Cash Management and Financial Value of Commercial Banks in Kenya

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Abstract

Purpose: The concept of firm value has become a great concern to shareholders, managers, potential investors, creditors and other stakeholders globally since it measures the firm's worth and posits a positive public image. Despite measures put in place to improve cash management, the commercial banks in Kenya general performance is on a downward trend this therefore has a negative impact of the financial value of commercial banks. The main objective of the study was to assess the effect of cash management on the financial value of commercial banks in Kenya.

Methodology: The study was guided by Cash conversion theory. The study employed correlation research design on the panel data collected over a span of 10 years. The target population was 38 commercial banks in Kenya. A secondary data collection sheet was used to document information from audited financial statements downloaded from Nairobi stock exchange and Central bank of Kenya websites. Normality was tested through Shapiro –Wilk and confirmed. Stationarity was tested using Levin-Lin-Chu test and results confirm stationarity. Multicollinearity was assessed through Variance inflation factors and found to be within the range of less than 10, thus Multicollinearity established to be absent in the independent variables. Heteroscedasticity was tested through Breach – Pagan test. The probability of Chi-square of 2 degrees of freedom is $0.21 > 0.05$ at 5% level of significance confirming homoscedasticity. Auto-Correlation was tested by using Durbin-Watson test.

Findings: The results depicted a value of 1.988 which confirms no autocorrelation. Descriptive statistics comprised of mean, standard deviation and variance. The overall descriptive statistics show high variation between the dependent and independent variables among different commercial banks. Inferential statistics comprised of Pearson's correlation analysis and Random Effects Model. The Pearson's correlation coefficient depicts $r = 0.48$ with a p-value of 0.000 for financial value and cash management. The regression coefficients were established as 0.02, p-values < 0.05 for cash management and financial value showing that cash management had a significant positive influence on financial value of commercial Banks.

Recommendation: It was recommended that commercial banks should improve on income generation and return on assets. Efficiency in using fixed assets should be a key concern to commercial banks.

Keywords: *Cash management, Financial Value, Commercial banks*

1. INTRODUCTION

The financial performance and value of any organization is crucial dependent on the efficient management of working capital around the globe. Working capital management (WCM) ensures a company has sufficient cash flow to meet its short-term debt obligations and operating expenses. The concept of evaluation of a firm's value has become a great concern to the shareholders, managers, potential investors, creditors, and other stakeholders globally (Cytonn, 2021).

Free cash flow is a crucial influence on shareholders' firm value. Hence, companies, particularly in the current difficult economic times, are targeting working capital to lock cash invested in the business and invest in areas of higher value-added returns. Increasing profit at the cost of liquidity can bring severe problems to the firm; hence, a firm must adopt a strategy where a balance will be maintained between these two objectives. Working capital management is one of the most critical areas while making liquidity and profitability comparisons among firms (Cytonn, 2021).

Working capital management is a critical factor in the organization's long-term success as affects its growth, sustainability profitability and liquidity and the value of the firm. Firm value is not only critical for ascertaining the book worth of the firm but also enhances industry value and the economy's prosperity (Kipkirui, 2018). Despite implementation of various working capital management strategies, commercial banks general performance is on a downward trend this therefore has a negative impact of the financial value of commercial banks.

The banking sector registered decline in performance in 2020 with profit before tax decreasing by 29.5 percent from Ksh.159.1 billion in 2019 to Ksh.112.2 billion in 2020(CBK, Annual report and Financial Statement, 2018/2019). The banks gross Non-Performing Loans increased by 12.6 percent from KShs. 298.4 billion in June 2018 to KShs. 335.9 billion in June 2019. In the year 2019/2020, profitability in the banking sector declined by 17.2 percent in the year ended June 30, 2020. Total expenses increased by 11.9 percent to KShs. 404.1 billion in June 2020 due to a 150.8 percent increase in bad debts (CBK, Annual report and Financial Statements, 2020/2021)). Decrease in profitability decreases firm's financial value and shareholders' wealth. Researches done have majorly concentrated on working capital and financial performance and the aspect of a firm's value has been ignored yet it's a key factor especially for firms trading in the stock exchange as this will have an effect on market prices of shares and shareholders' wealth. Therefore, the need to establish the effect of payable management, receivables management and cash management on the value of commercial banks in Kenya.

