International Research Journal Of Economics and Finance

Vol 7, Issue 1, pp 75-85, May 13, 2025, © International Research Journal Publishers, ISSN 2710-2742 (online) www.irjp.org

Working Capital Management and Financial Performance of Deposit Taking Microfinance Institutions in Kenya

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Accepted, May 6th, 2025

Abstract

Purpose of the study: To determine the effect of working capital management on financial performance of deposit taking microfinance institutions (DTMFIs) in Kenya.

Methodology: The descriptive-correlational research design was used on 14 DTMFIs in Kenya that existed between 2019 and 2023. Through data collection schedule, this study collected annual unbalanced panel secondary data from bank supervision reports from the CBK website. Descriptive and regression analysis was done. This study adopted an unbalanced panel regression model to establish the effect of WCM on financial performance of DTMFIs.

Results: Working capital management had a positive regression coefficient (β=0.925; p=0.003) indicating a positive effect. Capital adequacy also showed a positive effect (β=0.065; p=0.009). On the other hand, non-performing loans had a negative effect on financial performance (β=-0.171; p=0.000). However, capital structure as measured by debt ratio indicated a positive but insignificant effect on financial performance (β=4.651; p=0.242).

Conclusion: The study concluded that working capital management and capital adequacy have a positive effect on financial performance of DTMFIs in Kenya. It also concludes that non-performing loans have a negative effect on financial performance of DTMFIs in Kenya while capital structure as measured by debt ratio has no significant effect on financial performance of DTMFIs in Kenya.

Recommendation: The study recommends that DTMFIs maintain an appropriate working capital ratio; reduce default rates; optimize their capital structure; and maintain a strong capital base for improved financial performance. Further research is recommended similar researches based on other firms, other factors, different measures of variables and balanced semi-annual or quarterly data.

Keywords: *Working Capital Management, Non-Performing Loans, Capital Structure, Capital Adequacy, Financial Performance, Deposit Taking Microfinance Institutions*

INTRODUCTION

The relationship between working capital management (WCM) and financial performance is central to understanding how firms optimize their operational efficiency and profitability. Efficient management of working capital ensures that a company maintains adequate liquidity to meet its short-term obligations while minimizing the cost of holding excess inventory or delayed receivable (Ahmed, 2022). Effective WCM can enhance financial

performance by improving cash flow, reducing operational costs, and increasing profitability (Mulajje, 2019). On the contrary, strong financial performance provides more resources for better WCM, creating a feedback loop that can drive sustained financial stability and growth (Boisjoly, Conine & McDonald, 2020). Understanding this relationship allows firms to optimize their working capital strategies to achieve better financial outcomes and maintain competitive advantage.

The firms have experienced increased challenges in financial performance in recent years with reduction in profits and asset levels (CBK, 2023). For example, the subsector made losses in the last five years consecutively. In 2019, the sector showed a combined loss before tax of Ksh.339 million with the losses increasing by 85.9% to Ksh.2.4 billion in 2023, according to Central Bank of Kenya [CBK] (2023). Further, 71% of the Deposit taking microfinance Institutions in Kenya made losses in 2023 compared to 29% which made declining profits in the same year. Further, the sector has shown a reduction in the assets. For instance, the sector registered an 8.8 percent decline in total assets in the year 2023 (CBK, 2023). The total assets as of December 31, 2023 stood at Ksh.64.2 billion, in comparison to Ksh.70.4 billion reported in the year ended 2022. Compared to Ksh.76.4 billion worth of assets in 2019, the sector experienced a 16% decline in assets in the last five years.

Studies have consistently shown that efficient WCM improves profitability and financial stability by optimizing cash flow and reducing financing costs. For example, Abdulnafea, Almasria and Alawaqleh (2022) in research focused on Jordanian banks found a positive relationship. This was supported by Mulajje (2019) in their study based on small and medium enterprises in Uganda where a positive relationship was found. Nguyen (2020), however, in their study in Vietnam found that WCM had a negative effect on financial performance. On the other hand, Almomani, Almomani and Obeidat (2021) in their study in Jordan found no significant relationship between the two.

