

**EFFECT OF LIQUIDITY ON PROFITABILITY OF NON-FINANCIAL
FIRMS LISTED AT NAIROBI SECURITIES EXCHANGE.**

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DECLARATION

This research project is my original work and has not been submitted for examination in any other university.

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DEDICATION

I wish to dedicate this project to my loving parents; Mr Zachariah Wairegi and Mrs. Joyce Wairegi who persuaded and impressed on me the importance of education and encouraged me to pursue further studies.

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I would like to express my sincere gratitude to the Almighty God for the perfect health I have had during the entire period of my study.

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ABSTRACT

One of the major objectives of a firm is to maximize profit and maintain high liquidity management. The most important part in administration of working capital is maintenance of its liquidity to fulfil its intended objective. The objective of this study was to determine the effect that liquidity has on profitability of listed non-financial firms at NSE. This study incorporated a cross-sectional and descriptive research design. This research design provided both qualitative and quantitative information from all the chosen population. It also enabled the researcher to understand the characteristics of a group; gauge a situation and assemble data around possible change. The researcher looked at 37 listed non-financial firms in Kenya and employed Pearson Correlation and regression analysis to explain the relationship. The dependent variable was measured using ROA, while the independent variables were; current ratio, quick ratio, cash ratio, cash conversion ratio, age and size. All the independent variables had positive correlation against financial performance apart from cash conversion cycle which is negatively correlated. This shows that when liquidity increases then financial performance for non-financial companies listed at NSE also increases. One limitation of the study was though there are 45 non-financial firms in the NSE, only 37 had the available data. Further studies should be undertaken to cover a bigger scope that is, all companies in Kenya, including the SMEs. This would help in determining the effect of liquidity on profitability for companies registered in Kenya. Similar study should be replicated for other countries middle income earning, developing and developed countries. Such studies undertaken in such countries would be compared to the results of this study and conclusions drawn from the possible differences in outcome.

TABLE OF CONTENTS

DECLARATION	ii
LIST OF FIGURES	viii
LIST OF TABLES.....	ix
ABBREVIATIONS AND ACRONYMS	x
CHAPTER ONE:INTRODUCTION.....	1
1.1 Background of the Study	1
1.1.1 Liquidity	2
1.1.2 Profitability.....	4
1.1.3 Effect of Liquidity on Profitability.....	5
1.1.4 Firms Listed at Nairobi Securities Exchange	6
1.2 Research Problem	8
1.3 Research Objective	10
1.4 Value of the Study	10
CHAPTER TWO:LITERATURE REVIEW.....	12
2.1 Introduction.....	12
2.2 Theoretical Framework.....	12
2.2.1 Pecking Order Theory	12
2.2.2 Trade –Off Theory	13
2.2.3 Transaction Cost Theory	15
2.2.4 Liquidity Preference Theory	17
2.3 Determinants of Firm Financial Performance	17
2.3.1 Firm Specific Factors	17
2.3.2 Industry-Related Factors	19
2.3.3 Macroeconomic Determinants	20
2.4 Empirical Studies.....	21
2.5 Summary of Literature and Research Gap.....	24
2.6 Conceptual Framework.....	25
CHAPTER THREE:RESEARCH METHODOLOGY.....	27
3.1 Introduction.....	27
3.2 Research Design	27
3.3 Population.....	28
3.4 Sample and Sampling Technique	28

3.5 Data Collection	28
3.6 Diagnostic Test	29
3.7 Data Analysis	29
3.7.1 Analytical Model	30
3.7.2 Tests of Significance	30
CHAPTER FOUR:DATA ANALYSIS, RESULTS AND DISCUSSIONS	31
4.1 Introduction	31
4.2 Response Rate	31
4.3 Data Validity	31
4.4 Descriptive Statistics	34
4.5 Correlation Analysis	36
4.6 Regression Analysis	37
4.6.1 Model Summary	38
4.6.2 The F Statistic	38
4.6.3 Regression Coefficients	39
4.7 Results and Discussion of Findings	40
CHAPTER FIVE:SUMMARY CONCLUSIONS AND RECOMMENDATIONS	42
5.1 Introduction	42
5.2 Summary of Findings	42
5.3 Conclusion.....	43
5.4 Recommendations	44
5.5 Limitations of the Study	45
5.6 Suggestions and Areas of Further Research.....	46
REFERENCES	48
APPENDICES	53

LIST OF FIGURES

Figure 2.1: Schematic diagram showing relationships among the Variables	26
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LIST OF TABLES

Table 4.1: Normality Tests	32
Table 4.2: Multi-Collinearity Test	33
Table 4.3: Descriptive Statistics Table	34
Table 4.4: Correlation Analysis Table	36
Table 4.5: Model Summary	38
Table 4.6: ANOVA Table.....	39
Table 4.7: Regression Coefficientsbn.....	40

ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
CMA	Capital Markets Authority
GDP	Gross Domestic Product
NSE	Nairobi Securities Exchange
ROA	Return on Assets
ROAA	Return on Average Assets
ROE	Return on Equity
SME	Small and Medium Enterprises
TCT	Transaction cost theory
WC	Working Capital
WCM	Working Capital Management
NFF	Non-financial firms
DF	Degree of freedom
VIF	Variance Inflation Factor

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

One of the striking corporate goals for a firm is the need to maximize profit, attain the highest level of owner's net worth and to maintain high liquidity position in order to guarantee its safety. Of the above organizational goals, Zygmunt (2013) posits that liquidity management has continually received much attention in the corporate finance management due to its perceived effects on corporate profitability. Liquidity however is an important aspect particularly in successful running of an organization and has thusly attracting greater global attention and concern despite the current status of the world economy and financial (Priya & Nimalathasan, 2013).

The connection between profitability and liquidity of a firm can be looked at from the background of two theories; Anticipated Income Theory and the Trade-off theory. The Anticipated income theory proposes that the liquidity nature of a firm can be controlled through proper structuring and phasing of the credit obligations. Nzotta (2007) argue that the theory highlights the potential benefits and the borrower's credit worthiness as the definitive assurance for facilitating sufficient liquidity. The Trade-off theory points out that the management team of firms focus majorly on positive level of liquidity to stabilize the benefits and costs of holding cash. The theory therefore articulates that profitability and liquidity pose contradictory ends to a firm; thus, a pursuit of any of these approaches will imply a trade-off seemingly for the other firm (Dash & Hanuman, 2008). The expense of holding cash result into low production rate of the liquid asset as a result of tax disadvantages and liquidity premium linked to them (Ajao& Small, 2012). Therefore, businesses should strategies

that ensure liquidity rate is very low hence reducing the associated risk premiums as well as utilizing resources from external sourcing in maintenance of liquid assets leading to competitive market position.

Effective management of a firm liquidity is important to both small and large firms because the best possible level of holding cash is worth much and useful because it represents the ability of the company to exploit the supplementary current assets to create profits devoid of distressing the proficiency to react to potential needs (Ajao & Small, 2012). Accordingly, a firm must make sure that the minimal amount of liquid assets available balances or exceeds to some extent the daily or short-term obligations. The firms listed at the (NSE), need to strike a balance between a firm's need of profitability and liquidity is important because effective liquidity level translates to the company being in operation in the foreseeable future and hence sustainability. However, according to Ongore and Kusa (2015), the primary concern for majority of firms has been maximization of profit ignoring measures that deals with liquid assets management. This move has been vindicated by the conviction that liquidity and profitability are contradictory objectives. Thus, a firm can choose to pursue either profitability or liquidity at a time with respect to the theory of profitability and liquidity trade-off. However, in the present day unpredictable business environment, the need to be liquid has become so much pronounced that it is important that a firm first seeks to be liquid and then strive to realise a positive return on their investment.

1.1.1 Liquidity

According to GARP (2013), liquidity is the ability of an organization to finance additional assets and meet both unexpected and expected collateral and cash responsibilities at a logical cost and not necessarily experiencing undesirable losses.

Nwaezeaku (2008) distinctively argued that liquidity is the extent of convertibility to cash or the simplicity with which some assets can be transformed into cash at a reasonable market price. In addition, Goodhart, (2011) pointed that the amount of capital that is present for investment is termed as liquidity. However, administration of liquidity is a complex activity because of diverse considerations involving estimation of potential benefits and associated costs. High rate of liquidity enhances generation of capital and other useful resources by small enterprises internally and the larger firms evade insolvency.

Alavinasab and Davoudi (2013) suggest that the liquidity position of a firm is important for company existence because it has been established to cause a direct impact on reduction of financial costs, organizational growth, development in the sales strategies, among other positive effects including affection of firm's risk standard. Therefore, firm's liquidity is regarded locally and globally as one of the fundamental aspects of that facilitates organizational growth as well has increasing the extent of market share. Efficient liquidity control result in greater profitability of the firm enhancing value addition on the wealth docket of stakeholders (Ben-Caleb, 2008). According to Bhavet (2011), an effective survival strategy an organization should adopt is to enhance liquidity status and sustainability that guarantees fulfilment of current firm's expenses since extension or failure to address these expenses within a stipulated time frame may jeopardize the company's credit worthiness especially from the short-term creditors' perspective, low market value of goodwill and ultimately causing liquidation of the company. Thusly, the most favourable financial management principles of a firm ought to preserve sufficient liquidity in order to fulfil its short-term growing requirements without distracting profitability.

Different measures of liquidity have been advanced. According to Nwankwo (2001), the use of liquidity ratio, in the case of banks, represents the amount of liquid assets as a proportion of total deposits. However, the ratio is considered defective in measuring the liquidity position because it uses only assets that are considered liquid while disregarding the available liquidity via the ability of a bank to borrow. Furthermore, it does not emphasize on the economic condition challenge. Eljelli (2004) advocate the use of cash ratio as another viable liquidity determinant.

