Effects of Working Capital Management on Performance of Non-Financial Companies Listed In NSE, Kenya

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Abstract

The purpose of this study was to investigate the effect of working capital management on the performance of non-financial companies listed in the Nairobi Securities Exchange (NSE), Kenya. The study employed an explanatory non-experimental research design. A census of 42 non-financial companies listed in the Nairobi Securities Exchange, Kenya was taken. The study used secondary panel data contained in the annual reports and financial statements of listed non-financial companies. The data were extracted from the Nairobi Securities Exchange hand books for the period 2006-2012.The study applied panel data models (random effects). Feasible Generalised Least Square (FGLS) regression results revealed that an aggressive financing policy had a significant positive effect on return on assets and return on equity while a conservative investing policy was found to affect performance positively. The study recommended that managers of listed non-financial companies should adopt an aggressive financing policy and a conservative investing policy should be employed to enhance the performance of non-financial companies listed in the NSE, Kenya.

Key words: working capital management, performance, non-financial companies

1. Introduction

Working capital management refers to investment in current assets and current liabilities which are liquidated within one year or less and is therefore crucial for firm's day-to-day operations (Kesimli&Gunay, 2011). Working capital is the money needed to finance the daily revenue generating activities of the firm. According to Vahid, Mohsen and Mohammadreza (2012) working capital management plays a significant role in determining success or failure of firm in business performance due to its effect on firm's profitability as well on liquidity. Business success depends heavily on the ability of financial managers to effectively manage the components of working capital (Filbeck& Krueger, 2005). A firm may adopt an aggressive or a conservative working capital management policy to achieve this goal.

According to the NSE (2010), a number of public and private companies have been under statutory management in the last decade, including the Kenya Planters Co-operative Union KPCU (2010), Ngenye Kariuki Stockbrokers (2010), Standard Assurance (2009), Invesco Assurance (2008), Hutchings Beimer (2010), Discount Securities (2008), Uchumi Supermarkets (2006), and Pan Paper Mills (2009). Uchumi supermarket Ltd annual report (2005, pp 10) reported that the company had a tight cash flow position that made it difficult for the company to maintain supplier relations and consistent supplies. This condition led to loss of customers to competition and worsened the cash flow position which resulted into receivership. It is therefore worth investigating the effect of working capital management policy on performance.

Statement of the problem

Business success depends heavily on the ability of financial managers to effectively manage the components of working capital (Filbeck& Krueger, 2005). All public and private companies such as Hutchings Biemer, Pan Paper Mills, and Uchumi Supermarkets Ltd that have been put under statutory management (NSE, 2010),in the last decade had liquidity problems and were unable to pay their short term financial obligations as and when they fell due. Where they exist, studies conducted in Kenya to explore the effect of working capital management on performance have not addressed aggressive /conservative working capital management practices. For instance, Nyamao *et al.* (2012) considered working capital management in terms of efficiency of cash, inventory and receivables management, while Mathuva (2009) considered working capital management in terms of the operating cycle. It is against this background that this study was carried out.

2. LITERATURE REVIEW

Modern theories offer two alternative strategies of working capital management, that is, conservative working capital management policy and aggressive working capital management policy. The literature contains an extensive debate on the risk/return trade-off among different working capital policies (Gitman, 2005; Moyer *et al*., 2005; Brigham & Ehrhardt, 2004). While more aggressive working capital policies are associated with higher returns and risk, conservative working capital policies offer both lower risk and returns (Gardner *et al*., 1986; Weinraub&Visscher, 1998).

Nyamao, Lumumba, Odondo and Otieno (2012) conducted a study to investigate the effects of working capital management practices on the financial performance of small-scale enterprises (SSEs) in Kisii South District, Kenya. The study, which adopted a cross-sectional survey research design, found that working capital management practices were low amongst SSEs as majority of them had not adopted formal working capital management routines. Similarly, their financial performance was on a low average. The study concluded that working capital management practices influence the financial performance of small scale enterprise. The study relied on primary qualitative data to measure the working capital management practices, but the present study measured working capital management in terms of aggressiveness/conservatism using secondary quantitative data. The findings of the study also required validation in other areas of the country and among companies listed in the NSE.

Similarly, Ogundipe,Idowu and Ogundipe (2012) conducted a study to examine the impact of working capital management on the performance and market value of companies. The study used Tobin Q, ROA, EBIT, and ROI as the dependent variables while the independent variables were cash conversion cycle; current ratio; current asset to total asset ratio; current liabilities to total asset ratio; and debt to asset ratio. Using correlation and multiple regression analysis techniques, the study established that a significant negative relationship exists between cash conversion cycle and market valuation and a firm's performance. The study, however, only focused on short-term financing decisions.

