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Capital Adequacy And The Performance Of Micro Finance Institutions In Kenya

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Abstract: ***Microfinance institutions are created with the intention of enhancing and fostering direct participation of impecunious groups and people in well-established enterprises as well as improving their socioeconomic position by offering efficient monetary as well as social assistance. The microfinance industry has nonetheless been affected by poor performance. For instance, the data from Association of Microfinance institutions showed that the performance declined between 2017 and 2018. There was a surge in Kenya's microfinance sector losses in 2017 which contributed to a dramatic drop in financial income. While the micro-lenders struggle to manage a shifting business environment, losses reported by the sector are eroding the main and total capital levels of MFIs. This paper investigated how the financial success of microfinance organizations in Kenya is impacted by capital sufficiency. It distinctively aimed to determine the effect of management effectiveness on the performance of the microfinance institutions in Kenya, to evaluate the impact of asset quality on that performance, to ascertain the impact of total capital on that performance, and to ascertain the contribution of liquidity on that performance. A descriptive research approach was applied. The paper utilized the fixed effects model in analyzing secondary data collected from 14 Kenyan MFIs from 2017 to 2021. The findings reveal that the performance of microfinance institutions has been declining over the years. Furthermore, capital sufficiency and liquidity improve financial results while asset quality and managerial efficiency have a negative effect. This paper proposes that these institutions should adopt debt collection policies and practices that minimize loanee default rate***

Keywords: ***Capital adequacy, Asset quality, Management efficiency, Liquidity, Total capital, Performance, Microfinance Institutions.***

I. INTRODUCTION

The existing commercial setup is constantly changing requiring corporates to adopt various methods that will give them an edge over their competitors (Mutumira, 2019). The mutating challenges within the corporate world have compelled firms to adopt robust financial practices that can facilitate their daily operations. Company's profitability depends on its efficiency in providing financial intermediary services (Almazari & Alamri, 2017). Firms' trustworthiness relies on their ability to mitigate risks associated with inadequate capital (Udom & Eze, 2018). This is because business investment plans depend on funding from investors (Babakova, 2013).

Capital is fundamental in enhancing the productivity of businesses; MFIs being one of them (Al-Tamimi & Obeidat, 2017). The area of finance is highly safeguarded since it is an economic pillar. Therefore, regulatory bodies have been mandated to prioritize the stability of financial institutions considering that this impacts the country's long run economic growth and development (Soludo, 2016). Existing literature indicate that capital has a massive effect on firms' financial success. Almazari and Alamari (2017) assert that the financial success of a firm is hinged on its capital quantity. A rise in an organization's capital adequacy is associated with improved financial performance (Udom & Eze, 2018).

In Kenya, microfinance institutions advance financial services to persons with little earnings and disadvantaged

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groups of individuals by customizing their products to suit their needs (Helms, 2006). Muriu (2011) opines that the efficiency of the banking sector is dependent on profitability of the participating institutions. According to him, a decrease in profits has a negative effect on the potential of an MFIs to withstand shocks and thus hampering their solvency. This implies that the managerial team's ability to mitigate risks accounts for the total profits generated by an MFI (Muriu, 2011). Given the significance of MFIs in the nation, it is imperative to constantly monitor and oversee their performance (Barth, Caprio & Levine, 2013). The underwhelming results of the banking sector has been ascribed to a number of issues, including insufficient capital, significant non-performing assets, and others. These issues lead to recurring problems in the industry and the downfall of some banks (Agbada & Osuji, 2013). Economic crisis across the globe has constrained the efficacy of financing institutions. Given that the banking sector is unpredictable and subjected to plenty of threats that may affect the participating financial institutions, capital ensures there is harmony within banks as well as the overall banking system is safeguarded. Banks' capital cushions the depositors' funds from the bank's losses.