1.1.2 Profitability

The growth of a business enterprise can be realized if a firm focus on its internal capacities and therefore according to Tsomocos (2003) a firm profitability should be assessed from the perspective of survival growth because business entities are emphasizing of survival strategies ahead of profitability. Delis, Athanasoglou, and Brissimis (2005) described profitability as firm's ability to create more income that surpasses the total expenses with regard to the capital base of the entity and also, he suggested that positively progressing firms stand at a better position of withstanding emerging challenges and supports financial system stability. Further, Aburime (2008) defines profitability as the disparity between the revenue realized as a result of selling the organizational production and the complete prospect cost of element utilized in the process of producing the output. However, the cost computed comprise of cost resulting from owner's capital utilization and the charged premium for taking risk.

Optimization of profit involves two variables; revenue and cost; which a firm management should consistently manage. Makori and Jagongo (2013), highlight that basically effectiveness is concerned on turnover level that must be attained with the aim of covering costs and establishes additional revenue. Therefore, mutual profitability may be enhanced via analysis of ratio, marginal analysis, breakeven

analysis, cost management or through effective financial management. Thusly, whether a business unit is arranging to register profit or adopting strategies of improving its profitability status, it is therefore its mandate to possess sufficient liquidity to conduct transactions and financial activities. Profitability is popularly measured by return on assets (ROA) which represent the ratio of net income over total assets. Similarly, return on equity (ROE) that measures profitability of a firm as a ratio of the net income total equity has been advocated by different

1.1.3 Effect of Liquidity on Profitability

Liquidity and profitability of a firm are considered both important characteristics of a firm. This because a highest liquidity level gives the firm an assurance and the ability to meet its short-term obligations when it falls due and if this is achieved, it can lead to a profitable business. Azam and Haider (2014) posits that a liquidity level represents the company's capacity to react to short-term roles and this implies that a firm should adopt strategies of optimizing its profitability and liquidity while carrying out its daily business activities. Bhunia, Khan and Mukhuti (2012) show that an optimum liquidity - profitability relationship will lead to the progress of the suitable intensity of WC. It can be concluded that there is always a negative relationship between profitability and liquidity status of a firm, Aburime (2008) opine that this not always real in all circumstances. The availability of a non-continuance linear relationship, between liquidity and profitability correspond to the ability of an organization to hold current assets until a particular level.

Horne and Wachowicz (2012), highlight that the profitability of a firm is established by subtracting costs incurred while generating revenue from the total income. Hence the total profit computed can be used as a determinant in evaluating organizational

financial performance implying that profitability can make a favourable instrument of assessing the progress of a company in achieving its desired goals and facilitate business going concern.

Lamberg and Valming, (2009) suggest that the liquidity and profitability of a firm represent the two major function of working capital management (WCM) and associates to the harmonizing movements of liabilities and assets over time. Thus, it has been posited that the management team can advocate for both profitability and liquidity objectives since the two objectives have a direct relationship. Chakraborty (2008) in the process investigating the association between profitability and working capital of pharmaceutical firms in India discovered that WC is not an element of enhancing profitability, similarly, there is likelihood of negative correlation between the two concepts. Additionally, working capital investments enhance the chances of corporate profitability occurrence; however, low level of WC investments may not result in sustainable sales and output.

1.1.4 Non-financial Firms Listed at Nairobi Securities Exchange

In 1954, The Nairobi Securities exchange (NSE) was founded and acted as the primary and secondary market for initial public offerings and trading of securities. Currently, it is the only market in Kenya where securities are traded. Since its formation, NSE has grown over the period with key milestones being introduction of investment banks that currently stand at 21 in number, increased number of stock brokers (8), custodian banks and increase in the number of firms listed at NSE from 23 to the current 66 firms though 4 firms trading has been suspended. The Capital Markets Authority (CMA) is the regulator of the government charged with obligation of regulating and licensing the Kenyan capital markets. CMA is also charged with

approving public tender and listings of securities traded at the Nairobi Stock Exchange.

The NSE is grouped into 12 sectors namely; energy and petroleum, insurance, agricultural, construction & allied, automobile & accessories, banking, manufacturing & allied, commercial and services, investment, telecommunication and technology, investment services and lastly the growth venture market sector (Nairobi Securities Exchange, 2015). According to Anyanzwa (2015), the idea on whether equity or debt financing is the path to follow has maintained to be the major task that the companies' management team need to tackle but economists argue that debt financing is a preferred approach, according to the perspective of stakeholders, if the funds can be utilized appropriately and if the market rates are favourable. To be able to carry out the study companies that are as comparable as possible within the same industry were investigated. The research will therefore investigate all listed companies in the NSE with the exception of financial institutions such as banks because they are considered highly regulated and their leverage levels are heavily influenced by regulation.

The liquidity position of some of the firms in the NSE has been unstable to the extent of being delisted or temporarily suspended having in some cases moved to having negative working capital whereby the firms have more current liabilities than current assets, making it difficult to finance their day- to-day operations. A case in point is Uchumi Supermarket, Athi River Mining and Mumias Sugar Company. Indeed, as at the end of 2017, the total debt of Uchumi Supermarket stood at Ksh 4.8 billion while the declined by -311.63%, a position that led to a negative liquidity position. In addition, the Capital Market Authority has come up with regulations drafted in 2015, arising out of the concern that a number of companies were sliding into negative working capital territory, a direction that undermines investor

confidence. A company that is delisted or suspended for six months from operations will have its directors barred from accessing directly or indirectly the NSE for five years. Furthermore, all manufacturing firms listed at the NSE are required at all times to maintain positive working capital failure to which it will be levied a penalty of Ksh 10 million. The study will exclude firms in the insurance banking and investment industries.

1.2 Research Problem

The firm's liquidity status is a fundamental aspect to both external and internal players of an organization due to its strong relationship of the daily business activities and transactions (Bhunja, 2012). The major obstacle in liquidity management concept is attaining the expected trade-off between profitability and liquidity. Padachi (2006) argued that while businesses are in the run of facilitating the success of day-to-day activities, there is a tangible need of striking a balance among profitability and liquidity. The underlying reason of the mentioned need is due to influence surpluses and inadequacy of liquidity on profitability of firms. Apart from the obvious inability to pay its obligation which might in the extreme lead to liquidation of the firm, excess liquidity also for example, if the recommended amount of liquid asset surpasses the normal level, implying that the surpluses will probably result in adverse impact on organizational profitability and general financial performance especially when the market risk is constantly stable.

The importance of liquidity on a firm performance as attracted the interest of different scholars. Ibe (2013) sought to find the effect of efficient liquidity management on banks' profitability in Nigeria. The findings show that liquidity management is however a fundamental challenge in the Nigerian banking sector and consequently

suggest that firms must involve qualified and competent staff if they opt to certify that accurate decisions are made within the organization. Zygmunt (2013) sought to indeed answer whether liquidity has an impact on organizational profitability in Poland. As a result, from the findings, it was discovered that liquidity has a positive and significant impact on listed IT firms in Poland. Ismail (2016) researched on the impact of liquidity management on profitability of Pakistani Firms. It is found from the research findings that the cash conversion cycle and current ratio, representing the liquidity variables have considerable positive effect on profitability (ROA) and that prolonged cash conversion cycle and increased current ratio facilitates realization of greater organizational performance. Nimalathan and Priya (2013) further carried out an investigation to establish the impact of liquidity management on profitability of manufacturing firms listed in Sri Lanka stock exchange. From the findings, it is evident that there is an existence of considerable relationship between profitability and liquidity management in manufacturing industry in Sri Lanka.

Muhaji (2014) investigated the impact of leverage and liquidity on particularly the state-owned commercial firms in Kenya. The study findings proposed that there is available evidence with regard to impact of leverage and liquidity factors on organizational financial performance in the tourism industry based on the sampled firms. Kibuchi (2015), on his side, attempted to establish the nature of relationship existing between level of liquidity and organizational performance among the Kenyan commercial banks. The results were that there was positive correlation coefficient between ROA and customer deposits, cash balance and size of firm

In Kenya, for example, the studies have concentrated on investigating liquidity risk or management on the performance of firms as measured by ROA or ROE. However, few studies in Kenya have investigated the influence of liquidity on firm profitability.

1.3 Research Objective

To determine the effect of liquidity on profitability of non-financial firms listed at Nairobi Securities Exchange.

1.4 Value of the Study

The major aim of this study is to contribute significantly towards the existing literature on the concept of debt financing. However, the research study target is to adopt holistic perception on the concept of liquidity as well as making unique contribution by contrasting diverse sources of funding strategies adopted by Kenyan firms while attempting to discover the most profitable one. In addition, the study also aims at providing reliable information to the policy makers and regulatory bodies pertaining promotion of investment activities to the Kenyan Capital Markets Authorities for example offering support in harnessing and analyzing financial resources appropriate to business and establish guiding principles that enhance investment activities particularly in developing countries.

The study may be of help to firms' management team by providing appropriate guidelines that may help in decision making process as well as suggest significant approaches aimed at enhancing profit maximization and the general financial performance of the firm hence increasing the wealth shareholders. Consequently, the study findings may also contribute to the pool of information to entrepreneurs, on how to plan for short term liquidity the businesses and make informed decisions for investment.

The Kenyan government may benefited from the research by understanding how debt financing impacts on the financial distress and value of firms listed at the NSE and is better placed to formulate and implement policies that not only safeguard companies' liquidity but also improve their financial performance.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers other researcher work on the consequence of liquidity on the profitability of listed firm at Nairobi Security exchange. The main sections covered in this chapter include; theoretical framework, determinants of financial distress, review of empirical studies, summary of literature review and conceptual framework.

2.2 Theoretical Framework

Several theories have been advanced to attempt and explain liquidity position of a firm and how it influences its performance. The study was guided by the Pecking Order Theory and the Trade-off theory.