In another study, Vahid,Mohsen and Mohammadreza(2012) investigated the impact of working capital management policies (aggressive and conservative policies) on the firms' profitability and value of listed companies in the Tehran Stock Exchange. The study used panel data and operationalised working capital management policy as conservative/aggressive. The results of the study show that application of a conservative investment policy and aggressive financing policy has a negative impact on a firm's profitability and value. The study adopted the model used by Nazir and Afza (2009) to investigate the relationship between the working capital management policies and profitability of firms listed in the Karachi Stock Exchange (KSE). In their study, Nazir and Afza (2009) found a negative relationship between a firm's profitability and its financing policies. Thus, firms that adopt an aggressive working capital policy generate a lower rate of return than those adopting a conservative working capital policy. The present thesis borrowed the operationalisation of working capital management as applied in the two studies since Kenya has a different economic setting from Iran and India where the two studies were carried out.

Bhunia and Das (2012) conducted a study to examine the relationship between the working capital management structure and the profitability of Indian private sector firms. The independent variables used in the study were ratios that affect working capital management and included the following: current ratio, liquid ratio, cash position ratio, debt-equity ratio, interest coverage ratio, inventory turnover ratio, debtors' turnover ratio, creditors' turnover ratio, and working capital cycle. Return on capital employed was used as a proxy for profitability. Using multiple regression analysis, the study found a weak relationship between all the working capital management constructs and profitability. The study should, nevertheless, have been extended to identify the other factors that drive profitability in addition to working capital management.

In a study conducted to determine the effect of working capital management on profitability of Indian firms, Sharma and Kumar (2011) used a sample of 263 non-financial firms listed on the Bombay Stock Exchange during 2002 to 2008. Data were analysed using OLS multiple regression. The study found a positive relation between WCM and firm profitability, although the relationship between cash conversion cycle and ROA was not statistically significant. The study also found that account receivables are also positively related to ROA and that account payables are negatively related to ROA. The results assert that Indian firms can increase profitability by increasing cash collection cycle. This study contradicts other studies (Ogundipe,Idowu&Ogundipe, 2012; Dong,2010; Mathuva 2009). The authors attribute this difference to the fact that India is an emerging market.

A study by Dong and Su (2010) concluded that a firm's profitability and liquidity are affected by working capital management. The study used pooled data for the period between 2006 and 2008 to assess the companies listed in the Vietnam Stock Exchange. The study focused on cash conversion cycle and related elements to measure working capital management. The study found that the relationships among these variables were strongly negative, suggesting that profit is negatively influenced by an increase in cash conversion cycle. The study also found that profitability increases as the debtor's collection period and inventory conversion period reduce. The present study operationalised working capital management in terms of aggressiveness and conservatism as measured by the proportion of current liabilities to total assets and total liabilities.

Mathuva (2009) examined the influence of working capital management components on the profitability of 30 firms listed on the Nairobi Stock Exchange. The study used the cash collection cycle to measure working capital.

The present study, however, measured working capital management practices in terms of aggressive financing and aggressive investing working capital management practices. Mathuva applied the Pearson and Spearman's correlations, the pooled ordinary least squares, and the fixed effects regression models in data analysis. The study found a highly significant negative relationship between profitability and the time it takes for firms to collect cash from their customers. The study also found a highly significant positive relationship between profitability and the period taken to convert inventories to sales and the time it takes for firms to pay creditors.

Raheman and Mohamed (2007) carried out a study to analyse the impact of working capital management on firm's performance in Pakistan. The results of their study established that the cash conversion cycle, net trade cycle, and inventory turnover in days had a significant effect on the performance of the firms. They suggested that efficient management and financing of working capital can increase the operating profitability of manufacturing firms. They, therefore, assert that effective policies must be formulated for the individual components of working capital.

CONCEPTUAL FRAMEWORK
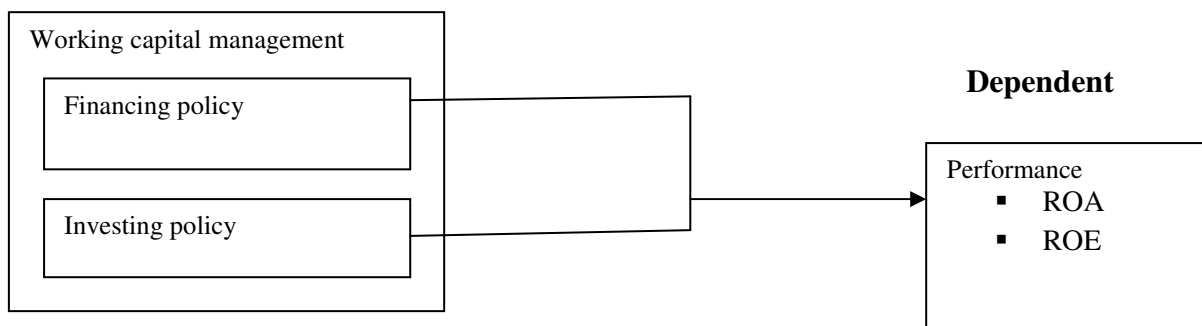
Independent variable

Figure 1.conceptual framework

HYPOTHESIS

i.   There is no significant relationship between financing policy and performance of non-financial companies listed in NSE, Kenya.

ii.   There is no significant relationship between investing policy and performance of non-financial companies listed in NSE, Kenya.