2. LITERATURE REVIEW

2.1 Theoretical Literature Review

The study was guided by cash conversion theory, transaction cost theory and contingency.

2.2.1 Cash Conversion Theory

This theory was developed by Gitman (1974). The theory focuses on the inflows of cash from the sale of finished goods and the length of time between the acquisitions of raw materials. The cash conversion theory combines both balance sheet and income statement data to create a measure with a time dimension making it more dynamic as a measure of liquidity management. In most cases, a company acquires inventory on credit, which results in accounts payable. The cash conversion cycle is the most crucial aspect of working capital management. Recognizing the growing demand for help in managing the cash flow cycle, they proposed to use the cash conversion cycle as a benchmark to investigate improvement opportunities and a tool in the negotiations with suppliers and customers.

2.2 Empirical Literature Review

Kangangi and Omagwa (2020) did a study aimed to study was to determine the effect of working capital management practices on Growth of Small and Medium Enterprises in Nyeri County, Kenya. The target population comprised of a total of 841 SMEs operating in Nyeri County, Kenya. Proportionate stratified random sampling was used to select a sample of 89 SMEs. The study found that cash management practices had positive and statistically significant effect on the growth of SMEs (p= 0.000); debtors' management practices had a positive and statistically significant effect on the growth of SMEs (p=0.000). Additionally, creditors management practices had a positive but statistically insignificant effect on the growth of SMEs (p=0.196) whereas inventory management practices had a positive but statistically insignificant effect on the growth of SMEs (p= 0.263).

Mwariri (2020) did a study with the objective of this study was to assess the association of working capital management practices and financial distress of firms publicly listed at the Nairobi Security Exchange (NSE). The total population of this study will be all the 67 publicly listed in Kenya. Purposive sampling was adopted in selection of 25 firms listed in manufacturing and related sectors. Collected data was analyzed through descriptive and inferential statistics. Descriptive statistic included mean, minimum, maximum, standard deviation, skewness and kurtosis. Inferential statistics included Pearson correlation and regression modelling. Data was analyzed using Stata 14. Study findings documented that cash conversion period had negative association with financial distress of listed companies in NSE.

Wanjala (2015) in a study was set out to establish the relationship between working capital management and dividend payout ratio of listed firms in Nairobi securities exchange used correlation research design was utilized and the target population of 62 firms listed in Nairobi securities exchange for a period of eight years from (2006-2013). Data collected was analyzed using a multiple regression model and Pearson correlation analysis. Findings of the study indicated that efficient management of working capital leads to better dividend payout ratio. Cash conversion cycle indicated a positive relationship of 0.022.

Ogola (2021) in a study titled "Working Capital Management and Financial Performance of Deposit Taking Microfinance Institutions in Mombasa County, Kenya" used descriptive research design on all the five Deposit Taking Microfinance Institutions in Mombasa County, Kenya. Primary data was collected using questionnaires while secondary data was obtained from audited annual financial reports. Descriptive statistics was applied in the analysis of qualitative data. Inferential statistics of Pearson product-moment Correlation, Regression and Chi square were obtained. From the findings of the study, the Pearson Correlation test revealed a correlation of 0.516, 0.391 and -0.325 for Cash Turnover, Accounts Receivable Turnover and Accounts Payable Turnover respectively against Return on Assets.

