

**EFFECT OF FIRM LEVEL FACTORS ON FINANCIAL
PERFORMANCE OF LISTED FIRMS IN THE NAIROBI
SECURITIES EXCHANGE**

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**Effect of Firm Level Factors on Financial Performance of Listed Firms
in the Nairobi Securities Exchange**

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and Technology**

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

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DEDICATION

I dedicate this thesis to God Almighty for the guidance, strength, power of mind, protection and skills and for giving me a healthy life. He has been the source of my strength throughout this program and on His wings only have I soared. I also wholeheartedly dedicated this work to my beloved parents (Mr. Simon Irungu and Mrs. Mary Irungu), who have been my source of inspiration and strength when I thought of giving up. To my lovely wife; Carol who has encouraged me all the way and whose encouragement has made sure that I give it all it takes to finish that which I have started. To my son Ryan who have been affected in every way possible by this quest. To my brothers, sister, relatives, mentor, friends, and classmates who shared their words of advice and encouragement to finish this study. Thank you. My love for you all can never be quantified. God bless you.

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ABBREVIATIONS AND ACRONYMS

CEOs	Chief Executive Officers
CMA	Capital Market Authority
EA	East Africa
NSE	Nairobi Securities Exchange
ROA	Return on Assets
ROE	Return on Equity
SOX	Sarbanes Oxley Act
SPSS	Statistical Package for Social Sciences
SWM	Shareholder Wealth Maximization
OECD:	Organization for Economic Co-operation and Development

DEFINITION OF TERMS

- Asset tangibility:** Include both fixed assets, such as machinery, buildings and land, and current assets, such as inventory. The opposite of a tangible asset is an intangible asset. Nonphysical assets, such as patents, trademarks, copyrights, goodwill and brand recognition, are all examples of intangible assets (Dogan, 2013). Asset tangibility was determined by the ratio of fixed asset to total asset
- Firm age:** Refers to the number of years a firm has been in operation (Sebhatu, 2011). Firm age in the current study was determined by the number of years a firm had been in operation.
- Financial Performance:** Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Sebhatu, 2011). Financial performance was measured by Return on Asset and Return on Equity.
- Firm size:** Refers to how large or small is a firm (Rwakakamba, 2011). A firm is considered to be small if it employs fewer than 250 persons and which have an annual turnover not exceeding 50 million euro, and/or an annual balance sheet total not exceeding 43 million

euro. Firm size was determined by the total assets a firm had. The more the assets, the bigger the firm.

Leverage:

is the use of fixed costs in a company's cost structure. Mostly it involves buying more of an asset by using borrowed funds, with the belief that the income from the asset will be more than the cost of borrowing (Gweyi & Karanja, 2014). Leverage was measured by the ratio of total debt to total assets

Liquidity:

is the ability of a firm to meet its short-term obligations. Liquidity plays a crucial role in the successful functioning of a business firm (Bhunja, 2010). Liquidity was measured by the current ratio

Firm level factors:

These are factors that are specific to a firm and influence the leverage of that firm. They include firm size, leverage, profitability, tangibility, liquidity and growth (Abbasi & Malik, 2015). The current study used the following firm level factors; firm size, liquidity, leverage and asset tangibility.

ABSTRACT

The Kenya government and the private companies have put great efforts in ensuring the existence of a favorable environment for doing business in the country and more so for listed firms. Consequently, while some firms listed in the NSE have improved in performance, there are others that have experienced declining fortunes and some have even been delisted from the NSE over the last decade. The general objective of the study was to determine the effect of Selected Firm Level Factors on Financial Performance of financial and non-financial firms in the Nairobi Securities Exchange. The specific objectives of the study was to determine the effect of leverage, liquidity, asset tangibility, firm size and to determine the moderating effect of firm age on the relationship between firm level factors and financial performance of listed firms in the Nairobi securities exchange. The study employed cross sectional research design. This study targeted all the 64 firms listed on the Nairobi Securities Exchange. A census of all the 64 firms listed in Nairobi Securities Exchange was used as a unit of analysis. Secondary data extracted from the financial statements was used to compute the relevant ratios and encompassed panel data. The study employed a dynamic panel data regression and spearman's correlation to test the relationship between the variables across the sectors. Test of hypothesis was done at 95% confidence interval. The study found out that there was a negative and significant relationship between leverage and financial performance of financial and non-financial firms. There was a positive and significant relationship between liquidity, assets tangibility, firm size with financial performance of financial and non-financial firms. Firm age was revealed to be a good moderator on the relationship between firm level factors and financial performance. Based on the findings, the study concluded that liquidity, asset tangibility and firm size have a positive and significant effect on financial performance while leverage has negative and significant effect on financial performance as measured using ROA and ROE for both financial and non-financial firms listed in NSE. The study recommended for policy makers of the listed firms to embrace leverage, liquidity, asset tangibility and firm size on their strategic decision-making. These indicators will further guide in expanding the interpretation of the financial dynamics in the listed firms at the Nairobi securities exchange and other related firms. Since the study concentrated only on firms listed at the NSE, further studies can explore non-listed firms and incorporate other variables that influence financial performance such as exchange rates, economic growth, interest rates and inflation.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Firm characteristics are usually associated to firm financial performance and these include firm size (Dogan, 2013), leverage (Dogan, 2013), firm age (Yazdanfar, 2013), liquidity (Dogan, 2013), board size (Vafeas, 1999), asset tangibility, unique technology, human capital and market power (Bresnahan, Brynjolfsson & Hitt, 2002). There are two diverse opinions on what really influences firm performance. The first viewpoint is that it is actually firm characteristics that highly influence performance (Galbreath & Galvins, 2008) whereas the second point view is that industry characteristics are the ones influencing firm performance.

Performance in a firm reflects the implementation of strategies that give competitive advantage over other firms. Whilst performance measurement is financial and non-financial, firm's characteristics do contribute to firm's performance. Decision making process of a firm relies heavily on its financial performances that determine the direction the firm can take in the future. Decisions may therefore be base (Robert Baum & Wally, 2003) on firm factors such as firm size, leverage, liquidity, firm age, asset tangibility and market power.

Financial performance plays an imperative role in the firm performance that is expressed in monetary term. Financial performance emphasizes on variables related directly to the financial report. It is prudent that before investing their funds, investors should first have knowledge about the performance of the firm (Deitiana & Habibuw, 2015). The modest way to determine the performance of a firm is to look at the company's financial statement. Due to intense competition among the firms, a firm is expected to be able to maintain and/or improve its performance in order to compete with others. Consequently, the firm can be able to increase its market share as well as reduce its operational costs.

This is the direction the firm can take to edge its competitors and remain viable; conversely it can register dismal performance and be edged out of the business (Porter, 2011).

Stiff competition among firms has resulted to unhealthy business operations leading to loses. This is despite the favorable environment guaranteed for firms to operate on, and strategies employed by the firms to stay afloat (Yahaya, Farouk, Yusuf & Dania, 2015). Firm's internal systems can be attributed to the nonperformance in spite of favorable environment. Firm's characteristics play an important role in its internal systems that may be attributing to non-performance in spite of favorable business environment.

1.1.1 Relationship between Firm Characteristics and Financial Performance

Firm characteristics have been widely associated with its performance, both financially and non-financially. One of the firm characteristic that is constantly associated to firm performance is firm size commonly measured by either natural logarithm of assets, or sales or employees. Bigger firms are presumed to be more efficient than smaller ones (Hawawini, Subramanian & Verdin, 2003). The market power and access to capital markets of large firms may give them access to investment opportunities that are not available to smaller ones. Therefore, firm size helps in achieving economies of scale (Kaguri, 2013).

Leverage allows a greater potential returns to the investor than otherwise would have been available, but the potential loss is also greater: if the investment becomes worthless, the loan principal and all accrued interest on the loan still need to be repaid. This constitutes financial risk. The degree of this financial risk is related to the firm's financial structure. The total combination of common equity, preferred stock and short and long-term liabilities is referred to as financial structure. That is, the manner in which the firm finances its assets constitutes its financial structure. If short-term liabilities are subtracted from the firm's financial structure, we obtain its capital structure (Naceur & Goaid, 2008). Leverage therefore opens up opportunities for rivalry predation in

concentrated product markets, thus conditioning the performance effect of leverage on the degree of competition in the financial performance of a firm.

There are three liquidity ratios that are used for this purpose, including the current ratio, the quick ratio and the capital ratio. Liquidity not only helps to ensure that a person or business always has a reliable supply of cash close at hand, but it is a powerful tool when it comes to determining the financial health of future investments as well (Clementi, 2001).

Firm age (measured as the number of years a company is operating in the market since it was founded) is an important determinant of financial performance. According to the life cycle effect, younger companies are more dynamic and more volatile in their growth experience than older companies are (Evans, 1987). Maturity brings stability in growth as firms learn more precisely their market positioning, cost structures and efficiency levels.

Firm characteristics are potential factors contributing to financial performance. Firm size can determine efficiency, market power, access to capital and achievement of economies of scale. Leverage allows a greater potential returns to the investor which constitutes a financial risk. The degree of this financial risk is related to the firm's financial structure. Similarly, liquidity influences the successful functioning of a business firm by determining the financial health of future investments. The probability of firm growth, firm failure, and the variability of firm growth decreases as firm's age. This can be attributed to the improvement of strategies to suite the changing business environments (Kioko, 2013).

1.1.2 Global Perspective of Firm Level Characteristics and Financial Performance

There has been reported collapses and scandals of the high profile listed firms such as Enron, WorldCom and others in the US (Iraya, Mwangi & Muchoki, 2015). This has been as a result of inadequate liquidity levels in the firms. In addition, a considerable

amount of listed firms funds were tied up in current assets to an extent that the assets are idle and thus making performance to suffer of listed firms suffer (Baum, Caglayan, Stephan & Talavera, 2008).

In Japan, there has also been a reported general increase in performance of listed firms. The improved performance has been attributed to the reduced debts of the listed firms in the last decades. In addition, Japanese firms rely on internally generated funds and precautionary cash holdings to have lower leverage. Ueda (2012) also reported that average leverage of listed firms in Japan fell from 27.49% to 19.34 from the year 1990 to 2012. Khoo and Durand (2014) also reported a remarkable increase in listed firms' assets which has led to improved performance.

As the stock market of China has been developing for 20 years, the listed firm has become the leading role in the Chinese economy (Xu, & Banchuenvijit, 2014). Binti and Binti (2010) reported a tremendous increase in performance of the listed firms in China. Fafchamps and Quinn (2016) stated that the average production per listed firm in china produces about US\$6,500 of output per worker. Fafchamps and Quinn (2016) also indicated that firms in China are more productive than firms in Vietnam and that the latter, in turn, are more productive than firms in the African countries. Fafchamps and Quinn (2016) reported that the improvement in performance of the listed firms was as a result of increase in their total assets. Eljely (2004) empirically examined the relationship of liquidity and profitability as measured by current ratio and cash gap on a sample of 29 joint stock companies in Saudi Arabia and found significant negative relation between the firm's profitability and its liquidity level, as measured by current ratio using correlation and regression analysis.

1.1.3 Regional Perspective of Firm Level Characteristics and Financial Performance

Firms of different sizes have access to different sources of finance. For instance, large firms often have access to both bank and market finance in countries with financial markets, while small and medium size firms have limited access to market finance, given the stringent listing requirements. Firms in Sub Saharan Africa are as diverse as the countries in this region. Furthermore, this diversity is also seen in the financial systems, on the other hand firm financing is dependent on the level of financial development in a country, the quality of institutions as well as the legal and financial environment (Beck, Demirguc-Kunt, Laeven, & Levine, 2008).

In South Africa, listed firms have recorded declining performance. Long-term debt and total debt has been reported to negatively affect performance of firms in South Africa (Abata, Migiro, Akande & Layton, 2017). Fatoki, George and Mornay (2010) also found a significant negative association between return on assets of listed firms in South Africa and long-term debt, and total debt sales growth had a significant positive association with the gross profit margin for all metrics of debt.