3. METHODOLOGY

3.1. Research Design

This study adopted an explanatory non-experimental research design to analyse the effect of financing decisions on performance of non-financial companies listed in the NSE, Kenya. Explanatory research seeks to establish causal relationship between variables (Saunders *et al., 2009 &*Robson 2002,). According to Kerlinger& Lee (2000) an explanatory non-experimental research design is appropriate where the researcher is attempting to explain how the phenomenon operates by identifying the underlying factors that produce change in it in which case there is no manipulation of the independent variable. This study was therefore explanatory non-experimental seeking to establish the relationship between financing decisions and performance.

3.2. Empirical Model

$$ROA_{it} = \alpha + \beta_1(TCL/TA)_{it} + \beta_2(TCA/TA)_{it} + \beta_3 Size_{it} + \beta_4 GDPGR_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

$$ROE_{it} = \alpha + \beta_1(TCL/TA)_{it} + \beta_2(TCA/TA)_{it} + \beta_3 Size_{it} + \beta_4 GDPGR_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(2)$$

Where:

ROA_{it} = Return on assets of company*i* at time *t*

ROE_{it} =Return on equity of company *i* at time *t*

$(TCL/TA)_{it}$ = Total current liabilities to total assets ratio (financing policy) of company *i* at time *t.*

$(TCA/TA)_{it}$= Total current assets to total assets ratio (investing policy) of company i at time t.

$Size_{it}$= size of the company (measured as logarithm of total assets) of company i at time t.

$GDPGR_{it}$= Gross Domestic Product growth rate

α= Constant term

β^s are coefficients of the explanatory variables

ε_{it}= composite error term

Table 1: Operationalisation and Measurement of Study Variables

Category	Variable	Operationalisation	Measurement	Hypothesised direction
Dependent variable	Performance	Return on assets(ROA).The profit generated by each one shilling invested in assets	$EBIT/TotalAssets$ (Pratheepkanth,2011;Ebaid,2009; Abor, 2005)	Positive/negative
		Return on equity (ROE). Measuring the returns to shareholders	$EBIT/Equity$ (Pratheepkanth,2011;Ebaid,2009; Abor, 2005)	Positive/negative
Independent variable	Working capital management	Financing policy	$totalcurrentliabilities/TotalAssets$ A higher ratio indicates a relatively higher aggressive financing policy (Nazir&Afza,2009;Vahid, Mohsen & Mohammadreza,2012)	Positive/negative
		Investment policy	$totalcurrentliabilities/TotalAssets$ A lower ratio means a relatively aggressive investment policy (Nazir&Afza,2009;Vahid, Mohsen & Mohammadreza,2012)	Positive/negative
	Size	This is a proxy for the size of the company listed at NSE	It was measured by taking the logarithm of total assets of each company (Nazir&Afza,2009)	Positive/negative
	GDP growth rate	Economic environment of a country	It was measured by the annual percentage growth rate of GDP at market prices based on constant local currency (Nazir&Afza,2009)	Positive/negative

Source: Researcher (2013)

3.3. Target Population
The target population of the study comprised of all non-financial companies listed in the Nairobi Securities Exchange (NSE). The NSE had 44 non-financial companies as at 31st December 2012. The companies in the financial sector were excluded from the study to remove any anomalies associated with this sector which is highly regulated by the central bank prudential on issues of liquidity, asset and capital holding, and provision for bad debts among other factors (Santos, 2001). The study adopted a census approach because of the small number of non-financial companies in the NSE. According to (Saunders, Lewis &Thornhill 2009) a census approach enhances validity of the collected data by including certain information-rich cases for study. The total numbers of non-financial listed companies in the NSE used in the study were 42.

3.4. Data Collection Procedure
The study utilised panel data which consisted of time series and cross-sections. A combination of time series with cross-sections enhances the quality and quantity of data to levels that would otherwise be impossible to

achieve with only one of the two dimensions (Gujarati, 2003). The data for all the variables in the study were extracted from published annual reports and financial statements of the listed companies in the NSE covering the years 2006 to 2012.The data was obtained from the NSE hand books for the period of reference. The specific financial statements from which data were extracted include the income statement, statement of financial position, and notes to the accounts. The researcher used a document review guide to extract and compile the required data for analysis from the financial statements.

3.5. Data Analysis Method

The data obtained were analysed using descriptive statistics, correlation analysis, and panel multiple regression analysis. The panel methodology was aided by STATA 11.0 software. Descriptive statistics were used to summarise and profile the status of working capital management policies (WCMP) and performance among companies listed in the NSE. Feasible Generalised Least Square estimation was performed after accounting for various violations of classical linear regression assumptions. The Hausman specification test was used to determine the appropriate model for estimating the panel data in the study.