A. CAPITAL ADEQUACY

Capital adequacy is the amount that guarantees the safety of client deposits in an institution (Archer, Karim, & Sundararajan, 2010). Olalekan and Adeyinka (2013), equate capital adequacy to the total funds needed to facilitate a firm's long run activities. They further opine that sufficient capital cushions a firm from losses that may result in its collapse. Almazari and Alamri (2017), state that capital sufficiency is a firm's ability to mitigate its risks. Hasan and Aykut (2014) opine that capital adequacy reflects the structure and sufficiency of capital of microfinance institutions. Capital adequacy ratio (CAR) measures how firm's capital is adequate. CAR demonstrates the ability of the bank to endure losses when in distress (Dang, 2017). It is the anticipated that the financial institution would be more profitable and require little external funding as the equity to asset ratio increases. The cost of going bankrupt is also lower for the financially sensible institution, which lowers their cost of borrowing (Berger, Bouwman, Schaeck, 2016). Because of this, financial institutions with larger capital to asset ratios are more secure and have a better safety net thus be able to stay afloat during economic downturns. In contrast, a financial firm with insufficient capital is viewed as riskier than a bank with substantial capitalization. The various measures of capital adequacy for this study are: management efficiency, asset quality, total assets and liquidity.

Management efficiency indicates how prudent the managerial staff is by comparing the quantity produced versus the magnitude of investment done. Generally, efficiency gauges whether an organization's operations are in line with their level of productivity. In the banking context, efficiency is an indicator of how institutions' allocation of resources results in the delivery of the best services to their clients (Barus, Muturi, Kibati & Koima, 2017). It factors how banking institutions juggle between delivery of quality services to their clients and profit maximization. Normally, the set of standards as stipulated by the regulatory bodies that govern the banking industry restrict some activities that banks might explore in their quest to increase their profitability. While the bank's managerial staff have the power to regulate the expenses, their ability to dictate output is limited. This is measured using costs to total assets (Ikapel, Namusonge, & Sakwa, 2020).

Asset quality is part of the vital elements that dictate a bank's success. The system that controls credit as well as the loan portfolio hugely determines the asset quality. Loans pose the greatest risks to banks since they represent a huge portion of the bank's assets. Securities are the other element that accounts for a sizeable amount of assets and thus it possesses some considerable risk. Also, factors such as property investments, contingent assets, and by a smaller degree outstanding funds that are due as well as capital equipment can all dictate asset quality (Nzoka, 2015).

Total capital includes all debts with interest as well as shareholders' equity. Mwai (2017) terms the total capital as an indicator of how effective the capital structure is. The return on Total Capital ratio differs from the gain on equity capital ratio given the former assesses a company's value on its common investment portfolio.

Liquidity is the capacity to clear responsibilities as soon as they emerge. Liquidity management is critical for companies that offer financial services and those that do not (Drehmann and Nikolaou, 2009). The bank is responsible for paying the financial commitments which include long and short-term arrears as well as other financial costs. Banks utilize liquidity by converting assets to into cash in order to make cash payments (Diamond and Rajan, 2015). According to Jagongo and Makori (2013), it is the duty of all banks to fulfil their fiscal commitments, and banks do this by transforming their current assets into cash. Micro financial institutions with a low level of current assets may experience challenges in carrying out their operations, while a significant level of current assets denotes that the institution's investment returns is not in pristine condition. This is measured using liquid assets to customer deposits (Demirgüneş, 2016).

B. PERFORMANCE

Performance, as perspective by Ukko, Saunila, and Tikkamakki (2017), refers to the outcomes or results by specific activities, as well as to how such activities are carried out or their potential. Financial performance, business performance, and organizational effectiveness are the three categories into which performance can be classified, according to Ukko, Saunila, and Tikkamakki (2017). While company performances also include indications of non-financial performance in addition to indicators on financial performance, financial performance focuses on the use of emphasizes on straightforward result-based financial measures. Alternatively, it can be examined from the perspectives provided by different paradigms, for instance the Balanced Scorecard as well as Performance Prism (Bourne, Neely, Mills & Platts, 2003).