2.2.1 Pecking Order Theory

The pecking order theory was advanced by Myers and Majluf (1984) and advocates the use of cash holdings to enhance performance. The theory argues that firm liquidity should be generated from internally sourced liquid assets because firms will prefer finance sources with regard to ease of accessibility. According to pecking order theory, firms will first use internally sourced reserved earnings as investments major financing source. The focus of the pecking order theory is the utilization of the resources that are found within the firm or least valuable firm's resources because the use of retained earnings, for example, is found to be cheaper in comparison to the externally sourced funds. Servaes and Tufano (2006) reinforce this position by positing that firms primarily use cash holdings when they need to need funds to invest while experiencing inadequate profits. Ross, Westerfield and Jordan (2008) explain

that if the internal source fails to meet their financial needs, then firm will resort to the use of external financing. External financing is the second option in the pecking order to raise a firm liquidity because selling securities to increase cash might be expensive, and therefore, it gives a strategy to evade external sources of financing if need be.

Ramalho, Silva (2012) explain that the main justification of the Pecking Order Theory in raising a firm liquidity level is existence of information asymmetry between a firm management and the general public or lenders of finance. Consequently, firms that are faced with challenges of uneven distribution of information and advanced costs of external equity may opt to meet their liquidity need strategy by adhering to the predicting factors of the pecking order theory (Ibbotson *et al.*2011). Indeed, Chittenden *et al.* (2006), while investigating the strategies adopted by UK based SMEs proposed to the concept of availability of strategies that fosters hierarchy of needs and preferences in the process of decision-making regarding sources of capital among the SMEs in United Kingdom. Michaelas *et al.* (1999) opines that generally, the British SMEs prefer profit retention than going for external sourcing in form of debt financing. However, these strategies concur with the provisions of the Pecking Order Theory.

2.2.2 Trade –Off Theory

The trade-off theory was advanced by DeAngelo and Masulis (1980) is anchored on the models with regard to costs of agency and taxes. Modigliani and Miller (1963) argued that a company has a most favourable structure of capital in which it offsets the advantages and the cost of debt. Based on the seminal work of MM, the trade-off implies the stand of a company in determining the exact amount of equity and debt finance should be invested in the company by considering the potential benefits and

costs. The theory highlights that there is a huge benefit as a result of adopting debt financing because of the interest tax shield benefits associated with it. However, the trade-off theory also suggests that there is a cost to financing with debt which includes financial distress costs such as agency costs and bankruptcy costs. Thus, the theory postulates that there is a significantly positive link between organizational performance and debt level. The repercussion of the theory is that companies will have an optimal financial leverage and that over time; they regulate their leverage with the aim of achieving the expected level.

Ajao and Small (2012) opines that under the trade-off theory, the management of firms will lay emphasis on appropriate level of liquidity to stabilize the benefits and costs of cash holdings. The associated expense of cash holdings is due to the low return of liquid assets due to tax disadvantages and liquidity premium. Therefore, in determining the optimal liquidity level, firms should consider securing competitive market position by means of external resources to uphold liquid assets. Goyal and Frank (2005) reinforced the need to balance cost and benefit in choosing an optimal capital structure, a position that justifies the need to determine funds combination that have the least cost with a reasonable benefit and that is readily available. The determination of the cash holding position influences the chances of financial distress that a firm is likely to face by managing the cost of external financing and enable a firm to come up with an investment plan by meeting financial limitations (Abushammala & Sulaiman, 2014).

Voutsinas and Werner (2011) reported that large firms with high profit returns will adopt debt financing because of positive credit worthiness as a result of low chances of experiencing bankruptcy which is contrary with the pecking order theory that suggests that highly performing firms opt to retain their profits by ploughing back into

the business hence strengthening the capital base as well as facilitating implementation of new projects and the overall business activities. Various studies have been undertaken to confirm the trade-off theory. For example, De Jong, Brounen and Koedijk (2006) investigated a total of 313 CFOs on structure of capital among four European countries, particularly, France, UK, Germany and Netherlands. From their findings, it is evident that trade-off theory entails majorly on the expected or targeted debt ratio, bankruptcy cost and tax implications among the four countries. Furthermore, they also discovered existence of strong degree of similarity on the capital structure in the four countries as well as the United States while contrasting policies of capital structure across the two continents.

2.2.3 Transaction Cost Theory

Transaction cost theory (TCT) was advanced by Williamson (1985) and proposes that transaction cost is used by firms to determine whether to employ a particular financing option; either to source funds internally or externally. This theory posits that there are economic reasons as to why organizing some transactions one way or another.

Williamson (1999) is of the view that TCT is capable of the analysis and understanding of financing structures of organizations. The initial description of the theory by Williamson was concerned with the governance structures between markets and firms by arguing that the hierarchical organization in a firm may reduce transaction costs, depending on its impact on incentives, monitoring and structure of production. Despite the fact that exchanges through the market among different partners may have high transaction costs for some activities, exchange within integrated structures may suffer from low-powered incentives. As Owens & Quinn (2007) opine, the choice of governance depends on the attributes of transactions, in

particular their frequency and idiosyncrasy as well as the uncertainty within which they are carried out.

According to Rao (2003), transaction costs are all the costs of undertaking a transaction. TC studies often examine bilateral exchanges (Wever et al. 2012) and since financing through borrowing is increasingly becoming an essential part of the business in the infrastructure development, there is a need for an organization to borrow; both short and long-term funds. In the financing sector, the transaction costs can vary significantly depending on the form of financing because short-term financing is generally more expensive than long-term financing and this informs the firm to adopt an appropriate financing mix that will not endanger the liquidity position of a firm. (Häkkinen 2011).

2.2.4 Liquidity Preference Theory

The Liquidity Preference theory was advanced by John Maynard Keynes (1936). According to Keynes liquidity refers to the convenience of holding cash. This implies that the rate of interest is the payment for parting with liquidity. Desire for liquidity or demand for money arises because of three motives: Transactionary on current expenditure, precautionary against unforeseen expenditure and speculative to make a profit.

Firms pay interest for borrowed funds and accordingly charge interest for parting with liquidity. Therefore, firms need to maintain an equilibrium level so as to meet their transactionary and speculative purpose.

2.3 Determinants of Firm Financial Performance

The financial performance of a firm is dependent upon different factors that range from firm specific, industry dependent and the overall economy factors. According to Mirza, and Javed (2013) the performance of a firm is of importance to investors, stakeholders and the economy and therefore, the factors that will influence its performance will be of importance to the same group of stakeholders. In terms of the various factors that can influence the performance of a firm, Francis (2013) suggest that these factors can be categorized into, firm-specific factors, industry specific determinants and macro-specific factors.

2.3.1 Firm Specific Factors

The firm specific factors are internal decisions that will influence the firm's expenses and revenues. Imazari (2014) highlight that the common indicators that are used to assess a firm performance include operational efficiency, capital adequacy, profitability, asset quality and increase in the volume of firm's assets. This implies therefore that internal features for instance decisions of the management on (profit and loss and/or balance sheets accounts), firm size, expenses and risk management influences firm's profitability directly, since majority of these factors will continue being confidential and are under the control of the firm top management. Other internal factors which have been found to affect the firm profitability include the firm level of liquidity and the management of its working capital (Yasser, Entebang & Mansur, 2011).

The ownership of a firm has been determined by Mirza and Javed (2013) to affect the performance of a firm. By citing Uguru (2000), they posit that the ownership of a firm can either be owner controlled in which the managers are the dominant shareholders, management-controlled firms in which there exist a dominant shareholder and the

externally controlled firms in which managers are not the dominant shareholders. In accordance with the agency theory, in the essence that the management team holds some shares in the company, they will emphasize on maximizing the wealth of the stakeholder. Similarly, Ang et al. (2010) opine that the cost of agency is slightly higher when the management of the firm is done by the outsiders which imply that ownership concentration and firm management are inversely related although it has direct relationship with outside ownership. In addition, an increased inside ownership is linked with high cost level of research and development (R & D) and this will therefore increase the firm expenses and therefore performance (Gurbuz, Aybars & Kutlu, 2010).

Wang and Sarkis (2013) posit that the corporate governance practices that are being observed by a firm management also influence the performance of a firm. Different scholars are of the perception that high-quality corporate governance facilitates the general firm performance (Imazari, 2014). Corporate governance principles such as protection of shareholders' rights, protection of the rights of stakeholders, suitable transparency and disclosure of material information will align the management actions to the shareholder wealth maximisation goal. This position was supported by Wang and Sarkis (2013) study which sort to discover influence of corporate governance on organizational performance

A firm's capital structure has been identified by Su and Vo (2010) to impact on performance. Capital structure therefore refers to the ratio of equity and debt financing and this implies that in cases where a firm has high level of debt financing it is likely to experience certain risk of bankruptcy, despite the fact that there are also some benefits of monitoring and tax associated with debt financing. In addition,

capital structure also moderates the agency conflict by lowering rate of flow of free cash within and out of the firm. According to Abu-Rub (2012) a firm need to identify its optimal capital structure that maximizes profitability for the company.

Risk management of a firm has also been found to impact on the performance of a firm because risk tends to attract only risk-taking investors (Gurbuz et al., 2010). The relationship of returns and risk has to be maintained for reasons being enhancing the amount of returns that investors will get in relation with their invested resources as well as the risk they are bearing. Certain firm characteristics like the size, growth rate, dividends, liquidity) and sales have also been identified has influencing the performance of a firm. This is because fast growing companies are likely to invest on heavy machinery hence increasing size and asset base of the firm. In addition, large and developed firms tend to attract quality workforce therefore enhancing high organizational performance.

2.3.2 Industry-Related Factors

The importance of market structure decisions such as government policies in a certain sector, like petroleum industry, will affect the profitability of the firms that operate in the sector. In Kenya, for example, the performance of Oil firms was affected when the government came in to reign on the cost of petroleum products that had allegedly gone overboard. Altunbaş et al., (2007) point out that wide empirical evidence, however, does not give a comprehensive proof that firm performance is affected either by concentrated market structures and collusive price setting behaviour or superior production and management techniques. The levels of efficiency in banks differ extensively across the banking industry (Schure et al., 2004). Whereas some researchers have doubted the relationship between market power and bank ownership

status, citing that there is distinct proof on the impact of market power on bank performance.