4. EMPIRICAL RESULTS

4.1 Descriptive Statistics

Table 1 presents the descriptive statistics for the data used in the analysis.

Table 2: Descriptive Statistics

Variable	Observation	Mean	Std. Deviation	Min	Max
Return on assets	280	0.1172809	0.2963635	-1.614589	3.167213
Return on equity	281	0.1415472	1.252394	-18.11016	6.252167
Financing policy	281	0.3210174	0.2857892	0	2.762324
Investing policy	281	0.497626	.6554207	0.0025644	9.616251
GDP growth rate	282	4.580205	1.821908	1.528	6.99329
Total assets	282	18,400,000	39,300,000	0	307,000,000

Source: Study data (2013)

As indicated in table 2, the mean value of return on assets for 280 observations was 0.1172809 with a standard deviation of 0.2963635 and minimum and maximum values of -1.614589 and 3.167213 respectively. The positive return on assets indicates that the companies were on average profitable although some companies were operating at a loss as reflected in the negative minimum observed value of return on assets. The mean value for return on equity was 0.1415472 with a standard deviation of 1.252394 and minimum and maximum values of -18.11016 and 6.252167 respectively for 281 observations. The negative minimum value observation for return on equity signifies that some companies were operating at a loss.

The results in table 2 further indicate that, total current liabilities to total assets ratio (working capital management 1) had a mean value of 0.3210174 with minimum and a maximum values of 0 and 2.762324 respectively. This observation indicates that the companies used less current liabilities to finance assets build-ups. These results suggest that non-financial companies investigated followed a conservative financing working capital management policy. The maximum, value of 2.76234, however, indicates that there was a company that had adopted an extremely aggressive financing working management policy in which the value of current liabilities was almost three times the value of total assets.

The results output shown in table 2 indicate that the mean value of total current assets to total assets ratio(working capital management 2) was 0.497626 with minimum and maximum values of 0.0002 and 9.616251 respectively. The mean value indicates that, on average, companies were neither very aggressive nor excessively conservative in their investing working capital management practices. The maximum observation of 9.616251 indicate that there was a company during the period under study that was following an extremely conservative investing working capital management policy by holding high levels of investment in current assets.

During the period covered by the study from 2006 to 2012, the Kenyan economy grew on average by 4.580205 with minimum and maximum growth rates of 1.528 and 6.99329 respectively. Finally, the mean for the total

assets for the firms under consideration was Kshs 18,400 million with a standard deviation of Kshs 39,300 million. The maximum value of the asset for the period covered was Kshs 307,000 million while the minimum value was zero.

4.2. Diagnostic Test Results

This section presents the results of the following diagnostic tests: test of multicolleniarity, autocorrelation test, panel unit root test, and Hausman specification test.

Table 3: Correlation Matrix

	Aggressive financing policy	Aggressive investing policy	Size	GDP growth rate
Financing policy1	1.0000			
Investing policy2	0.4973	1.0000		
Size	0.0297	-0.0298	1.0000	
GDP growth rate	-0.0579	0.0542	-0.0931	1.0000

Source: Study data (2013)

As presented in table 3, the study used a correlation matrix to test for multicollinearity. The explanatory variables used in this study were total current liabilities to total assets ratio (working capital management 1) and total current assets to total assets ratio (working capital management 2). Size of the company and GDP growth rate were used as control variables. The results indicate that the correlation coefficients for all variables were less than 0.8 implying that the study data did not exhibit severe multicollinearity as recommended by (Gujarati, 2003; Cooper & Schindler, 2008).

Autocorrelation Test Results
Table 4: Test for Autocorrelation

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

$F(1, 39) = 93.710$

Prob > F = 0.0000

The study used the Wooldridge test for autocorrelation to test the presence of autocorrelation in the data and the results are presented in table 4. The null hypothesis of this test was that there was no first order autocorrelation in the data. The test statistic reported was F test with one and thirty nine degrees of freedom and a value of 93.710. The p-value of the F test was 0.0000 implying the F test was statistically significant at 1 percent level. The results therefore indicate that there was a problem of first order autocorrelation in the data. Subsequently, the study corrected for this violation of classical linear regression model assumption by employing FGLS estimation approach.

Heteroskedasticity Test Results
Table 5: Test for Heteroskedasticity

Likelihood-ratio test	LR chi Square (42) = 605.30
(Assumption: homosk nested in hetero)	Prob > chi2 = 0.0000

The study tested for panel level heteroskedasticity using the Likelihood Ratio (LR) as shown in table 5. The null hypothesis of this test was that the error variance was homoskedastic. The likelihood-ratio test produced a chi-square value of 605.30 with a p-value of 0.0000. The chi-square value was statistically significant at 1 percent level and hence the null hypothesis of constant variance was rejected to signify the existence of heteroskedasticity in the study data as recommended by Poi and Wiggins (2001). The study consequently employed the FGLS estimation technique to take care of this problem.