According to Upadhaya, Munir, and Blount (2014), performance may be gauged by looking at factors including output and productivity, profit, the efficiency of internal systems, employee attitudes, and organizational reaction to

circumstances. Based on Combs, Crook, and Shook (2005), organizational success is tracked using financial and non-financial metrics, including level of client experience, employee contentment, and social performance, in addition to economic results controlled by financial metrics like earnings, stock market performance, and growth indicators. According to Griffins (2013), the effectiveness of management in using the resources assigned to them by the shareholders to create wealth within a specific time frame is evaluated by an organization's performance.

The study's primary interest is financial health. A subjective indicator of the company's effectiveness in employing resources from its main line of operations as well as creating money is called financial performance. This term is as well relied upon when comparing firms in the same sector or when combining sectors and is utilized as a gauge for a firm's financial success for a given duration (Gichuki, 2014). In order to evaluate an organization's financial success, researchers typically use either stock-based metrics like Tobin's Q and market returns or accounting-based metrics like return on assets (ROA), return on sales (ROS), and return on equity (ROE) (Pelletier, 2018). Accounting and market metrics are universally recognized as optimal measures of an organization's financial performance. Employed in this analysis is ROA. An analyst, manager, or investor can calculate a company's ROA to see how successfully management uses its resources to make profits.

C. MICRO FINANCIAL INSTITUTIONS IN KENYA

One of Sub-Saharan Africa's most active microfinance markets is found in Kenya. It has a wide range of institutional structures and an extensive distribution of branches to help the underprivileged. The sector began after the downfall of Kenyan enterprises and massive dismissal of employees in the 1980s and since then it has grown every year. The firm takes several forms, including deposit-taking MFIs, non-governmental organizations (NGOs), religious organizations, Merry-go-rounds, Rotating Savings and Credit Associations (ROSCAs), Accumulative Savings and Credit Associations (ASCAS), and Investment Groups. Due to the ease of conducting business in the absence of a comprehensive regulatory framework, financial inclusion and financial literacy have increased (AMFI, 2018).

The Kenyan microfinance sector is made up of a sizable and varied array of institutions (AMFI, 2015). The three main types of institutions are the informal, the formal subsidized, and the formal non-subsidized. Local groups like ROSCAs, ASCAs, and money lenders are included in the informal category. The informal microfinance institutions have two standout characteristics. Most of them are membership-based transactions involving savings. It is unknown with certainty how many informal groups there are, and it is also unknown how much money is exchanged annually, but it is estimated to be in the billions of shillings.

The officially registered organizations whose financial operations are not regulated fall under the category of formal subsidiaries. Microfinance institutions that are NGOs, enterprises and firms limited by guarantee and liability respectively are the major institutional actors in this category. There are 71 financial services associations, 56 microfinance NGOs, 4 companies limited by shares (such as KIE and AFC), and 4 that are by limited by guarantee. Institutions that are properly recognized and regulated fall under the formal non-subsidized category. 3 microfinance banks, 4 downsizing commercial banks, 3,500 SACCOs, and 1 savings bank are among them (AMFI, 2015). The existing legislation that guides the registration of MFIs is flawed since some government entities have overlapping roles (AMFI, 2015). For instance, Kenya has nine distinct parliamentary acts govern the registration of microfinance organizations.

D. STATEMENT OF THE PROBLEM STATEMENT

Various research from various scholars in this field have had mixed results either because of context as well as the methods employed. For the papers that focussed on Kenya, there was little attention on MFIs. For instance, Musyoka (2017) and Kamaita (2018) investigated how capital sufficiency affected the financial success of Kenyan commercial institutions Mutumira (2019) investigated on how capital sufficiency affects the financial success of Kenyan insurance businesses. This thus highlights the need to undertake this study since we concentrate on MFIs.

Njue(2020) focussed on the liquidity and financial results linkage of MFIs in Kenya for the period 2012-2016. They however did not consider managerial efficiency. With the ever-changing dynamics in the financial world, it is important to re-examine their study with more variables as well as most recent data. This is an area our paper addresses as it utilizes most recent data as well as it factors managerial efficiency.