2.3.3 Macroeconomic Determinants

The performance of a firm is in addition determined by the macroeconomic control variables that are prevailing in a particular point in time. According to Panayiotis, Anthanasoglou, Brissimis and Mathaios, (2010), the common variables include inflation rate, the long-term interest rate and rate of economic growth prevailing in a country. Similarly, studies have established a link between the macroeconomic variables and firm risk exposure because for a firm that has dealings with partners using different form of currency, then, the changes in the foreign currency rates will increase the volatility of the asset operations expenses and asset level. Indeed, Allen and Saunders (2004) provided evidence of the importance of macroeconomic factors in determining the profitability of banks in the sampled.

Schumacher and Saunders (2000) investigated on the determining factors of interest margin among six EU and US based commercial banks between the financial periods of 1988 to 1995. However, it is evident from their findings that macroeconomic dynamism and policies have a noteworthy influence on interest margin of commercial banks. In addition, the discoveries highlighted a fundamental trade-off between certifying bank solvency, as described by high ratio of capital to asset, and reducing the cost of financial services offered to consumers, as evaluated by lower rate of interest margin. Besides, the cyclical business cycle nature of firms will have a direct effect on entities such as banks that depend on the individual performance of the client firms. Afanasieff et al. (2002) while using panel data techniques to uncover the main determining factors of performance of commercial banks in Brazil, for example,

found out those macroeconomic variables such as GDP growth rate, inflation expectations are significant in establishing profitability of banks over time.

2.4 Empirical Studies

A review of various theoretical literatures on the relationship between liquidity and financial performance shows that indeed many studies have been undertaken to try and determine this relationship. However, from the theoretical anchorage of liquidity and its role on firm performance, to the various empirical studies, it can be concluded that indeed there has been no agreeable consensus on this important issue. This section therefore seeks to review empirical studies on liquidity and firms' performance conducted across various countries in order to validate theoretical predictions.

Ismael (2016) carried out a study with the objective of determining consequences of liquidity management on firm's profitability in Pakistan forming the KSE-100 Index. His study incorporated multivariate regression analysis, descriptive statistical analysis and correlation analysis. Consequently, the findings of the study highlighted that cash conversion cycle, variables of liquidity and current ratio have significant positive effect on profitability (ROA) of the sampled firms. Additionally, the analysis outcomes also implied that prolonged cash conversion cycle and advanced current ratio facilitates high organizational performance. Accordingly, the study proposes that companies should harmonize their terms of credit sales, and formulate collection & inventory turnover approach on a strategic manner to be more accessible to high frequency of customer. Though the study looked at the management aspect of liquidity and its influence on profitability of the firms, the size of the firms under the

study is large than the present study because of the difference of country specific factors that influence on the firm performance.

Odunayo and Oluwafeyisayo (2015) investigated the causal relationship between profitability and liquidity of Nigerian Deposit Money Banks. By adopting an explanatory approach that employed panel research design, the researchers collected data from 15 listed deposit money banks out of the 19 existing banks of similar characteristics in Nigeria. The research findings suggest existences of traces of unidirectional causality connection ranging from profitability to liquidity for some banks while for other banks, the findings show the existence of bidirectional relationship between performance and liquidity of the banks. The study differs with the current study basing on the scope and geographical dimensions. While the study concentrated on banks quoted at the Lagos security exchange, the present study will concentrate on the non-banking firms at the Nairobi security exchange.

Petria, Capraru and Ihnatov (2015) sought to determine the determinants of banks' profitability among European countries. The research used return on average assets (ROAA) and return on average equity (ROAE) to proxy firm profitability while the determinants were divided into bank specific and non-bank specific factors. The study employed regression and correlation techniques using SPSS. The research shows support earlier studies position that liquidity and credit risk, efficiency management, business diversification, the market concentration/competition and the growth of economy have impacts on profitability of banks, both on ROAE and ROAA. The study differs from the current on the basis of scope in that while the current study examines all non-financial firms at the NSE.

Boadi, Lartey and Antwi (2013) investigated on the effect of relationship between profitability and liquidity of quoted commercial banks in Ghana. The study adopted a longitudinal time dimension and was descriptive in nature. The major research technique adopted in collection of secondary data for the study was document analysis, and covered the period 2005 - 2010, a time span in which both profitability and liquidity of banks were deteriorating. The result suggested existence of a feeble positive link between profitability and liquidity of the quoted commercial banks. As a result, the study findings suggested particular proof of a positive relationship between bank profitability and liquid assets for 90 Australian, North American and European banks from 1972 to 1981.

Anjum and Malik (2013) evaluated the determinants of corporate liquidity on the basis of cash holdings among 395 listed firms in Pakistani. The research covered the period 2005 -2011 and adopted ANOVA, Pearson correlation, descriptive statistics and multiple regressions to carry out the statistical analysis. Conversely, the study findings demonstrated a significant positive relationship between the selected variables and cash holdings apart from growth in sales. However, though the study mirrors the current study, it did not seek to link the effect of liquidity on the firms' performance and therefore, the present study goes a step further.

Maaka (2013) researched on the consequence of liquidity risk on the performance of commercial banks in Kenya. Using descriptive research design, the researcher sought to establish the relationship between of the banks in the period covering 2008 – 2012. Availability of a considerable liquidity gap, commercial banks are required to borrow from the repo market however the current market rate hence increasing the cost of financing incurred by the banks. Additional, customer deposit frequency positively

affects profitability of commercial banks thus, economists propose launch of multiple branches to enhance high deposit frequency.

Maroko (2014) had to find the effect of capital structure on the general financial performance and profitability of quoted companies at the NSE. The study adopted secondary data acquired from financial statements of the respective listed firms sampled for investigation, which were particularly chosen using stratified random sampling approach. Furthermore, the researcher employed multiple regression technique with the goal of establishing the nature of relationship between debt interests, cost of equity, financial performance of firms and financial leverage. As a result, the outcomes of the analysis demonstrated positive relationship between debt interests, cost of equity, financial performance of firms and financial leverage.

Kondongo and Maina (2013) on their part ought to authenticate Modigliani and Miller (1963) theory in Kenya, by examining the impacts of debt-equity ratio on organizational performance of quoted companies at the NSE for the time between 2002- 2011. It is evident therefore from their study that companies listed at NSE depend largely on short term debt. Furthermore, the study highlighted that there is negative relationship among all instruments of evaluating and estimating organizational performance and debt-equity ratio.

2.5 Summary of Literature and Research Gap

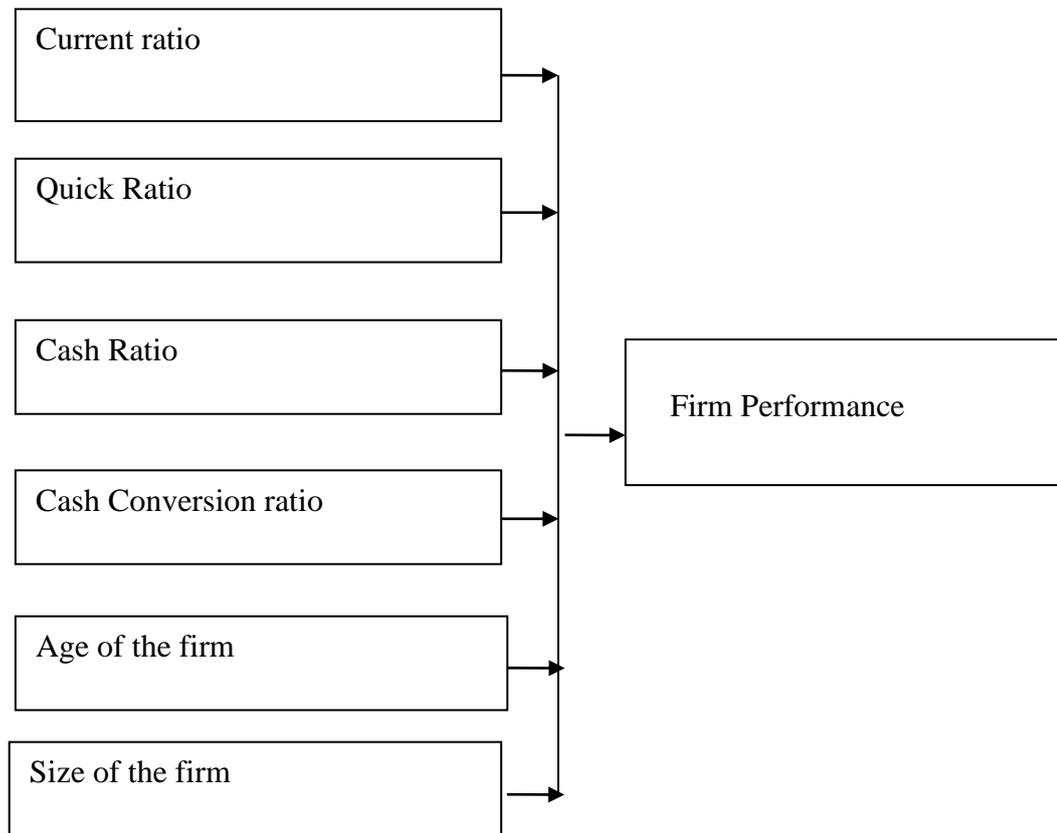
An evaluation on the studies above indicates that indeed liquidity position of a firm is one of the parameters that is perceived to influence the performance of a firm. However, it still remains a puzzle on what direction a firm's liquidity affect the performance of a firm. Different studies have supported the view advocated by

various theories such as, pecking order theory and the trade-off theory that show that the financing aspect of a firm affect the performance of a firm. Examples of studies that support positive relationship include studies by Anjum and Malik (2013), Latey, Aturi and Boardi (2013), Zymunt (2013) in Polish firms and Maaka (2013) in Kenya. However, Odunayo and Oluwafeyisyo (2015) findings show a negative relationship between liquidity and profitability on Ghanaian firms.

From the empirical review study's findings, it is evident that the effect of liquidity on the profitability of firms is still inconclusive. The direction of the effect of liquidity has been mixed and considering that majority of the studies in Kenya have concentrated on commercial banks, there is need to extend the study to non-financial firms listed at the Nairobi Security Exchange. This study will therefore, bridge the existing knowledge gap by extending the scope of the study on the firms.