In Kenya, the microfinance sector, particularly Deposit-Taking Microfinance Institutions (DTMFIs), faces unique challenges related to WCM due to volatile economic conditions and regulatory pressures. The motivation for this study stems from the need to address these challenges by providing empirical evidence on how effective WCM can enhance the financial performance of DTMFIs in Kenya. Various research gaps also existed. For example, Ahmed (2022) researched on WCM and financial performance of small and medium enterprises in Garissa County. A contextual gap existed where the focus was on SMEs. Kathuri (2022) in their research on the effect of non-performing loans other than WCM on financial performance of deposit taking microfinance institutions in Kenya showed conceptual gaps. Further, Munyasia (2023) added conceptual gaps by focusing on credit risk management in relation to financial performance. This research aims to fill existing gaps in the literature by answering the question: what is the effect of WCM on financial performance of DTMFIs in Kenya?

Purpose of the Study

To determine the effect of working capital management on financial performance of DTMFIs in Kenya.

Research Question

what is the effect of WCM on financial performance of DTMFIs in Kenya?

Theoretical Foundations

This study was based on trade-off theory, operating cycle theory and Miller-Orr model.

Trade-off theory: Trade-off theory by Kraus and Litzenberger (1973) posits that firms balance the costs of liquidity against the benefits of financial flexibility, influencing how working capital is managed. The DTMFIs need to optimize their liquidity to avoid financial distress while also taking advantage of debt financing to enhance profitability. Thus, the theory predicts that DTMFIs that find a balance between maintaining sufficient liquidity and

managing debt efficiently will likely exhibit improved financial performance, aligning with the study's focus on WCM.

Operating cycle theory: Operating cycle theory by Smith (1980) examines the efficiency of converting inventory and receivables into cash, affecting cash flow and financial performance. By focusing on the duration of loan disbursements and collections, DTMFIs can optimize their operating cycle to enhance cash flow and reduce the need for external financing. The theory suggests that shorter operating cycles led to better financial performance by minimizing the time funds are tied up in operations, thus improving liquidity and reducing costs associated with WCM

Miller-Orr Model: The Miller-Orr Model by Miller and Orr (1966), however, addresses managing cash reserves by setting optimal upper and lower limits, balancing liquidity needs with holding costs. By applying the model, DTMFIs can determine the optimal range for their cash balances, ensuring liquidity while minimizing opportunity costs associated with holding excess cash. The model predicts that maintaining cash within this optimal range will contribute to better financial performance by improving liquidity management and reducing the costs of cash handling. This alignment with the model can enhance the financial stability and profitability of DTMFIs, making it a valuable tool for effective WCM. These theories collectively provide a framework for understanding how WCM affects financial performance.

Empirical Review

Nguyen (2020) studied the impact of WCM on firm performance in different business cycles in Vietnam. This study was conducted on financial data of 38 economic groups listed on Vietnam's stock market for the period 2009-2019 and it aims to provide empirical evidence on the impact of WCM policy on performance in all phases of the economic cycle of Vietnamese economic groups. The study uses FGLS estimation method. The study showed that WCM had a negative impact on firm performance.

Almomani, Almomani and Obeidat (2021) studied the relationship between WCM and financial performance based on evidence from Jordan. this study used time series and data covering the period 2010-2018. A sample of 42 manufacturing firms listed on the ASE was used in the analysis and hypotheses testing. For data analysis, we used descriptive statistics and the multiple linear regression method was used for hypotheses testing. The study found that WCM had no significant effect on the financial performance.

Mulajje (2019) looked into WCM and financial performance of small and medium enterprises in Kampala Capital City Authority: a case study of Kawempe division urban council. A population of 250 employees from different small and medium sizes entities was targeted and a sample of 100 respondents was used. A simple random sampling technique was used. Data was collected using Questionnaires as a research instrument. The study used an exploratory research design. The study found that WCM affected the financial performance with positive significant relationship.

In the United Republic of Tanzania, Bukwimba and Ngata (2022) did research on the effect of working capital on firm financial performance management. The study analysed the effect of WCM on a firm's financial performance, a case of seven selected manufacturing firms in Tanzania listed with the Dar es Salaam Stock Exchange for the period from 2011 to 2020. The paper adopted secondary data from the annual reports of selected manufacturing firms in Tanzania. Purposive sampling techniques were used to select annual reports for investigation, and data were collected from the financial statements of the selected manufacturing firm. The study found a negative and insignificant effect of working capital on firm financial performance.

Ahmed (2022) did a study on WCM and financial performance of small and medium enterprises in Garissa County, Kenya. The study employed a causal research design. According to the county administration of Garissa, 243 SMEs were targeted. A sample of 149

SMEs were selected using simple random sampling. According to the county administration of Garissa, 243 SMEs were targeted. Simple random sampling was used to draw a total of 149 SMEs. Secondary data was evaluated using quantitative methods that included descriptive statistics and inferential statistics. The analysis used secondary data. The study found that working capital management had a significant positive influence on the financial performance.