The use of different data types might result in different findings considering the methods deployed during analysis. While investigating liquidity and the success of Turkish retailers Demirgüneş (2016) utilized time series data. In order to improve on existing knowledge, we utilize panel data in a Kenyan context as well as on MFIs rather than on retailers.

E. OBJECTIVES OF THE STUDY

The research objectives are: to analyse the effect of managerial efficiency on the performance of Kenyan microfinance intuitions; to examine the effect of asset quality on the performance of Kenyan microfinance intuitions; to investigate the effect of total capital on the Performance of Kenyan microfinance intuitions; and to determine the effect of liquidity on the performance of Kenyan microfinance institutions.

II. LITERATURE REVIEW

A. THEORETICAL REVIEW

There are various theories reviewed to support the relationship between capital adequacy and performance of Microfinance institutions. Agency theory outlines how the owner and agent are linked (Jensen & Meckling,1976). The agent is mandated to make decisions that should benefit the owner (Wasserman, 2006). It pinpoints that in some instances,

the agent's decision may not be in line with the principal's thus causing a dispute. Firm's performance illustrates this theory through reducing costs and output maximization. Eisenhardt (1989) asserts that principals have at their disposal two ways that are suitable for taming the agent's self-interest practices. First is through developing a system that monitors and evaluates the conduct of the agent. Secondly is by signing a performance-based contract (Eisenhardt, 1989). The theory has however been faulted for not being flexible to account for the fact that cost decisions are determined through some restricted assumptions forgetting that the ideal cost control procedures are the one's dictated by the specific firm or country characteristics (Byrd & Hickman, 1992). In relation to the study, the theory notes that minimization of costs and high efficiency is the desired result of firms. Therefore, managers are given the responsibility of governance to achieve the desired results. In the case of microfinance institutions in Kenya agency theory underlines the managers efficiency who are entrusted by the shareholders to manage the organization.

Markowitz (1959) presented Modern Portfolio Theory (MPT) which is a critical progression in financial modelling. Key to this hypothesis is its evaluation of the connection between financial hazard and the belief that investors ought to be repaid for presuming variations in actual returns. Ideally MPT portrays the extent in which the actual return varies from the expected one. The portfolio hypothesis hypothesizes that when handling a financial hazard businessman are judicious when business environment is ideal (Chijoriga, 2015). Organizations have effectively connected present day portfolio hypothesis to market risks throughout the years. The assessment of the organization's whole risk portfolio in an all-encompassing way is said to lessen profit instability, stock value fluctuations and external capital expenses in addition to higher capital effectiveness. Further, the assessment of financial hazard dependencies additionally enables organizations to exploit operational efficiencies (Liebenberg & Hoyt, 2015). The theory emphasizes on spreading out of assets to cushion the effects unpredictability and also financial hazards associated with a specific firm (Omisore, Munirat & Nwufo, 2012). This hypothesis thus discourages one from piling up all their investments on one entity, implying that the impact of financial hazard decreases when investments are diversified. By pooling investments that have a weak relationship in one portfolio, we expect that negative news pertaining one of the assets will be cancelled out by positive news of a different asset within the same pool.

The weakness of this theory is that it emphasizes on diversification of investments but it does not factor in the disadvantages of diversifying investments, such as, a surge in operations costs. The theory also indicates that, firms can manage risks by diversifying their asset to hedge against market volatility. This theory is essential in this paper as it expounds on how the quality of assets determine performances of micro finance institutions.

