FINANCIAL MANAGEMENT PRACTICES AND FINANCIAL PERFORMANCE OF NON FINANCIAL FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE KENYA

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D58/CTY/PT/23357/2011

A Thesis Submitted to the School of Business in Partial Fulfillment of the Requirements for the Award of Degree of Master of Science (Finance) of Kenyatta University

June, 2017
DECLARATION

This thesis is my original work and has not been presented for a degree at any other university or for any other award.

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DEDICATION

I dedicate this work to my parents Mr. and Mrs. David Muchiri for their everlasting love and guidance during my youth. To my wife, Heather Waithera for her support and to my children Alyssa, Kaitlyn and Allen.
ACKNOWLEDGEMENT

First and foremost I give glory to God for giving me good health, wisdom and seeing me through the MSC course and most importantly guiding me through as I undertook the research work.

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DECLARATION</td>
<td>II</td>
</tr>
<tr>
<td>DEDICATION</td>
<td>III</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENT</td>
<td>IV</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>V</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>VIII</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>IX</td>
</tr>
<tr>
<td>OPERATIONAL DEFINITION OF TERMS</td>
<td>X</td>
</tr>
<tr>
<td>ABBREVIATIONS AND ACRONYMS</td>
<td>XII</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>XIII</td>
</tr>
<tr>
<td>CHAPTER ONE</td>
<td>1</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Background of the study</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Statement of the Problem</td>
<td>6</td>
</tr>
<tr>
<td>1.3 Objectives of the Study</td>
<td>7</td>
</tr>
<tr>
<td>1.3.1 Specific Objectives</td>
<td>7</td>
</tr>
<tr>
<td>1.4 Research Hypotheses</td>
<td>8</td>
</tr>
<tr>
<td>1.5 Significance of the Study</td>
<td>8</td>
</tr>
<tr>
<td>1.6 Scope of the Study</td>
<td>9</td>
</tr>
<tr>
<td>1.7 Limitation of the Study</td>
<td>10</td>
</tr>
<tr>
<td>1.8 Organization of the study.</td>
<td>10</td>
</tr>
<tr>
<td>CHAPTER TWO</td>
<td>11</td>
</tr>
<tr>
<td>LITERATURE REVIEW</td>
<td>11</td>
</tr>
</tbody>
</table>
2.1 Introduction ........................................................................................................... 11
2.2 Theoretical review ................................................................................................ 11
2.3 Empirical Review ................................................................................................. 17
2.4 Summary of Literature and Research gaps......................................................... 23
Table 2.1 Summary of Research Gaps .................................................................. 24
2.5 Conceptual Framework ...................................................................................... 27

CHAPTER THREE ................................................................................................. 29

RESEARCH METHODOLOGY .............................................................................. 29

3.1 Introduction ......................................................................................................... 29
3.2 Research Design .................................................................................................. 29
3.2.1 Research Philosophy .................................................................................. 29
3.3 Empirical model .................................................................................................. 31
3.4 Target Population ............................................................................................... 34
3.5 Data Collection Instruments ............................................................................ 34
3.6 Data Collection Procedure ................................................................................ 34
3.7 Data Analysis and Presentation ......................................................................... 35
3.8 Diagnostic Test .................................................................................................... 36
3.9 Ethical Considerations ....................................................................................... 37

CHAPTER FOUR .................................................................................................. 39

DATA ANALYSIS, PRESENTATION AND INTERPRETITION ......................... 39

4.1 Introduction ......................................................................................................... 39
4.2 Descriptive statistics .......................................................................................... 39
4.3 Diagnostic tests .................................................................................................... 41
4.4 Panel regression results for direct relation (Reduced Equation) ....................... 44
4.5 Panel regression results for moderated relation (Full Equation) ...................... 47
4.6 Hypotheses testing .............................................................................................. 49

CHAPTER FIVE ................................................................................................... 52
SUMMARY, CONCLUSION AND RECOMMENDATIONS ..........................52

5.1 Introduction ........................................................................................................52
5.2 Summary of the findings ...................................................................................52
5.3 Conclusion ..........................................................................................................52
5.4 Recommendation ...............................................................................................53
5.5 Policy implication ...............................................................................................54
5.6 Contribution of the study ..................................................................................54
5.7 Suggestions for further study ............................................................................54

REFERENCES ...........................................................................................................56

Appendix I: Listed Non-Financial Firms on the Nairobi Securities Exchange .........63
Appendix II: Data Collection tool ............................................................................65
LIST OF TABLES

Figure 2.2: Conceptual framework ................................................................. 28
Table 3: Measurement of study variables ....................................................... 33
Table 4.1: Descriptive statistics .................................................................. 40
Table 4.2: Correlation matrix ...................................................................... 41
Table 4.3: Summary of unit root test ............................................................ 42
Table 4.4: Equality of means ....................................................................... 43
Table 4.5: Random effects regression results .............................................. 44
Table 4.6: Hausman test ............................................................................. 45
Table 4.7: Fixed effects regression results .................................................... 46
Table 4.8: Fixed effects regression results .................................................... 48
LIST OF FIGURES

Figure 2.2: Conceptual framework ........................................................................28
OPERATIONAL DEFINITION OF TERMS

**Asset management:** Refers to how well company assets are managed to generate revenue. Ratios are used to measure how efficient an organization is in asset management. Such ratios are also known as efficiency ratio. In the study, efficiency in asset management was measured using Total asset turnover ratio.

**Financial Management practices:** Encompasses actions geared to management of money in such a manner as to accomplish the objectives of the organization. In the study financial management includes liquidity management, Capital budgeting and Leverage.

**Financial Performance:** Is the degree to which financial objectives are being accomplished in an organization. It reflects how well a firm can use assets from primary mode of business to generate revenues. In the study, Financial performance was measured using return on assets ratio.

**Inflation:** A general increase in prices and fall in the purchasing value of money.

**Leverage:** Leverage is the measure of how much debt a company has on its balance sheet. Leverage ratio
which is widely used to measure leverage is calculated as Debt divided by Equity.

**Liquidity Management:** Liquidity measures the company's ability to meet its short-term obligations using its most liquid assets. It is measured using current ratio which is calculated as current assets divided by current liabilities.

**Listed Non-financial firms:** These are firms listed at the Nairobi securities exchange that do not offer financial services such as Banking, Investment and Insurance.

**Return on Assets:** This is a financial performance ratio that gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings before interest and tax by its total assets, ROA is displayed as a percentage.

**Total asset turnover ratio:** Total asset turnover ratio measures the efficiency of the use of total assets in generating sales. Total assets are sum of current and net fixed assets. The total asset turnover is calculated as sales divided by average total assets. The average total assets are the simple average of total assets at the beginning and end of the period.
## ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMH</td>
<td>Efficient Market Hypotheses</td>
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<tr>
<td>EBIT</td>
<td>Earnings before interest and tax</td>
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<td>FTSE</td>
<td>Financial Time Stock Exchange</td>
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<tr>
<td>KPI</td>
<td>Key performance indicators</td>
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<td>NSE</td>
<td>Nairobi Securities Exchange</td>
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<td>PAT</td>
<td>Positive accounting Theory</td>
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<td>ROCE</td>
<td>Return on capital employed</td>
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<td>ROS</td>
<td>Return on Sale</td>
</tr>
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<td>ROI</td>
<td>Return on investments</td>
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<td>SMEs</td>
<td>Small and Medium Enterprises</td>
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<td>USA</td>
<td>United States of America</td>
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<td>UK</td>
<td>United Kingdom</td>
</tr>
</tbody>
</table>
ABSTRACT

Some firms listed at the Nairobi Securities Exchange, in the non-financial sector, have continued to record poor performance as evidenced in declining share prices. This study sought to establish the effect of financial management practices on financial performance of non-financial firms listed at the Nairobi Securities Exchange. The independent variables of the study were liquidity, Capital budgeting and Leverage. The main objective of the study was to establish the effect of financial management practices on financial performance of non-financial firms listed at the Nairobi securities Exchange. The study used panel data analysis to establish the relationship between financial management practices and financial performance of non-financial firms listed at the Nairobi securities exchange. A census study was conducted on the non-financial firms. The study used secondary data for a five year period covering year 2010 to 2014. However, some of the non-financial firms were listed or had been suspended in between the study period. Therefore, complete data for the period was collected from financial statements of 34 companies. The data was analyzed using E-views 8. Diagnostic tests were carried out to test for Stationarity, Multicollinearity, and Hausman. Fixed regression analysis was run for two equations. One with inflation included as a moderating variable and the other excluding inflation. With moderation effect of inflation, only capital budgeting was significant at 0.05 significance level while all other variables were insignificant. With exclusion of inflation as a moderating variable, Liquidity with a value $\beta=0.009295$ and return on capital employed with a value $\beta=1.000236$ were significant at 0.05 significance level. The regression gave a coefficient of determination $(R^2)$ of 85.28% which showed that 85.28% of change in return on assets was accounted for by the explanatory variables while the adjusted R-square of 85.01% further justified this effect. Liquidity and capital budgeting gave a significant positive relationship to return on assets in the regression model which meant that they had a positive significant impact on financial performance. However, capital budgeting with a coefficient of 1.000236 had the highest impact on return on assets. The empirical findings imply that Liquidity management and capital budgeting impact on financial performance of non-financial firms. This finding leads to the conclusion that proper liquidity management and proper capital budgeting can bring about higher profitability. Based on this conclusion, the study recommended that senior managers of non-financial firms listed at the Nairobi Securities exchange should focus more on capital budgeting and Liquidity management so as to improve on the bottom line of their institutions. Performance reviews on the senior management should focus on financial management practices such as liquidity and capital budgeting to improve financial performance of their institutions.
CHAPTER ONE
INTRODUCTION

1.1 Background of the study

Financial management is one of management functional areas which is core to success of business enterprises. Inefficient financial management, combined with the uncertainty of the business environment often led Business Enterprises to serious problems (Deresse & Prabhakara, 2012). Paramasivan and Subramanian (2009) argued that financial management helps to improve the profitability position of business organizations with the help of strong financial control devices such as budgetary control and ratio analysis.