2.3 Conceptual Framework

Independent Variable **Dependent Variable**

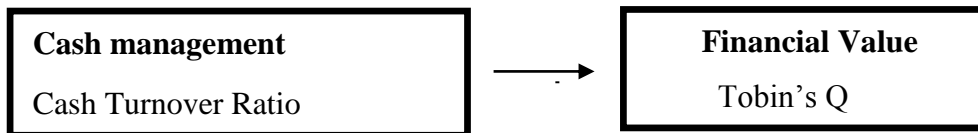**Working Capital Management**

Figure 1: Conceptual Framework (Researcher, 2022)

3. MATERIAL AND METHODS

3.1 Research Philosophy

This study was guided by positivism. Positivism was appropriate for this study because data collected requires quantitate analysis. It helped in establishing the relationship between the constructs of working capital and financial value of the commercial banks.

3.2 Research Design

This study employed correlation research design on the panel data. Since the data was purely quantitative, the design was most appropriate to enable the study to establish the link between working capital management and the value of commercial banks.

3.3 Target Population

The target population was 38 commercial banks in Kenya as per CBK report 2022.Other banks which were under receivership or those that had collapsed were not included.

3.4 Sample Population

Census was adopted thus all the 38 commercial banks were used in the study to establish the relationship between working capital management and financial performance of commercial banks and financial value so as to be objective enough to conclude and generalize for the whole country.

3.5 Research Instrument

Secondary data was collected by use of secondary data collection sheet so as to enable documentation of information required from audited financial statements of commercial banks.

3.6 Data Collection Procedure

Audited financial statements were downloaded from Nairobi securities exchange (NSE) and from CBK website. The required data was extracted from financial statements ranging from the financial year ended 31st December 2012 to financial year ended 31st December 2021.This was then tabulated in a data collection sheet

3.7 Data Analysis and Presentation

Data was sorted and cleaned then later exported to STATA to aid in analyzing descriptive and inferential statistics from the panel data. Diagnostic tests were done to establish suitability of the data. Normality was tested through Shapiro –Wilk. Stationarity was tested using Levin- Lin-Chu test. Multicollinearity was tested by use of Variance inflation factors. Heteroscedasticity was tested through Breuch- Pagan test. Durbin – Watson test was used to test the autocorrelation of error terms. Descriptive statistics comprised mean, standard deviation and variance. Inferential statistics

comprised of Pearson's correlation and Hausman test for random effects. Data was presented using tables. The model is presented in equation 1.

$$FV_{it}= \alpha + \beta_1 CM_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{(1)}$$

$\alpha =$ Regression constant

$\beta_1 =$ Panel regression coefficients

CM= Cash Management

FV= Firm Value

i = 38 Commercial Banks

t = Time period from 2012-2021

ε= Error term

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

Mean, standard deviation, minimum and maximum were run to establish the behavior of the independent and dependent variables. The results are shown on Table 4.1.

Table 1: Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Financial Value	380	3.773456	3.228091	.15	13.82263
Cash Mgt	380	5.14771	14.16165	.0902711	121.2626

The study period ran from 2012 to 2021 giving a 10-year span with 38 observations for each bank. This produced a panel total of 380 observations over the 10-year period. The standard deviation of financial value was established as 3.23. The mean was 3.77 with a minimum of 0.15 and a maximum of 13.82. This means that some of the banks had a very low financial value this may discourage investors as the bank is seen to be riskier to invest in thus share prices may drastically go down. Some banks however, some banks a higher financial value during the period. Such banks are likely to benefit from high investments and increase in share prices thus increasing shareholders' wealth. Generally, the financial value fluctuated over the ten years.

For cash management, the average was 5.15 while the standard deviation of 14.16 shows that there was a wider variation as evidenced by the minimum value of 0.09 and maximum value of 121.26 The variation means that, some of the banks has low cash flow which is a threat to effective operation, while others had higher cash flow which it indicates a greater frequency of cash replenishment through revenue that could be used in other investments.

4.2 Diagnostic tests

Preliminary tests were done to establish whether the data set was fit for analysis. These are discussed below.

4.2.1 Normality Test

Shapiro-Wilk test was used to test normality. Table 2 shows that the p-values of all variables are greater than 0.05 at 95% degree of confidence, thus the study failed to reject the hypothesis that data the variables of cash management and financial value was normally distributed.