Panel unit root test

Panel unit root test was applied for all variables used in the analysis in order to avoid spurious regression results. The study applied Fisher-type test because it has more advantages than other panel unit root tests. The Fisher-type unit root test requires specification of Dickey-Fuller to test whether a variable has unit root. The study

therefore concluded that all the variables under consideration did not have unit root and were therefore used in levels instead of their first difference. This means that the results obtained were not spurious (Gujarati, 2003).

Hausman test

In order to choose between fixed and random effects model for model 1(ROA), the Hausman test was used. The null hypothesis of the Hausman test was that the random effects model was preferred to the fixed effects model. For ROA model, Hausman test reported a chi-square of 2.13 with a p-value of 0.9073 implying that at 10 percent level, the chi-square value obtained was statistically insignificant. The researcher therefore failed to reject the null hypothesis that random effects model was preferred to fixed effect model for ROA as recommended by Greene (2008).

In order to choose between the fixed and random effects models for model 2 (ROE), the Hausman test was used. The null hypothesis of the Hausman test was that the random effects model was preferred to the fixed effects model. Hausman test reported a chi-square value of -13.96 with a p- value of 0.106 implying that the chi-square value was statistically insignificant at 10 percent level of significance. This finding is also reinforced by the negative values of Chi-square implying a strong evidence of accepting the null hypothesis. Hence the researcher did not reject the null hypothesis that random effects model was preferred to fixed effect model for ROE model as recommended by Greene (2008). Thus the researchers applied the models using random effects. Having chosen random effects model as indicated by the Hausman test, the researcher then tested whether the data had panel effects. The researcher employed the Breusch-Pagan Lagrangian multiplier test for random effects. The study concluded that there were panel effects for both ROA and ROE. Thus to account for panel effects the study used random effects model as opposed to simple OLS model for both ROA and ROE as recommended by Greene (2008) and Breusch and Pagan (1980).

4.3. Hypothesis Testing

The various diagnostic tests performed during the study revealed that return on assets; return on equity; financial leverage; total current liabilities to total assets ratio; total current assets to total assets ratio; size of the company and GDP growth rate did not have unit root thus the study ran them in levels. Further, the tests indicated that the data had both autocorrelation and heteroskedasticity thus the study estimated equations 1 and 2 in Feasible Generalized Least Square in order to account for the problem. The estimation results for equations 1 and 2 are presented in Table 7 and Table 8.

4.3.1. FGLS Regression with ROA as the dependent variable

Using ROA as the dependent variable, the study considered a set of hypotheses pertaining to the relationship between performance of non-financial firms listed on the NSE and financial leverage, working capital management, and dividend policy. As indicated in Table 6, return on assets was regressed on total current liabilities to total assets ratio (working capital management policy 1), total current assets to total assets ratio, size of the company, and GDP growth rate.

Table 6: FGLS Regression Results (Dependent variable: ROA)

Variable	Coefficient	Standard Error	Z	P>z
Financing policy	0.1174164*	0.0283824	4.14	0.000
Investing policy	0.0335097**	0.0139033	2.41	0.016
Size	0.0018864	0.0029528	0.64	0.523
GDP growth rate	0.0034529**	0.0015597	2.21	0.027
Constant	0.0252196	0.0497393	0.51	0.612
Wald Chi Square (6) = 55.27 Prob> chi2 = 0.0000 (*), (**) and (***) denote 1%, 5%, and 10% levels of significance respectively				

Source: Study data, 2013

The regression results shown in table 6 indicate that total current liabilities to total assets ratio (working capital management 1) is significant at 1 percent level. The coefficient of total current liabilities to total assets ratio is 0.1174164 and significant with a p-value of 0.000 which is less than 0.01. The results indicate that there was a significant positive relationship between total current liabilities to total assets and performance of non-financial companies listed in the NSE as measured by ROA. The positive coefficient indicates that as more current liabilities were utilised aggressiveness increased and subsequently performance as measured by ROA improved. These results are inconsistent with Afza and Nazir (2007) who found a negative relationship between the aggressiveness of financing policy and accounting measures of profitability. In addition the findings contradicted the findings by Vahid, Mohsen &Mohammadreza who concluded that aggressive financing policy and firm's profitability are negatively related and hence, utilizing more current liabilities to finance firm activities may negatively affect the firm's performance (ROA).

The regression results presented in table 6 indicate that total current asset to total assets (working capital management 2) was significant at 5 percent level. The coefficient of the total current assets to total assets ratio was 0.0335097, with a p-value of 0.016 which is less than 0.05. The indicate that there was a statistically significant positive relationship between total current assets to total assets ratio and performance of non-financial companies listed in the NSE as measured by return on assets. This observation implies that holding other variables in the regression constant, a unit increase in total current assets to total assets ratio lead to an increase of 0.0335097 in ROA. The positive coefficient meant a negative relationship between aggressiveness in investing policy and performance measured by ROA.As total current assets increased aggressiveness reduced and subsequently ROA increased.This observation corroborates the results by Afza and Nazir (2007).