Capital Buffer Theory contributors were Calem and Rob (1996). It propounds that financial institutions ensure that their capital ratios are above the minimum threshold dictated by regulatory bodies. Whenever the firms realize that their capital ratios are approaching the minimum standard, they target to improve them resulting in a difference between the actual value and the minimum threshold. This difference is the buffer capital (Lindquist,2004). Based on this theory, firms with small capital buffers aim to increase them while those with larger buffers aim to retain their levels. More capital implies that a firm will not succumb to negative shocks (Rime, 2001). There are plenty of factors that result in firms having high buffers (Milne & Whalley, 2002). First, it insures the firm against expenses associated with unprecedented losses in loans; secondly, it determines the firms risk appetite; and lastly it indicates the financial health of a firm providing it with an edge over its market competitors. There is a relationship between capital sufficiency and performance. A rise in the portfolio risk causes the desire by firms to increase capital thus ensuring that their buffer is not affected (Laeven &Levine,2009). In line with this study, buffer capital is an important tool in ensuring that MFIs do not collapse as they compete for unsecured deposits and mutual funds. This justifies the sensitivity of firms with regarding the magnitude of buffer capital in comparison with their competitors. This theory is applicable in our research as it underpins the capital sufficiency and financial success link.

Liquidity Preference Theory is part of the works of John Maynard Keynes in 1936. It emanated from the fact that individuals desire to have money is founded on the transactional and wealth storage functions of money (Bibow, 2005). Essentially there is a trade-off between interest rates and willingness to keep cash. High interest rates will result in individuals foregoing liquidity to maximize their returns. Alternatively, lower interest rates may result in individuals preferring more cash at hand.

Keynes (1936) pinpoints that the desire to hold cash can be classified into three perspectives: That is, for current transactions, for speculative purposes, and for precautionary roles. These three elements define the reasons as to why MFIs may be interested in having cash. They will need cash to cater for daily operations. The amount of money for transaction purposes relies on factors such as earnings, spending levels, as well as periods between payments. They will as well demand money as a buffer for unprecedented future shocks. Furthermore, MFIs may demand money so that they may capitalize on high returns associated with improved interest rates. This is evidence that MFIs utilize their financial assets actively in running their daily activities. This theory therefore plays a critical role of establishing how MFIs achieve their client's liquidity requirements versus the three reasons of holding cash.

B. EMPIRICAL REVIEW

Ikapel et.al (2020) analyzed how prudent financial management affects how Kenyan commercial banks perform. They relied on Returns on assets as well as equity as the main measures of the performance of financial institutions. Using data for the period between 2006 and 2017 for banks whose records were on the Nairobi Securities Exchange they found strong evidence that prudent financial management greatly influences how banks perform. The current study examines how capital sufficiency affects performance of Micro finance institutions.

Njue (2020) conducted a study on financial success and liquidity control for Kenya's MFIs. The paper examined how success of Kenyan MFIs is affected by liquidity control. Secondary data from CBK web page, CBK's yearly publications plus the yearly AMFI publication between 2012 and 2016 was used. The findings reveal that liquidity control determined the financial success of MFIs. The quality of asset as well as periods between maturity impacted financial success negatively while capital sufficiency impacting negatively.

Ray and Mahapatra (2019) sought to find out how asset quality impacted the financial results of Indian MFIs. They utilized data for 76 MFIs observed between 2006 and 2013. They noted that over the study period, there was a decline in asset quality that resulted in MFIs performing badly. By being profit oriented, MFIs became inconsiderate as they introduced exploitative lending as well as abusive debt collection techniques that increased repayment rates. Tactics that resulted in higher default rates as well as worsened the portfolio at risk and write off ratios. Since the preceding paper focused on India, the current paper improves the available knowledge by extending the study to Kenya.

Charmler et.al (2018) examined how liquidity influences the performance of Ghanaian banking institutions. The research analyzed the degree, evolution, and role of liquidity on the banks' performance. A panel dataset comprising of 21 banks that were observed between 2007 and 2016 was utilized. The findings indicate liquidity positively impacts the banks' performance. Also, regressors such as size of bank, capital ratio, foreign shareholders, and interest margin positively affect a bank's performance. Current study will focus on MFIs in Kenya so that the contextual gap can be minimized.