2.6 Conceptual Framework

According Miles and Huberman (1994), a conceptual framework is a diagram or written blueprint that elaborates, either in narrative or graphically format, the major points of concern to be studied, variables, the crucial elements, or ideas and the reputed associations among them. In the model presented in Figure 2.1, it is postulated that a firm liquidity influences a firm performance.



Independent Variables

Dependent

Figure 2.1: Schematic diagram showing relationships among the Variables

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter the core subject of discussed will be the method that will be adopted in the study with the aim of achieving the objective of the study. Therefore, the section will focus on research design, target population, procedures for data collection and analysis of data.

3.2 Research Design

Research design is a tactical plan intended to provide a blueprint or a procedure used in statistical collection, estimation and analysis of data whose preference is reliant on the phase to which information about the topic of study has highly advanced (Tromp 2008). Therefore, this study incorporated a cross-sectional and descriptive research design. This research design provided both qualitative and quantitative information from all the chosen population. It also enabled the researcher to understand the characteristics of a group; gauge a situation and assemble data around possible change.

According to Kothari (2004), an appropriate survey is one that enables the researcher to collect data by inquiring about opinions, beliefs, behaviours, attitudes, or answers from the chosen population sample in order to comprehend the cluster or represented population. In addition, the cross-sectional study applied because the data was collected from all non-financial companies listed in NSE at the same period in time and this enabled the researcher to draw inferences about the variables being studied

study without manipulation of the respondents and therefore enables the evaluations and measurements to be managed completely.

3.3 Population

A population of study is a complete assembly of persons or corporate bodies that the researcher has shown interest to examine some characteristics (Sekaran & Bougie, 2010). It is characterized as far as accessibility of components, time allotment, land limits and theme of intrigue. The study had an exception of all financial institutions such as banks, insurance companies, investment companies. There are 45 non-financial firms listed in NSE.

3.4 Sample and Sampling Technique

This research adopted census technique of data collection since the entire population is not infinite thereby encouraging studying of the whole population. However, this method ensured that all population elements are targeted and studied. The sample selected were the companies listed at the NSE in the automobile, commercial and services, construction, energy and manufacturing sectors because they possessed the required information and liquidity measures as would apply for these companies. The study therefore focused on 37 companies in the automobile, commercial and services, construction, energy and manufacturing sectors out of the 68 companies listed at the NSE. (Appendix I).

3.5 Data Collection

The study used secondary data only which was obtained from the commercial banks' annual reports and financial statements from 2013 – 2017. The financial statement

was obtained from Capital Market Authority library. The data collected was quantitative in nature. Financial information related to current ratio, was extracted. The currency used for reporting the data was the Kenya shillings, abbreviated as KES. The dependent variable was firm performance as measured by return on assets.

3.6 Diagnostic Test

The suitability of the data was examined by testing normality as well as existence of multicollinearity for the variables. In this study, normality was tested using skewness and kurtosis. Multi-collinearity test evaluates whether the independent variables are highly correlated. It occurs when two or more predictors in the model are highly correlated leading to unreliable and unstable estimates of regression coefficients hence causing strange results when attempting to study how well individual independent variable constitute to an understanding of the dependent variable. To test the level of correlation F-statistic serial correlation analysis was undertaken. Serial correlation test was done to test the level of correlation (Godfrey, 1996).

3.7 Data Analysis

Analysis of data was achieved through the use Statistical Package for Social Sciences (SPSS Version 20.0). Computation of Descriptive statistics incorporated standard deviation and mean. Additionally, in order to establish existence of relationship between the variables under investigation, the researcher carried out regression analysis. Descriptive statistics, for instance, mean and standard deviation likewise was done to depict variable characteristics.

3.7.1 Analytical Model

A regression model was used for data analysis to expressing the relationship between liquidity and profitability of firms listed in NSE.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \epsilon$$

Where,

Y– Profitability as measured by Return on Assets (Net income / Total assets).

X₁ – Current ratio, as measured by Current Assets / Current Liabilities

X₂ – Quick Ratio, as measured by (Total Assets – inventory) / current liabilities

X₃ – Cash Ratio, as measured by cash level/ current assets

X₄ – Cash Conversion ratio as measured by Accounts collection period + average holding period - average payment period.

X₅ - Age of the as measured by Natural logarithm of the number of years the firm will have been in existence since its inception.

X₆ – Firm size as measured by the Log of total Assets

ϵ = Error term

3.7.2 Tests of Significance

In this study, the researcher carried out an F- test so as to find the degree of impact of the variables. The confidence level of significance of at which variables will be interpreted was assumed at 95%. Interpretation of results took the following assumption; a variable containing 0.05 of p-value or less value was regarded as being significant whereas p-value of above 0.05 was regarded as insignificant on the outcomes of the dependent variable.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter contains an analysis of data collected for all the variables. Data was analysed by the use of regression analysis that was used to assess whether there is any impact of liquidity on profitability of NFF listed at NSE. Data diagnostics was first undertaken in order to determine whether data is fit to undertake such a study. A descriptive statistic was then undertaken and a regression analysis is then determined. The chapter then shows the results for such analysis, and the discussion of the study findings.

4.2 Response Rate

However, some firms dealt purely on service related industry out of which only 45 companies that dealt with products and less of service. This was singled out as the study needed to undertake a cash conversion cycle that needed to know the number of days from the day a company pays for its inventories and the day customers pay for those products. (Mugenda & Mugenda, 2003).

4.3 Data Validity

In order to determine whether to use regression analysis or not in determining the relationship between the variables, data validity tests were accepted. The tests included test for normality, autocorrelation test and multi collinearity tests.

Table 4.1: Normality Tests

	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Y = ROA	-3.97	.179	35.771	.355
X1 = Current Ratio	2.054	.179	4.514	.355
X2 = Quick Ratio	3.6	.179	17.625	.355
X3 = Cash Ratio	.902	.179	-.293	.355
X4 = CCC	-.478	.179	.331	.355
X5= Age	-1.56	.179	3.404	.355
X6 = Size	.240	.179	-.473	.355
Valid N (listwise)				

Source: Author, 2018

Normality test is undertaken by the use of Skewness and Kurtosis which measures the leanness of data to the right or to the left and the flatness of data respectively. A kurtosis and skewness value of more than 3 shows that data is not drawn from normal distribution. According to the table 4.1, the skewness for ROA is -3.97 and the kurtosis is 35.77. This shows that data for this variable is not normal and therefore transformation for this variable is undertaken by using standardized variable for ROA. Similarly, current ratio, quick ratio and age had data that was not from a normal distribution and therefore transformation of the data was undertaken in order to use standardized variables for this data.

Table 4.2: Multi-Collinearity Test

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Zscore: X1 = Current Ratio	.269	3.722
Zscore: X2 = Quick Ratio	.294	3.407
X3 = Cash Ratio	.683	1.465
X4 = CCC	.860	1.162
Zscore: X5= Age	.950	1.052
X6 = Size	.893	1.119

Source: Author, 2018

Multi collinearity test was undertaken on the variables to determine whether there was multi collinearity between the variables. VIF factor is used to test for collinearity where a VIF factor value of more than 10 indicates presence of multi collinearity in the variable. Below 10 VIF factor shows absence of multi collinearity. The table 4.2 shows that all variables have VIF values of less than 10 and therefore there was no presence of multi collinearity.

4.4 Descriptive Statistics

Table 4.3: Descriptive Statistics Table

	N	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic
Y = ROA	185	-3.1302	1.4762	.050581	.3574971
X1 = Current Ratio	185	.0827	10.0893	1.900479	1.7188086
X2 = Quick Ratio	185	.0103	16.8621	1.575071	2.1099546
X3 = Cash Ratio	185	.0000	.6855	.206778	.1781633
X4 = CCC	185	1.1600	6.1552	4.497620	.8595076
X5= Age	185	1.0986	5.1180	4.041021	.6991079
X6 = Size	185	12.1953	19.7483	15.456695	1.7961206
Valid N (listwise)	185				

Source: Author, 2018

Financial Performance was measured by return on assets. This is a profitability ratio that measures the profits earned by the company from the use of its total assets. The mean for ROA was 0.05 with a standard deviation of 0.36. There is low standard deviation which shows that the variable does not have huge disparities. It therefore shows that the utilisation of the assets by the companies listed at NSE was uniform across the entire population. The outliers had 1.48 for the maximum and the minimum had a loss of -3.13

On the other hand, Current ratio was determined by the total current assets to current liabilities. This is a measure of liquidity for the company as it measures the available current assets to offsets the current liabilities as and when they fall due. The NSE for the period of 2013 to 2017 had an average of 1.9 current assets to current liabilities ratio with a standard deviation of 1.72. The disparities for this ratio among the companies was huge with outliers of 10.09 for the maximum and minimum of 0.08

Quick ratio on the other hand shows the liquidity of the company when you compare the current liabilities with the most liquid assets of the company. Quick ratio is determined by the current assets less inventories over total current liabilities of the company. It shows the number of times liquid assets in the company are available to offset the current liabilities of the firm as and when they fall due. The average for this ratio is 1.58 with a huge standard deviation of 2.11 that shows very great disparities among the companies. It shows that many companies had values that were far from the mean by up to 2.11. The outliers were a maximum of 16.86 and the minimum of 0.0103.