Table 6 indicate that the coefficient of financial leverage of -0.0001392 was statistically insignificant at 10 percent level with p-value of 0.306 that is greater than 0.1. The results indicate that there was an insignificant negative relationship between financial leverage and performance of non-financial companies listed in the NSE as measured by return on assets.

4.3.2 FGLS regression with ROE as the dependent variable
Table 7: FGLS Regression Results (Dependent variable: ROE)

Variable	Coefficient	Standard Error	Z	P>z
financing policy	-0.0647696	0.0488256	-1.33	0.185
investing policy	0.0876082*	0.0185633	4.72	0.000
Size	0.0036795	0.0052275	0.70	0.482
GDP growth rate	0.0043182**	0.0021154	2.04	0.041
Constant	0.0587487	0.0825654	0.71	0.477
Wald Chi Square (6) = 1170.23 Prob> chi2 = 0.0000 (*), (**) and (***) denote 1%, 5%, and 10% levels of significance respectively				

Source: Study data (2013)

The regression results presented in table 7 indicate that the coefficient for total current liabilities to total assets ratio (aggressive financing policy) is -0.0647696 and is statistically insignificant at 10 percent level of significance. The results indicate that there was no statistically significant relationship between total current liabilities to total assets ratio and performance of non-financial companies listed in the NSE as measured by ROE. According toAfza and Nazir (2007) a negative coefficient for *TCL/TA* points out to a negative relationship between an aggressive financing policy and return on equity. The higher the *TCL/TA* ratio, the more aggressive the financing policy, that yields negative ROE. These results are inconsistent with the results obtained by Vahid, Mohsen and Mohammadreza (2012) who concluded that following a conservative investment policy and aggressive financing policy has a negative impact on a firm's profitability.

The regression results presented in table 7 indicate that the coefficient for total current assets to total assets ratio (working capital management policy 2) of 0.0876082 was statistically significant at 1 percent level. The results indicate that there was as a statistically significant positive relationship between total current assets to total assets ratio (aggressive investing policy) and performance of companies listed in the NSE as measured by return on equity. This implies that holding other variables in the regression constant, a unit increase in total current assets

to total assets ratio would lead to a 0.0876082 increase in return on equity. The findings imply that there was a statistically significant negative relationship between the aggressiveness of investing policy and firm performance as measured by return on equity. These results confirm the findings of Afza and Nazir (2007) who postulate that performance cannot be increased by being aggressive in managing the working capital requirements.

5. SUMMARYAND CONCLUSION

The study established that the performance of the firm improved with adoption of an aggressive financing policy. Specifically, the findings of this study indicate that as the total current liabilities to total assets ratio increases the performance improves.This study concluded that the use of current liabilities to finance assets should be more preferable than using long term debt (financial leverage). This is probably because current liabilities are less costly than long-term debt.

The study additionally concluded that following an aggressive investing working capital management policy will affect the performance negatively.Aggressive investing policy was measured by total current assets to total assets ratio. A low ratio indicates an aggressive investing policy and a high ratio indicate a conservative investing policy. The findings of the study indicate that increasing the proportion of current assets in relation to total assets enhanced performance as measured by both ROA and ROE.

5.5 Suggestion for Further Research
A study should be undertaken to compare the working capital management policies of non-financial companies companies listed on the NSE and those not listed and the effects of these policies on performance. In addition, future studies could be extended to analyse working capital management practices and their effect on performance across the countries especially those in the East African Community.