Table 2: Shapiro Wilk Normality test

Variables	Obs	W	v	z	Prob>z
Cash Mgt	380	0.97996	1.376	0.699	0.24224
Financial Value	380	0.97094	1.995	1.513	0.06517

4.2.2 Stationarity Test

To confirm reliability and validity of the data, stationary test was done using Levin-Lin-Chu test. This test is based on null hypothesis that the variables are not stationary. Table 3 shows that all the p-values were less than 0.05 at 95% confidence level, while the t statistics were less than -1.966 t-critical value, hence the study rejected the null hypothesis that all variables were not stationary at 5% significant level.

Table 3: Levin-Lin-Chu unit-root Test

Variable	Panels	Periods	Test Statistic	P-value
Cash Mgt	38	10	-2.6015	0.0046
Financial Value	38	10	-5.1006	0.000

4.2.3 Multicollinearity Test

To assess Multicollinearity, the Variance inflation factors (VIFs) were calculated for each independent variable and the reciprocals (tolerances). Table 4 shows that the VIF of all the variables seem to within the range of less than 10 and the 1/VIF>0.1, there is no case of Multicollinearity in the independent variables. Thus, the variables can be used alongside each other.

Table 4: Variance Inflation Factors

Variable	VIF	1/VIF
Cash Mgt	1.01	0.990902
Mean VIF	1.43	

4.2.4 Test of Heteroscedasticity

Breuch – Pagan test was used to assess the homoscedasticity of data distribution with the null hypothesis that variables were constant at 95% confidence level. The results are shown in Table 5 show that the probability of Chi-square of 3 degrees of freedom is $0.2057 > 0.05$ at 95% confidence level. Thus the study failed to reject the null hypothesis that variables were constant.

Table 5: Breusch-Pagan / Cook-Weisberg test for heteroscedasticity

H_0: Constant variance
Variables: fitting values of firm value
chi2 (1)   =   1.60
Prob > chi2 = 0.2057

4.2.5 Test of Auto-Correlation

Independence of error terms, which implies that observations are autonomous, was evaluated through the Durbin-Watson test. Durbin Watson (DW) test check that the residuals of the models are not auto-correlated. Hypothesis test comprises H_0: There is no evidence of autocorrelation. From table 6, the value for Durbin-Watson of 1.998 confirms no autocorrelation.

Table 6: Durbin- Watson Test

F-statistic	10.14271	Prob. F (3,493)		0.0000
Obs * R-squared	19.79990	Prob. Chi-Square (3)		0.0001
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
Cash Mgt	-0.000300	0.000645	-0.465306	0.6419
Financial value	0.000679	0.000724	0.937431	0.3490
R-squared	0.039507	Mean dependent variance		0.000912
Adjusted R-squared	0.025869	S.D. dependent variance		0.243237
S.E. of regression	0.240070	Akaike info criterion		6.57E-05
Sum squared residual	28.41334	Schwarz criterion		0.067397
Log likelihood	7.983548	Hannan-Quinn criterion.		0.026484
Durbin-Watson stat	**1.998048**			

4.2 Inferential statistics

4.2.1 Correlation Analysis

Pearson correlation analysis a parametric test whose correlation coefficients (r) value range between -1 and 1 ($-1 \leq r \leq 1$) was used to test the association between the variables. The results are shown on Table 7. The relationship between the financial value and cash management which were established to be r = 0.4761 with a p-value of 0.0000 for financial value and cash management this imply that cash management has a significant strong positive association with financial value.

Table 7: Pearson Correlation Coefficients

Variable	Financial Value	Cash Management
Financial Value	1.0000	
Cash Management	0.4761*	1.0000
	(0.0000)	

4.2.2 Fixed Effect Model

The Fixed Effects regression model is used to estimate the effect of intrinsic characteristics of individuals in a panel data set. Such factors are not directly observable or measurable but one needs to find a way to estimate their effects since leaving them out leads to a sub-optimally trained regression model. If the fixed effects assumption holds, then fixed effects estimator is more efficient than the random effects model. The results are shown in Table 8.