Cash conversions cycle on the other hand shows the days a company takes in collecting cash from credit sale to its trade debtors from the day the company pays for the goods that it sold. The average number of days for the non-financial firms at NSE in the period was 4.5. This was because this value was regularized by looking at the natural logarithm of the value. The standard variation was 0.86 with a maximum of 6.16 and a minimum of 1.1

The study also looked at the age of the company which was determined by the number of years the company has been in existence since incorporation. The companies learn a great deal from experiences and as such it is usually expected that old firms have enough experience in the industry and are in most cases likely to make

good decisions that would result to good financial performance of the company. The average age was 4.04 with a standard deviation of 0.7 and maximum of 5.12 and minimum of 1.1

Size was measured by the natural logarithm of the total assets. The average was 15.46 with small standard deviation of 1.8 and outliers of 19.75 and 12.2

4.5 Correlation Analysis

Table 4.4: The Correlation Analysis Table

	<i>Y = ROA</i>	<i>X1 = Current Ratio</i>	<i>X2 = Quick Ratio</i>	<i>X3 = Cash Ratio</i>	<i>X4 = CCC</i>	<i>X5 = Age</i>	<i>X6 = Size</i>
<i>Y = ROA</i>	1						
<i>X1 = Current Ratio</i>	0.167108092	1					
<i>X2 = Quick Ratio</i>	0.13246618	0.838337	1				
<i>X3 = Cash Ratio</i>	0.274372914	0.490736	0.407929	1			
<i>X4 = CCC</i>	-0.18355916	0.033866	0.07813	-0.24632	1		
<i>X5 = Age</i>	0.072743964	0.136743	0.109241	0.170255	-	1	
<i>X6 = Size</i>	0.151037601	-0.21723	-0.22246	-0.05553	-	-	1

Source: Author, 2018

The Pearson's correlation analysis measures the correlation of a variable with another variable. The correlation may either be positive or negative. Positive correlation implies that increase in one variable leads to an increase in the other variable while the vice versa is true. The variables that are highly correlated have value of 1 or closer to 1, either negative or positive. Variables that are weakly correlated have Pearson's correlation values that are close to zero while 0 implies that is no correlation.

According to table 4.3, we consider the correlation analysis between the independent variables and the dependent variable. All the independent variables have positive correlation against financial performance apart from cash conversion cycle which is negatively correlated at -0.184. This shows that when liquidity increases then financial performance for companies listed at NSE also increases albeit with small margins since the correlation is weak.

Cash conversion cycle has negative correlation which implies that any increment in the number of days before one obtains cash from sale of inventory leads to a decrease in financial performance. Any Increase in CCC would mean that the company is taking longer to collect its dues from the debtors therefore reducing its liquidity and increasing the risk of bad debts.

4.6 Regression Analysis

A regression analysis was undertaken in order to determine the effect of liquidity on profitability for NFF listed at NSE. It was also conducted to show whether the effect is statistically significant or not. The regression model used in the study is represented by the following linear equation $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + e$

4.6.1 Model Summary

Table 4.5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.345 ^a	.119	.089	.3411463	1.488

Source: Author, 2018

The model summary shows the coefficient of determination of 11.9%. It shows that the model was only able to predict the dependent variable to the extent of 11.9%. The other changes of the dependent variable are explained by other factors that are not within the model to the extent of 88.1%. This is therefore a weak model.

The Durbin Watson score of 1.488 shows absence of autocorrelations in the model. Presence of autocorrelations is determined by Durbin Watson value of 4 and above.

4.6.2 The F Statistic

The study uses the F statistic to determine whether there is significant effect on financial performance due to the liquidity of the form of not. The F test statistic uses the One-Way ANOVA table in rejecting or failing to reject the null hypothesis of the study.

The null hypothesis in this study states that there is no effect of liquidity on profitability for NFF listed at NSE. The F critical value from the F distribution table at 95% degrees of freedom is compared to the calculated value of F. If the F calculated value is greater than F critical then the null hypothesis is rejected. In order to determine the significance of the model, the p value is compared to the alpha value of

0.05. If the alpha value is greater than the p value, then the model is significant and the vice versa is true.

Table 4.6: ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.800	6	.467	4.010	.001 ^b
	Residual	20.716	178	.116		
	Total	23.516	184			

Source: Author, 2018

The F critical value for 6 and 178 degrees of freedom at an alpha of 0.05 is 2.11. According to the table 4.6 the F calculated is 4.01 which shows that the F calculated value is greater than the F critical which leads us to reject the null hypothesis and declare that there is a positive effect of liquidity on financial performance. The P value of 0.001 is compared to the alpha value of 0.05. The alpha value is greater and we conclude that the model is significant. In conclusion therefore, we agree that the study shows that there is a positive and statistically significant effect of liquidity on financial performance for non-financial firms listed at NSE.

4.6.3 Regression Coefficients

The regression coefficients show the coefficients for the variables in the regression model. The model in this study was found to be weak and only explained 11.9% of the changes in dependent variable. The resulting equation may not be very adequate in predicting Y.

Table 4.7: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	-.368	.301		-1.225	.222
	Zscore: X1 = Current Ratio	.032	.049	.088	.651	.516
	Zscore: X2 = Quick Ratio	.006	.046	.017	.130	.897
	X3 = Cash Ratio	.407	.171	.203	2.380	.018
	X4 = CCC	-.041	.032	-.099	-1.304	.194
	Zscore: X5= Age	.014	.026	.038	.532	.595
	X6 = Size	.034	.015	.169	2.271	.024

Author, 2018

The resulting equation as per the values in table 4.7 are $Y = -.368 + 0.032 X_1 + 0.006 X_2 + 0.407 X_3 - 0.041 X_4 + 0.014 X_5 + 0.034 X_6 + 0.301$

4.7 Results and Discussion of Findings

The major conclusions of the research was that there was a statistically significant consequence of liquidity on profitability of NFF listed at the NSE. This means that increase on liquidity for the companies decreased their liquidity risks that ensured that their financial performance is enhanced. The increase in liquidity meant that the firms were able to make collections from the debtors as fast as possible while the firms took their time to pay for the inventories. The firms had to maintain an optimal position between how fast to collect their outstanding taking into consideration the total revenues so as not to scare away significant revenue, while at the same time ensure that they pay their trade payables, as late as possible ensuring that this does not affect adversely, the credit terms.

Other findings of the study were that cash conversion cycle had negative correlation with financial performance. This means that increasing the number of days before a company receives cash from the sales, reduces financial performance. This could be explained by the fact that the effect of an increased CCC means that there is less liquidity in the company which increases their liquidity risks as the company may be unable to meet its obligations as and when they fall due. This adversely affects profitability of a firm.

The age of the company was positively correlated with financial performance though the relationship was weak. This means that the companies obtained good experience that enabled making of better decisions with time. The older the company the quality its decisions which translated to better financial performance.

Size was found to be positively correlated with financial performance which means that the greater a company is the better its financial performance. This could be explained by the fact that large companies enjoy from economies of scale as a result of buying commodities in bulk.

The study is consistent with the findings of Ismael (2016) who found out that liquidity had a positive effect on financial performance for Pakistan KSE 100. The relationship was positive and significant relationship. Odunayo & Okewafeyisayo (2015) found a unidirectional causality of liquidity and profitability. Similarly, Petria et. al (2015) also agreed that there is a constructive significant relationship among liquidity and financial performance.

On the contrary, Maaka (2013) found a negative effect of liquidity on profitability for commercial banks in Kenya for the study period of 2008 to 2012.

CHAPTER FIVE

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter of the study will be important in detailing the summary of the findings, conclusions made from the results findings and also the recommendations that emanate from those conclusions. The chapter also looks at the limitations of the study and suggests area to undertake further research.

5.2 Summary of Findings

The study sought to evaluate on the consequence of liquidity on the profitability of non-financial firms listed at NSE. The main findings of the study were that there was statistically significant effect of liquidity on financial performance. The current ratio, quick ratio, and cash ratio had positive correlation against financial performance which means that all these are measures of liquidity of a company and they have positive correlation against financial performance. Increasing liquidity in the firms listed at NSE therefore acts to increase financial performance. This could be explained by the fact that increasing liquidity of the firms reduces bankruptcy risks as it provides the assets required to meet current liabilities as and when they fall due. The study tells us that at NSE bankruptcy is a major factor that dictates the profitability of a firm. This means that firms that are not in position to meet their financial obligations as and when they fall due are not able to secure favourable credit terms that ultimately affects their profitability.

Another important finding of the study was that the cash conversion cycle which was measured by the number of days from the day that the firm pays for its inventories to the day the company receives money from the sale of that inventory is negatively

correlated to financial performance. This means that increasing the number of days from which one stays with inventory and the number of days the trade receivables take to pay for the inventory supplied will reduce the financial performance of the firm. This is basically because increasing the cash collection period means that the firms reduce their available cash for supporting operations in the firm. The recommended cash management system advocates for collecting receivables as possible while making sure that payables are paid as late as possible.

Size of the firm is positively correlated to the financial performance. This is basically because large companies are able to enjoy from economies of scale such as bulk purchases that attracts huge discounts among other examples that enhances financial performance of these firms.

The study shows that the older the company the higher the profitability of the firm. This could be explained by the fact that when a company stays for some time, then gains vital experience that it is able to use to its own advantage. With time a firm is able to learn trade dynamics that would enhance profitability in the company.

5.3 Conclusion

The study makes various deductions based on the study findings. The first conclusion is; liquidity of a company positively affects the profitability of a firm. The study at 95% degrees of freedom undertakes that increase in liquidity increases profitability of firms registered at the NSE. Liquidity in the study was measured by the current ratio which is the ratio of current assets to current liabilities. It measured the extent to which the current assets were able to cover the current liabilities as and when they fall due.

The quick ratio was also determined in the study, which represents the ratio of current ratio less inventories over current liabilities. The ratio measures the extent to which the most liquid assets in the firm are able to cover the current liabilities as and when they fall due. This ratio also had a positive correlation with profitability, meaning that increase in this ratio also increased profitability. Similarly, cash ratio had positive correlation with profitability. Cash ratio was measured by use of liquid cash over total current liabilities. These ratios were used to measure liquidity and they exhibited positive correlation against profitability.

The study also concludes that the older the organization the better the profitability. This shows that old organizations are able to rely on past experience in decision making that leads in quality decisions that results in increase profitability of the firm.

The size of the firm also positively impacts the profitability of the firm. The bigger the firm, the more the firm is able to enjoy from economies of scale, the better the trade discounts from bulk purchasing among other factors that lead to increased profitability of the firm.