As the financial sector at The Nairobi Securities’ Exchange, which include banking, investments and insurance firms, continues to record growth, some firms in the non-financial sector in Kenya have been characterized by a decline in performance and as a result market prices of their shares at the Nairobi Securities Exchange has recorded a decline. Non-financial sector include, Agricultural, Automobiles and accessories, Commercial and services, Construction and allied, Energy and petroleum, Manufacturing and allied, Telecommunication and technology, (NSE, 2014). Some companies listed under the non-financial sector at the NSE have been delisted, suspended or even put under receivership due to poor performance. According to NSE report (2006), Uchumi supermarket was put under receivership on 2nd June 2006 by the debenture holders due to inability to meet its financial obligations as a result of poor financial performance. However, Uchumi was relisted again in May 2011. Kenya
Airways recorded a record 29.7 billion loss before tax for the financial year ended 31st March 2015. (NSE, 2015)

Business Enterprises have often recorded poor performance due to lack of knowledge of efficient financial management (Deresse & Prabhakara, 2012). The uncertainty of the business environment causes business enterprises to rely excessively on equity and maintain high liquidity and these financial characteristics affect profitability (Deresse & Prabhakara, 2012). It is therefore worth investigating the effect of financial management practices on financial performance of non-financial firms listed at the Nairobi Securities Exchange.

1.1.1 Financial Management Practices

The decision function of financial management can be broken down into three major areas: the investment, financing, and asset management decisions. Financial management practices revolve around these three key decisions. Efficient financial management requires the existence of some objective or goal, because judgment as to whether or not a financial decision is efficient must be made in light of some standard. Different authors and researchers approach the particular areas of financial management in various ways given their area of focus. For instance, a study carried out in Malaysia by Mohd et al., (2010) identified the components of financial management as financial planning and control, financial accounting, financial analysis, management accounting, capital budgeting and working capital management. Chung and Chuang (2010) studied five particular areas of financial management practices: capital structure management, working capital management, financial reporting and analysis, capital budgeting and
accounting information system. From the study variables, Financing, Investing and asset management decisions play out.

Deresse and Prabhakara (2012), used independent variables such as accounting, reporting, and analysis, working capital management, fixed asset management and financial planning to represent financial management practices in the study on the effect of financial management practices and characteristics on profitability in Ethiopia. Other variables which they considered were Liquidity, Leverage and asset turnover.

Kieu (2006) used financial management practices variables such as accounting information system, financial reporting and analysis, working capital management, fixed asset management, financial planning and good performance in financial characteristics such as liquidity and business activity. Therefore, the study emphasized on three key variables to represent financial management practices. The key variables are, Liquidity management, Capital budgeting and Leverage.

1.1.2 Financial Performance

Financial ratio analysis is paramount in assessing financial performance of any business enterprise. Ratios are mostly used as standard measure of financial performance and benchmarking. Most researches have opted to use ROE, ROA and EPS to measure financial performance. For instance, Ebaid (2009) in his study seeking to investigate the impact of choice of capital structure on the performance of firms in Egypt used ROE, ROA, and gross profit margin to measure financial performance. Financial structure was measured by short-term debt to asset ratio, long-term debt to asset ratio, and total debt to total assets.
Johannes (2013) sought to establish the popularity of EPS and outlined three limitations, namely the inability of EPS to reflect shareholder value, EPS management and an inherent bias towards positive EPS growth. A case study approach was used to analyze the EPS growth of three listed companies and the four major components of EPS growth were identified. These included inflation, increased asset investment due to retained profit and debt, operating leverage and financial leverage. Given the limitations outlined on EPS, the study used ROA to measure of financial performance of non-financial firms listed at the NSE.

1.1.3 Inflation and financial performance

Effects of inflation on the relationship between independent variables and the dependent variable could not be ignored. Inflation can lead to uncertainty about the future performance of investment projects thereby forcing firms to take conservative approach in investment strategies. Inflation is known to affect the economy of a country in general, Tucker (2007). Dewan & Hussein (2001) found in a sample of 41 middle-income developing countries including Fiji, that inflation was negatively correlated to growth. Economic condition of the country can affect a firm’s performance on multiple fronts. Cost of borrowings can negatively influence the firm’s capability to generate finances and invest in projects (Ntim, 2009). Several studies done on financial management practices and performance have failed to look into this important aspect of inflation and the influence it would have on the relationship between variables. However, a few studies have shown mixed results on the influence of inflation to financial performance of firms. Zulfiqar and Din (2015) carried out a study in an attempt to investigate the effects of macroeconomic variables on the performance of
textile industry of Pakistan using inflation and interest rates as the independent variables. They found a positive insignificant relationship between inflation and return on assets. Deresse and Prabhakara (2012) did not factor in the influence of inflation in the relationship between variables when he carried out a study on effects of financial management practices and characteristics on profitability in Ethiopia.

Inflation is expressed as a percentage rate of inflation either monthly or annually. The study used monthly rate of inflation.

1.1.3 Non-Financial Firms Listed at the Nairobi Securities Exchange

For an efficient stock exchange, the companies listed in NSE are expected to be financially healthy so as to ensure economic growth of a country. There are two major categories of listed firms at the NSE. These major categories are the financial and non-financial firms. These categories are further classified into Banking, Insurance, Investment and Investment services for financial sector. Non-financial sector include Agricultural, Automobiles and Accessories, Commercial and Services, Construction and Allied, Energy and Petroleum, Manufacturing and Allied, Telecommunication and Technology. The Nairobi securities exchange uses NSE 20 share index, among other indexes, to measure performance of the exchange, (NSE 2015). Financial performance of listed companies is reflected on the performance of the Nairobi securities exchange through the NSE 20 share index. This means that growth of the index shows good performance of listed firms while decline in the index shows poor performance of the listed firms. Since 2006, the NSE 20 share index declined and has stagnated for the period to 2014. The performance of the stock market indicates that the market has not managed to make significant contribution to financing economic growth (Ngugi,
Amanja & Maana, 2009). While there are about 58 companies listed in NSE, not all of them are in a financially sound position, although at the point of listing, these listed companies must meet the listing requirement of NSE. While most companies in the financial sector, especially banking industry have consistently recorded good performance, some counterparts in the non-financial sector have stagnated and even recorded losses.

1.2 Statement of the Problem

Business success depends heavily on the ability of financial managers to effectively manage the components of financial management practice (Filbeck & Krueger, 2005). In the recent past non-financial firms in Kenya have been characterized by a decline in performance or even stagnated in growth. This has led to loss of company value at the NSE and in effect loss of investors’ wealth. In their study on Understanding financial distress among listed firms in Nairobi Securities Exchange, Maina and Sakwa (2012), noted that there is an increasing trend of failure of Kenyan firms such as Uchumi Supermarkets and A Baumann. Though it was re-listed, Uchumi supermarkets had been put under receivership on 2nd June 2006 by the debenture holders (NSE, 2009). Kenya Airways suffered a net loss of 25.7billion for the financial period ending 31st March 2015(NSE, 2015).

A number of public and private companies such as Hutchings Biemer, Pan Paper Mills, and Uchumi Supermarkets Ltd that have been put under statutory management in the last decade had liquidity problems and were unable to pay their short term financial obligations as and when they fell due (NSE, 2010). However managers and practitioners
still lack adequate guidance for attaining optimal financing decisions (Kibet et al., 2011).

Previous studies conducted in Kenya have not addressed aggressive financial management practice as a whole. For instance, Nyamao, Ojera, Lumumba, Odondo and Otieno (2012) considered financial management practice in terms of efficiency of cash, inventory and receivables management, while Mathuva (2009) considered financial management practice in terms of the operating cycle, other researchers have only concentrated on working capital. The descriptive findings of financial management practices on financial performance of non-financial listed firms around the world are numerous, however most findings involve securities exchange in the developed or market economy countries while findings involving securities exchange in the developing or emerging economies are few, and findings involving securities exchange in Kenya are even more rare. It is against this background that this study was carried out.

1.3 Objectives of the Study

The main objective of the study was to establish the effect of financial management practices on financial performance of non-financial firms listed at the Nairobi securities exchange, Kenya.

1.3.1 Specific Objectives

i. To determine the effect of liquidity management on financial performance of non-financial firms listed at the Nairobi securities exchange, Kenya.
ii. To establish the effect of capital budgeting on financial performance of non-financial firms listed at the Nairobi securities exchange, Kenya.

iii. To determine the effect of leverage on financial performance of non-financial firms listed at the Nairobi securities exchange, Kenya.

iv. To evaluate the moderating effect of inflation on the relationship between financial management practices and financial performance of non-financial firms listed at the Nairobi securities exchange, Kenya.

1.4 Research Hypotheses

In view of the research objectives the study sought to test the following null hypotheses.

H₀₁: Liquidity management has no significant effect on the financial performance of non-financial firms listed at the NSE.

H₀₂: Capital budgeting has no significant effect on the financial performance of non-financial firms listed at the NSE.

H₀₃: Leverage has no significant effect on the financial performance of non-financial firms listed at the NSE.

H₀₄: Inflation has no significant effect on the relationship between financial management practices and financial performance of non-financial firms listed at the NSE.