The Nigerian stock exchange (NSE) earlier called the Lagos Stock Exchange (LSE) was registered on 1st March 1959, incorporated on 15th , September 1960 and started business on 5th June 1961. In December 1977, its name was changed from the Lagos Stock Exchange to the Nigerian Stock Exchange (NSE) and additional branches have since then been opened in Kaduna, Port Harcourt, Kano, Ibadan, Onitsha and Abuja. The major recent developments in the NSE include the following; the transition from the Callover trading system to the Automated Trading System (ATS) on April 27, 1999, the commissioning of the Electronic Business (e-business) platform in July, 2003 and lastly, the trade alert information system launched in 2005 providing text messages on mobile phones of stockholders of any transactions in their stock within 24 hours. Sakai and Asaoka (2003) in a panel data of over 400 Japanese firms find that higher debt-asset

ratio improves firm performance. Agrawal and Knoeber (1996) also showed that leverage had a negative effect on firm performance in Nigeria.

Companies listed at the Dar es Salaam Stock Exchange (DSE) has been reported to face turbulences from the market due to shortages of liquidity, unpredictable business environment and increased debts levels. The market report (2013) showed that the majority of listed companies saw their share prices dipping down, with only three firms recorded a share price gain. This prompted investors to sell their shares in large numbers and thus leading to decreased performance of the firms.

1.1.4 Local Perspective of Firm Level Characteristics and Financial Performance

In Kenya, most companies listed at the Nairobi Securities Exchange have had improved in performance while others have experienced declining performance which has been attributed to the fact that corporate managers another practitioner lack adequate guidance required to attain optimal financing decisions (Ayako, Kungu & Githui, 2015). In addition, most collapse of many listed firms in Kenya has been due to financing issues or behavior of firms in general.

Oduol (2011) further argued that in a competitive market, the realizable market value for liquid assets is less than their face value thus in cases of financial distress, the cost of liquidation will decrease. In addition, ability of a listed firm to sell its assets had an impact on the level of financing and high liquid firms will employ more debt. Kihara (2006) showed that change in firm ownership lead to more debt usage of firms listed in NSE in order to spur growth levels and take up more business opportunities.

1.1.5 Firms listed in Nairobi Securities Exchange (NSE)

The NSE is Africa's fifth largest securities exchange in terms of market capitalization as a percentage of Gross Domestic Product (GDP); which stood at 25.4% as at 2009 and 30.35% in 2012; and fourth largest in terms of trading volumes (World Bank, 2012). The NSE assists the Kenyan economy by facilitating the transfer of savings to investment in

productive enterprises, assisting in the rational and efficient allocation of capital, which is a scarce resource and improves the access to finance by different types of users by providing the flexibility for customization. The publicly quoted companies in Kenya operate in various sectors of the economy.

The NSE groups these firms under three market segments namely: Main investment Market Segment (MIMS), Alternative Investment Market Segment (AIMS) and the Fixed Income Security Market Segment (FISM). At the time of this study, there were fifty-eight companies listed on the MIMS and AIMS that has grown from forty-seven in 2005. Companies listed on the MIMS are categorized into 4 segments namely agriculture, commercial and services, finance and investment; and industrial and allied (Musuva, 2013). A list of publicly quoted companies in Kenya is provided in Appendix I.

Kenya is strategically located within the East African region and plays a major role in regional and international trade and development. Kenya's membership in the East Africa Community (EAC) and the Common Market for Eastern and Southern Africa (COMESA) has opened up opportunities for businesses operating in Kenya to participate in international business and benefit from performance gains from economic integration of trade and investment. The government of Kenya has reiterated the need for more involvement in international trade and investment by Kenyan companies. The liberalization of the Kenyan economy in the 1980s and 1990s resulted in changes in Kenya's trade policy from import substitution to outward export promotion programs (Gertz, 2009).

Listed companies contribute to international trade in Kenya and they represent firms that have sought growth opportunities locally through established capital markets and internationally through international trade. While national international performance is an area of interest at a macro-level, firm level analysis forms the basis of micro level analysis and provides better understanding of what the determinants of international success and failure for companies. The international success of firms has been argued to

contribute to the national economic growth and development of countries (Rutashobya & Jaensson, 2004).

This study focused on NSE listed firms because these companies have well-established formal systems and publicly available information containing data on financial and operational performance. These reports are regulated by the Capital Markets Authority (CMA) and have been audited by reputable audit firms. This provides objective and reliable economic and financial performance data for analysis. The consistency in the reporting requirements also provides an opportunity for the investigation of an international performance framework through a cross-sectional study while controlling for industry effects.

1.2 Statement of the Problem

The Kenya government and the private companies have put great efforts in ensuring the existence of a favorable environment for doing business in the country and more so for listed firms. Consequently, while some firms listed in the NSE have improved in performance, there are others that have experienced declining fortunes and some have even been delisted from the NSE over the last decade (Kibet, Kibet, Tenai & Muthol, 2011).

Two-thirds of the listed firms that are active on the Nairobi Securities Exchange reported losses or reduced earnings in the year 2011 (World Bank, 2012). Ali (2013) also reported that some listed firms underperformed and faced financial problems in the year 2012. For example CMC Holdings faced boardroom challenges and Mumias Sugar moved into losses, while Unga group and Uchumi profits fell by 43%. The profits of Uchumi further fell by 35% in the year 2013. In addition, fifteen of the sixty-four listed firms that traded on the stock exchange reported losses, two less than in the 2015 financial year, while 25 of the listed firms, or 39%, recorded falling after-tax profits in the year 2016 (NSE Report, 2016). The analysis also finds that a third of the companies announced reduced revenues including eight firms that were profitable in the year 2015.

The poor performance of the firms listed in NSE has been majorly associated with the firm level factors. Banafa, Muturi, and Ngugi (2015) indicated that the poor performance of the NSE firms is as a result of their debt levels. Omesa (2015) further stated that liquidity level and total assets were also a major contribution to the performance of the listed firms. The firms had not fully appreciated the importance of liquidity management and the implications of such risk to the firms themselves, as well as the wider financial system. Significant efforts to turn around such companies or even liquidate them have focused mainly on restructuring of firm level factors.

Many studies have been done to investigate the effect of certain firm characteristics on financial performance, but only concentrated on a few firm characteristic. Omondi and Muturi (2013) conducted a study on factors affecting the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. The study was informed by trade off and the agency theories thus presenting a theoretical gap. The current study was informed by tradeoff theory, liquidity preference theory, economies of scale theory and financial distress theory. The study also did not consider asset tangibility as a factor that affects financial performance. In addition, Ayako, Kungu and Githui (2015) conducted a study on determinants of the performance of firms listed at the Nairobi Securities Exchange. The study found that firm size and liquidity were found to be insignificantly related to financial performance. In addition, the study focused on non-financial listed firms only. Mahfoudh (2013) conducted a study on effect of selected firm characteristics on financial performance of firms listed in the agricultural sector at the Nairobi securities exchange. The study evidenced that the only variables that were statistically significant were liquidity and board size and the other three variables that were not statistically significant were namely firm size, leverage and firm age. The study used firm age as an independent variable while the current study used it as a moderating variable. This study sought to determine the effect of firm level factors on financial performance of Listed Firms in the Nairobi Securities Exchange

1.3 Research Objectives

1.3.1 General Objective

The general objective of the study was to determine the effect of Firm Level Factors on Financial Performance of Listed Firms in the Nairobi Securities Exchange

1.3.2 Specific Objectives

The specific objectives of the study are;

- i.** To determine the effect of leverage on financial performance of listed firms in the Nairobi securities exchange.
- ii.** To establish the effect of liquidity on financial performance of listed firms in the Nairobi securities exchange.
- iii.** To investigate the effect of asset tangibility on financial performance of listed firms in the Nairobi securities exchange.
- iv.** To establish the effect of firm size on financial performance of listed firms in the Nairobi securities exchange.
- v.** To determine the moderating effect of firm age on the relationship between firm level factors and financial performance of listed firms in the Nairobi securities exchange.

1.4 Research Hypotheses

The study pursued the following hypotheses;

- i.** **H₀₁:** Leverage has no significant effect on financial performance of listed firms in the Nairobi securities exchange.
- ii.** **H₀₂:** Liquidity has no significant effect on financial performance of listed firms in the Nairobi securities exchange.

- iii. **H₀₃**: Asset tangibility has no significant effect on financial performance of listed firms in the Nairobi securities exchange.
- iv. **H₀₄**: Firm size has no significant effect on financial performance of listed firms in the Nairobi securities exchange.
- v. **H₀₅**: Firm age does not moderate the relationship between firm level factors and financial performance of listed firms in the Nairobi securities exchange.

1.5 Justification of the Study

The outcome of this study will help listed firms' financial managers in Kenya in understanding the firm level factors that affect their financial performance, as such make better decision on these factors as well as concentrate on them in order to improve financial performance in the industry and the sector at large.

Policymakers will also be guided on the formulation of rules and regulations proposed to help the industries whose firms are listed to perform better as well as the sector in general. They will be able to formulate policies that give listed firms in Kenya a conducive atmosphere for enabling them to craft strategies that might boost their firm financial performance.

The results of this study will be beneficial to investors and lenders as it may provide insight into the effect of certain operational style of firms' management in covering the interest of the managers and the shareholders, since the capital market set securities' prices based on reported firm performance.

Similarly, creditors and other providers of finance would be able to draw a line as to the recovery of their fund or otherwise through firms' performance indicators. Thus, both investors and creditors can rely on the information drawn from this research to access and make informed decision on their investment position.

Lastly, given the limited knowledge in the same field, the findings of this study may also be used as a source of reference for other researchers. Similarly, this study will be of great significance to the academician who seek to increase their knowledge on the firm level factors that affect listed firms in NSE performance

1.6 Scope of the Study

The study sought to determine the effect of Firm Level Factors on Financial Performance of Listed financial and non-financial firms in the Nairobi Securities Exchange. The study looks at firm level factors which include leverage, liquidity, asset tangibility, firm size and firm age. Firms listed in Nairobi Securities Exchange (NSE) were used for study. A census of all the NSE listed firms that have submitted audited financial statement was selected. The study targeted all the 64 firms listed in Nairobi Securities Exchange since 2012. The study did not consider the firms that are not listed at any particular year between 2012 and 2016. This is because the data for the periods are current data and easily available. In addition, the period of 2012 to 2016 was selected because most NSE firms performed so poorly within this period causing a public outcry.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter addressed and reviewed past studies on the subject and critically reviewed relevant literature. Attempt was made to do an empirical study, which critiques the fundamental theories of firm level factors and financial performance. The chapter comprised of six sections; in the first section, theoretical framework was elaborated, the second section was the conceptual framework, the third sections reviewed empirical research studies, the fourth section presented a summary of the literature, the fifth section presented the critique of the literature while section six brought out any research gaps in the subject which the literature had not addressed.

2.2 Theoretical Review

A theoretical framework is a collection of interrelated concepts. It guides research to determine what things to measure, and what statistical relationships to look for (Defee, Randal, Thomas & Williams, 2010). Esper, Mentzer and Stank (2008) emphasizes that a good research should be grounded on theory. This study was built on the underpinning theories, including the tradeoff theory, liquidity preference theory, economies of scale theory and financial distress theory.

2.2.1 Trade-off Theory

Kraus and Litzenberger (1973) proposed this theory. According to Kraus and Litzenberger (1973), debt financing offers the firm a tax shield, and that firms that pursue higher levels of debt gain the maximum tax benefit and ultimately enhance profitability, though higher levels of debt financing in the firm may also increase the possibility and adverse effects of bankruptcy. The trade-off theory emphasizes on the fact that a firm will choose a financial leverage level by balancing the costs and benefits

of both the debt and equity financing. That is as the firm increases their debt, the marginal benefit of the debt begins to decline as the marginal cost increases. Therefore the managers needs to establish an optimal mix that will ensure that the marginal cost remain minimum as the marginal benefit move to maximum (Topal, 2011). The Static Trade-off Theory argued that although the benefit of tax shields may encourage the firms to employ more debt than other external sources available to them, this mode of finance is not free from costs. Myers (1977) observed that as much as levered firms enjoy tax deductibility as a benefit of their leverage, care needs to be taken such that the cost of financial distress associated with the inclusion of debt financing in the capital structure. Myers (1977) observed that the firm's capital structure is at optimal at the point where the cost of using debt and equity is at minimum as compared to the benefit that accrues as a result of using the mix, to allow the firms to trade them off. The firms therefore should seek to establish this optimal point in their capital structure irrespective of their size and earnings.