5.4 Recommendations

The study therefore makes several recommendations based on the conclusions made by this study. The management should ensure that they check their liquidity levels to ensure that they are able to meet and cater for their short-term obligations, as and when they fall due. This reduces the risks of bankruptcy and therefore increases profitability.

The study also recommends that the cash conversion cycle should be optimally managed. This is to mean that the cash conversion cycle should be managed in such a way that the receivables are collected as soon as possible and care must be taken so as

not to discourage good customers who would be scared away by the tight credit policies. The companies must also pay as late as possible without harming their credit terms facilities with the suppliers. An optimal position must therefore be determined by the management of each company so as to ensure that cash conversion cycle has been reduced as much as possible.

The study also recommends that the firms should be cautious on day to day experiences. The outcomes of various decisions should be analysed and lessons taken from the outcome of the decisions. This would help the firm in learning from its past mistakes and past glories. The firm is able to understand the industry it operates in and therefore ensure that the profitability of the firm is maintained. This emanates from the fact that the age of the firm is positively correlated to profitability.

The companies should also be encouraged to grow in size, their investments should be channelled towards contributing to the growth of the company. The shareholders would thus need to ensure that a good [portion of profits made by the company are ploughed back to the business to help in its growth. This is because as the company grows in size, their profitability increases significantly.

5.5 Limitations of the Study

The study was undertaken for firms listed at the NSE, data was however obtained from 37 firms from a possible 45 firms. This is a limitation of this study as there are other small and medium enterprises in Kenya in their millions. The generalization of the entire study to Kenya would therefore have been limited with the sample size chosen and the category of the firms chosen.

The study is also limited by the context of the study, as it concentrated on firms listed at NSE in which case are limited to companies in Kenya, and just few of the cross

listed companies in other East African region. This would therefore limit the use of the study to other countries and regions of either different economic standards or of different economic standards.

The study was also conducted from the year 2013 to 2017. This period of five years was characterized by increased political interference, with three presidential elections being undertaken in these 5 years. In the normal activity a period of five years in Kenya is only characterized by a single presidential election. The information obtained is therefore likely to have been adversely affected by these political unrests that are followed by presidential elections in Kenya.

The study also used secondary data that was obtained from the websites of listed companies. The secondary data used may have had errors or omissions or other alterations of the data as it was being transferred to the websites and other secondary sources. The researcher did not get authentication of the secondary data and assumed that the data was error proof.

5.6 Suggestions and Areas of Further Research.

From the drawbacks of the study makes several propositions. Firstly, the study suggests that research should be undertaken not only on the NFF listed at the NSE but on all companies in Kenya, including the SMEs. This would help in determining the effect of liquidity on profitability for companies registered in Kenya. The study would involve all companies registered in Kenya and random sampling used in identifying companies whose data would be collected and analysed.

Similar study should be replicated for other countries middle income earning, developing and developed countries. Such studies undertaken in such countries would be compared to conclusions gotten from the possible differences in outcome.

The study period should also be added in future research. This would prevent the aspect that the study period is covered with so many elections that do not necessarily happen during other normal periods. A study therefore needs to be undertaken for a normal period that reflects the political climate.

It also suggest that a research to be undertaken where it would rely on both authenticated secondary data and primary data obtained through interviews, and observations.

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APPENDICES

	Company
1	Eaagads
2	Kakuzi
3	Kapchorua Tea
4	The Limuru Tea
5	Sasini
6	Williamson Tea Kenya
7	Car & General (K)
8	Marshalls (E.A.)
9	Sameer Africa
10	Express Kenya
11	Hutchings Biemer
12	Longhorn Publishers
13	Nairobi Business Ventures
14	Nation Media
15	Standard
16	TPS Africa
17	Uchumi Supermarket
18	ARM
19	Bamburi
20	Crown Paints
21	E.A.Cables
22	E.A.Portland
23	KenGen
24	Kenol Kobil
25	Kenya Power & Lighting
26	Total Kenya
27	Umeme
28	A.Baumann & Co
29	B.O.C Kenya
30	British American Tobacco
31	Carbacid
32	East African Breweries
33	Eveready East Africa
34	Flame Tree Group
35	Mumias Sugar Co.
36	Unga Group
37	Safaricom

Company	Firm	Y = ROA	X1 = Current Ratio	X2= Quick Ratio	X3 = Cash Ratio/Current Assets	X4 = CCC	X5= Age	X6 = Size	
Eaagads Limited	2017	0.04	12.83	10.62	0.57	135.67	4.26	13.72	
	1946	2016	0.01	5.73	5.66	0.69	27.67	4.25	13.52
		2015	-0.02	0.89	0.82	0.58	35.30	4.23	13.25
		2014	-0.14	0.87	0.74	0.49	42.15	4.22	12.92
		2013	-0.18	0.89	0.64	0.40	61.80	4.20	13.05
Kakuzi Ltd	2017	0.47	3.85	3.62	0.61	15.17	4.71	14.40	
	1906	2016	0.46	4.82	4.42	0.59	26.11	4.70	14.31
		2015	0.18	4.34	4.12	0.59	28.35	4.69	15.25
		2014	0.06	6.82	6.49	0.64	23.84	4.68	15.12
		2013	0.07	7.95	7.54	0.64	27.55	4.67	15.09
Kapchoria Tea	2017	-0.05	3.46	2.86	0.21	127.63	4.17	14.16	
	1952	2016	0.16	4.26	2.82	0.11	219.16	4.16	14.57
		2015	-0.02	5.68	4.25	0.10	170.17	4.14	14.44
		2014	-0.02	5.10	3.50	0.20	133.96	4.13	14.41
		2013	0.11	2.12	1.62	0.29	46.51	4.11	14.34
Limuru tea Ltd	2017	-0.14	4.94	4.93	0.18	471.16	4.80	12.31	
	1895	2016	-0.11	5.17	5.15	0.12	389.11	4.80	12.45
		2015	0.02	5.80	5.80	0.19	340.16	4.79	12.66
		2014	0.01	8.08	8.07	0.04	464.62	4.78	12.68
		2013	0.12	16.87	16.86	0.06	431.90	4.77	12.72
Sasini Tea Ltd	2017	0.04	4.24	3.84	0.43	86.38	4.17	16.34	
	1952	2016	0.06	5.28	4.64	0.55	61.05	4.16	16.34
		2015	0.07	4.93	4.20	0.47	84.97	4.14	16.56
		2014	0.00	2.33	1.73	0.21	83.15	4.13	16.48
		2013	0.02	1.90	1.26	0.15	80.59	4.11	15.93
Williamson Tea	2017	-0.04	1.33	1.11	0.29	154.51	4.17	15.94	
	1952	2016	0.11	1.52	1.18	0.30	205.28	4.16	15.97
		2015	-0.04	1.41	1.18	0.32	213.51	4.14	15.92
		2014	0.13	1.39	1.12	0.37	140.62	4.13	15.92
		2013	0.16	1.24	0.96	0.33	130.69	4.11	15.80
Car & General	2017	0.03	1.00	0.40	0.07	88.07	4.39	15.33	
	1936	2016	0.04	1.01	0.37	102.07	4.38	15.22	
		2015	0.02	1.06	0.44	74.59	4.37	15.20	
		2014	0.11	1.20	0.53	167.05	4.36	15.19	
		2013	0.15	1.11	0.43	157.15	4.34	14.96	
Marshall E. A Ltd	2017	-0.05	0.35	0.12	0.06	267.82	4.25	12.47	

1947	2016	-0.07	0.26	0.09	0.10	115.17	4.23	12.46
	2015	-0.07	0.48	0.21	0.08	279.06	4.22	12.57
	2014	-0.01	0.59	0.37	0.34	88.04	4.20	12.61
	2013	-0.37	0.67	0.35	0.22	93.01	4.19	12.59
Sameer Africa Ltd	2017	0.01	1.50	0.86	0.07	189.72	3.87	14.90
1969	2016	-0.26	1.57	0.61	0.06	242.08	3.85	15.01
	2015	0.00	2.21	0.98	0.15	291.53	3.83	15.14
	2014	-0.02	2.52	1.19	0.11	277.90	3.81	15.17
	2013	0.12	3.37	1.86	0.15	283.35	3.78	15.12
Deacons Kenya Ltd	2017	-0.53	0.80	0.24	0.09	70.91	3.78	14.26
1973	2016	-0.17	1.64	0.44	0.07	174.46	3.76	14.64
	2015	0.07	2.90	1.30	0.10	276.34	3.74	14.46
	2014	0.06	2.90	1.17	0.25	180.65	3.71	14.25
	2013	0.10	2.95	1.24	0.26	183.82	3.69	14.29
Express Kenya Ltd	2017	-0.48	0.60	0.35	0.27	381.67	4.60	12.20
1918	2016	-0.42	0.85	0.50	0.26	332.64	4.58	12.49
	2015	-0.22	1.13	0.92	0.24	188.08	4.57	12.75
	2014	-0.22	0.59	0.41	0.10	70.96	4.56	12.77
	2013	-0.01	0.64	0.56	0.38	30.21	4.55	12.67
Longhorn Publishers Ltd	2017	0.19	1.37	0.84	0.04	275.92	3.95	13.76
1965	2016	0.15	1.49	0.94	0.04	281.75	3.93	13.76
	2015	0.25	1.50	1.07	0.04	111.04	3.91	12.85
	2014	0.34	1.74	1.21	0.20	57.57	3.89	12.98
	2013	0.39	1.42	1.19	0.45	72.23	3.87	12.86
Nation Media Group	2017	0.17	2.02	1.81	0.41	166.91	4.06	16.24
1959	2016	0.20	2.07	1.72	0.36	271.41	4.04	16.31
	2015	0.31	2.10	1.85	0.37	190.08	4.03	16.02
	2014	0.41	2.37	2.06	0.36	188.33	4.01	15.99
	2013	0.43	2.52	2.24	0.46	181.95	3.99	15.94
Standard Group	2017	-0.08	3.68	2.88	0.03	13.45	4.74	15.11
1902	2016	0.07	2.77	2.54	0.09	47.52	4.74	15.15
	2015	-0.15	0.95	0.87	0.02	72.04	4.73	14.76
	2014	0.11	1.22	1.05	0.02	69.60	4.72	14.87
	2013	0.11	2.39	2.09	0.09	73.35	4.71	14.81
TPS Eastern Africa Ltd	2017	0.02	1.08	0.88	0.23	201.46	1.95	16.53
2010	2016	0.02	1.63	1.40	0.38	185.91	1.79	16.51
	2015	-0.02	1.04	0.84	0.00	185.06	1.61	16.42
	2014	0.02	78.26	2.24	0.00	200.35	1.39	16.39
	2013	0.06	54.96	6.86	0.00	200.66	1.10	16.42