1.5 Significance of the Study

This study would contribute to the knowledge of financial performance of non-financial firms listed at the NSE in Kenya which can be considered representative of emerging economies. The findings of financial performance of non-financial firms listed at the
NSE in this study would expand the literature of financial management practices in general and especially on performance of non-financial listed firms at NSE in Kenya.

The study would offer valuable contributions from both a theoretical and practical standpoint where it contributes to the general understanding of the role of financial performance of non-financial listed firms at NSE. This research study would be of great importance to Government of Kenya as it would provide information on the role of financial performance of listed non-financial firms at NSE. Therefore policymakers in both the national government and county government will benefit a great deal, as the study provides information that can be used to formulate sound economic policies. The study provided information that can be used as empirical evidence by researchers on role of financial management practices and performance of non-financial listed firms at the NSE.

1.6 Scope of the Study

The study used secondary data collected from financial statements of the firms listed under the non-financial sector at the Nairobi securities exchange. This data was readily available since all listed firms are required to publish their annual statements. The data was relating to earning before interest and tax, total assets, current assets, current liabilities, short term debt, long term debt and shareholders equity. This data assisted to compute return on assets ratio as a measure of performance, current ratio as a measure of liquidity, return on capital employed as a measure of capital budgeting and debt ratio to represent leverage. The data on inflation was readily available from the Kenya bureau of statistics. The study was limited to a period of 5 years covering year 2010 to year 2014.
1.7 Limitation of the Study

The researcher encountered inconsistent data and in some cases lack of data for the five year period that the researcher covered. This is because some of the non-financial sector companies were listed in between the period covered by the research. In such instances the firms were dropped from the study which left the researcher with 34 firms. This was considered a good representation of the total population. Some firms adopted different approaches to present their financial statements which made it difficult to retrieve data.

1.8 Organization of the study.

The study covered 5 major chapters. Chapter one covered the introduction, research background, research objectives, hypotheses and the problem statement. Chapter two covered literature review where both theoretical review and Empirical review were discussed. Chapter three covered methodology while chapter four covered data analysis and hypotheses testing. Chapter five covered summary of the study, conclusion, recommendations and policy implication.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews theoretical and empirical literature on financial management practices and financial performance of non-financial firms listed at the NSE. Specifically it covered the theoretical review and empirical review in relation to the study variables. It addressed the research gap and conceptual framework. A summary of the literature review is also provided.

2.2 Theoretical review

This section covers various theories related to the study. Shareholder theory, Liquidity trade off theory and Pecking order theory have been discussed.

2.2.1 Shareholder Theory

Shareholder theory defines the primary duty of a firm’s managers as the maximization of shareholder wealth (Friedman, 1962). The theory enjoys widespread support in the academic finance community and is a fundamental building block of corporate financial theory. However, the shareholder model has been criticized for encouraging short-term managerial thinking and condoning unethical behavior. Smith (2003) notes that critics believe shareholder theory is geared toward short-term profit maximization at the expense of the long run. Freeman, Wicks and Parmar (2004,) assert that shareholder theory involves using the prima facie rights claims of one group—shareholders—to excuse violating the rights of others. Opponents of shareholder theory often recommend that firms balance the interests of shareholders against those of employees, customers,
and other stakeholders when making business decisions (Freeman, 1984). The criticisms are understandable because many proponents of shareholder theory, in a stylized version of the model, exhort managers to maximize the firm’s current stock price (Keown, Martin, & Petty, 2008). Wealth maximization is inherently a long term goal; the firm must maximize the value of all future cash flows and does not condone the exploitation of other stakeholders (Jensen, 2002).

**2.2.2 Liquidity Trade off Theory**

Liquidity is the ability of a company to fulfill the short term obligations at the due time. In other words, liquidity is the relationship between the cash which will be given to the company in a short time period and the cash which the company needs (Talebi, 1997). Under perfect capital market assumptions holding cash neither creates nor destroys value. The firm can always raise funds from capital markets when funds are needed, there are no transaction costs in raising these funds, and the funds can always be raised at a fair price because the capital markets are assumed to be fully informed about the prospects of the firm.

The trade-off theory suggests that firms target an optimal level of liquidity to balance the benefit and cost of holding cash. The cost of holding cash includes low rate of return of these assets because of liquidity premium and possibly tax disadvantage. The benefits of holding cash are in twofold: First, the firms save transaction costs to raise funds and do not need to liquidate assets to make payments. Second, the firm can use liquid assets to finance its activities and investment if other sources of funding are not available or are extremely expensive. Jensen (1986) presents agency problem associated with free-cash flow. Jensen (1986), suggests that –free cash flow problem can be
somewhat controlled by increasing the stake of managers in the business or by increasing debt in the capital structure, thereby reducing the amount of “free” cash available to managers. As theory, the use of trade off model cannot be ignored, as it explains that, firms with high leverage attracts high cost of servicing the debt thereby affecting its financial performance and it becomes difficult for them to raise funds through other sources. Holding cash on that point is not only maintained by the smaller firm but also larger firms.

The cash flow period as a strong liquidity index is indirectly associated with value of the company because low cash flow period (high liquidity) versus high cash flow period (low liquidity) means that the company has received the cash from selling products sooner, but has done its current payments later. So, current value net of the cash flow and consequently value of the company will increase (Ghorbani & Adili, 2013). This theory instigates the first research hypotheses: Liquidity management has no significant effect on the financial performance of non-financial firms listed at the NSE.

2.2.3 Pecking Order Theory

The pecking order theory suggests that firms have a particular preference order for capital used to finance their businesses (Myers & Majluf, 1984). Owing to the information asymmetries between the firm and potential investors, the firm will prefer retained earnings to debt, short-term debt over long-term debt and debt over equity. Myers and Majluf (1984) argued that if firms issue no new security but only use its retained earnings to support the investment opportunities, the information asymmetric can be resolved. That implies that issuing equity becomes more expensive as asymmetric information insiders and outsiders increase. Firms whose information
asymmetry is large should issue debt to avoid selling underpriced securities. The capital structure decreasing events such as new stock offering leads to a firm’s stock price decline.

An announcement of increasing capital structure events is received by the market as good news because financial intermediaries like investment bank can become insiders to monitor the firm’s performance. Managers may have inside information that is not known to the market. Insider investors have more information about the true distribution of firm returns than outsiders. Insider investors tend to limit the use of equity in order to retain control of the firm (Hutchinson, 1995). Moreover, the risk of the firm’s return is unknown to investors. They are forced to rely on noisy signals such as the firm’s level of capital structure to determine the risk of their investment and firm’s value may be underpriced by the market (Myers & Majluf, 1984).

An organization’s need to plan and consider how to confront future potential risks and opportunities by establishing an efficient system of control, a detector of variances between organizational objectives and performance (Anthony & Govindarajan, 2007). Budgets are considered to be the core element of an efficient control-process and consequently vital part to the umbrella concept of an effective MCS (Davila & Foster, 2007, Puxty & Lyall, 1989). “As a forward looking set of numbers, budgets project future financial management practice on performance which enables evaluating the financial viability of a chosen strategy” (King, Clarkson & Wallace, 2010). This theory instigates the second research hypotheses: Capital budgeting has no significant effect on the financial performance of non-financial firms listed at the NSE.
2.2.4 Static Trade-off Theory

Modigliani and Miller (1963) argue that a firm would raise its value by financing debt because of a debt tax shield. However, one of the disadvantages of debt is the cost of potential financial distress, especially when the firm relies on too much debt. In static trade-off theory (Miller, 1977), noted that the agency costs of financial distress and the tax-deductibility of debt finance generate an optimal capital structure. Therefore, firms’ capital structures are optimal when they determine by comparison off the costs against the benefits of the use of debt and equity.

Previous research on static trade-off theory concludes mixed results. On one side, study shows that target leverage is not important. Many studies for instance, Titman and Wessels (1988), Rajan and Zingales (1995) and Fama & French (2002) affirm that higher profitability firms tend to borrow less, this is inconsistent with the actual trade-off prediction that higher profitability firms should borrow more to reduce tax liabilities. Graham (2000) estimating the cost and benefit of debt, finds that the large and more profitable firms with low financial distress expectation use the debt conservatively. Microsoft is the classic example of those studies that it being a very profitable organization has maintained a zero-debt policy. Further survey of corporate executives shows the softness of target leverage (Graham & Harvey, 2001). Speed of adjustment towards target leverage is slow (Jalilvand & Harris (1984); Fama & French (2002). Firms on their capital structures do not compensate the impacts of stock returns actively and prior stock returns are the main determinant of market leverage (Welch, 2004).
Flannery and Rangan (2006) contradict Welch (2004) by finding the effects of firm’s prior stock price movements. Most of the time firms are not so active with respect to their financial policy but to move towards target leverage firms do buy back their securities (Leary and Roberts, 2005; Hovakimian, 2006). Strebulaev, (2004) and Hennessy& Whited (2004) have tried to conciliate inconsistent empirical findings with respect to trade-off theory in a dynamic framework. This theory instigates the third research hypotheses: Leverage has no significant effect on the financial performance of non-financial firms listed at the NSE.