Dynamic Trade off Theory on the other hand argues that the firm's capital structures may not always be as per their target leverage ratios, but firms may allow the ratio to vary considering the costs and the benefits of the use of debt and equity and also the financing margin that the firm anticipates in the next period. Fischer, Heinkel and Zechner (1989) argued that a dynamic optimal capital structure is an appropriate choice in a case where the firm requires recapitalization. Unlike the static trade off theory where the emphasis is on the targeted leverage ratio that the firm will not be willing to deviate from, the dynamic trade off theory emphasizes on the firm having an optimal leverage range within which they let their leverage ratios vary. The firm only adjusts their capital structure when leverage reaches either of the two boundaries defining the range. The levels of the boundaries vary cross-sectional with firm characteristics such as the volatility of cash flows, size, earnings of the firm, interest rates and bankruptcy costs (Davydenko, 2012)

This theory is deemed relevant to this study. This is because it assumes that there are benefits to leverage within a capital structure up until the optimal capital structure is reached. In addition the theory recognizes the tax benefit from interest payments.

2.2.2 Liquidity Preference Theory

This theory was proposed by John Maynard Keynes (1989). According to Keynes, investors demand a premium for securities with longer maturities, which entail greater risk, because they would prefer to hold cash, which entails less risk; hence, the more liquid an investment is, the easier it is to sell quickly for its full value. The theory further holds that since interest rates are more volatile in the short term, the premium on short-term versus medium-term securities will be greater than the premium on medium-term versus long-term securities (Amihud, & Mendelson, 1991). According to Runde (1994), people value money for both the transaction of current business and its use as a store of wealth. Thus, they will sacrifice the ability to earn interest on money that they want to spend in the present, and that they want to have it on hand as a precaution; on the other hand, when interest rates increase, they become willing to hold less money for these purposes in order to secure a profit.

According to Runde (1994), the rate of interest is determined by the demand for, and supply of, money; and demand for money (or liquidity preference) means the desire of the public to hold liquid cash for the following three motives. The transactions motive, which relates to the demand for money or the need of cash for the current transactions of individual and business exchanges. The precautionary motive, which refers to the desire to hold cash balances for unforeseen contingencies (such as illness, accident and unemployment); and The speculative motive, which relates to the desire to hold one's resources in liquid form to take advantage of future changes in the rate of interest or bond prices. The higher the rate of interest, the lower the speculative demand for money, while the lower the rate of interest, the higher the speculative demand for money (Taylor & O'Connell, 1985)

The theory was deemed relevant to this study. This is because according to the theory a firm needs to hold more cash for investment; hence, the rate at which a financial institution charges interest on loans borrowed, especially in the short term, is key in promoting the investment agenda for such a firm. The theory is therefore relevant to the current study since it informs one of the independent variable that is liquidity.

2.2.3 Economies of Scale Theory

Marshall (1890) laid out the theory of Economies of Scale. Marshall (1890) assigned the key role to external economies in his attempt to reconcile increasing returns and competitive equilibrium. It is argued that Marshall's chief purpose in creating the category of external economies was to explain the great historical reduction in production costs associated with increase in output. To the extent that Marshall envisaged the advantages available to small firms as arising from the general progress of industries, and although he clearly distinguished between external and internal economies, there was a clear conclusion that the two sources were seen to co-exist. The availability of external economies to firms is seen to increase with the scale of industry output, a factor that also induces the average size of firms to increase, and therefore the availability of internal economies (Melitz & Ottaviano, 2008). Economies of scale refer to the cost advantages that enterprises obtain due to size, output or scale of operations. Economies of scale are internal, external, national, international, aggregative or dis-aggregative (Hitt & Ireland, 1987).

Frequently attributed to Stefanou (2006), the association of firm size with scale and scope economies, market power, and the ability to aggregate inputs is widely believed to confer performance advantages on large firms. This discussion has been interpreted by many to mean that there are increasing returns in research and development (R&D), both to R&D establishment size and to firm size. For several reasons, size may also provide advantages in the conduct of a firms' R&D efforts (Gomes, Kruglianskas & Scherer, 2009) or innovative activities (Gay, 1981). First, capital market imperfections confer advantages to large firms in securing financing for R&D projects and in providing

mitigation strategies against adverse selection and moral hazard in the raising of capital. Secondly, large firms may be better able to spread the fixed costs of research over a larger sales base in the absence of fully functioning markets for innovation (Colburn & Talley, 1992). Thirdly, large firms are able to exploit economies of scale in the conduct of the R&D activity itself (Panzar & Willig, 1981). Finally, large firms may have greater access to the complementary technologies and downstream capabilities (i.e., marketing and finance) that are presumed to make R&D more productive (Cohen, 1995). Despite these persuasive arguments, empirical findings are mixed (Colburn & Talley, 1992). Some researchers note that inconsistent findings result from difficulty in developing good measures of innovation (Cohen, 1995), while others argue that a lack of sufficiently detailed data make it difficult to distinguish between measures of economies of scale and economies of scope (Cockburn, & Henderson, 2001).

This theory is relevant to this study since it informs firm size that is one of the independent variables in this study. Firms that are larger are believed to enjoy economies of scale. Economies of scope are present if cost savings or performance benefits are realized when two or more activities are conducted jointly in comparison to when these activities are conducted separately (Panzar & Willig, 1981). In the standard analysis of production, scope economies result when activities share productive inputs at little or no additional cost. Henderson and Cockburn (1996) identify internal spillovers of knowledge as a second source of returns that results from a more diverse R&D program. They argue that the knowledge developed and accumulated in one R&D activity can be transferred to other R&D activities at little cost, but with significant performance benefits. Some research suggests that beyond a certain point, however, escalating coordination and agency costs eventually lead to diseconomies of scope (Henderson & Cockburn, 1996). Therefore, the economies of scale theory explain the cost advantages that enterprises obtain due to size and output or scale of operation.

2.2.4 Financial Distress Theory

Financial distress theory was proposed by Gordon (1971). Financial distress can be subdivided into four sub-intervals: deterioration of performance, failure, insolvency, and default. Whereas deterioration and failure affect the profitability of the company, insolvency and default are rooted in its liquidity. Theoretically, the outcome of each interval can be positive, implying that the company breaks the downward trend, or negative indicating the continuing deterioration of the firm value and a movement downwards from one sub-interval of the spiral to another. In many real cases, when entering financial distress, the company traverses all the stages of decline (Muller, Steyn-Bruwer, & Hamman, 2009).

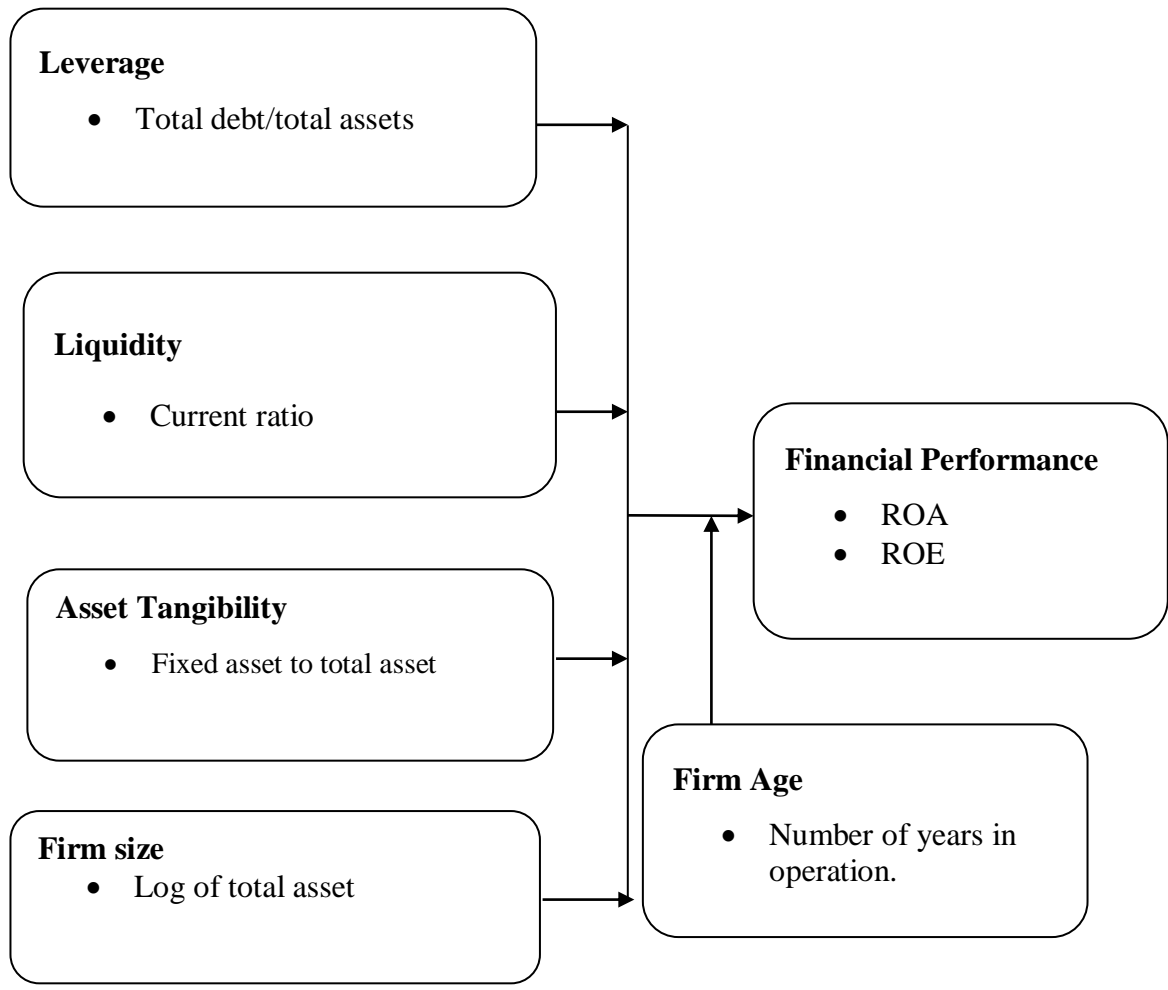
Financial distress is characterized by a sharp decline in the firm's performance and value (Opler & Titman, 1994). This part of the overall process has two important characteristics; moving down the spiral from one phase to another the sharp decline accelerates, whereas the length of each stage becomes shorter and shorter. Obviously, this decline of performance can continue longer than the economic failure of the company. The length of insolvency depends on the maturity structure of the firm's debt, whereas default is dependent on the date of maturity followed by renegotiation and turnaround or liquidation and is, therefore, the shortest stage of financial distress.

The biggest challenge in financial distress is to recognize adverse processes as early as possible in order to gain more time for response. The later financial distress is anticipated, the more time pressure and the more questionable is the success of counter measures (Opler & Titman, 1994).

This study was deemed relevant to this study. This is because it informed the dependent variable which was financial performance. In addition the theory of financial distress was useful in explaining the causes of financial challenges facing firms listed in NSE.

2.3 Conceptual Framework

According to Kombo and Tromp (2009), a concept is an abstract or general idea inferred or derived from specific instances. A conceptual framework is a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation. Mugenda and Mugenda (2003) and Smith (2003), define a conceptual framework a hypothesized model identifying the model under study and the relationship between the dependent and independent variables. Kothari (2004) defines an independent variable also known as the explanatory variable is the presumed cause of the changes of the dependent variable, while a dependent variable refers to the variable that the researcher wishes to explain. The goal of a conceptual framework is to categorize and describe concepts relevant to the study and map relationships among them. Such a framework would help researchers define the concept, map the research terrain or conceptual scope, systematize relations among concepts, and identify gaps in literature (Camp, 2003). Below is a figurative representation of the variables to be explored by this study.



Independent Variables

Moderating Variable Dependent Variable

Figure 2.1: Conceptual Framework

2.3.1 Leverage

According to Chechet and Olayiwola (2014), leverage is the use of fixed costs in a company’s cost structure. Mostly it involves buying more of an asset by using borrowed funds, with the belief that the income from the asset will be more than the cost of borrowing. Usually this involves the risk that borrowing costs will be larger than the income from the asset leading to incurred losses. Cheng and Tzeng (2010) argued that

leverage allows a financial institution to increase the potential gains or losses on a position or investment beyond what would be possible through a direct investment of its own funds.