Uchumi Supermarket	2017	-0.38	0.08	0.01	0.00	173.51	3.74	15.28
1975	2016	-0.53	0.26	0.12	0.21	61.38	3.71	15.43
	2015	-3.13	0.33	0.09	0.03	33.05	3.69	13.93
	2014	0.13	1.08	0.58	0.30	46.93	3.66	15.08
	2013	0.16	1.01	0.51	0.27	47.15	3.64	14.96
Athi River Mining	2017	-0.29	0.22	0.15	0.06	60.80	3.76	17.05
1974	2016	-0.11	0.59	0.35	0.04	138.05	3.74	17.42
	2015	-0.11	0.38	0.19	0.04	121.63	3.71	17.27
	2014	0.10	0.47	0.24	0.04	156.90	3.69	16.78
	2013	0.09	1.35	0.58	0.00	160.74	3.66	16.93
Bamburi Cement	2017	0.11	4.09	3.36	0.51	75.75	4.19	17.48
1951	2016	0.24	3.10	2.20	0.34	82.70	4.17	17.33
	2015	0.25	1.28	0.39	0.00	64.67	4.16	17.35
	2014	0.17	1.15	0.34	0.01	49.78	4.14	17.35
	2013	0.15	1.20	0.30	0.03	50.91	4.13	17.43
Crown Paints	2017	0.19	1.19	0.70	0.15	130.09	5.12	14.54
1850	2016	0.15	1.16	0.70	0.16	105.63	5.11	14.41
	2015	0.20	1.11	0.63	0.13	107.00	5.11	14.64
	2014	0.19	1.15	0.63	0.10	133.00	5.10	14.44
	2013	0.24	1.48	0.88	0.10	110.86	5.09	14.14
East African Cables	2017	-0.13	0.44	0.30	0.12	144.03	3.93	15.77
1966	2016	-0.11	0.60	0.44	0.04	123.44	3.91	15.84
	2015	-0.21	1.03	0.72	0.00	212.74	3.89	15.47
	2014	0.11	1.51	1.15	0.00	229.88	3.87	15.34
	2013	0.14	1.30	1.01	0.01	248.07	3.85	15.22
East Africa Portland Cement	2017	0.06	0.31	0.11	0.10	3.19	4.43	17.12
1933	2016	0.13	0.43	0.15	0.09	19.04	4.42	17.14
	2015	0.37	0.94	0.39	0.05	81.23	4.41	16.80
	2014	-0.03	0.90	0.32	0.07	78.23	4.39	16.32
	2013	0.11	1.04	0.43	0.11	90.28	4.38	16.37
Kengen	2017	0.03	1.48	1.42	0.30	229.25	4.14	19.75
1954	2016	0.03	1.20	1.16	0.38	148.26	4.13	19.72
	2015	0.07	0.95	0.91	0.16	279.15	4.11	18.58
	2014	0.02	1.10	1.07	0.30	402.80	4.09	19.23
	2013	0.02	1.42	1.37	0.23	418.76	4.08	18.96
Kenolkobil	2017	0.15	1.44	0.89	0.10	36.31	4.06	17.00
1959	2016	0.15	1.26	0.84	0.17	41.77	4.04	17.00
	2015	0.12	1.24	0.88	0.07	35.34	4.03	16.95
	2014	0.07	0.95	0.70	0.08	29.94	4.01	17.14
	2013	0.02	0.84	0.55	0.05	33.77	3.99	17.15

Kenya Power	2017	0.03	0.87	0.74	0.05	66.64	4.55	19.65
1922	2016	0.04	0.98	0.75	0.08	71.32	4.54	19.51
	2015	0.05	1.45	1.19	0.32	23.70	4.53	19.42
	2014	0.05	1.03	0.73	0.15	87.17	4.52	19.21
	2013	0.03	0.97	0.59	0.09	54.95	4.51	19.03
Total Kenya Ltd	2017	0.11	1.74	0.92	0.12	54.79	4.13	17.45
1955	2016	0.11	1.65	0.86	0.14	64.11	4.11	17.40
	2015	0.08	1.53	0.87	0.13	55.09	4.09	17.35
	2014	0.07	1.49	0.74	0.08	44.34	4.08	17.30
	2013	0.05	1.28	0.64	0.17	57.91	4.06	17.50
Umeme Ltd	2017	0.02	0.60	0.52	0.07	25.11	2.56	14.67
2004	2016	0.09	0.87	0.77	0.05	56.08	2.48	14.62
	2015	0.12	1.01	0.91	0.06	40.26	2.40	14.13
	2014	0.17	1.03	0.95	0.25	45.03	2.30	13.52
	2013	0.23	1.07	0.99	0.35	20.23	2.20	13.14
Olympia Capital Holdings	2017	0.03	1.75	1.01	0.16	156.24	3.89	14.29
1968	2016	0.02	2.39	1.61	0.18	173.41	3.87	14.29
	2015	0.00	1.60	1.09	0.23	140.93	3.85	14.04
	2014	0.02	1.17	0.79	0.15	124.38	3.83	14.03
	2013	0.01	2.80	2.26	0.22	195.40	3.81	14.31
Transcentury	2017	-0.06	0.40	0.32	0.17	22.49	3.00	16.75
1997	2016	-0.04	0.50	0.39	0.09	93.56	2.94	16.76
	2015	-0.37	0.63	0.49	0.04	178.90	2.89	15.89
	2014	-0.15	1.59	1.23	0.04	225.87	2.83	16.48
	2013	0.05	1.49	1.23	0.03	192.79	2.77	16.70
BOC Gases	2017	0.04	1.95	nm1.73	0.50	183.58	4.88	14.62
1886	2016	0.09	2.26	2.00	0.46	186.27	4.87	14.61
	2015	0.13	2.06	1.80	0.44	187.12	4.86	14.35
	2014	0.16	2.14	1.80	0.43	17.18	4.85	14.37
	2013	1.48	2.23	1.89	0.44	10.51	4.84	14.55
BAT Ltd	2017	0.43	1.32	1.23	0.46	40.67	4.70	16.23
1907	2016	0.49	1.41	1.32	0.49	37.38	4.69	16.31
	2015	0.59	1.45	1.35	0.50	55.40	4.68	16.31
	2014	0.55	1.25	1.17	0.48	36.75	4.67	16.22
	2013	0.54	1.26	1.19	0.40	42.42	4.66	16.14
Carbarcid Investments	2017	0.14	6.80	6.44	0.60	57.45	4.03	15.01
1961	2016	0.18	7.09	6.91	0.62	20.46	4.01	14.94
	2015	0.21	22.52	6.15	0.58	43.04	3.99	14.82
	2014	0.25	25.17	5.39	0.53	45.46	3.97	14.68
	2013	0.30	10.09	9.67	0.59	60.08	3.95	14.57
EABL Ltd	2017	0.30	0.67	0.12	0.00	13.95	4.55	17.61
1922	2016	0.31	0.46	0.08	0.00	15.92	4.54	17.60

	2015	0.34	1.02	0.59	0.17	76.59	4.53	17.55
	2014	0.29	0.72	0.37	0.09	74.32	4.52	17.38
	2013	0.36	0.70	0.42	0.08	49.01	4.51	17.25
Eveready East Africa	2017	0.45	2.69	1.84	0.32	255.48	4.72	13.23
1905	2016	-0.44	0.45	0.18	0.03	125.21	4.71	13.11
	2015	-0.11	0.98	0.44	0.12	123.95	4.70	13.67
	2014	-0.69	1.33	0.46	0.02	226.79	4.69	12.79
	2013	0.12	1.54	0.53	0.02	161.77	4.68	13.12
Flame Tree Group Holding	2017	0.05	1.29	0.98	0.06	114.52	3.33	13.59
1989	2016	0.23	1.53	1.20	0.07	113.04	3.30	13.56
	2015	0.27	1.64	1.35	0.07	101.24	3.26	13.50
	2014	0.27	1.55	1.31	0.07	92.77	3.22	13.19
	2013	0.57	1.21	0.99	0.04	76.50	3.18	12.62
Mumias Sugar Company	2017	-1.35	0.11	0.09	0.10	196.41	3.83	15.77
1971	2016	-0.38	0.18	0.14	0.16	64.35	3.81	16.59
	2015	-0.93	0.19	0.13	0.09	117.08	3.78	15.73
	2014	-0.26	0.41	0.30	0.12	27.98	3.76	16.37
	2013	-0.12	0.84	0.55	0.09	104.95	3.74	16.75
Unga Group Ltd	2017	0.02	1.64	1.06	0.21	51.55	4.69	16.14
1908	2016	0.08	2.30	1.29	0.15	68.83	4.68	16.03
	2015	0.07	2.37	1.42	0.17	63.87	4.67	15.98
	2014	0.07	2.27	1.20	0.13	65.96	4.66	15.90
	2013	0.01	1.84	0.84	0.09	85.89	4.65	15.93
Safaricom Ltd	2017	0.65	0.46	0.44	0.18	37.97	3.18	18.49
1993	2016	0.48	0.65	0.63	0.17	43.13	3.14	18.58
	2015	0.44	0.62	0.47	0.33	75.58	3.09	18.47
	2014	0.36	0.74	0.66	0.47	40.20	3.04	18.38
	2013	0.28	0.69	0.63	0.44	41.04	3.00	18.34

Source: CMA 2013-2017