2.2.5 Cost Push Theory

Cost-push inflation is caused by wage increases enforced by unions and profit increases by employers. The type of inflation has not been a new phenomenon and was found even during the medieval period. But it was reviewed in the 1950s and again in the 1970s as the principal cause of inflation. The early proponent of this theory was Slichter (1954). Slichter’s views on inflation were directly linked with his understandings of the recent development of industrial relations in the United States. Slichter had presented a paper on the relationship between inflation and wage determination, at the annual meeting of the American Economic Association of 1953 (Slichter 1954). The basic cause of Cost-Push inflation is the rise in money wages more rapidly than the productivity of labor. The labor unions press employers to grant wage increases considerably, thereby raising the cost of production of commodities. Employers in turn, raise prices of their products. Higher wages enable workers to buy as much as before, in spite of higher prices. On the other hand, the increase in prices induces unions to demand still higher wages. In this way, the wage-cost spiral countries, thereby, leading
to cost-push or wage-push inflation. Cost-push inflation is an inflation, which occurs due to a raise of price of goods and services but this cannot be changed with any other appropriate substitution. Cost-push factors activate through the supply side of the economy by increasing the unit cost of production, so that real output or GDP contraction can create inflation (Gaomab II, 1998).

The cost-push inflation theory emphasizes the fact that rise prices due to the increasing cost of production. Prices are pushed up by rising costs and these costs are passed along to the consumers in the form of higher prices. Wages are pushed up by trade union’s bargaining power (Makochekanwa, 2007). If the external price shock is accompanied by devaluation of local currency or a higher tariff rate, then it is translated into the prices of domestic products because of increasing costs (Hansen et al. 1995). Another cause of Cost-Push inflation is profit-push inflation. Oligopolist and monopolist firms raise the price of their products to offset the rise in labor and cost of production to earn higher profits. There being imperfect competition in the case of such firms, they are able to administered price of their products (Totonchi, 2011). Profit-push inflation is, therefore called administered-price inflation or price-push inflation. This theory instigates the fourth research hypotheses: Inflation has no significant effect on the financial performance of non-financial firms listed at the NSE.

2.3 Empirical Review

This section covers previous studies done in relation to financial management practices and financial performance. Studies done abroad were looked at as well as studies done in Kenya. Studies relating to each independent variable to financial performance were considered.
2.3.1 Liquidity Management and Financial Performance

Bhunia and Khan (2011) studied liquidity management efficiency of Indian steel companies with a sample of 230 companies for 9 years period (2002-2010) and found a petite association between the indicators of liquidity and profitability. Bhunia, Khan and Mukhuti (2011) also found that working capital in terms of liquidity is accountable for poor capacity, underutilization and poor consumption and that there exist a high positive relationship between liquidity and profitability. More recent studies have also confirmed the existence of the tradeoff between liquidity and profitability trade off.

Samiloglu and Demirgunes (2008) investigated the relationship among Istanbul firms and found that growth in sales affects firm profitability positively. This result invariably support the view that liquidity and profitability are directly associated since liquidity is enhanced by sale’s growth. Lamberg and Valming, (2009) studied the impact of liquidity management on profitability during financial crises with a sample of companies listed on Stockholm stock Exchange’s small and mid-capitalist with some restrictions. Adopting a quantitative methodology and regression analysis, they found out that the adaptation of liquidity strategies do not have a significant impact on profitability measured by ROA. However, that increased use of liquidity forecasting and short-term financing during the financial crisis had a positive impact on ROA. In other word frequent monitoring and forecasting on liquidity levels and making more short-term investments can provide gains in profitability.

Ashokkumar and Manohar (2010) studied Cement Industry in Tamilnadu and found significant negative relation between the firm's profitability and its liquidity level. More recent studies have also confirmed the existence of the tradeoff between liquidity and
profitability trade off. For instance Bhunia and Brahma (2011) studied the importance of liquidity management on profitability and found a significant negative relationship between the profitability.

### 2.3.2 Capital Budgeting and financial performance

Yao, Smid and Hermes (2006) compared the use of capital budgeting techniques and their impact on performance in Netherlands and China. They compared 250 Dutch and 300 Chinese firms. The response rates were 87 firms responded in total. Out of these 42 and 45 were Dutch and Chinese companies, respectively. The study used return on assets to measure performance which was used in a regression model as a dependent variable and measured against the various investment decision techniques. The results indicated that in both countries, sophisticated capital budgeting techniques mostly NPV and IRR had a positive relationship with return on assets (ROA).

Itivi (2011) sought to determine the effect of capital budgeting on the growth of manufacturing firms listed at the Nairobi stocks exchange. The study adopted a descriptive research design and a census survey was used where statistical data was collected quantitatively and qualitatively. A finding of this study was that capital budgeting process affects the growth of listed manufacturing firms. In a study conducted in South Africa, Olawale, Olumuyiwa and Morgan (2010) found out that the use of sophisticated investment appraisal techniques such as NPV and IRR methods have a positive impact on the profitability of firms.

Irungu (2014), studied the relationship between the applied capital budgeting techniques and the financial performance of companies listed in the Nairobi Securities Exchange.
The study concluded that there was no significant relationship between the capital budgeting techniques employed and the financial performance of the same.

Munyao, Kalui and Ngeta. (2013) sought to establish the relationship between capital budgeting techniques and financial performance of companies listed at the Nairobi securities Exchange. The objective was to find out the relationship between capital budgeting techniques and financial performance of companies listed in the NSE. The study used multiple regression analysis to find the association between capital budgeting techniques and the financial performance of companies listed at the Nairobi Stock Exchange. The finding of the study indicated that there is a significant relationship between capital budgeting techniques and the financial performance of the companies registered in the Nairobi Stock Exchange method.

2.3.3 Leverage and financial performance

Empirical evidence on the relation between leverage and performance is mixed; that is, the effect of leverage on performance has been found to be positive, negative, or insignificant. Margaritas and Pillai (2010), sought to investigate the effect of capital structure on the performance of the public Jordanian firms listed in Amman stock market. The study used multiple regression model represented by ordinary least squares (OLS) as a technique to examine the effect of capital structure on the performance. The study found out that there was no significant difference to the impact of the financial leverage between high financial leverage firms and low financial leverage firms on their performance.
On the other hand, several scholars, such as Antoniou (2008), provided evidence to support the notion that the relation between financial leverage and performance is negative. Furthermore, Connelly, Limpaphayom, and Nagarajan (2012) found that the variation in leverage is not associated with firm performance, measured as Tobin’s q. Some studies show that the relation between financial leverage and firm performance is non-monotonic. For instance, Coricelli, Driffield, and Roland (2012) found that the positive relation between leverage and total productivity growth exists to a certain point and beyond such a critical threshold; the negative relation between leverage and total productivity growth exists. Cai and Zhang (2011) showed that changes in financial leverage negatively affect stock returns. Similarly, Giroud et al. (2012) showed that reducing leverage ratios result in better performance.

Shaheen (2014) investigated the impact of leverage on financial performance of an organization. The objective of this study was to analyze the effects of leverage on performance measures to better understand the dynamics and determinants of performance within the Pakistan companies. The study findings suggested that leverage is negatively related to performance. Madan (2007) examined the role of financing decision in the overall performance of the leading hotels in India showing that Leverage seemed to be working only for a few companies, while it affected most of the firms negatively. The research further revealed that those firms which were moderately geared were able to generate a good return on equity.

Ebaid (2009) studied the impact of capital structure choice on firm performance in Egypt, considered as emerging or transitional economy of the period 1997-2005. Results indicated that capital structure choice decision had weak to no impact on firm’s
performance. Gamze, (2012) also noted that, Leverage as a control variable has a significant negative relationship with firm value and profitability of firms.

Raza (2013) investigated the effect of financial leverage on firm performance where he used empirical evidence from Karachi stock exchange. Using descriptive statistics, he found out high leverage ratio in textile industry whereas the average profitability of textile industry was negative. The result of this study showed a negative relationship between performance and leverage.

2.3.4 Inflation and financial performance

Awan, (2014) reviewed the Impact of liquidity, leverage, inflation on a firm profitability an empirical analysis of food sector of Pakistan and found out a significant positive relationship between leverage, liquidity and inflation on firm profitability. According to Loto (2012) the inflation and lending rate are positively insignificant with performance of manufacturing performance. Chaudry et al. (2013) studied inflation and sectorial growth. They studied time series data from 1972 to 2010 of three major sectors; these sectors were agriculture, manufacturing and services. Their findings were that the inflation had negative relation for manufacturing sector but have positive relation with services and agriculture sectors. Zuhaib & Nizam (2015) in their study on inflation, interest rates and firms performance in Pakistan found that inflation was strongly positive related with both return on asset and return on equity while the interest is highly native related with return on asset. In her study on effects of working capital management on performance of non-financial firms listed at the NSE, Wamugo (2014) used financing policy and Investing policy as independent variables and ROA and ROE and the dependent variables. The influence of inflation on the relationship between the
variables was not considered. Deresse & Prabhakara & Prabhakara (2012) also did not consider the influence of inflation on the relationship of the independent and dependent variables in their study on the effect of financial management practices and characteristics on profitability of firms in Ethiopia.

2.4 Summary of Literature and Research gaps

Concerned with financial management practices, previous researchers have concentrated on examining, investigating and describing the behaviour of Securities Exchange market in practising financial management. Their findings are mainly related to exploring and describing the behaviour of Securities Exchange market towards financial management practices. Although they provided much descriptive statistical data and empirical evidence on Securities Exchange market financial management practices, it appears that there still are some gaps in the literature, which need to be addressed. Most research work on performance done in Kenya have looked at individual components of financial management and not financial management as a whole.