There are three types of leverage; balance sheet, economic, and embedded. Balance sheet leverage is the most visible and widely recognized form (Hall & Vila, 2002). The leverage ratio can thus be thought of as a measure of balance sheet or, to the extent that it also includes off-balance-sheet exposures of economic leverage. A firm can finance its investment by debt and/or equity. The use of fixed-charged funds, such as debt and preference capital along with the owner's equity in the capital structure is described as financial leverage or gearing (Kanu, 2015). An unlevered firm is an all-equity firm, whereas a levered firm is made up of ownership equity and debt. Financial leverage takes the form of a loan or other borrowing (debt), the proceeds of which are (re)invested with the intent to earn a greater rate of return than the cost of interest. If the firm's marginal rate of return on asset (ROA) is higher than the rate of interest payable on the loan, then its overall return on equity (ROE) will be higher than if it did not borrow (Molyneux & Thorton, 1992).

Leverage allows a greater potential returns to the investor than otherwise would have been available, but the potential loss is also greater: if the investment becomes worthless, the loan principal and all accrued interest on the loan still need to be repaid. This constitutes financial risk. The degree of this financial risk is related to the firm's financial structure. The total combination of common equity, preferred stock and short and long-term liabilities is referred to as financial structure. That is, the manner in which the firm finances its assets constitutes its financial structure. If short-term liabilities are subtracted from the firm's financial structure, we obtain its capital structure (Naceur & Goaid, 2008).

Gupta (2010) cited some studies showing contradictory results about the relationship between increased uses of debt in capital structure and financial performance. Berger and Di Patti (2006) reported a positive relationship between leverage and financial

performance. Simerly and Li (2000) showed negative relationship between financial performance and leverage level. Similarly, Zeitun and Tian (2007) found that debt level is negatively related with financial performance. Several researchers have studied firms' debt use and suggested the determinants of financial leverage by reporting that firm's debt-equity decision is generally based on a trade-off between interest tax shields and the costs of financial stress (Upneja & Dalbor, 2001). According to the tradeoff theory of capital structure, optimal debt level balances the benefits of debt against the costs of debt hence, use of debt to a certain debt ratio results in higher return on equity, however, the benefit of debt would be lower than the cost after this level of capital structure. In other words, the more a company uses debt, the less income tax the company pays, but the greater its financial risk.

2.3.2 Liquidity

Liquidity of the firm is a key determinant of the firm's financial performance. According to Bhunia (2010), liquidity is the ability of a firm to meet its short-term obligations. Liquidity plays a crucial role in the successful functioning of a business firm. Mwangi and Iraya (2014) further stated that liquidity is the term used to describe how easy it is to convert assets to cash. The most liquid asset, and what everything else is compared to, is cash. This is because it can always be used easily and immediately. Liquid assets are important to have in times of crisis or emergency because they are so easily converted into cash. Without liquidity, money can become tied up in systems that are difficult to cash out of and even more difficult to assess for actual cash value. During times of emergency, large financial institutions shut down, making it difficult for people to access the cash they need to buy essentials like food, gasoline and other emergency supplies

There are three liquidity ratios that are used for this purpose, including the current ratio, the quick ratio and the capital ratio. Liquidity not only helps to ensure that a person or business always has a reliable supply of cash close at hand, but it is a powerful tool when it comes to determining the financial health of future investments as well

(Clementi, 2001). Liargovas and Skandalis (2008) argued that firm can use liquid assets to finance its activities and investments when external finance are not available. On the other hand, higher liquidity can allow a firm to deal with unexpected incidences and to cope with its obligations during periods of low earnings.

Vishnani and Shah (2007) affirmed that the most common measures of liquidity are the current ratio and return on investment for profitability. The current ratio is used to test a firm's liquidity, that is, its current or working capital position by deriving the proportion of the firm's current assets available to cover its current liability. A higher current ratio indicates a larger investment in current assets which means, a low rate of return on investment for the firm, as excess investment in current assets will not yield enough returns. A low current ratio means smaller investment in current assets that means a high rate of return on investment for the firm, as no unused investment is tied up in current assets. However, there is consensus in theoretical literatures that the higher the ratio, the better.

Mwangi and Iraya (2014) state that many of the funding resources are invested in the short term liquid assets. This provides a buffer against the liquidity shocks. Diamond and Rajan (2001) emphasize that a mismatch in depositors demand and production of resources force a firm to generate the resources at a higher cost. Liquidity has a greater impact on the tradable securities and portfolios. Broadly, it refers to the loss emerging from liquidating a given position. It is essential for a bank to be aware of its liquidity position from a marketing perspective. It helps to expand its customer loans in case of attractive market opportunities (Falconer, 2001). A bank with liquidity problems loses a number of business opportunities. This places a bank at a competitive disadvantage, as a contrast to those of the competitors (Chaplin et al., 2000).

Almajali, Alamro and Al-Soub (2012) found that firm liquidity had significant effect on Financial Performance of firms. The liquidity is essential for company existence. It principally has an effect on financial costs reduction or growth, changes in the sales dynamic, as well as it influences on company risk level. The decisive significance of

liquidity means that it is important for company development and at the same is one of the fundamental endogenous factors which are responsible for company market position. The significance of liquidity to company performance might lead to the conclusion that it determines the profitability level of company.

2.3.3 Asset Tangibility

Giambina (2011) measured overall tangibility as the ratio of total tangible assets to book value of assets. La Rocca, La Rocca, Gerace and Smark (2009) measured tangibility as the ratio of property, plant and equipment to total book assets. Degryse, de Goeij and Kappert (2012) measured tangible assets as ratio of tangible fixed assets to total assets. According to the authors mentioned in this paper, tangibility is measured as the ratio of tangible assets to total assets. Herciu and Ogrea (2012) argued that a firm is highly competitive as long as its managers are able to mix tangible and intangible assets in the most effective and efficient manner. Therefore, a firm can get the same score of competitiveness by using a different combination of assets and by giving different importance coefficients to the tangible and intangible assets.

According to Köksal, Orman and Oduncu (2013) tangible assets are positively related to firm performance and the trade-off theory predicts a positive relation between leverage and tangibility. This relationship exists because tangible assets are easier to collateralize and they suffer a smaller loss of value when firms go into distress. Since firms tend to match the maturity of assets with maturity of liabilities, tangibility should be positively related with leverage (Köksal *et al.*, 2013). Harris and Raviv (1991) argue that the larger share of tangible assets increases the liquidation value of a company. This is because the tangible assets constitute collateral for the debt in case of bankruptcy. Morellec (2001) argues that when a firm is solvent, tangible asset increase the firm value by allocating assets to better uses. He also argues that when the firm is in distress, tangible asset sales represent the cheapest source of funds for the firm. Moreover, asset sales allow the firm to finance continued operation of its remaining assets without requiring external capital.

2.3.4 Firm Size

There are different approaches of measuring firm size including natural log of assets, sales, number of employees and log of market capitalization. This study employed log of total assets as measures of firm size. Log of total asset is the most popular firm size proxy in empirical corporate finance research. Some of the studies which have used log of the total assets include Pervan, & Višić, (2012); Vijayakumar and Tamizhselvan (2010); Linck, Netter, & Yang (2008); Lemmon, Roberts, and Zender (2008); (Graham, Li & Qiu, 2012).

Firm size has become such a routine to use as a control variable in empirical corporate finance studies that it receives little to no discussion in most research papers even though not uncommonly it is among the most significant variables. Firms of different size distinguish themselves along different observable and unobservable dimensions. Therefore, there are many different ways of defining a firm's size category. The OECD (2005) classification defined SMEs as firms with between 10 and 250 employees. Firms with less than 10 employees are micro firms and those with more than 250 are large firms. The OECD notes that this definition may vary by country. In the US, for example, the upper limit is set at 500 employees instead of 250. Micro-sized companies are also often defined to have up to 49 employees and hence SMEs to have between 50 and 249 employees. The European Union also uses financial data to define size bands. Firms with turnover between over EUR 2 million and EUR 50 million are classified as SMEs. Firms with less than EUR 2 million in turnover are micro companies and firms with more than EUR 50 million are large firms.

Another critical element in the classification of firm size categories is the ownership structure of firms. It is necessary to treat subsidiaries of large companies that fall into the micro firm or SME categories according to their turnover or number of employees differently from independent micro firms or SMEs. This uses the net assets employed by the firm to be the measure of size.

According to Heshmati and Kim (2011) listed companies have easier access to the equity market, in comparison with the smaller companies, because of low fixed costs. Transaction cost and asymmetric information problem are lesser in big firms in comparison with small firms. Therefore, large firms prefer to raise fund from equity rather than debt. Most financiers do not agree to offer small firms capital, or the price of the offered capital is too high for small firms. Another reason, which makes small firms reluctant to use outside financing, is the market access limitations. In many cases, the minimum volume of capital is required in order to raise external fund. This idea is supported by empirical evidence that concludes SMEs are often forced to use internal source, and then short-term debt contracts due to the limited access to the long term financing.

Many authors have suggested a positive relationship between a firm leverage and its size (Fama & French, 2002). Rajan and Subramanian (2005) stressed out, that when the value of the firm increases; the ratio of direct bankruptcy costs to the firm value would decrease. The effect of these expected bankruptcy costs might be little on large firms' borrowing decisions, which empower them to take on more leverage. On the other side, smaller firms face a different reality in raising the long term debt. Asymmetric information is not the main reason, but the reason is the significant negative correlation between firm size and the probability of bankruptcy (Hall et al., 2004). One explanation could be that relatively large firms tend to be more diversified; therefore, they are less prone to insolvency (Titman & Wessels, 2008). Chittenden et al. (2006) believed in the large companies the cost of monitoring is much lower than small firms. They argued that moral hazard and adverse selection problems are decreased reasonably in large companies, subsequently using debt as an external funding is much better in listed companies than SMEs. Hence there is a positive relationship between the level of debt and the firm's size. (Riportella, & Cazorla Papis, 2001) stressed out that there is a positive relationship between borrowing and size of the firm.

Daskalakis and Psollaki (2010) further found three reasons to confirm the positive relationship between level of debt and the firm size. They found that there is a strong relationship between the size of the firms and the risk of bankruptcy. This means a large company has a lower risk of default than small firms. They also found that listed companies might be able to incur lower transaction costs associated with debt. They also found out that due to transparency and accuracy in a large company the cost of information asymmetry is lower than in SMEs. It is assumed that large firms are less likely to default because they are more diversified than smaller firms; therefore, large firms should have a greater debt capacity (Titman & Wessels, 2008).

2.3.5 Firm Age

The conceptual basis for treating firm age as a moderator variable in the relationship between firm characteristics and financial performance can be attributed to the liability of newness. The liability of newness suggests that newer firms are disadvantaged vis-à-vis older firms because newer firms lack experience, lack external ties and lack legitimacy. The return on investment in older firms is likely to be higher because it has benefited from exposure, repetition and learning by doing that assist older firms to refine their strategies and build firm-specific human capital (Rafiq, Salim & Smyth, 2016).

Firm age measured as the number of years a company is operating in the market since it was founded is an important determinant of financial performance. Past research shows that the probability of firm growth, firm failure, and the variability of firm growth decreases as firm's age (Evans, 1987; Yasuda, 2005). According to the life cycle effect, younger companies are more dynamic and more volatile in their growth experience than older companies (Evans, 1987). Maturity brings stability in growth as firms learn more precisely their market positioning, cost structures and efficiency levels.

According to Liargovas, and Skandalis, (2008), older firms are prone to inertia, and the bureaucratic ossification that goes along with age; they might have developed routines, which are out of touch with changes in market conditions, in which case an inverse relationship between age and profitability or growth could be observed (Liargovas, and Skandalis, 2008). Newer and smaller firms, as a result, take away market share in spite of disadvantages like lack of capital, brand names and corporate reputation with older firms .

Past studies shows a relationship between the age of the firm and firm's growth, failure and variability in growth decreases with age (Yasuda, 2005). Young firms are more flexible and dynamic and more volatile in their growth compared to older firms. As the firm ages they are likely to become more stable in growth, gain more knowledge and innovations, position itself better in the market, develop a better structure that increases efficiency and help lower costs and are more likely to have better investment plans

2.3.6 Financial Performance

Financial performance can be described as a measurement of how well a firm uses its assets from its primary mode of business to generate revenue. The term is also used as general measure of firm's overall financial health over a given period of time. The business dictionary (2013) defines financial performance as measuring results of a firm's polices and operations in monetary terms and these results are reflected in firm's return on investment, return on assets, value added etc. Biryra (2009) also defined financial performance as the business' capability to generate liquidity, that is, finances from the investments it already has through which other processes are kept running. In other words, financial performance may be used to mean the extent of safety and stability in handling deposited funds (Mutua, 2013).