REFERENCES
Afza, T. &Nazir,M. S. (2008). "Working Capital Management Policies of Firms: Empirical
        Evidence from Pakistan", *Pakistan Journal of Commerce and Social Sciences*, 1(1)
         25-36.
Afza, T. &Nazir, M. S. (2007). Is it Better to be Aggressive or Conservative in Managing
        Working Capital, *Journal of Quality and Technology Management*, 3(2), 11-21.
Ajibolade, O.S. and Sankay,C.O.(2013). Working Capital Management and Financing Decision:
        Synergetic Effect on Corporate Profitability. *International Journal of Management, Economics and
        Social Sciences, 2(4), 233 –251.*
Almajali .Y.A., Alamro.A.S. & Al-Soub.Z.Y. (2012). Factors Affecting the Financial
        Performance of Jordanian Insurance Companies Listed at Amman Stock Exchange;*Journal of
        Management Research*, 4(2), 226-289
Azam,M. &Haider ,S.I.(2011). Impact of working capital management on firms'
        performance:evidence from non-financial institutions of kse-30 index. *Interdisciplinary
        journal of contemporary research in business,* 3(5), 481-492.
Baltagi, B. H. (2005). *Econometric Analysis of Panel Data*, third Edition, New York: John
        Wiley & Sons Inc.
        pplication to the Banking Industry. *Journal of Banking and Finance*, 30, 1065-1102.
Bhunia,A. &Das,A.(2012).   Affiliation between Working Capital Management and
        Profitability. *Interdisciplinary journal of contemporary research in business*, 3(9), 957-968
Breusch, T. S., & Pagan, A. R. (1980). The Lagrange Multiplier Test and its Applications to   Model
Specification in Econometrics. *The Review of Economic Studies, 47*(1), 239-253.
Brigham, E. F. &Ehrhardt ,M. C. (2004. *Financial Management: Theory and Practice,*11th
        Edition, South-Western College Publishers, New York.
Bryman, A. (1984). The Debate about Quantitative and Qualitative Research - A Question of
        Method or Epistemology. *British Journal of Sociology* 35(1), 75-92.
Bryman, A. and E. Bell (2003). Business Research Methods. Oxford, Oxford University Press.
Burja, C. (2011). Factors Influencing the Companies' Profitability.*AnnalesUniversitatis
        Apulensis Series Oeconomica,* 13(2), 215-224
Butt, B. Z., Hunjra,I.H.&Rehma,.K.U.(2010). Financial Management Practices and Their Impact
        on Organizational Performance.*World Applied Sciences Journal*, 9 (9), 997-1002.
Choi, I. (2001). Unit root tests for panel data. *Journal of International Money and Finance*, 20,   .249–272.
CMA statistical bulletin (2012).Retrieved from *www.cma.or.ke*

Cooper, R. D., & Schindker, S. P. (2008). *Business Research Methods.* India: Tata McGraw-Hill

Deloof, M. (2003). "Does Working Capital Management Affect Profitability of Belgian
        Firms?" *Journal of Business, Finance and Accounting*, 30, (3-4), 573-587.

Dochartaigh, N.O. (2002). The internet research hand book: A practical guide for students and
        researchers in the social sciences: Sage.

Dong, H. P. & . Su, J.T. (2010). The Relationship between Working Capital Management and
        Profitability. *International Research Journal of Finance and Economic*, 3(5), 62-71

Eljelly, A. M. A. (2004). "Liquidity-Profitability Tradeoff: An Empirical Investigation in
        an Emerging Market", *International Journal of Commerce and Management,* 14(2), 48-61.

Filbeck, G.&Krueger,T.M. (2005). An Analysis of Working Capital Management Results
        Across Industries .*Mid-American Journal of Business*, 20(2), 10-17.

Filbeck,G. & Krueger ,T. (2005). Industry Related Differences in Working Capital
        Management: Mid-American. *Journal of Business*, 20(2), 11-18.

Gardner M J, Mills D L & Pope R A. (1986).Working Capital Policy and Operating Risk: An
        Empirical Analysis, *Financial Review,* 21(3), 31

Gitman, L. A. (2005). *Principles of Managerial Finance*, 11th Edition, Addison Wesley
        Publishers, New York.

Greene, W.H. (2008). *Econometric Analysis* (6th ed.). Upper Saddle River, N.J.: Prentice Hall

Gujarati,D. (2003) .Basic Econometrics.4thed.NewYork:McGraw Hill,pp.638-640.

Gitman, L.J. (1997). Principles of Managerial Finance. (Seventh Edition). New York:Harper
        Collins College Publishers,pp. 684-710.

Gujarati, D. (2003). *Basic Econometrics* (4th ed.). New York: McGraw Hill

Javed,B. &Akhtar,S. (2012)Interrelationships between Capital Structure and Financial
        Performance, Firm Size and Growth: Comparison of industrial sector in KSE: *European Journal of
        Business and Management*, 4(15), 148-157.

Jensen, M.C. (1986). Agency costs of Free Cash Flow, corporate Finance, and Takeovers.
        American Economic Review, 76(2), 323-329.

Kenya Vision 2030, Popular Version (2007).Government Of the Republic of Kenya

Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioral research* (4th ed.). Fort Worth,
        TX: Harcourt.

kesimli,I.G.&Gunay, S.G.(2011).The Impact of Global Economic Crisis on Working Capital of
        Real Sector in Turkey. *Business and Economic Horizon*, 4(1) pp.52-69.

Laitinen, E.K. (2002). A Dynamic Performance Measurement System: Evidence from Small
        Finnish Technology Companies. *Scandinavian Journal of Management*,18(1), 65-99.

Lambrix,R.J. &Singhvi,S.S.(1979), "Managing the Working Capital Cycle", *Financial Executive,* , 32-41.

Levin, A., Lin, C.F. & Chu, C.S. J. (2002). Unit root tests in panel data: Asymptotic and
        finite-sample properties. *Journal of Econometrics*, 108, 1–24.