Though comprehensive studies looking at financial management as a whole have been carried out in developed countries, few studies have been carried out in developing countries. It was therefore imperative to carry out a study on developing countries like Kenya to analyze the relationship and also complement the studies in developed countries.
Table 2.1 Summary of Research Gaps

<table>
<thead>
<tr>
<th>RESEARCH TOPIC</th>
<th>AUTHOR(S)</th>
<th>VARIABLES</th>
<th>METHODOLOGY/MODEL</th>
<th>FINDINGS</th>
<th>RESEARCH GAPS</th>
<th>HOW GAPS ARE ADDRESSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect of financial management practices and characteristics on profitability: a study on business enterprises in Jimma town, Ethiopia</td>
<td>Deresse &amp; Prabhakara &amp; Prabhakara (2012)</td>
<td>Financial Accounting, Reporting and Analysis: Working Capital Management, Capital budgeting (Fixed asset) Management, Financial Planning and Control</td>
<td>Both primary and secondary data were collected from 37 business enterprises in Jimma town.</td>
<td>Profitability was significantly affected by efficiency in financial management practices such as accounting, reporting, and analysis, working capital management, fixed.</td>
<td>Study conducted in Ethiopia and only covered companies located in one town.</td>
<td>Consider moderating effect of inflation.</td>
</tr>
<tr>
<td>Study Title</td>
<td>Author(s)</td>
<td>Methodology</td>
<td>Results</td>
<td>Limitations</td>
<td>Considerations</td>
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<tr>
<td>Effects of Working Capital Management on Performance of Non-Financial Companies Listed In NSE, Kenya</td>
<td>Wamugo, MaKauAN dKosibei (2014)</td>
<td>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.</td>
<td>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.</td>
<td>Only Working capital used. Working capital could be affected by other management practices.</td>
<td>Study used more independent variables to establish a clear relationship. Also moderating effect of inflation was considered.</td>
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<tr>
<td>The effect of budgets on financial performance of manufacturing companies in Nairobi county</td>
<td>Evans Obara Onduso (2013)</td>
<td>A census survey of 18 manufacturing firms listed at the Nairobi securities exchange was conducted. A cross-section</td>
<td>The study findings revealed that there is a strong positive effect of budgets on financial performance. Only budgeting used. Financial performance could be affected by other management practices.</td>
<td>Considered performance of all firms under the non-financial sector. More independent variable used</td>
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<td></td>
</tr>
<tr>
<td>Study Title</td>
<td>Author(s)</td>
<td>Methodology</td>
<td>Findings</td>
<td>Implications</td>
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<td>-----------------------------------------------------------------------------</td>
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<tr>
<td>Effects of financial Leverage on firm performance. Empirical evidence from Karachi stock exchange.</td>
<td>Muhammad Wajid Raza (2013)</td>
<td>Panel data analysis was used and secondary data collected from listed non-financial firms at Karachi stock exchange for a period covering 6 years 2004-2009</td>
<td>The results of this study shows negative relation between performance and leverage.</td>
<td>Few variables used. Liquidty and capital budgeting considered together with leverage.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effects of Working Capital Management on Firm’s Performance: Evidence from Turkey</td>
<td>Gamze Vural et.al. (2012)</td>
<td>Panel data analysis was used and secondary data collected from 75 manufacturin g firms listed on Instanbul stock exchange for the period 2002-2009.</td>
<td>The results demonstrate that firms can increase profitability measured by gross operating profit by shortenin g collection period of accounts receivable and cash conversio n cycle.</td>
<td>Only Working capital used. Working capital could be affected by other management practices.</td>
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</tbody>
</table>
Leverage as a control variable has a significant negative relationship with firm value and profitability of firms.

Source: Researcher 2017

2.5 Conceptual Framework

A conceptual framework is a written or visual presentation that explains graphically or in narrative form the main things to be studied, the key factors, concepts or variables and presumed relationship among them, (Miles & Huberman, 1994). The study sought to establish the effect of financial management practices on financial performance of non-financial firms listed at the Nairobi securities exchange.
Figure 1.2: Conceptual framework

Independent variables

- **Liquidity Management**
  - Short term financing

- **Capital budgeting**
  - Investment decision

- **Leverage**
  - Financing decision

Dependent variable

- **Performance of non-financial listed firms**
  - Return on Assets

Moderating Variable

**Source: Researcher, 2017**

Figure 2.2 represent the relationship between the independent and the dependent variables of the study. Independent variables comprise of the Liquidity Management, Capital budgeting and Leverage. On the other hand, financial performance of non-financial listed firms as the dependent variable. This study therefore sought to establish the relationship between independent variables to the dependent variables and the influence of the moderating variable on the relationship.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter contains methodology used in the study. The chapter contains the following subsections: Research philosophy, research design, target population, data collection, data analysis and diagnostic tests. The Diagnostic tests conducted include test of multicollinearity, equality of means, stationarity and hausman test.

3.2 Research Design

A research design is the arrangement of conditions for data collection and analysis of data in a manner that aim to combine relevance to research purpose with economy in research procedure (Kothari, 2006). Research design constitutes decision regarding what, why, where, when and how concerning an inquiry or a research study (Sekaran, 2010).

This study adopted causal research design. Causal study focus on an analysis of a situation or a specific problem to explain the patterns of relationships between variables. Causal study was therefore used to explain the relationship between financial management practices and financial performance of non-financial firms listed at the NSE. The study was purely quantitative as it involved collection and analysis of quantitative data derived from the financial statements of companies.

3.2.1 Research Philosophy

A research philosophy is a belief about the way in which data about a phenomenon should be gathered, analyzed and used. According to Hudson and Ozanne (1988), research philosophy is closely linked to the following two terms. Epistemology, which
is the relationship between the researcher and the reality or what is known to be true and Ontology which is the nature of reality or what is believed to be true. The two major philosophical doctrines or paradigms in the social science inquiry are positivism and interpretive.

According to Hudson and Ozanne (1988), “positivism ontology asserts that there is a single, external and objective reality to any research question regardless of the researcher’s belief. Thus, the positivist researchers take a controlled and structural approach in conducting research by initially identifying a research topic, constructing appropriate research questions and hypotheses and by adopting a suitable methodology. As positivists’, researchers seek objectivity and use consistently rational and logical approaches to research. Further, statistical and mathematical techniques are central in the research methods adopted by positivist researchers and they adhere to specifically structured research techniques to uncover single and objective realities. The goal of positivist research is to make generalizations because human actions can be explained as a result of real causes that precedes their behavior.

An interpretive researcher enters the field with some sort of prior insight about the research topic but assumes that it is insufficient in developing a fixed research design due to complex, multiple and unpredictable nature of what is perceived as reality. During data collection stage, the researcher and his informants are interdependent and mutually interactive with each other. The goal of interpretive research is to understand and interpret human behavior rather than to generalize and predict causes and effects (Hopkins, 2000). Given the research problem of this study positivist paradigm was adopted.
3.3 Empirical model

The model used was fixed effects model to test research hypothesis. Independent variables used were variables to define financial management practices which include Liquidity management, Capital budgeting and Leverage. Financial performance was measured by ROA ratio. As an indicator of liquidity (LIQ) the conventional definition was used: The ratio of current assets to current liabilities (Jong, Kabir, & Nguyen, 2008). Capital budgeting was measured by ROCE ratio and Leverage was measured by use of debt ratio.

The model of the effect of financial management practices on financial performance was formulated as follows:

\[ \text{ROA} = f(\text{LM, FCB, LR}) \]

Where:

\[ \text{ROA} = \text{Return on assets} \]
\[ \text{LM} = \text{Liquidity Management} \]
\[ \text{FCB} = \text{Capital budgeting} \]
\[ \text{LR} = \text{Leverage ratio} \]

**Equation 3.1**

\[ \text{ROA}_{it} = \beta_0 + \beta_{1it} \text{LM} + \beta_{2it} \text{FCB} + \beta_{3it} \text{LR} + \epsilon \]  
(Reduced Equation)

**Equation 3.2**

\[ \text{ROA}_{it} = \beta_0 + \beta_{1it} \text{LM} + \beta_{2it} \text{FCB} + \beta_{3it} \text{LR} + l + \epsilon \]  
(Full Equation)
Where: $\beta_1, \beta_2$ and $\beta_3$ the coefficients, $\epsilon$ is the error variable,

ELM, EFCB & LR are independent variables related to financial management practices.

$i$ is Number of non-financial firms (38 firms were studied)

$t$ is time. i.e Year 2010, 2011, 2012, 2013 and 2014

$I$ is Inflation

**H0:** Liquidity management has no significant impact on financial performance of non-financial firms listed at the NSE.

$\text{ROA} = f(LM = \text{Current assets}/\text{Current Liabilities})$.

Liquidity management will be measured by current ratio.

Similar model was used by Laetey, Antwi and Boadi (2013) on their study on the relationship between liquidity and profitability of listed banks in Ghana.

**H0:** Capital budgeting has no significant impact on financial performance of non-financial firms listed at the NSE.

$\text{ROA} = f(FCB = \text{EBIT}/(\text{Total assets}-\text{Current liabilities}))$

Capital budgeting will be measured using ROCE ratio which will be collected from secondary data obtained from audited financial statements.

**H0:** Leverage has no significant impact on financial performance of non-financial firms listed at the NSE

$\text{ROA} = f(LR = (\text{Long term debt} + \text{Short term debt})/\text{Shareholders equity})$
3.3.1 Operationalization and Measurement of Study Variables

Table 3 below shows the variables operationalization matrix. It summarizes the indicators, measures and scale of dependent (Financial performance) and independent variables, namely Liquidity management, Capital budgeting and Leverage.