Neely (2011) observes that financial performance measures mainly serve three purposes. Firstly, they serve as a tool of financial management, secondly they serve as major objectives of business e.g. to have a 40% ROA and lastly they serve as a mechanism for

motivation and control within an organization. Many researchers have used different financial performance measures.

The level of significance in the performance of a financial institution can be measured in both micro and macro perspectives. In the micro perspective, the most fundamental prerequisite is profit as well as the best source of funds. Despite being a result, profits are also a requirement in an era of increasing competition in money markets. As a matter of fact, the prime aim of financial firms is basically to make profit as the main reason for doing business (Bobakova, 2003).

Financial performance is measured in different methods. One method is the use of Return on Assets (ROA). ROA is the ability of firm's assets to gain profit. It is arrived at after the division of net annual income by the asset value. The other indicator is Return on Equity (ROE) that refers to the profit contributed by the owners capital share in a firm. It is gotten by dividing net income by the total equity capital. The other commonly used measure as upheld by Hendrikse (2009) is Net Interest Margin (NIM) which is the interest earned out of income from the assets. All these measures tend to explain the extent to which the company performs financially which as well steers up other perspectives of performance. The current study used ROA and ROE to measure financial performance.

Financial goals drive higher profits, but non-financial company objectives also aid in improving the company as a whole. The non-financial improvements help round out the company's strengths in areas like customer service, production quality and employee satisfaction. These areas create a stronger company as a whole that is able to perform better in the market, increasing profits. A study by Kim, MacDuffie and Pil (2010) observed that focusing on employee satisfaction allows firms to create a workforce of engaged, loyal employees. With increased employees morale, often comes better attendance and effort. By aiming to improve the workplace for employees, firm management should show employees that the firm cares about more than simply making money. The study also found that the quality of work produced by the firm affects

reputation and amount of business you receive. When a firm offers consistently high quality products or services, the firm gains a positive reputation that potentially leads to more business and repeat customers.

Ayako, Kungu and Githui (2015) conducted a study on determinants of the performance of firms listed at the Nairobi Securities Exchange. This study analyzed the factors affecting the performance of 41 non-financial companies listed on the Nairobi Securities Exchange (NSE) using panel data over the period 2003 to 2013. The results indicated that corporate governance was statistically significant in determining the performance of firms and it had the expected sign (Positive). The leverage of the firm also had the expected negative sign and was statistically significant in explaining the performance of companies. Firm size and liquidity were however found to be statistically insignificant in determining the performance of these firms. Any limitations/suggestions for areas of further research/cross-reference!!

2.4 Empirical Studies

2.4.1 Leverage and Financial Performance

Al-Tally (2014) investigated on the effect of financial leverage on firm financial performance in Saudi Arabia's public listed companies. The overall results of this study were that, in the long term, in the absence of acute economic downturns, lower leverage levels tend to lead to higher profit margins and returns on both assets and equity. It also provides evidence to recommend that, under normal economic conditions, Saudi Arabian firms could attempt to improve their financial performance by balancing their zakat liabilities with their leverage borrowing levels.

Perinpanatha (2014) investigated the impact of financial leverage on financial performance special reference to John Keells Holdings PLC Sri Lanka. The study intended to test the hypothesis and to measure a relationship between the financial leverage and the financial performance of the John Keells Holdings plc in Sri Lanka

during the periods of 2006-2012. The findings of the study showed a negative relationship between the financial leverage and the financial performance of the John Keells Holdings plc. However, the financial leverage had a significant impact on the financial performance of the John Keells Holdings plc in Sri Lanka.

Wainaina (2014) conducted a study on the relationship between leverage and financial performance of top 100 small and medium enterprises in Kenya. The study used descriptive cross sectional research design. The study found that for the year 2009 liquidity had a greater effect to financial performance followed by leverage while firm size had a minimal impact on financial performance of SMEs. The study also found out that for 2012 leverage, liquidity and firm size explained 62.4% of changes in the financial performance of the SMEs. The study concluded that leverage had a significant influence on the financial performance; the study also concluded that there was a positive relationship between leverage (debt equity ratio) and financial performance of small and medium enterprises in Kenya. The study recommended that for SMEs to effectively determine the funding mix to employ and to maintain a good debt equity ratio, there is need for capacity building of SMEs in areas of business management.

Ali (2014) conducted a study on the impact of financial leverage on firm performance: the case of non-financial firms in Kenya. The study took performance measures in a wider perspective using ROA, ROE and Tobin's Q. In addition to financial leverage the study expanded its explanatory variables by controlling for liquidity, firm size and firm age. The study analyzed the data from the three models using random effect model after the Hausman test results preferred the random effect model while Levin Lin Chu test results for unit roots indicated that the data was stationary. The results revealed that there is a significant negative relationship between leverage and return on assets. The result is also buttressing that profitable firms uses pecking order theory in its financing, the more profitable a firm is, the more likely they are going to reduce its debts hence internal financing is preferred. Findings from the Tobin's Q model indicated that large firms have a positive insignificant relationship between financial leverage and firm performance while the older firms showed an increase in its market value; this is an

indication of investors' confidence on the older firms who have built their reputation over a long period.

Ebiringa and Ezeji (2012) studied the effect of financial leverage on bank performance using six banks from Nigeria. The study made use of secondary data from Nigerian Stock Exchange fact book and the financial statements of the sampled banks. Debt-equity and coverage ratios were used to measure financial leverage which was the independent variable, while earning per share (EPS) represented performance as the dependent variable. Multiple regression technique was used to establish whether relationship exist between financial advantage and performance of sampled banks. The findings showed mixed results. While some banks reported positive relationship between leverage and performance, others revealed negative relationship between leverage and performance.

Njeri and Kagiri (2013) examined the effect of capital structure to the company's financial performance of listed banking institutions in Nairobi Securities Exchange. The study determined whether capital structure have effect on financial performance of the firm by considering the debt, leverage risk, debt equity ratio and interest rates and how they are related to Return on Equity (ROE), Return on Assets (ROA), Gross Profit Margin and Net Profit Margin (NPM) at determined significant level. The research findings indicated that there was a positive relationship ($R= 0.608$) between the variables. The study also revealed that capital structure aspects under study could explain 56.4% of financial performance of commercial banks listed at the NSE. The study findings revealed that the combined effect of the four aspects under study on financial performance of commercial banks listed at the NSE was statistically significant. This was revealed by the ANOVA findings where high F values and log p values were registered at 95% confidence interval.

Enekwe, Agu and Eziedo (2014) determined the effect of financial leverage on financial performance of the Nigeria pharmaceutical companies over a period of twelve (12) years (2001-2012) for the three companies. This work employed three

financial leverage ratios for the independent variable which were: debt ratio (DR); debt-equity ratio (DER) and interest coverage ratio (ICR). Financial performance on the other hand was measured using Return on Assets (ROA). The ex-post facto research design was used for this study. Secondary data were obtained from the financial statements of the selected pharmaceutical companies' quoted on the Nigerian Stock Exchange (NSE). Descriptive statistics, Pearson correlation and regressions were employed and used for this study. The results of the analysis showed that debt ratio (DR) and debt-equity ratio (DER) have negative relationship with Return on Assets (ROA) while interest coverage ratio (ICR) has a positive relationship with Return on Assets (ROA) in Nigeria pharmaceutical industry. The analysis also revealed that all the independent variables have no significant effect on financial performance of the sampled companies. Based on the above findings, the researchers recommended that companies' management should ensure that financial decisions made by them are in consonance with the shareholders' wealth maximization objectives which encompasses the profit maximization objective of the firm. The amount of debt finance in the financial mix of the firm should be at the optimal level to ensure adequate utilisation of the firms' assets.

Wabwile, Chitiavi, Alala, Douglas and Islam (2014) analyzed and compared performance amongst tier 1 commercial banks listed on NSE (that is banks with an asset base above 100 billion by the year 2011) in relation to their financial leverage. Specific indicators were used to measure and compare variance in their performance were profitability Return on assets (ROA) and Return on capital employed (ROCE), growth of the firm Earnings per share (EPS) and Dividend yield (DY) and value of the firm Price book value (PBV) was preferred over price/earnings ratio because earnings can be erratic, and hence vary depending on the season of the business but assets on the other hand are less volatile and relatively easy to value. Pearson correlation analysis and regression analysis were used to test correlation of data, F-test, Durbin Watson test, adjusted R², mean and standard error of the data. There is a negative correlation between debt asset ratio and ROAC and ROCEC (-.642) and (-.494)

respectively though not significant. That is as the debt ratio increases, it means the banks' most assets are being financed by both long-term and short-term liabilities and hence the return on such assets as well as that on capital employed is reduced to cater for the outstanding liabilities. There is positive correlation between the debt asset ratio and the EPS (.096) though not significant.

Abubakar (2015) investigated the relationship between financial leverage and financial performance of deposit money banks in Nigeria, with specific reference to how debt-equity ratio and debt ratio affect return on equity of deposit money banks in Nigeria. Eleven deposit money banks from Tier 1, Tier 2 and Tier 3 classification of banks were sampled using convenience sampling technique for the period 2005-2013. This study adopted both descriptive and correlation analysis. Findings from the descriptive analysis show that about 84% of total assets of deposit money banks in Nigeria are financed by debts confirming that banks are highly levered financial institutions. The correlation analysis revealed a significant relationship between debt-equity ratio and financial performance proxy by return on equity. However, no significant relationship was found between debt ratio and ROE. The study recommends among others that an appropriate debt-equity mix should be adopted by banks if they must improve their financial performance, survive and remain competitive.

Maghanga and Kalio (2012) studied the impact of leverage on performance of the Kenya power and lighting company. The study used a sample of 55 respondents and structured questionnaires to collect primary data and secondary data was obtained from firm's annual reports. The study concluded that leverage has a great impact on performance as far as financing is concerned. Thus, the study revealed that an optimal debt financing is crucial in ensuring that companies realize improved financial performance. The study recommended that companies should work on reducing some operational costs by going for relative cheaper sources of financing to improve greatly on their financial performance.

Zubair and Sajid (2014) examined the effect leverage on company's performance from Karachi Stock Exchange. Panel data methodology was used for companies listed at Karachi Stock Exchange for the year 2004-2009. The study finding established a negative relation between performance and leverage hence a conclusion that long-term debt was more expensive thus utilization of debt in a high level results in a low profitability.

Matemilola, Bany-Ariffin and Azman-Saini (2013) examined the effect of leverage and managerial skills on returns for shareholders. The study used the fixed effects model and multiple linear regression to analyze data collected. Regression analysis results established that leverage had a positive relationship with shareholders' return. Moreover, it was established that managerial skills had a positive relationship with shareholders' return. The study concluded that leverage and managerial skills may be priced in equity valuation.

Gweyi and Karanja (2014) investigated the impact of leverage on performance of Kenyan registered deposit-taking SACCOs using a sample of 40 Savings and Credit Co-operative Societies. The study used secondary data for period of 2 years from the year 2010 to 2012. The findings of the study established that a positive correlation exists between the debt-equity ratio with return on equity and after tax profits.

Banafa, Muturi and Ngugi (2015) examined impacts of leverage on financial performance of listed Kenyan non-financial firms. The study employed a causal research design and to examined the effect of leverage of the 42 listed non - financial firms at NSE. Secondary data from firms' financial statements was used for a period of five years from the year 2009-2013. The study used the regression model to analyze the collected data. The study revealed that leverage had a negative and significant impact on corporate financial performance.

Rao, Al-Yahyaee and Syed (2007) investigated impact of financial leverage on corporate financial performance using panel data in a textile sector of economy in Pakistan for a period of 13 years beginning in the year 1999 to 2012. The study employed accounting ratios ROA and Tobin Q to measures of corporate financial performance and total debt to total assets ratio, long-term debt to total assets ratio, short-term debt to total assets and debt to equity ratios to determine financial leverage. The study established that leverage had a negative impact on ROA while Tobin Q has a positive coefficient with SDTA. The study concluded that due to high cost of borrowing in Pakistan and the less development of capital markets, firms are forced to borrow from banks to finance projects, which in turn they pay huge amount of interest and principal, which affects their performance

Study by Mule and Mukras (2015) investigated the relationship between financial leverage and financial performance of listed Kenyan firms. The study used annual data for a 5 years period starting from the year 2007 to the year 2011. The study using panel data analysis found strong evidence that financial leverage significantly and negatively affects the performance measured using ROA and Tobin Q. Moreover, the study found that financial leverage negative and insignificant effect on performance measured using ROE. The study also revealed that asset tangibility and ownership concentration are important determinants of performance.