Barus, Muturi, Kibati and Koima (2017) evaluated the effect of prudent managerial skills on financial results of SACCOs in Kenya. The paper's success relied on an explanatory research design. They focused on 83 authorized SACCOs that had been in operation in the previous 5 years. According to the study, management efficiency has little effect on a SACCO's financial success. To minimize the methodological gap, current paper employs a descriptive research design.

Mwai (2017) researched on the prerequisite capital and performance linkage in banks. The paper specifically analysed how the Central bank's minimum capital threshold impacts Kenya's financial institutions. The research relied on the use of the descriptive methodology. Data obtained from 43 commercial banks was utilized. The paper discovered that both the threshold and overall capital, positively influenced banks performance. Further, with ROA and ROE as indicators of financial health, it was found that leverage decreases financial performance. This study will shift its focus to microfinance institutions in order to close on the contextual gap.

Susan and Nasieku (2016) evaluated the influence of capital on Kenyan commercial banks' profitability. A descriptive approach was used for the investigation. Only banks that had been approved by Kenya's Central Bank were considered. Financial records for the years 2010 to 2014 were analyzed. According to the study findings, Tier I and II banks capital to weighted risk assets ratios exceeded the minimum threshold set by the regulatory body. This is despite a decline in these ratios during the study period within the two bank categories. To minimize the contextual gap, our paper will emphasize on the link between capital and financial success of MFIs.

Cheruiyot (2016) researched on the influence of asset quality on the success of Kenya's financial institutions. This was done through descriptive research that focused on 43 commercial banks. The analysed data was sourced from the yearly bank's financial reports. The paper found an increase in asset quality improved the bank's performance. The current study improves the previous study by focusing on MFIs.

Demirgüneş (2016) investigated how liquidity affected the financial gains of Turkish retailers. The study used time series data from Turkish retail businesses from the first quatre of 1998 to the third quatre of 2015. The cointegration test indicated that liquidity and firm profitability have a long-run relationship. Unlike the previous study that focused on retailing industry, the current study minimizes the contextual gap by focusing on MFIs.

III. RESEARCH METHODOLOGY

A. RESEARCH DESIGN

Descriptive research design was applied. The method was applied to gather information on the current phenomena to characterize the variables. It was appropriate in this investigation as it involves a detailed analysis of how capital sufficiency affects performance of Kenya's micro finance institutions. This design is suitable for a mixed methods approach due to its accommodative nature. This study focusses on all the microfinance institutions recognized by Kenya's Central Bank which is the regulatory body. There are 14 microfinance institutions in Kenya classified as either large, medium, or small based on their market share (Central Bank of Kenya,2021). The study employed the census method because all items are factored in, the conclusions are precise and consistent. The sample size for the researcher was 14 MFIs.

The research compiled secondary data and that was populated via a collection sheet. The sources were respective MFI's publications as well as CBK's yearly financial reports. The period 2017 through 2021 was considered. This period was used because it was the most recent and therefore, it helped in providing more current financial information on MFIs. Secondary data on MFIs was gathered via the specific organization's websites and from the CBK yearly publications. Specifically, the annual reports of the MFIs firms were scrutinized to obtain data on management efficiency, asset quality, total capital, liquidity, and financial performance.

a. MODELS SPECIFICATION

The estimated regression model was as follows.

$$Financial\ Perfomance_{it} = \beta_0 + \beta_1 TotalCapital_{it} + \beta_2 Asset\ Quality_{it} + \beta_3 ManagementEfficiency_{it} + \beta_4 Liquidity_{it} + \varepsilon_i$$

Where: β_0 is the intercept, β_s are slope coefficients for the respective regressors, i identifies a specific MFI, t is the respective year, and ε_i is the residual.