Table 2: Measurement of study variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Operationalization</th>
<th>Measurement</th>
<th>Hypotheses Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variable</strong></td>
<td>Financial Performance</td>
<td>• Return on Assets</td>
<td>EBIT/Average total assets (Ebaid 2009)</td>
</tr>
<tr>
<td><strong>Independent variables</strong></td>
<td>Liquidity management</td>
<td>• Current ratio</td>
<td>Current assets/current liabilities. (Shaheen, 2014)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The higher the current ratio the more capable the company is, of paying its obligations.</td>
</tr>
<tr>
<td></td>
<td>Capital budgeting (Investment decision)</td>
<td>• Total assets</td>
<td>ROCE ratio</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Current liabilities</td>
<td>EBIT/(Total assets-current liabilities)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>A Higher ROCE indicates more efficient use of capital. ROCE should be higher than the company’s capital cost.</td>
</tr>
<tr>
<td></td>
<td>Leverage</td>
<td>• Short term debt</td>
<td>(Short term debt+long term debt)/Shareholders Equity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Long term debt</td>
<td>(Raza, 2013; Shahen, 2014)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Shareholders’ Equity</td>
<td>A high Debt to Equity ratio generally indicates that a company has been aggressive in financing its growth with debt.</td>
</tr>
</tbody>
</table>
3.4 Target Population

A population is the total collection of elements about which a researcher wishes to make some inferences (Cooper & Schindler, 2007). Burns and Grove (2003) and Mugenda and Mugenda (2003) describe population as all the elements that meet the criteria for inclusion in a study. Population is therefore the entire group of individuals, events or objects having a common observable characteristic. The population of this study consisted of all non-financial firms listed in the Nairobi Securities Exchange. There were 48 non-financial firms listed at the Nairobi Securities Exchange as at end of year 2014 (NSE, 2014). A census study was done where all the firms in the target population were selected and considered for analysis. The study made use of secondary data obtained from the financial statements (balance sheets and income statements) of the firms for a five year period covering years 2010 to 2014.

3.5 Data Collection Instruments

The study used panel secondary data to test hypotheses. The secondary data was contained in the financial statements of listed non-financial firms. A work plan was drawn to extract data relating to financial performance, leverage, liquidity and capital budgeting for a period of five years covering 2010 to 2014 from all firms listed under the non-financial sector at the NSE. Data relating to average annual inflation was collected from the Kenya bureau of statistics for year 2010 to year 2014.

3.6 Data Collection Procedure

The study used secondary panel data contained in the annual reports and financial statements of all listed non-financial companies at the NSE. Financial statements were used to provide data on performance as measured using ROA, Capital budgeting as
measured using ROCE, Liquidity as measured using liquidity ratio (current assets and current liabilities), and leverage as measured using debt ratio. In order to calculate the ratios, raw data was required. The data extracted from the financial statements included earnings before interest and tax, Total assets, Current assets, current liabilities, short term debt, long term debt and shareholder’s equity. Average annual inflation rate was collected for five years covering 2010 to 2014. To enhance quality and quantity of data adequacy, a combination of both time series and cross section data was used (Gujarat, 2003).

3.7 Data Analysis and Presentation

The study used fixed generalized least squares regression analysis to test the significance of the various independent variables (Liquidity management, Capital budgeting and Leverage). Eviews 8 statistical package was used for data analysis and presentation of study findings. Descriptive statistics was conducted to establish initial inferences of the data. Diagnostic tests were also conducted.

3.7.1 Regression Analysis

Regression analysis consisted of fixed generalized least squares regression analysis, coefficients of determination ($R^2$), so as to test hypotheses.

3.7.2 Stationarity Test

If the variables in the regression model are not stationary, then it can be proved that the standard assumptions for asymptotic analysis will not be valid. In other words, the usual “t-ratios” will not follow a t-distribution, so we cannot validly undertake hypotheses tests about the regression parameters. In order to work on panel data, the data is
required to be stationary. A stationary process has statistical properties (mean, variance
and covariance) that do not change over time. Therefore, it is important that one should
first test a time series to see if it is stationary or not (Brockwell & Davis, 1996).

A non-stationary series can have a strong influence on its behavior and its properties
thereby leading to spurious regressions (the results that look good but which are really
valueless). There are various formal ways of testing for stationarity such as Dickey-
Fuller (DF) unit root test (Dickey & Fuller, 1979), Augmented Dickey-Fuller (ADF)
unit root test, Kwiatkowski-Phillips-Schmidt-Shin (KPSS) tests and the Phillips-Peron
(PP) unit root test. Ayat and Burridge (2000), state that the Augmented Dickey-Fuller
(ADF) test has become the most popular of many competing tests in testing for unit
root.

This study applied the unit root test, Dickey-Fuller (DF) to determine if the financial
management practice and financial performance of listed non-financial firms in Kenya
are stationary or non-stationary and if they are non-stationary, then their first or second
difference was taken to make them stationary for further processing of the data.

3.8 Diagnostic Test

Diagnostic tests should be performed so that the model chosen is a good model in the
sense that all the estimated coefficients have the right signs, they are statistically
significant on the basis of the $t$ and $F$ tests Gujarati (2003). Diagnostic test in regression
analysis seek to assess the validity of the regression model.
3.8.1 Multicollinearity

Multicollinearity implies that for some set of explanatory variables, there is an exact linear relationship in the population between the means of the response variable and the values of the explanatory variables (Horne, 1998). The goal of the multicollinearity test is to analyze whether there is correlation between independent variables. Multicollinearity in the regression model can be detected such as by testing the R2 value and/or analyzing the correlation matrix (Ghozali, 2002). Correlation matrix was used to test for multicollinearity. A general rule is that if a correlation between any two variables is greater than or equal to 0.70, then a high degree of interrelation can be inferred and the possibility of multicollinearity exists (Kieu, 2004).

3.8.2 Hausman test

To decide between fixed or random effects, you can run a Hausman test where the null hypotheses is that the preferred model is random effects vs. the alternative the fixed effects (Greene, 2008). It basically tests whether the unique errors (ui) are correlated with the regressors, the null hypotheses is they are not.

3.9 Ethical Considerations

There are important ethics risks in research that seeks to cross cultures, not least because of the potential to distort or misrepresent data analysed at a distance, given insufficient local knowledge and contextual understanding (Fossheim, 2013). Sufficient understanding of proximate contexts is necessary to mitigate the risks of misinterpretation and misrepresentation associated with secondary data analysis. This also entails awareness of the limits of understanding, taking care to recognise what cannot be known and should not be assumed by the secondary researcher. The
researcher was well cautious not to assume and to restrict conclusions based on facts obtained from the data collected. The research was purely for academic purposes.
CHAPTER FOUR
DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents analysis and findings of the study as set out in the research methodology. The study utilized secondary data collected from the Nairobi securities exchange. Data was collected from 34 non-financial firms listed at the NSE. This is because of incomplete data in the financial statements and the fact that some firms in the sector were listed in between the study period while others had been suspended. The Data was analyzed using E-views 8. Presented first are descriptive characteristics of the data. After descriptive analysis, diagnostic analysis of the data is presented. This entails test of stationarity, equality of means, multicollinearity, hausman test and granger causality. Findings on correlation analysis are also presented followed lastly by the panel data analysis which establishes the effect of the four independent variables on profitability of the firms.

4.2 Descriptive statistics

This section highlights descriptive statistics for returns on Assets, Returns on capital employed, leverage and current ratio as described in section. Table 4.1 provides statistics on the mean, maximum, minimum and the standard deviation for each variable.
### Table 4.1: Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>ROCE</th>
<th>LEVERAGE</th>
<th>LIQUIDITY</th>
<th>INFLATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.15216</td>
<td>0.09644</td>
<td>0.365329</td>
<td>2.009869</td>
<td>0.0802</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.637524</td>
<td>0.475165</td>
<td>10.13397</td>
<td>8.843122</td>
<td>0.1400</td>
</tr>
<tr>
<td>Minimum</td>
<td>-0.612184</td>
<td>-1.220787</td>
<td>-24.7835</td>
<td>0.090043</td>
<td>0.0410</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.224578</td>
<td>0.203179</td>
<td>2.190476</td>
<td>2.454624</td>
<td>0.03465</td>
</tr>
<tr>
<td>Observations</td>
<td>170</td>
<td>170</td>
<td>170</td>
<td>170</td>
<td>170</td>
</tr>
</tbody>
</table>

*Source: Research data 2016*

ROA averaged 0.15216 with a maximum value of 0.637524 and a minimum value of -0.612184 at a standard deviation of 0.224578. The positive average return indicates that all companies were on average profitable although there were some who recorded losses as indicated by the negative minimum value.

Capital budgeting recorded a mean value of 0.09644 with a maximum value of 0.475165 and a minimum value of -1.220787 at a standard deviation of 0.203179. The results indicate that most companies had made returns from capital invested on long term projects on average. Some companies however made negative returns from capital investment.

LEVERAGE recorded an average 0.365329, a maximum value of 10.13397, a minimum value of -24.7835 and a standard deviation of 2.190476. The result shows that there was a company which though made profit, was highly geared with total debt being 10 time the profit. The min value of -24.7835 indicate that there was a company which was highly geared and made losses in one of the periods under review.
LIQUIDITY averaged 2.009869 with a maximum value and minimum value of 8.843122 and 0.090043 respectively at a standard deviation of 2.454624. The maximum value indicates that there was a company which had adopted an aggressive liquidity management approach with current assets almost nine times the value of current liabilities. On average non-financial companies were relatively aggressive in short term financing with a mean value of 2.009869.

4.3 Diagnostic tests

This section presents the results of the following diagnostic tests: test of multicollinearity, Stationarity test, and Hausman specification test.

4.3.1 Multicollinearity

The goal of the Multicollinearity test is to analyze whether there is correlation between independent variables. Multicollinearity in the regression model can be detected such as by testing the correlation coefficient value or analyzing the correlation matrix (Ghozali, 2002). To establish the linear relationship of the different variables under study a correlation analysis was conducted.