Rehman (2013) employed a sample of 35 listed companies from Food Producer sector of KSE. The research was conducted to find out the Relationship between financial leverage and financial performance. The main variable used for test of Hypothesis Comprise of Independent variable which is financial leverage whereas dependent variable is Financial performance of listed sugar companies at KSE. Debt to equity ratio was used to measure financial leverage whereas financial performance is measured using Return on Asset, Earning per share, Net Profit margin, Sales growth and return on equity. Results of the study show mix results. There was positive relation of debt to equity ratio with return on Asset and Sales growth and negative relationship of debt to equity ratio with Earning per share, Return on equity and Net profit margin.

Saini (2012) conducted a study on Impact of Financial Leverage on Shareholders Return and business sector underwriting from the Indian Telecom part organizations. Study period consisted of years 2004-2010. Hypothetical framework comprise of Independent variable as financial leverage and dependent variable comprise of Shareholder return & market capitalization. Telecommunication Industry. It was concluded that a Positive Correlation is found between budgetary influence and shareholders return for Telecommunication Industry and negative connection is found between monetary power and business promotion for telecom Industry. The total valuation of a firm can be Increased by the different bounding of three variables as Financial leverage, Shareholder return & market capitalization.

Kahiga (2014) quantify the impact of deposit taking savings & credit cooperative in Kenya. Study was an attempt to investigate the impact and the influence on execution of store taking places in different Sacco's in Kenya. They adopted the Analytical & descriptive designs for research and the correlation analyses was done using Pearson's correlation method. SPSS was brought in to play to find out the significant relationship among variables which consisted of financial performance as dependent & financial leverage as independent variable. Study time period comprise of years 2010-2012. Outcomes of the research showed that there is strong correlation financial performance of Saccos in Kenya & the financial leverage. Pearson correlation between debt to equity ratio & profitability variables was 0.994 and exhibited a strong relationship between the two variables while on the other side Pearson correlation between debt to equity ratio & profitability variables was 0.662 and showed strong relationship between the variables since Sigma 2 tailed value $S < 0.05$.

Mahmoudi (2014) presented an empirical insight on the effect of leverage on cement industry profitability. The study was an attempt to highlight the crucial issue that the managers are confronting today, that how to choose the combination of debt & equity to achieve the optimal capital structure that would minimize the firms cost of capital & improves returns to the business owners. Using leverage on capital structure as Independent variable and profitability as dependent variable and time period comprised

of years 2008-2011. They used descriptive and regression models to test the theory. Results of the exploration demonstrate that there is a critical negative relationship between firm's profitability & leverage. It was evidenced through this research that top management of every firm should be focused on making prudent financing decisions in order to remain profitable and competitive and therefore managers should realize to what extent leverage had an influence on the financial performance.

Asif, Rasool and Kamal (2011) in their research finding regarding Impact of financial leverage on dividend policy evidence from listed companies at Karachi Stock exchange, examines the relationship between dividend policy & the financial leverage of 403 companies, listed in the Karachi stock exchange during the period 2002-2008. The strategy for the profit that is trailed by the organizations is tried by utilizing broadened model of Linter (1956). Data utilized was gathered from investigation reports, online information base of overall stock data, SBP website, Business Recorder website and annual reports of the listed companies. Islamabad Stock exchange and Security exchange commission of Pakistan was brought into play for the collection of data for the year 2002 and 2003. Dividend yield and debt ratio were used as Independent variable and dividend per share as dependent variables. First descriptive statistics for all the variables are collected and after that association lattice was computed to distinguish a preparatory relationship among all the variables emulated by relapse examination on board information to look at the extent and criticalness through settled and irregular impact model. It were demonstrated through hypothetical attestations and were defended through Random impact display that broadly practiced dividend approach and level of corporate obligation influence the profit arrangement of Pakistani firms. While on the other side it has been observed that financial leverage was found to have negative effect on profit payout, demonstrating that less profit installments are made by the organizations that are under high leverage.

Bhatti, Majeed, Rehman and Khan (2010) had examined the effect of leverage on risk and stock returns evidence from Pakistani companies. The paper had attempted to make an Investigation on the influence of power on efficient hazard and stock return in the

corporate sector of Pakistan. Data was gathered from eight commercial enterprises that are cotton, designing, Fuel and vitality, Chemicals, Transport and correspondence, sugar and partnered concrete, paper & board. Data was collected from the period Jan 2005-Dec 2009. Primary data was collected due to limited time and resources are collected from eight industries, researcher has not covered all the industries due to limitations. Researchers analyzed the data by utilizing the recipes of return, Standard deviation, Leverage and connected these entire recipe in Ms Excel. Results provided that despite of many reforms brought by the Government, Corporate part still conveys an abnormal state of influence making abnormal state of methodical danger prompting high instability in stock costs of these commercial ventures exchanged on Karachi Stock Exchange.

Jude Leon (2013) in his work on the Impact of capital structure on financial performance of listed manufacturing firms in Srilanka explained that Capital structure is the most significant discipline of Company's operation Capital decision has the greatest importance regarding the firm's sustainability. The capability of an organization in satisfying the needs of stakeholders is in close relation to capital structure. Study period chosen for this study is from the years 2008-2012. Data was collected using secondary sources such as Colombo stock exchange handbook, CD record of Colombo stock exchange, Colombo stock exchange monthly report and CSE annual report. Study has focused on the manufacturing sector, as the population had been taken from 30 firms and there had been 150 firm-Years (30×5) for the panel data analysis purpose. SPSS software version 13.0 has been used for the processing of data, further correlation, regression and descriptive statistics were also utilized for data analysis. Independent and dependent variables are measured using leverage, ROE and ROA. Results showed that by correlation analysis leverage is negatively correlated with both ROA and ROE. There is negatively relation prevalent between leverage and ROE which is significant at 0.001 levels. Here leverage has a significant relationship with ROE. On the other side there is no significance between ROA and Leverage at significance level 0.097. Hence, there is

negative relationship prevalent between Leverage and ROE and no significant relationship between leverage and ROA.

Moradi, Salehi and Erfanian (2010) in their research work on the study of effect of financial leverage on earnings response coefficient throughout income approach: Iranian evidence aimed to find out relationship between budgetary influence and profit reaction coefficient through a wage approach. Companies raise their value by distinctive systems to touch base on the choice that give better techniques are a test that most money related directors of the partnership face. In organizations with remarkable obligation the response of stock costs to sudden income will be influenced by company's liquidation hazard. This incorporates organizations recorded on Tehran Stock Exchange and the data of seven year period from 2002-2008 was used. Degree of financial leverage and unexpected earnings were taken as Independent and abnormal stock return as dependent variable. Analysis of data was performed by using multiple regressions. Outcomes of the study portrays that the profit reaction coefficient for the low power firms gathering is bigger than high influence ones, with contrasts in the methods among gatherings factually noteworthy.

Taani (2012) investigated the Impact of working Capital management policy and financial leverage on financial performance. This study had decided the Impact of working capital administration approach and budgetary power on monetary execution of Jordanian organizations measured regarding ROE, ROA and Net Income. Sample size consisted of 45 Jordanian companies and time period of 5 years from 2005- 2009. By taking N.I, ROE and ROA for measure of profitability and are used as dependent variables whereas working capital management policy and debt ratio which are proxy variable of financial leverage are used as Independent variables. To test the hypothesis and to analyze the data of present research SPSS software was used. Whereas Test of correlation using scatter graph, Pearson rank correlation, ANOVA & multiple regression analysis were performed. Study results demonstrate that Test of obligation proportion has moderate negative direct relationship to net Income and ROA yet a frail positive association with ROE. Working capital administration approach test outcomes

characterized a moderate positive straight relationship to net salary. Further, there was frail positive straight relationship between living up to expectations capital administration arrangement and ROA; however it shows up there was no direct relationship between living up to expectations capital administration approach and ROE.

Adongo (2012) studied the effect of financial leverage on profitability and risk of firms listed at the Nairobi securities exchange. A casual research design was adopted for the study. Population consisted of fifty eight companies out of which thirty companies were sampled. The sample excluded fifteen companies listed under banks and insurance because these companies are regulated and are to meet certain liquidity and leverage ratios. Six companies were suspended. The study covered a five year period January 2007 to December 2011. Three companies were newly listed and therefore not continuously listed over the period of study. Four companies had information missing for some years required for the computation of the variables. Secondary data was used and data was collected from thirty sampled firms. Source data included NSE database, Capital Markets Authority (CMA) and Annual Audited Financial Statements of sampled companies. Data was analyzed using Statistical Packages for Social Sciences (SPSS) version 17. Cross-sectional time series fixed model was used with the regression and correlation analysis to determine the nature and the strength of the relationship between the independent and dependent variables. The findings revealed an insignificant relationship between returns adjusted by risk and financial leverage. This contradicted with the hypothesis of the study which had predicted a positive relationship between financial leverage, profitability and risk of listed firms.

2.4.2 Liquidity and Financial Performance

Omesa (2015) conducted a study on effect of liquidity on the financial performance of financial institutions listed in the Nairobi securities exchange. The study adopted descriptive research design where secondary data was retrieved from the balance sheets, income statements and notes of 19 financial institutions in the NSE for period covering 2010-2014. The results indicated that the relationship between liquidity and financial

performance is weak with an adjusted R² of 55.17% and that capital structure had a significant relationship with ROA while liquidity had an insignificant relationship. The results further show that there is a negative relationship between NSE listed financial institutions' cash position indicator with ROA. This might be explained with the view that with inadequate cash position, then the firm will borrow at possible high interest rate costs and thus reduce the firm's financial performance. The study concluded that liquidity management is not a contributor alone of the firm's financial performance and there exist other variable that will influence ROA.

Njeri (2014) conducted a study on the effects of liquidity on financial performance of deposit taking microfinance institutions in Kenya. This study used inferential statistics to explain the main features of a collection of data in quantitative terms while correlation and linear regression analysis are used for analyzing the data. The results revealed that there is a positive relationship between liquidity and financial performance as the coefficient of determination was found to be .910 explaining that the liquidity explains 91% of the variance in the financial performance. The correlation revealed a significant association of .941 at 5% level of significant. The study concluded that efforts to stimulate the MFIs' liquidity would see the micro financial sector realize increased financial performance that would result to increased efficiency in the sector's operations. Recommendations made include; strategies to facilitate increased liquidity of MFIs to be adopted, emphasize on asset growth as a stimulator of financial performance and competitiveness as well as improvements in operational efficiency through application of modern technology and innovative operational strategies.

Sanghani (2014) investigated the effect of liquidity on the financial performance of non-financial companies listed at the Nairobi securities exchange. Secondary data was collected from NSE and multiple regression analysis used in the data analysis. The study revealed that liquidity positively affect the financial performance of non-financial companies listed at the NSE. The study established that current ratio positively affects the financial performance of non-financial companies listed at the NSE. The study also revealed that an increase in operating cash flow ratio positively affects the financial

performance of non-financial companies listed at the NSE. The study found that an increase in debt to equity positively affects the financial performance of non-financial companies listed at the NSE. The study recommends that there is need for non-financial companies listed at the NSE to increase their current assets so as to increase their liquidity as it was found that an increase in current ratio positively affect the financial performance.

Maaka (2013) conducted a study on the relationship between liquidity risk and financial performance of commercial banks in Kenya. The study adopted descriptive research design. The study findings was that there has been an increase in value of cash balance over the five year period studied though there has been an increase in the volume of liquidity gap in commercial banks of Kenya over the five year period studied. It was also found that there was positive correlation coefficient between return on assets and customer deposits, cash balance and size of firm though a weak positive correlation between return on assets and liquidity gap existed. The study concluded that liquidity risk not only affects the performance of a bank but also its reputation and this might result in the loss of confidence among the depositors if funds are not timely provided to them. In addition to this, a poor liquidity position may cause penalties from the regulator and therefore it becomes imperative that banks maintain a sound liquidity position at all times. The study recommends that banks should maintain adequate liquidity levels though in the form of short-term marketable securities in order to realize profits for the banks.