Wambia and Jagongo (2020) did a study on the effects of WCM practices on the financial performance of insurance companies in Kenya. The study used the descriptive research design. It targeted 47 underwriting managers, chief accountants and finance managers from all the 47 insurance companies in Kenya. Purposively sampling technique was used to select a sample size of 141 respondents. Data was collected using the questionnaire and analyzed using Statistical Package for Social Sciences. This study found that WCM had positive effect on financial performance of insurance companies.

Conceptual Framewor

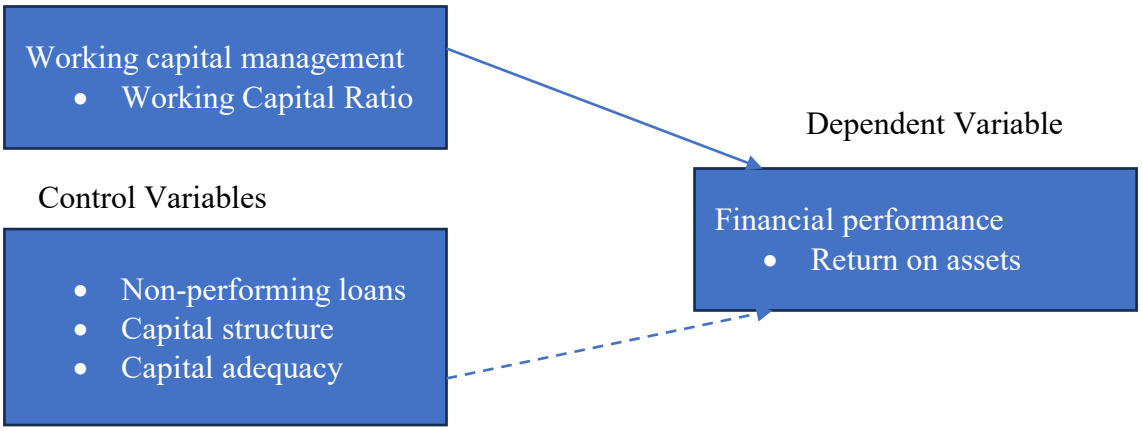

Figure 1: Conceptual Framework

Source: Chipa (2024)

RESEARCH METHODOLOGY

Research Design: The descriptive-correlational research design was adopted in this research. This design guided the researcher in describing WCM and financial performance. It also guided the researcher in establishing the cause-effect relationship between WCM and financial performance among DTMFIs.

Population: The population of this study was all 14 DTMFIs in Kenya between 2019 and 2023. The DTMFIs showed increased financial performance challenges in recent years. This was reflected in a reduction in assets and reduction in profitability levels. These challenges were rampant in the period between 2019 and 2023 when the sector experienced increased losses and other financial performances.

Data Collection: This study collected unbalanced annual panel secondary data from 14 DTMFIs between 2019 and 2023 from bank supervision reports accessed through the CBK website. Data was collected using data collection schedule that contained absolute data of current assets, current liabilities, profit after tax, total assets, NPLs, gross loans, core capital, total risk weighted assets, and total liabilities. The absolute data was adopted in calculation of ratios used for analysis.

Data Analysis: Descriptive and regression analysis was done in this study. This was done with the assistance of SPSS version 29 which enabled the researcher to generate the statistics. Descriptive statistics included mean and standard deviation. Regression analysis was done

using multiple panel regression to establish the effect of WCM on financial performance of DTMFIs in Kenya.

Diagnostic Tests: One key assumption in many statistical methods is the normality of the data. This study adopted the Shapiro-Wilk test to check on normality. This test's null hypothesis is that the data is normally distributed. Another diagnostic test was heteroskedasticity test where Breusch-Pagan test was used. The null hypothesis is that there is no heteroskedasticity. A p-value below 0.05 indicates heteroskedasticity as the null hypothesis is rejected. Multicollinearity was also tested using the Variance Inflation Factor (VIF). The VIF values above 10 indicate a significant multicollinearity problem.