Table 4.2: Correlation matrix

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>CAPITAL BUDGETING</th>
<th>LEVERAGE</th>
<th>LIQUIDITY</th>
<th>INFLATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAPITAL BUDGETING</td>
<td>0.973575</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>0.790356</td>
<td>0.725804</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIQUIDITY</td>
<td>0.070111</td>
<td>0.206288</td>
<td>0.204222</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>INFLATION</td>
<td>0.330787</td>
<td>0.202003</td>
<td>-0.07708</td>
<td>-0.77565</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Research data 2016
Table 4.2, shows the correlation matrix to test for presence of multicollinearity. The independent variables used in this study were liquidity as measured using current ratio, capital budgeting as measured using ROCE, leverage and inflation as a moderating variable. A general rule is that if a correlation between any two variables is greater than or equal to ±0.80, then a high degree of interrelation can be inferred and the possibility of multicollinearity exists (Kieu, 2004). As it is shown in the correlation matrix, there was no problem of multicollinearity as none of the relationships exceeded R±0.8.

4.3.2 Stationarity Test

All the variables were tested for stationarity using ADF-Fisher Chi-square. The table below shows a summary of unit root test for the variables. Probabilities for Fisher test were computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

**Table 4.3: Summary of unit root test**

<table>
<thead>
<tr>
<th>METHOD</th>
<th>LEVERAGE</th>
<th>ROA</th>
<th>ROCE</th>
<th>LIQUIDITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADF - Fisher Chi-square</td>
<td>Statistic</td>
<td>114.226</td>
<td>122.264</td>
<td>127.049</td>
</tr>
<tr>
<td></td>
<td>Probability</td>
<td>0.0000</td>
<td>0.0001</td>
<td>0.0000</td>
</tr>
<tr>
<td></td>
<td>Probability</td>
<td>0.0022</td>
<td>0.0001</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

**Source: Research data 2016**

The tests for LEVERAGE indicate no presence of a unit root at level. Probability at level was less than 5% which means we reject null hypotheses thereby indicating no presence of unit root thus the data is stationery.
Stationarity for ROA was tested using Unit root and results generated as shown in table 4.3.1 above. ROA was not stationary at level as ADF tests gave probability higher than 5% thus fail to reject the null of a unit root. This required for the data to be stationarized by differencing to avoid spurious results. On the first difference ADF test gave a probability of less than 5% thereby rejecting the presence of unit root.

ROCE was also not stationary at levels as ADF test fail to reject the null of a unit root. The data was stationarized by differencing. On the first difference ADF test rejected the presence of unit root with a probability of 0.000 which is less that 5% level of significance.

Finally stationarity test for LIQUIDITY indicated no presence of a unit root at level with probability of less than 5% which rejected presence of unit root.

4.3.4 Equality of the Means

The data was subjected to equality of means test to establish if the samples were drawn from the same population. The results were as shown in table 4.8 below.

<table>
<thead>
<tr>
<th>Method</th>
<th>df</th>
<th>Value</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anova F-test</td>
<td>(3, 676)</td>
<td>51.59227</td>
<td>0.0000</td>
</tr>
<tr>
<td>Welch F-test*</td>
<td>(3, 338.468)</td>
<td>35.84667</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: Research data 2016

The test for equality of means revealed that we reject the null hypotheses of equality of means since there is strong evidence that means differ across firms. The probability of
the F statistic is less than 0.05%. This implies that the samples were not drawn from the same population.

4.4 Panel regression results for direct relation (Reduced Equation)
Both fixed and random effects equations were run. However, the researcher used fixed effects equation as per Hausman test which recommended fixed test instead of Random test. The results were as tabulated in table 4.10 below

Table 4.5: Random effects regression results

Dependent Variable: ROA
Method: Panel EGLS (Cross-section random effects)
Periods included: 5
Cross-sections included: 34
Total panel (balanced) observations: 170
Swamy and Arora estimator of component variances

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIQUIDITY</td>
<td>0.005489</td>
<td>0.002222</td>
<td>2.470546</td>
<td>0.0145</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>0.001854</td>
<td>0.002282</td>
<td>0.812370</td>
<td>0.4177</td>
</tr>
<tr>
<td>ROCE</td>
<td>0.906865</td>
<td>0.027002</td>
<td>33.58452</td>
<td>0.0000</td>
</tr>
<tr>
<td>C</td>
<td>0.052992</td>
<td>0.008891</td>
<td>5.960230</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

R-squared 0.828788 Mean dependent var 0.097655
Adjusted R-squared 0.825694 S.D. dependent var 0.175575
S.E. of regression 0.073303 Sum squared resid 0.891965
F-statistic 267.8524 Durbin-Watson stat 1.703039
Prob(F-statistic) 0.000000

Source: Research data 2016; Significant at 0.05 level
4.4.1 Hausman test

To decide between Random and Fixed effects, Hausman test was run where the null hypotheses was that preferred model was random effects vs alternative, fixed effects model. (Greene, 2008). Table 4.10 below shows Hausman test results.

**Table 4.6: Hausman test**

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>76.365506</td>
<td>3</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: Research data 2016

In order to choose between fixed and random effects model for model 1(ROA), the Hausman test was used. The null hypotheses 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 76.36 with a p-value of 0.0000 implying that at 5 percent level, the chi-square value obtained was statistically significant. This means therefore that the study rejects the null hypotheses that random effects model was preferred to fixed effect model for ROA as recommended by Greene (2008). Interpretations therefore were based on the fixed effects regression model as shown in table 4.7 below.
Table 4.7: Fixed effects regression results

Dependent Variable: ROA
Method: Panel Least Squares
Sample: 2010 2014
Periods included: 5
Cross-sections included: 34
Total panel (balanced) observations: 170

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.036614</td>
<td>0.009077</td>
<td>4.033679</td>
<td>0.0001</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>0.001094</td>
<td>0.003058</td>
<td>0.357838</td>
<td>0.7209</td>
</tr>
<tr>
<td>LIQUIDITY *</td>
<td>0.009295</td>
<td>0.002750</td>
<td>3.380621</td>
<td>0.0009</td>
</tr>
<tr>
<td>ROCE *</td>
<td>1.000236</td>
<td>0.033198</td>
<td>30.12986</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

R-squared 0.852776 Mean dependent var 0.152160
Adjusted R-squared 0.850115 S.D. dependent var 0.224578
S.E. of regression 0.086945 Akaike info criterion -2.023824
Sum squared resid 1.254878 Schwarz criterion -1.950041
Log likelihood 176.0251 Hannan-Quinn criterion -1.993884
F-statistic 320.5106 Durbin-Watson stat 1.608499
Prob(F-statistic) 0.000000

Source: Research data 2016; Significance level is 0.05

Source: Research data 2016

As per table 4.11 above, the coefficient of determination R-Squared gave a value of 0.852776 this means that 85.28% of the variation in p as measure by ROA can be
explained by changes in Leverage, Liquidity and capital budgeting while only 14.72% could not be explained. The value of F =320.5106, is large enough to conclude that the set of independent variables as a whole were contributing to the variance of financial performance as measured by return on assets and therefore, the model represents the actual performance of the firms under study. The results indicate that there was a statistically significant positive relationship between capital budgeting with a coefficient of 1.000236 and a probability of 0.000 which is less than significance level of 0.05, and performance of non-financial companies listed at the NSE as measured by return on assets. The coefficient for liquidity of 0.009295 was statistically significant at 5% percent level with a P value of 0.0009. The results indicate that there was as a statistically significant positive relationship between liquidity and performance of non-financial companies listed in the NSE as measured by return on assets. However, leverage had a positive insignificant relationship to financial performance with a probability of 0.7209 which is higher than 5% significant level. This corroborates findings by Raza (2013) who found insignificant relationship between leverage and performance.

4.5 Panel regression results for moderated relation (Full Equation)

Inflation was introduced as a moderating variable in order to test its role in Performance. Theoretically, inflation has an effect on liquidity, capital budgeting and overall financial performance of a firm. The results were tabulated in table 4.8 below.
Table 4.8: Fixed effects regression results

Dependent Variable: ROA
Method: Panel Least Squares
Date: 08/20/16   Time: 18:26
Sample: 2010 2014
Periods included: 5
Cross-sections included: 34
Total panel (balanced) observations: 170

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVERAGE</td>
<td>0.003650</td>
<td>0.002388</td>
<td>1.528411</td>
<td>0.1288</td>
</tr>
<tr>
<td>LIQUIDITY</td>
<td>-0.000321</td>
<td>0.002541</td>
<td>-0.126276</td>
<td>0.8997</td>
</tr>
<tr>
<td>ROCE*</td>
<td>0.776624</td>
<td>0.031068</td>
<td>24.99763</td>
<td>0.0000</td>
</tr>
<tr>
<td>INFLATION</td>
<td>0.203770</td>
<td>0.135509</td>
<td>1.503733</td>
<td>0.1350</td>
</tr>
<tr>
<td>C</td>
<td>0.060231</td>
<td>0.013509</td>
<td>4.458436</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Effects Specification

Cross-section fixed (dummy variables)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-squared</td>
<td>0.942834</td>
<td>Mean dependent var</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.926810</td>
<td>S.D. dependent var</td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>0.060757</td>
<td>Akaike info criterion</td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>0.487261</td>
<td>Schwarz criterion</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>256.4346</td>
<td>Hannan-Quinn criter.</td>
</tr>
<tr>
<td>F-statistic</td>
<td>58.83936</td>
<td>Durbin-Watson stat</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000000</td>
<td></td>
</tr>
<tr>
<td>Significance level is 0.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Research data 2016

With inflation included as a moderating variable, as per table 4.7 above, the regression had an adjusted R-squared of 0.92681 which means that 92.681 of variations in financial performance can be explained by the changes in the independent variables. In terms of significance only capital budgeting as measured by return on capital employed (ROCE) was positively significant with a significance level of 0.0000. Inflation had an influence on the relationship between liquidity and performance of non-financial firms listed at the NSE. Leverage had a positive insignificant relationship with a probability
of 0.1288 which is higher than 5% level of significance. Inflation had a positive insignificant effect on performance. This is in line with the research done by Zulfiqar & Din (2015), who found a positive insignificant relationship between Inflation and Return on assets.