Alshatti (2015) conducted a research to find empirical evidence of the degree to which effective liquidity management affects profitability in Jordanian commercial banks and how commercial banks can enhance their liquidity and profitability positions. Based on the research findings, the researcher concluded that, there is an effect of the liquidity management on profitability as measured by ROE or ROA, where the effect of the investment ratio and quick ratios on the profitability is positive when measured by ROE, and the effect of capital ratio on profitability is positive as measured by ROA.

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

Maina (2011) researched on relationship between liquidity and profitability of oil companies in Kenya covering the period 2007 - 2010. Secondary data was used in the analysis that was obtained from the firm's financial statements. A regression model was developed to determine the relationship between the dependent variable (Profitability of the firms) and independent variables (liquidity position). The independent variable used in the model consisted of current ratio, quick ratio, cash conversion cycle, while leverage and the age of the firm were used as control variables. The study found that that liquidity management is not a significant contributor alone of the firm's profitability and there exist other variable that will influence ROA. However, it is important for a firm to understand the effect of each of the liquidity components on the firm's profitability and undertake deliberate measures to optimize its liquidity level.

Qian (2002) investigated association involving a measure of the cash gap and company financial performance in their study of a large sample of listed American businesses for a twenty year duration starting from 1975 to 1994; the results indicated a negative relationship. This shows that shareholders wealth is maximized by reducing the cash conversion cycle. Owolabi and Obida (2012) carried out a study of manufacturing companies quoted on the Nigerian stock exchange on the effects liquidity have on company financial performance. Using descriptive research they found that liquidity as

measured in terms of cash conversion cycle, cash flows and credit policy have a significant effect on company financial performance and they concluded that financial performance as measured by profits may be improved by having short cash conversion cycle, employing good credit policy and having an efficient cash management policies.

Njure (2014) examined the association linking the policies put in place in the management of working capital and business profitability for companies quoted at the NSE. Using a sample of 19 listed joint stock entities for a five-year duration and the findings were that company's profitability as measured by ROA increases with firm's size, efficient working capital and with a lesser aggressiveness of the asset management. Thus, contrary to the traditional theory of asset management, where a conservative policy is expected to sacrifice profitability at the cost of liquidity, the research study found a positive association amid a conservative management of current asset and current liabilities and the financial performance of firms quoted at the NSE.

Akoto, Awunyo-Vitor & Angmor (2013), in their studies found out that, Working capital management affect company' liquidity. Palepu, Healy and Bernard (2015) recommended financial ratios and cash flow analysis as methods of measuring financial performance, Ooghe and De Prijcker (2008) agreed that debts of the companies increase companies' illiquidity and impairs the companies' financial performance.

Al-khatib and Al-Horani (2012) investigated the role of a set of financial ratios in predicting liquidity of publicly listed companies in Jordan. The authors used logistic regression and discriminant analysis a comparison to determine which is more appropriate to use as well as which of the financial ratios are statistically significant in predicting the liquidity of Jordanian companies. During the period between 2007 and 2011, the results show that both logistic regression and discriminant analysis can predict liquidity, and that Return on Equity (ROE) and Return on Assets (ROA) are the most important ratios, which help in predict the liquidity of public companies listed on Amman Stock Exchange.

In his study, Eljelly (2014) found that there was a significant negative relationship between a firm's profitability and its liquidity level. When firms have more assets than liabilities, this might be a sign that they are losing investment opportunities that could return in profits for the company. Having fewer current assets is risky. However, in the long term, it is profitable. This retains more cash leads to lower profit due to missing profitability investment opportunities. Illiquid firms are risky, yet profitable. However, this cannot be the case in all situations, as other factors can affect these propositions. The size and age of the firm affects the effect of liquidity on profitability. Small firms with high liquid assets might be more profitable than larger firms in the short term. Conversely, larger firms with illiquid assets might be more profitable than smaller firms in the long term.

Sur, Maji and Banerjee (2013) made a comparative analysis of liquidity management of four major companies in Indian power sector, covering a period from 1987-88 to 1996-97. The techniques of ratio analysis, Motaal's comprehensive rank test, and simple statistical techniques like measures of central tendency and Spearman's rank correlation analysis have been used for the analysis. The liquidity ratios such current ratio, quick ratio, current assets to total assets ratio, inventory turnover ratio and debtors' turnover ratio have been used for comparison and suitable interpretations have been made. Motaal's comprehensive test is used to analysis the liquidity more precisely. To measure the closeness of association between liquidity and financial performance of the companies, Spearman's rank correlation co-efficient has been applied. The study has revealed that the inventory turnover ratio has a positive impact on firms' financial performance whereas the liquidity ratio, working capital turnover ratio and working capital to total asset have negatively influenced the profitability.

Khidmat and Rehman (2014) analyzed the relationship between the liquidity, solvency and performance which plays a vital role in the Return on Assets of the chemical sector in Pakistan. The analysis explained the relationship between liquidity and solvency with ROA and is conducted on the data of 10 chemical companies for the past nine years

(2000-2009) in the chemical sector of Pakistan. Conclusions drawn were that liquidity ratio affects ROA positively while it impacts negatively on solvency.

Suhaila (2014) investigated the effect of liquidity and leverage on financial performance of commercial state corporations in the tourism industry in Kenya. The study adopted descriptive research design where data was retrieved from the Balance Sheets, Income Statements and Notes of ten (10) Commercial State Corporations in the tourism industry in Kenya during the study period 2008-2012. A regression model was used to assess the impact of liquidity and leverage on financial performance measured with profitability. A positive relationship was found to exist between tourism industry liquidity and profitability of Commercial State Corporations in the tourism sector in Kenya.

2.4.3 Asset Tangibility and Financial Performance

Harc (2015) conducted a study on the relationship between tangible assets and capital structure of small and medium-sized companies in Croatia. The study found out that the relationship between tangible assets and long-term leverage is positive in all observed years and statistically significant. The results show that small and medium-sized companies use their collateral to attract long-term debt, which means that small and medium-sized companies use lower costs and the interest rate of long-term debt in relation to short-term debt. These findings correspond with the maturity matching principle, according to which long-term assets are financed with long-term financing and short-term assets are financed with short-term funds. These results suggest that tangible assets have a positive impact on the long-term debt of Croatian SMEs because tangible assets constitute a positive signal to the financial institutions, which can request the selling of these assets in case of bankruptcy. These findings are consistent with the trade-off theory that predicts a positive relation between leverage and tangibility, but also with the pecking order theory, which is generally interpreted as predicting a negative relation between leverage and tangibility.

Koksal *et al.* (2013) investigated the factors that determine the capital structure choices in Turkey. They used tangibility as a proxy for the type of assets. They found that tangibility appears to be the key determinant of long-term leverage (positive relationship), but is not important for short-term leverage (negative relationship). Their empirical findings suggested that the trade-off theory is a better description of the capital structure of Turkish firms than the pecking order theory.

Campello and Giambina (2011) examined the relation between corporate asset structure and capital structure by exploiting variation in the salability of tangible assets. They argued that tangible assets are often illiquid, so they show that redeployability of tangible assets is the main determinant of corporate leverage for firms that are more likely to face credit frictions, especially during periods of tight credit. Their evidence shows that tangible assets drive capital structure to the extent that they are redeployable. Only the component of asset tangibility that responds to salability has explanatory power over firm leverage. They found that the relation between redeployability and leverage is important and pronounced in firms for which the collateral resource is particularly important in the borrowing process. For large firms, in contrast, redeployability is an irrelevant driver for leverage.

Sanyal and Mann (2010) examined the financial structure of start-up firms. They found that start-ups with more tangible assets as potential collateral are more likely to use external debt in the financial structure, since these assets have a high liquidation value. Psillaki and Daskalakis (2008) investigated the capital structure of Greek, French, Italian and Portuguese small and medium-sized enterprises. They argue that the costs of financial distress depend on the types of assets that a firm employs. If a firm retains large investments in land, equipment and other tangible assets, it will have smaller costs of financial distress than a firm that relies on intangible assets. Thus, firms with more tangible assets should issue more debt. On the other hand, large holdings of tangible assets may imply that a firm has already a stable source of return, which provides more internally generated funds and discourages it from turning to external financing. Therefore, the negative relationship between leverage and asset structure indicates that

firms employ lots of tangible assets and seem to rely more on internal funds generated from these assets, which is predicted by the pecking order theory. They found that asset structure is significant and negatively correlated with leverage. A possible explanation is that firms with lots of tangible assets may have already found a stable source of return, which provides them more internally generated funds and discourages them from turning to external financing.

The study by Okwo et al. (2012) assessed the impact of a company's investment in fixed assets on its operating profit margin. The study is based on a sample four companies in the Nigerian brewery sector over an eleven year period from 1999 to 2009. The operating profit margin was taken as the dependent variable while the independent variables were Sales/Net Fixed Assets ratio, Interest Rates, Foreign Exchange Rate, and Inventory/Cost of Sale ratio. The findings of the study was that though the relationship between the level of investment in fixed assets and its impact on the operating profit was positive, the result was not statistically significant. Therefore, the result did not suggest any strong positive impact of investment in fixed assets on the operating profit of brewery firms in Nigeria.

Olatunji et al. (2014) examined the effect of investment in fixed assets on profitability of selected Nigerian banks. Data were obtained from annual reports and accounts of thirteen selected Nigerian commercial Banks for the period from 2000-2012. The relationship between the dependent variable (Net profit) and independent variables (Building, Land, Leasehold premises, fixtures and fitting, and investment in computers.) indicated that there was a significant relationship between them. The study concluded that investments in fixed assets had strong and positive statistical impact on the profitability of banking sector in Nigeria Further, the overall result of the study by Ahmad, Abdullah, Sulong and Abdullahi (2015) on some listed manufacturing companies indicated that the fixed assets had impact on ROE but not on ROA.

Campello (2006) conducted a study on asset tangibility and corporate performance under external financing. It's obvious that the overall performance of externally-funded funding is pushed by the post-financing value/redeploy ability of the firm belongings outdoor of the company. In addition, the thing of funding that is explained through external financing is associated with superior firm product market overall performance, valuation, and accounting returns when, eventually to financing, asset tangibility turns out to be high. In evaluation, economic consequences associated with outside investment are markedly poorer whilst asset tangibility is ex put up low. Crucially, those dynamics are not discovered for internally-funded investment. Inferences that the firm observes superior enterprise performance below external financing whilst belongings are greater tangible keep for each new outside fairness and debt financing.

Baloch, Ihsan, Kakakhel and Sethi (2015) conducted a study on impact of Firm Size, Asset Tangibility and Retained Earnings on Financial Leverage: Evidence from Auto Sector, Pakistan. Data from 22 companies from an analysis of the financial statements published by the State bank of Pakistan (SBP). The relationship between the underlying variables was determined by use of multiple regression analysis. Analyzed data show that the size of the firm and tangibility of assets have significant impact on leverage. In addition, it also mentioned there exist a negative relationship between the individual variables. It is stated that retained earnings have no significant effect on leverage.

2.4.4 Firm Size and Financial Performance

Abbasi and Malik (2015) pinpointed the effect of firm size between the relationship of firm growth and firm performance. In the study null and alternative hypothesis was constructed. The secondary cross-sectional data was gathered from 50 firms listed in Karachi stock Exchange. Before application of regression equation the formality of stationary of data was fulfilled, in addition the issue of the multi-co-linearity was resolved. The results of the regression analysis were demonstrating that the alternative hypothesis of the research that firm size had inspiration between independent variable (Firm growth) and dependent variable (Firm performance) was accepted. The study is

cooperative for the management to keep an eye on firm size along with firm growth while enhancing the firm performance.

Mahfoudh (2013) sought to find the effect of selected firm characteristics namely firm size, leverage, firm age, liquidity, and board size on firm financial performance as measured by return on assets. The study used correlational research design in an attempt to investigate the effect of firm characteristics on firm financial performance and the extent of causation was documented by running a multivariate linear regression analysis. The target population was seven agricultural firms listed at the Nairobi Securities Exchange and the researcher selected six out of the seven listed firms due to inaccessibility of the seventh listed firm from the year 2007 to 2012. The study evidenced that the only variables that were statistically significant were liquidity and board size and the other three variables that were not statistically significant were namely firm size, leverage and firm age. However, firm size, leverage, firm age, and liquidity were positively related to firm financial performance and board size was the only variable that was negatively related to firm financial performance.