Analytical Model

The model took the form of:

$Y_{it}=\alpha+\beta_1 X_{1it} +\beta_2 X_{2\,it} + \beta_3 X_{3it} +\beta_4 X_{4\,it} + \varepsilon$

Where: Y_{it} is financial performance as measured by return on assets of firm i at time t; α is constant; β_{1-4} is regression coefficients; X_1 is working capital management as measured by working capital ratio of firm i at time t; X_2 is non-performing loans as measured by NPL ratio of firm i at time t; X_3 is capital structure as measured by capital structure ratio of firm i at time t; X_4 is capital adequacy as measured by capital adequacy ratio of firm i at time t; ε is error term

RESULTS

From descriptive statistics, the DTMFIs in Kenya showed a mean financial performance (return on assets) of -8.853% between 2019 and 2023. Within the same period, working capital management (working capital ratio) averaged at 1.480 while NPLs averaged at 42.7% between 2019 and 2023. For capital structure, the mean within the period was 0.841 while for Capital adequacy the mean was 32.718%.

Various diagnostic tests were done to check on the assumptions of the regression model. This included normality, heteroskedasticity and Multicollinearity tests. Based on Shapiro Wilk test, for normality test the statistics had pvalues of less than 0.05. Hence, the data was not normally distributed and therefore the data set has not met the assumption of normality. The study adopted Breusch-Pagan Test for Heteroskedasticity where the pvalue (0.164) was above the 5% threshold. This shows that the data met the assumption of the Heteroskedasticity where it assumes that Heteroskedasticity does not exist in the dataset. Multicollinearity test showed that working capital management had a VIF value of 1.154; Non-performing loans had a value of 1.043; capital structure showed a VIF of 1.107 while capital adequacy showed a VIF of 1.260. Hence, the variables showed VIF values of less than 2. Hence, there was no multicollinearity in the data adopted in this research.

This study sought to establish the effect of working capital management on financial performance of DTMFIs in Kenya through unbalanced panel regression analysis. From the model summary, the model had a correlation (R) value of 0.586. Further, the model showed an R square of 0.343 indicating that the predictors (working capital management, non-performing loans, capital structure and capital adequacy) contributed 34.3% of the change in financial performance. Hence, other factors contribute the remaining change (65.7%) in financial performance. From the ANOVA table, the model was significant as the F-statistics that showed significance value below 0.05. Hence, the predictors had a significant effect on financial performance.

Table 1: Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6.226	2.742		-2.271	.026

Working capital management	.925	.304	-.759	3.043	.003
Non-Performing Loans	-.171	.036	-.489	-4.732	.000
Capital Structure	4.651	3.935	.126	1.182	.242
Capital adequacy	.065	.024	.305	2.681	.009

a. Dependent Variable: Financial performance

From the regression analysis outcomes, the model;

$Y_{it}=\alpha+\beta_1X_{1it}+\beta_2X_{2\,it}+\beta_3X_{3it}+\beta_4X_{4\,it}+\varepsilon$ was fitted into

$Y_{it}=-6.226+0.925X_{1it}-0.171X_{2\,it}+0.065X_{4\,it}+\varepsilon$

From the fitted model, working capital management had a positive and significant effect on financial performance (β=0.925; p=0.003). On the other hand, non-performing loans had a negative effect on financial performance (β=-0.171; p=0.000). However, capital adequacy positively influenced financial performance (β=0.065; p=0.009). Similar to capital structure (β=4.651; p=0.242).

Discussion of Findings

From the outcomes, increased working capital management in terms of working capital led to increased financial performance. This was reflected in the positive regression coefficient. Therefore, working capital management had a positive effect on financial performance. Mulajje (2019) who established that WCM affected the financial performance with positive significant relationship. They were different from those of Nguyen (2020) where WCM had a negative impact on firm performance. They also differed with those of Almomani, Almomani and Obeidat (2021) who found that WCM had no significant effect on financial performance.

The outcomes also showed that increase in non-performing loans led to reduced financial performance shown by a negative and significant regression coefficient. Therefore, NPLs had a negative effect on financial performance. The findings align with Ekinci and Poyraz (2019) who indicated that there existed a positive relationship between NPL ratio and financial performance. However, Gabriel, Victor and Innocent (2019) found that NPLs had a negative effect on financial performance which differed with the present outcomes. Other differing outcomes were those of Kathuri (2022) who found that NPLs had no significant effect on financial performance.

However, capital structure as measured by debt ratio indicated a positive but insignificant regression coefficient against financial performance. This was shown by a positive but insignificant regression coefficient. Therefore, a change in capital structure had no effect on significant effect on financial performance. The outcomes align with Shaik et al. (2022) who found there was no significant relationship between capital structure and financial performance. However, they differed with those of Ayange et al (2021) who found that capital structure had a positive effect on financial performance. They also differed with those of Arhinful, Mensah and Owusu-Sarfo (2023) who found that a negative relationship existed between capital structure and financial performance.