4.6 Hypotheses testing

Given the P values as shown in table 4.7, hypotheses testing can be concluded as below.

**H0**: Liquidity management has no significant effect on performance of non-financial firms listed at the NSE.

The regression results shown in table 4.7 indicate that total current liabilities to total assets ratio (Liquidity management) is significant at 5 percent level. The coefficient of Liquidity (total current liabilities to total assets ratio) is 0.009295 and significant with a p-value of 0.0009 which is less than 0.05. The results indicate that there was a significant positive relationship between total current liabilities to total current 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 utilized 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 & Mohammad reza, 2013) 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). Sanghani,
(2014) in a Study on Effect of Liquidity on Performance of non-financial companies listed at the Nairobi securities exchange revealed a positive significant relationship between current ratio. Operating cashflow, capital structure and performance of non-financial firms.

**H0:** Capital budgeting has no significant effect on performance of non-financial firms listed at the NSE.

The regression results presented in table 10 indicate that the coefficient for ROCE (Capital budgeting) of 1.000236 was statistically significant at 5% percent level with a probability of 0.000. The results indicate that there was a statistically significant positive relationship between Capital budgeting and performance of non-financial companies listed in the NSE as measured by return on assets. This implies that holding other variables in the regression constant, a unit increase in capital budget would lead to a 1.000236 increase in return on assets.

**H0:** Leverage has no significant effect on performance of non-financial firms listed at the NSE.

The coefficient Leverage of 0.001094 was statistically insignificant at 0.05 level with a P value of 0.7209 which is higher than 0.05. The results indicate that there was an insignificant positive relationship between leverage and performance of non-financial firms listed at the NSE. The result is consistent to the findings of Wamugo, (2014) who found an insignificant relationship between Leverage and performance though negative. Shaheen, (2014) in the study on impact of leverage on financial performance of the organization, found a negative relationship between Leverage and financial
performance in Pakistan, which is in contrast to the positive relationship established in this research. Ebaid, E (2009) examines the impact of capital structure choice on firm performance in Egypt which consider as emerging or transitional economy of the period 1997-2005, indicate that capital structure choice decision has weak to no impact of on firm’s performance.

**H₀₄:** Inflation has no significant effect on the relationship between financial management practices and financial performance of non-financial firms listed at the NSE.

With inflation added to the regression equation leverage and liquidity had p values higher than 5% level of significance which means that they had insignificant effect on financial performance. However capital budgeting as measured by ROCE had a significant effect with p value of 0.000 which is lower than 5% level of significance.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction
This chapter discusses the summary of the findings, the conclusions, recommendations of the study and the suggestions for further study. The chapter also provides policy implications as well as contributions of the study to the academic world.

5.2 Summary of the findings
The main objective of the study was to establish the effect of financial management practices on financial performance of non-financial firms listed at the Nairobi Securities Exchange. Data was extracted from financial statements of listed firms at the Nairobi securities exchange. The study established that capital budgeting and liquidity had a significant effect on performance of non-financial firms quoted at the NSE as per regression analysis. Capital budgeting as measured using return on capital employed had the highest significant effect on financial performance. This is consistent with the study carried out by Yao et al (2006) who found a positive relationship between capital budgeting and performance as measured using ROA. Sanghani (2014) concluded that liquidity positively affected performance of non-financial firms listed at the Nairobi securities exchange. Leverage had an insignificant effect on financial performance which is in consistent to Wamugo (2014).

5.3 Conclusion
The main focus of the study was to establish the effect of financial management practices on financial performance of non-financial firms listed at the Nairobi securities exchange. The regression results revealed that Capital budgeting (ROCE) had a high
positive significant effect on performance as measured using ROA. One unit change in capital budgeting would lead to a unit change in return on assets. Liquidity management also had a positive significant effect on financial performance of non-financial firms listed at the Nairobi securities exchange. Therefore, business organizations can improve financial performance by efficient management of Liquidity and capital budgeting. Sound financial management is essential to the success of businesses organizations. Successfully managing financial resources is important in new as well as expanding business. So time should be taken to develop and implement strategies geared towards proper Liquidity and capital budgeting management to improve the bottom line. Leverage had a positive insignificant effect on performance of non-financial firms listed at the Nairobi securities exchange. Therefore leverage should not be heavily relied on by management in trying to improve the bottom line of organization.

5.4 Recommendation

Based on the above conclusion, the study recommends that senior managers of non-financial firms listed at the NSE should put more emphasis on capital budgeting and liquidity management so as to improve the bottom line. Performance reviews on the senior management should also focus on Liquidity management and Capital budgeting for improved financial performance. Corporate governance should also incorporate best practice in terms of financial management practices where the Board is tasked on continuous monitoring and improvement on key aspects of financial management practices like, Capital budgeting and Liquidity management. Capital budgeting should be given higher emphasis since it has a bigger impact on profitability.
5.5 Policy implication

The government through regulation agencies such as capital markets authority should come up with policies which underscore liquidity and capital budgeting management as mandatory skills for executives in firms listed at the NSE. Non-financial companies should come up with policies to ensure adequate liquidity is maintained. Methods of raising funds to manage liquidity should be emphasized. These companies should also come up with policies to improve on investment decisions so as to improve returns on capital employed. Capital markets authority should also come up with policies to assist firms in management of investment decisions as well as monitor these decisions.

5.6 Contribution of the study.

Most studies done to the best of the researcher knowledge have not considered financial performance management in its entirety given the three facets of financial management decisions which are investment, financing and asset management decisions. This study considers all these aspects and their relationship to financial performance. The study also considers the moderation effect of Inflation to this relationship which also has not come out well in a number of studies. The study has also increased literature in the area of financial performance management.

5.7 Suggestions for further study.

It was expected that leverage would have a positive significant impact on performance of non-financial firms. The study however, showed positive insignificant effect on performance of non-financial firms. A study should be carried out to establish why this is the case and probably investigate the actual role of leverage management to a firm.
Financial management practices on financial firms should also be investigated so as to establish if all firms listed at the NSE face similar challenges in financial management. Effects of inflation influence on the relationship between financial management practices and financial performance should also be further investigated to clear any conflicts between theory and Empirical findings by various researchers.
REFERENCES


Johannes, D W (2013). Earnings per Share as a Measure of Financial Performance: Does it Obscure More than it reveals?


Nairobi securities exchange report 2014.

Nairobi securities exchange report 2015.


Appendix I: Listed Non-Financial Firms on the Nairobi Securities Exchange

AGRICULTURAL
1. Eaagads Ltd
2. Kapchorua Tea Co. Ltd
3. Kakuzi
4. Limuru Tea Co. Ltd
5. Rea Vipingo Plantations Ltd
6. Sasini Ltd
7. Williamson Tea Kenya Ltd

AUTOMOBILES AND ACCESSORIES
8. Car and General (K) Ltd
9. CMC Holdings Ltd
10. Sameer Africa Ltd
11. Marshalls (E.A.) Ltd

COMMERCIAL AND SERVICES
12. Express Ltd
13. Kenya Airways Ltd
14. Nation Media Group
15. Standard Group Ltd
16. TPS Eastern Africa (Serena)
17. Scangroup Ltd
18. Uchumi Supermarket Ltd
19. Hutchings Biemer Ltd
20. Longhorn Kenya Ltd

TELECOMMUNICATION AND TECHNOLOGY
21. Atlas development and support services
22. Safaricom Ltd

INVESTMENT SERVICES
23. Nairobi securities exchange

INVESTMENTS
24. Olympia Capital
25. Centum Investment
26. Trans century

MANUFACTURING AND ALLIED
27. B.O.C Kenya Ltd
28. British American Tobacco Kenya Ltd
29. Carbacid Investments Ltd
30. East African Breweries Ltd
31. Mumias Sugar Co. Ltd
32. Unga Group Ltd
33. Eveready East Africa Ltd
34. Kenya Orchards Ltd
35. A. Baumann Co Ltd

CONSTRUCTION AND ALLIED
36. Athi River Mining
37. Bamburi Cement Ltd
38. Crown Berger Ltd
39. E.A. Cables Ltd
40. E.A. Portland Cement Ltd

ENERGY AND PETROLEUM
41. KenolKobil Ltd
42. Total Kenya Ltd
43. Ken Gen Ltd
44. Kenya Power & Lighting Co Lt
45. Umeme Limited

GROWTH ENTERPRISE MARKET SEGMENT
46. Home Africa Ltd
47. Flame Tree Group holdings Ltd
48. Kurwitu Ventures

(Source: NSE, 2014)
### Appendix II: Data Collection tool

<table>
<thead>
<tr>
<th>Company</th>
<th>Year</th>
<th>EBIT</th>
<th>Total Assets</th>
<th>Average total assets</th>
<th>Current liabilities</th>
<th>Short term Debt</th>
<th>Long term debt</th>
<th>Total debt</th>
<th>Shareholders Equity</th>
<th>Annual average Inflation</th>
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