Listing Manual (2013). Retrieved June 1st, from http://www.nse.co.ke

Mathuva, D.M. (2009). The Influence of Working Capital Management Components on
        Corporate Profitability: A Survey on Kenyan Listed Firms. *Research Journal of Business Management*,
        3, 1-11.

Memba, F., &Nyanumba ,J.A.(2013) Causes of Financial Distress: A Survey of Firms Funded
        by Industrial and Commercial Development Corporation in Kenya. *Interdisciplinary Journal Of
        Contemporary Research In Business,* 4, (12), 1171-1185.

Minger,j. &white,l.(2010).A Review of Recent Contribution of Systems Thinking to
        Operational Research and Management Science. European Journal of Operational Research, 207(3),
        117-1161

Moyer R C, McGuigan J, R. &Kretlow, W. J. (2005), *Contemporary Financial Management*
        10th Edition, South-Western College Publication, New York.

Nairobi Securities Handbook (2006-2012). Retrieved August 31 2013, from
        http://www.nse.co.ke

Nazir,M.S.&Afza ,T.(2009). Impact of Aggressive Working Capital Management Policy on
        Firms' Profitability:*The IUP Journal of Applied Finance*, 15(8), 20-30.

Njanja, L. W. &Pellisier,R. (2011).The integrative effects of various management strategies in
        the performance of MSMES.*International business and management journa*l , 2 (2) , 105-116.

Njanja,L. W. &Pelissier, R. and Ogutu, M. (2010) .An Investigation into the Effect of
        Management Factors on Performance of (Micro, Small and Medium Enterprises) in Kenya International
        .*Journal of Business and Management*, 5(11), 66-78.

Nyamao,N.R., Ojera,P. ,Lumumba, M.,Odondo,A.J. and Otieno, S. (2012). Effect of working

capital management practices on financial Performance: A study of small scale enterprises in Kisii South District, Kenya. *African Journal of Business Management*, 6(18), 5807-5817.

O'Briena,J.P. &Folta,T.B. (2009). A Transaction Cost Perspective on Why,How, and When Cash Impacts Firm Performance.*Managerial and Decision Economics.* (www.interscience.wiley.com) DOI: 10.1002/mde.1457

Ogundipe,S.E., Idowu,A. &Ogundipe,L.O. (2012).Working Capital Management, Firms'Performance and Market Valuation in Nigeria. *International Journal of Social and Human Sciences*, 6, 143-147.

Pandey, I .(2005). Financial Management, Nineth Edition, KAS publishing house New Delhi.

Poi, B., & Wiggins, V. (2001). Testing for panel-level Heteroskedasticity and Autocorrelation.   StataCorp LP. Retrieved from http://www.stata.com/support/faqs/stat/panel.html

Raheman,A. & Mohamed ,N. (2007).Working Capital Management and Profitability Case of Pakistani firms.*International Review of BusinessResearch Paper*,3(1), pp.279-300.

Robson,C. (2002). Real World Research: A Resource for Social Scientist and practioners ,   Research oxford Blackwell.

Ross,A. (1977).The Determination of Financial Structure: The Incentive-Signalling Approach;*The Bell Journal of Economics*, 8(1), 23-40.

Saunders,M.,Lewis,P.&Thornhill,A. (2009).Research methods for business students.5[th]ed Italy:Prentice Hall.

Santos,J.A.C (2001) Bank Capital Regulation in Contemporary Banking: A Review Of Literature: *Financial Markets, Institutions and Instruments*, 10(2), 42-84.

Sejjaaka, S. (2011).Challenges to Growth of Capital Markets in Underdeveloped Economies: The Case of Uganda, Investment Climate and Business Environment Research Fund Report No.01/11.

Sharma, A.K. & Kumar, S. (2011). Effect of Working Capital Management on Firm Profitability: Empirical Evidence from India. *Global Business Review, 12(1),* 159 – 173.

Teruel, P. J. G & Solano, P. M. (2005). *"*Effects of Working Capital Management on SME Profitability", *International Journal of Managerial Finance*, 3 (2), 164-177.

Uchumi supermarkets annual (2006).NSE handbook (2006) Retrieved from http://www.nse.co.ke

Vahid,T.K. , Mohsen,A.K. &Mohammadreza,E.(2012) .The Impact of Working Capital Management Policies on Firm's Profitability and Value: Evidence from Iranian ompanies;*International Research Journal of Finance and Economics,* 88, 155-162.Weinraub, H. J. &Visscher, S. (1998). "Industry Practice Relating to Aggressive Conservative Working Capital Policies", *Journal of Financial and Strategic Decision* 11(2), 11-18.

Wilbricht,L. &Michael,P.J. (1989).Financial Management*;* Winter 1989; 18, 4; ABI/INFORM Complete, 82.

Williamson, O.E. (1988). Corporate Finance and Corporate Governance; *Journal of. Finance*, 43(3), 567-591.

Wooldridge, J. M. (2002). *Econometric Analysis of Cross Section and Panel Data*. Cambridge,   MA: MIT Press.