IV. RESULTS AND DISCUSSIONS

A. CORRELATIONAL ANALYSIS

		Management efficiency (%)	Asset quality (%)	Total capital (%)	Liquidity (%)	ROA %
Management efficiency (%)	Pearson Correlation	1				
	P-value	.000				
Asset quality (%)	Pearson Correlation	-.589	1			
	P-value	.000				
Total capital (%)	Pearson Correlation	-.460	.614	1		
	P-value	.000	.000			
Liquidity (%)	Pearson Correlation	.407	.067	.542	1	
	P-value	.001	.590	.000		
ROA %	Pearson Correlation	-.617	.185	.508	.081	1
	P-value	.000	.133	.000	.516	

Source: Author, 2023

Table 4.2: Correlation results

Based on correlational results analysis, we find that ROA has a weak positive relationship with liquidity(r=0.081), total capital(r=0.508) and asset quality (0.185). The link with liquidity is the weakest. It has a moderately negative association with management efficiency(r=0.617).

B. DIAGNOSTIC TESTS

a. NORMALITY TEST

After identification of the ideal model, we proceeded to test on whether our residuals were normally distributed. Our normality test indicated a p-value of 0.2737 which is a sign that residuals have a normal distribution.

b. HETEROSCEDASTICITY TEST

Heteroscedastic models result in misleading inferences and thus it is important to ensure the estimated model is homoscedastic. The modified Wald test for group heteroscedasticity was utilized to test for heteroscedasticity. The null hypothesis of the model indicated error term is homoscedastic across all the MFIs while the alternative indicated the error term was heteroscedastic.

Modified Wald for groupwise heteroscedasticity test	
Chi-square (14 df)	9.7e+29
P-value	0.000

Source: Author, 2023

Table 4.3: Heteroscedasticity Test

Based on the heteroscedasticity test, we rejected our null hypothesis since we had a small p-value (0.000) meaning that the model suffered from heteroscedasticity. To control for this problem, we utilized robust standard errors clustered by each of the 14 MFIs being studied.

c. HAUSMAN TEST

It dictated on which panel data model should be adopted.

	Value
Chi-square test statistic	28.709
P-value	0.000

Source: Author, 2023

Table 4.4: Hausman specification test

The p-value obtained from the Hausman test was smaller than 5% and thus it led to the rejection of our null hypothesis. Therefore, the Fixed Effects model was estimated and interpreted.

C. FIXED EFFECTS MODEL REGRESSION ANALYSIS

After the diagnostic tests, this study conducted the fixed effects model with robust standard errors. The regression estimates are as outlined in table 4.5.

ROA	**Coef.**	**St. Err.**	**t-value**	**p-value**	**[95% Conf]**	**Interval]**
Total capital	.011	.053	0.20	.845	-.105	.126
Asset quality	-.014	.005	-2.90	.012	-.024	-.003
Management efficiency	-.024	.012	-2.07	.059	-.049	.001
Liquidity	.051	.036	1.45	.172	-.025	.128
Constant	-6.23	1.441	-4.32	.001	-9.344	-3.117
R-squared	0.327		Number of obs		67	
F-test	6.465		Prob > F		0.006	
Akaike crit. (AIC)	410.904		Bayesian crit. (BIC)		419.723	

Source: Author, 2023

Table 4.5: Regression Results

As per the output in table 4.5 a R-squared of 0.327 signifying that variations in the model's regressors contribute 32.7% of variations in an MFI's ROA. Furthermore, the F-test results indicate an F-statistic of 6.465 that has a p-value of 0.006 showing that the regressors are jointly significant determinants of MFI financial performance in Kenya.

Generally, our estimated regression model is expressed as:

$$Financial\ Perfomance_{it} = -6.23 + 0.011 TotalCapital_{it} - 0.14 Asset\ Quality_{it} - 0.024 ManagementEfficiency_{it} + 0.051 Liquidity_{it} + \varepsilon_i$$

Based on the estimated results, we find that capital sufficiency and liquidity ratio positively affect ROA while asset quality and managerial efficiency have a negative effect.

D. HYPOTHESIS TESTING

We use the estimated regression p-values to determine whether to reject or not reject the study's four hypotheses. Based on our regression results, we find that the p-value (p=0.059) for management efficiency exceeds 0.05. We fail to

reject our first hypothesis that suggested that management efficiency hugely affects the financial success of an MFI. These research results confirm the results of Itumo (2013) and Barus et al. (2017), who discovered that managerial efficiency does not have a major effect on Kenyan banks' performance.