The outcomes further showed that increased capital adequacy led to increased financial performance. This was reflected in the positive regression coefficient shown by capital adequacy on financial performance. Therefore, capital adequacy had a positive effect on financial performance. The outcomes aligned with those of Ngoc, Tien and Thu (2021) who found that a positive relationship existed between capital adequacy and financial performance. However, they were different from Pham (2020) who found a negative relationship; and Nyabaga and Wepukhulu (2020) who found no significant relationship between the two.

Conclusions

From the outcomes, working capital management in terms of working capital showed a positive link with financial performance. The positive regression coefficient showed that

working capital management had a positive effect on financial performance. Therefore, the study concludes that working capital management has a positive effect on financial performance of DTMFIs in Kenya. The DTMFIs in Kenya that maintain a high working capital ratio experience high levels of financial performance reflected in high returns in their assets. However, DTMFIs with low levels of working capital display low levels of financial performance.

The findings also showed that NPLs had a negative effect on financial performance on financial performance. The outcomes also showed that increase in non-performing loans would lead to reduced financial performance. Therefore, NPLs have a negative effect on financial performance on financial performance of DTMFIs in Kenya. This shows that an increase in NPLs eroded the financial performance of DTMFIs in Kenya. Therefore, a high level of NPLs in their loan's portfolio would be reflected in low returns on assets.

The outcomes also showed capital structure as measured by debt ratio had a positive but insignificant effect on financial performance. Therefore, a change in capital structure had no effect on significant effect on financial performance. This study concludes that capital structure has no insignificant effect on financial performance of DTMFIs in Kenya. The DTMFIs with a high level of debt ratio may experience improved financial performance though not significantly. Hence, there is no difference in financial performance of DTMFIs in Kenya with high or low levels of debt ratio.

The outcomes also showed that capital adequacy had a positive effect on financial performance. Hence, increased capital adequacy led to increased financial performance among the firms. Therefore, capital adequacy has a positive effect on financial performance of DTMFIs in Kenya. This indicates that firms with higher capital adequacy were better positioned to enhance their financial outcomes. Consequently, the study confirms that capital adequacy plays a significant role in driving the financial performance of DTMFIs in Kenya, suggesting that maintaining adequate capital levels is crucial for the financial health of these institutions.

Recommendations

Since effective working capital management was found to significantly enhance financial performance, DTMFIs should aim to optimize the management of short-term assets and liabilities. Institutions should maintain an appropriate working capital ratio by ensuring sufficient liquidity to meet short-term obligations while avoiding excessive idle resources. This can be achieved by improving cash flow forecasting, speeding up the collection of receivables, and negotiating favourable payment terms with suppliers. Such practices will help enhance the return on assets and improve overall financial stability.

The study indicated that high NPL ratios negatively affects financial performance, highlighting the need for DTMFIs to reduce default rates. To address this, institutions should adopt more stringent credit assessment procedures, implement robust loan monitoring systems, and offer financial literacy training to clients. Additionally, developing early intervention strategies for struggling borrowers, such as loan restructuring or rescheduling, can help improve loan recovery and minimize the adverse effects of bad debts on profitability.

Although capital structure showed a positive coefficient, its effect on financial performance was not statistically significant. Nevertheless, DTMFIs should optimize their capital structure to manage financial risks effectively. Institutions should avoid excessively high debt ratios, which can increase financial strain and interest costs, potentially outweighing any benefits from leveraging. The DTMFIs should reduce their debt burden through gradually paying down high-interest loans or refinancing debt under more favourable terms. Additionally, balancing debt with equity financing can help maintain a sustainable capital structure that supports growth while managing financial risks.

The positive relationship between capital adequacy and financial performance emphasizes the importance of maintaining a strong capital base. DTMFIs should ensure compliance with regulatory capital requirements and consider building up additional reserves to cushion against potential losses. Strategies such as retaining earnings, issuing new equity, or accessing long-term funding can help boost capital adequacy. Maintaining sufficient capital not only supports financial stability but also enhances the institution's ability to absorb shocks and sustain growth.

From the limitations, this research suggests further research on the topic based on non-deposit taking microfinance institutions for comparison of outcomes. Similar research is recommended in other financial institutions like banks and FinTech firms. A similar study is also recommended based on other factors, other than WCM, influencing financial performance of DTMFIs in Kenya. Additional research is needed involving other measures of WCM and financial performance for comparison of results. Further, a similar study is recommended based on quarterly or semi-annual data that is balanced. This will enable the readers to compare how the effect would change.

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