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Table 8: Fixed effect model

Firm Value	Coef.	Std. Error.	T	p>|t|	Prob > f	R-squared
Cash Mgt	.0222451	.0195445	1.14	0.256	0.0000	0.3049
Constant	-3.212459	.8283435	-3.88	0.000		

4.2.3 Random Effect Model

A random-effects model assumes that explanatory variables have fixed relationships with the response variable across all observations, but that these fixed effects may vary from one observation to another. If the random effects assumption holds, the random effects estimator is more efficient than the fixed effects model. The results are as shown in table 9

Table 9: Random effect model

Firm Value	Coef.	Std. Error.	Z	p>|z|	Prob > chi2	R-squared
Cash Mgt	.0222451	.0195445	2.05	0.041	0.0000	0.3143
Constant	-3.075487	.8729562	-3.52	0.000		

4.2.4 Hausman's Test

Hausman's test was run to identify the appropriate model between fixed effect and random effect. In this case, Random effects is preferred under the null hypothesis due to higher efficiency, while under the alternative Fixed effects is at least as consistent and thus preferred. The Hausman's test was based on the null hypothesis that random effect model is appropriate while the alternative hypothesis was that the fixed effect model was appropriate. Results are shown on table 10.

Table 10: Hausman test results

ROA	(b)	(B)	S.E.	$p > \left| Chi^2 \right|$
	fe	re		
Cash Mgt	.0222451	.0222451	-.0105504	0.2872

b = consistent under null hypothesis; random effect appropriate

B = inconsistent under alternative hypothesis; fixed effect appropriate

According to Hausman tests the value for probability is 0.2872 which is greater than 0.05 thus, insignificant. Therefore, the study failed to reject the null hypothesis that the random effect model is appropriate. The regression model was thus presented in equation 2.

FV_{it} = -3.212459 + 0.0222451 CM_{it}…….………………………………………...………. (2)

The regression coefficients 0.0222 with p-values 0.000 < 0.05 for all the three independent variables cash management show that cash management had a significant positive influence on financial value of commercial Banks in Kenya. The findings are in line with Kangangi and Omagwa (2020), Mwariri (2020), Wanjala (2015) and Ogola (2021) who all established positive and significant relationship between cash management and financial value of commercial banks in Kenya

4.2.5 Discussion

The overall regression results show an R^2 of 0.3049 which imply that working capital components explain 31.43% of the variations in the financial value of commercial banks in Kenya. The other 68.57% of the variations in financial value of commercial banks in Kenya is not explained by the model but other factors that are not included in the model. C= -3.212459 imply that in the absence of working capital management, financial value would decrease by 3.212. Pearson's correlation coefficient was established to be r = 0.4761 with a p-value of 0.0000 for financial value and cash management this imply that cash management has a significant strong positive association with financial value. The random effect results having a regression coefficient of 0.0222, and P value of 0.041 < 0.05 shows that cash management has a significant positive influence on financial value of commercial banks. This indicates that a percentage increase in cash management will led to 2.22% increase in financial value of commercial banks. This means that if commercial banks improve on income generation and return on assets, the financial value of commercial banks will greatly improve. The study therefore rejected the null hypothesis that cash management has no significant effect on the financial value of commercial banks in Kenya.

5. CONCLUSION

Positive Pearson's correlation coefficient and regression coefficient indicates that a percentage increase in cash management will lead to an increase in financial value of commercial banks. This means that if commercial banks improve on income generation and return on assets, the financial value of commercial banks will greatly improve.

6. RECOMMENDATIONS

Since cash management has a significant positive influence on financial value of commercial banks. It was recommended that commercial banks should improve on income generation and return on assets. Efficiency in using fixed assets should be a key concern to commercial banks. Expenses particularly should be minimized and only incurred if necessary so as to increase net income for each period. Cash and cash equivalents should be maintained at optimal levels as any excess may hold too much current assets which could have been invested elsewhere.

7. ACKNOWLEDGEMENTS

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