Asset quality has a negative impact on financial success (-0.14). Its small p-value (P=0.012) indicates that we reject our second null hypothesis that suggested that asset quality insignificantly affects performance. Thus, asset quality hugely affects financial success. These results contrast those of Cheruiyot (2016) who found that asset quality influences financial success of Kenyan commercial banks positively. They are aligned with those of Njue (2020) who examined how asset quality affected the financial health of Kenyan MFIs. Raya and Mahaptra (2019) detected that asset quality adversely impacts the financial success of Indian microfinance institutions. They argued that in their quest to recover loans offered, institutions a times adopt some techniques that result in higher default rates.

Total capital (0.011) has a positive effect on ROA. Based on its high p-value (P=0.845) we accept our null hypothesis that proposed that total capital does not hugely affect the financial health of MFIs. Total capital has insignificant influence on financial success. These results contradict results by Mwai (2017) and Aymen (2013) who found that capital is a key determinant of the success of banks in Kenya and Tunisia respectively.

Liquidity (0.051) has a positive effect on ROA. Its large p-value (0.172) implies our null hypothesis that highlighted that liquidity has an insignificant effect on MFI performance upheld. The outcome slightly differs with those of Njue (2020) who detected that liquidity control is critical in determining the performance of Kenyan MFIs.

E. SUMMARY OF THE FINDINGS

The descriptive analysis indicates that the average financial performance across the five years was negative (poor). The least average financial performance for MFIs was observed in 2018 while the highest was in 2019. The large standard deviation of ROA implied that each firm's annual financial success deviated largely from the overall population mean. Furthermore, apart from asset quality that had positive mean all the other regressors reported negative mean values. Based on the correlation results we discovered that ROA has positive connection with management efficiency but has an inverse link with asset quality, liquidity, as well as total capital. The connection between ROA and the respective regressors is generally weak as exhibited by the small coefficients.

The study had four distinct objectives. The first objective was to ascertain how managerial efficiency influences the financial success of Kenyan MFIs. Findings reveal a rise in managerial efficiency is linked with a decline in financial performance; implying a negative influence. For the second objective we examined how asset quality affects financial performance and discovered that asset quality negatively affects performance. The other objective aimed at establishing the impact of total capital on ROA and found that total capital positively affects financial performance. Our fourth objective was to find out how liquidity affects financial performance. We discovered that liquidity improves Kenyan MFI's financial results.

V. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

Based on our research objectives, we conclude that asset quality is a critical determinant of financial success of a Kenyan MFI. Total capital, liquidity, and management efficiency all have an insignificant impact on financial results. In our first objective we ascertained the impact of managerial efficiency on financial success. Our results suggest that managerial efficiency negatively affects financial results, inferring that increased managerial efficiency is linked to lower financial gains. However, the effect is negligible. Next, we examined how asset quality affects financial results. We realized that asset quality negatively affects the financial health of MFIs. This implies that, from the perspective of MFIs, an upsurge in asset quality corresponds with a drop in financial results. Some of the practices employed by MFIs in their efforts to recover loans may end up in clients defaulting more and thus worsening the financial performances of MFIs.

Furthermore, we assessed the implication of total capital on financial results. According to our findings, capital has a positive influence on financial success. This signifies that a rise in capital leads to improvement in financial results though the effect is not significant. Finally, we investigated the impact of liquidity on financial results. We discovered that liquidity affects financial success positively, suggesting that an upsurge in liquidity is likely to enhance financial results. However, statistical analysis shows that this is not a significant effect.

B. RECOMMENDATIONS

We recommend that MFIs need to adopt policies and practices that reduces the quantity of non-performing loans in their institutions. This could be through means such as ensuring that they conduct thorough background checks on the clients before offering loans to determine their suitability. Also, they should utilize means that encourage their clients to make timely loan payments; minimizing the defaulting rate.

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