Naran (2013) investigated the effects of voluntary disclosure and company size on the financial performance of commercial banks in Kenya. Specifically, the study examined general and strategic disclosure, financial disclosure, forward looking disclosure, board disclosure as a proxy for measuring voluntary disclosure and company size and how they affect the financial performance of commercial banks in Kenya. Financial performance was measured using Return on Equity (ROE). The study adopted a descriptive research design. The study found that a strong relationship exist between the voluntary disclosure, firm size and financial performance. Financial disclosure, board disclosure and forward looking disclosure was found to positively affect the financial performance while general and strategic disclosures was found to negatively affect financial performance of commercial banks in Kenya. There was a positive relationship between asset a proxy for company size and firm financial performance.

Njoroge (2014) conducted a study on the effect of firm size on financial performance of pension schemes in Kenya. The objective of this study was to determine the effects of firm size on financial performance of pension schemes in Kenya, to determine the effect of market share; to assess the effect of the number of employees; to establish the effect of book assets; to establish the effect of the number of branches and to establish the effect of retained earnings on the financial performance of pension schemes in Kenya. The research was conducted through a descriptive research design. The study concluded that there has been significant market volatility as evident from the NSE index, Treasury bill rate movement and offshore indices. The study recommended that RBA should ensure all schemes, particularly those with segregated investments, have up to date investment policies and that the strategic asset allocation is included within the investment policy. It also recommended compulsory saving for all in employment, and the introduction of a flexible scheme for those in the informal sector, who can make periodic payments.

Pervan and Višić (2012) conducted a study on a firm may use different methods and diverse (non) financial analysis/indicators in order to evaluate its business success. However, one of the most widely applied methods refers to financial analyses that use profitability ratios as the key measures of firm's overall efficiency and performance. In their research, they focused attention on firm size and evaluated its influence on firm profitability. Other than, by the size of a firm, a firm performance was affected by a variety of internal and external variables. Therefore, apart from mere investigating the relationship between firm size and performance, they also explored the impact of some other variables crucial in determining firm profitability. The analysis was conducted for the 2002-2010 period and the results revealed that firm size had a significant positive (although weak) influence on firm profitability. Additionally, results showed that assets turnover and debt ratio also statistically significantly influence firms' performance while current ratio did not prove to be an important explanatory variable of firms' profitability.

Tahir and Razali (2011) using the firm size as one of the predictor variable, examined the relationship between enterprise risk management and firm value. The findings from the study indicated that there is positive relationship between firm size and firm value. The size influences a firm performance because large firm can increase their current size very fast by accumulating earnings from past performance and this enhances their value. In terms of structure which is firm's characteristics, institutional shareholders can influence any decision by management of firms. The accumulation of funds assists in putting up effective risk management structures.

Liargovas and Skandalis (2008) did a study on the financial performance and size of manufacturing firms in Greece. They found that financial performance of majority of the firms was affected by firm size. They argued that firm size is a basis of competitive advantage in the sense that larger companies tend to be more efficient than their smaller counterparts and have better resources to survive economic downturns. According to Shen and Rin (2012), cited by Mule, Mukras and Nzioka (2015) in their study found that firm size had a positive relationship with performance, implying that bigger firms are expected to achieve better performance. However, in the case of UK firms, size had a negative and significant effect on performance of the companies. This implies that, small companies sometimes suffer less from agency problems and more flexible structure to fit the change. They further argued that management efficiency reflects the capability of the management to deploy its resources efficiently and can be measured by financial ratios. The higher the ratio, the more the efficient management is in terms of operational efficiency, income generation and asset utilisation.

DeJong, Kabir and Nguyen (2008) analysed the influence factors of firm size, profitability, tangibility, no debt tax shield and sales growth of the capital structure of companies listed on the Stock Exchange. The study tried to see the differences of the results from the previous research with the research. The purpose of this study is to examine and determine the effect of firm size, profitability, tangibility, non-debt tax shield and sales growth of the capital structure on Banking Firms listed in Indonesian Stock Exchange period 2007-2012. Banking companies used in this study are all

banking companies' listings in 2007-2012, due to the limited number of listed companies, the census conducted by using all listed companies as much as 21 banks were analyzed using descriptive statistic and panel data regression with fixed effect model to test the hypotheses. The result of this research reveal that firm size, profitability, non-debt tax shield and growth has any effect to the capital structure, while tangibility were found has no effect to the capital structure. Overall, the independent variables have any effect to capital structure simultaneously. The magnitude of the coefficient of determination (Adjusted R Square) is equal to 0.874. This means that 87.4% of capital structure of the dependent variable can be explained by the five independent variables, namely firm size, profitability, tangibility, non-debt tax-shield and sales growth. While the remaining 12.6% of capital structure is explained by variables or other causes outside the model.

Ramasamy, Ong and Yeung (2005) suggested that size is positively related to a firm's ability to produce technologically complicated products that in turn leads to concentration. Such markets are supplied by few competitors and are therefore, more profitable. Thus, larger firms have access to the most profitable market segments. The empirical relationship between a firm's size, structure, and profitability has found that size is positively correlated with profitability (Abor, 2005). Additionally, profit rate of the market is positively correlated with the concentration ratio and negatively correlated with the marginal concentration ratio (Kioko, 2013). Also it shows that the positive association between firm size and profitability stems from implementing greater differentiation and specialization strategies, and should therefore lead to higher efficiency. Further studies also suggest that larger firms are able to leverage on economies of scale.

Aroni (2011) tested the influence of return on assets for the firms listed on the Nairobi stock exchange. The data collected covered the period covering 2002 December to 2008 December. The focus was to come up with the geometric stock returns on the stock prices for each year. The independent variables which were used in the research were the book to market, cash flow ratio, the dividend yield, firm size and the profitability ratio.

The conclusion drawn from the research was that in Kenya, stock returns are weakly driven by the firm specific factors. The study found a weak positive relationship between firm size and return for the firms under study.

Storey (2002) even found a negative association between firm size and profitability for U.K. based listed manufacturing companies. While no suitable reasoning can be used to explain such a link, organizational theory may perhaps solve part of this quandary. Furthermore, Henri (2004) suggests that larger firms can lead to increased coordination requirements, which in turn, makes the managerial task more difficult leading to organizational inefficiencies and lower profit rates. Further, it has been suggested that increased size tends to be associated with higher bureaucratization (Liargovas & Skandalis, 2008). Larger firms may have overly bureaucratic management structures, thereby inhibiting swift and efficient decision-making process. It is also possible that with the additional management layers needed to organize an increasingly large and diverse workforce, management may be affected by the agency problems.

Salim (2012) studied the relationship between bank size and financial performance of commercial banks in Kenya. The study specifically aimed at determining the relationship between bank size factors, namely, total deposits, total loans, and total assets, and financial performance, and went further to investigate the relationship between branch network size and financial performance. The main findings of the study established strong correlations between all the studied factors of bank size.

Lee (2009) examined the role that firm size plays in profitability. He used fixed effect dynamic panel data model and performed analysis on a sample of more than 7000 US publicly-held firms. Results showed that absolute firm size plays an important role in explaining profitability. However, this relationship was nonlinear meaning that gains in profitability reduced for larger firms. Amato and Burson (2007) tested size-profit relationship for firms operating in the financial services sector. The authors examined both linear and cubic form of the relationship. With the linear specification in firm size, the authors revealed negative influence of firm size on its profitability. However, this

influence wasn't statistically significant. On the other hand, the authors found evidence of a cubic relationship between ROA and firm size.

Using financial and economic data, Ammar, Hanna, Nordheim, and Russell (2003) examined the nature of the size-profitability relationship on a sample of electrical contractors. Using a first-order autoregressive model built into the error term, the authors found a significant difference in terms of profitability between small, medium and large firms. Namely, they revealed that profitability drops as firms grow larger than \$50 million in sales. On a sample of a US manufacturing firms, Amato and Wilder (1985) tested size-profitability relationship in linear as well as quadratic form. However, the results of their analysis showed that there is no relationship between firm size and profit rate.

A positive relationship between firm size and profitability was found by Vijayakumar and Tamizhselvan (2010). In their study, which was based on a simple semi-logarithmic specification of the model, the authors used different measures of size (sales and total assets) and profitability (profit margin and profit on total assets) while applying model on a sample of 15 companies operating in South India. Papadognas (2017) conducted analysis on a sample of 3035 Greek manufacturing firms. After dividing firms into four size classes he applied regression analysis which revealed that for all size classes, firms' profitability is positively influenced by firm size. Using a sample of 1020 Indian firms, Majumdar (1997) investigated the impact that firm size has on profitability and productivity of a firm. While controlling for other variables that can influence firm performance, he found evidence that larger firms are less productive but more profitable.

2.4.5 Firm Age and Financial Performance

Rafiq, Salim and Smyth (2016) studied the moderating role of firm age in the relationship between research and development (R&D) expenditure and financial performance. The study examined the impact of research and development (R&D) on the profitability and sales of mining firms in China and the United States (US) and the

moderating effect of firm age using Coarsened Exact Matching (CEM). Findings indicated that in the mining industry, firm age moderates the relationship between R&D activities and financial performance. In general, a comparatively mature R&D active firm earns 4.4% more profit and generates 7.2% more sales than a younger non-innovative firm. Further, the findings indicated that the turning point at which R&D activities switch from making a negative, to positive, contribution to profit and sales was 37 years and 22 years, respectively.

Pervan, Pervan and Ćurak (2017) determined the moderating influence of age on firm performance with evidence from the Croatian Food Industry. The study performed dynamic panel analysis based on a sample of 956 firms operating in Croatian food industry during the 2005-2014 period. The result of the analysis showed that age negatively affects firm's performance. As firms get older, benefits of their accumulated knowledge in all crucial aspects of the business (technology, supply channels, customers relations, human capital and financing costs) become overcome with their inertia, inflexibility and ossified by accumulated rules, routines and organizational structure. Beside firm's age, other firm specific factors influencing profitability of the firms operating in Croatian food industry include size, liquidity and solvency.

Kristiansen, Furuholt and Wahid (2013) found that long time in operation was significantly linked to business success. These studies found that microfinance efficiency and profitability were strongly related to its age. The large pool of customers with an old microfinance and the resulting efficiency is therefore, likely to make it achieve a higher growth in outreach and higher ROA and financial self-sufficiency.

Kaguri (2013) conducted a study using firm age as a moderating variable on the relationship between firm characteristics and financial performance of life insurance companies in Kenya. The study used size, diversification, leverage, liquidity, age, premium growth and claim experience as the independent variables and financial performance as the dependent variable. The study findings indicate that the joint effect

of variables are statistically significance to influencing financial performance of life insurance companies as indicated by the positive and strong Pearson correlation coefficients. This implies that premium growth is relied upon to make conclusions about the financial performance of life insurance companies' as shown by its strong and positive correlation coefficients. Based on the findings, the study recommends that insurers must work towards improving the premiums earned to increase profits. Further studies should be undertaken to analyze the different sectors in the economy to determine any significant differences in the relationship between firm characteristics and financial performance in the different sectors incorporating more independent variables.

According to the life cycle effect, younger companies are more dynamic and more volatile in their growth experience than older companies (Evans, 1987) are. Very often, the emergence of those companies is based on some innovations. Maturity brings stability in growth as firms learn more precisely their market positioning, cost structures and efficiency levels, are less frequently surprised by profit outcomes, and consequently are less likely to revise their investment plans.

Borghesi, Houston and Naranjo (2007) indicated that older firms are incapable of quick response to any changes in the environment and thus does not easily adapt to changing business environments which affects their financial performance.

2.4.6 Financial Performance

The concept of financial performance has been used widely to measure financial performance. In different studies both market measures such as Tobin's Q (Karaca & Ekşi, 2012; Abdullah, Shah & Hassan, 2008). Tobin's Q is estimated as the ratio of the market capitalization plus total debts divided by total asset of the company. Market value added (MVA) which is calculated as the absolute difference between market value and book value of equity (Abdullah, Shah & Hassan, 2008; Kula, 2005). In addition, Al Farooque, Van Zijl, Dunstan and Karim (2007) measured financial performance using the ratio of market value to book value ratio.

Other studies measured financial performance using financial ratios such as dividend yield, return on equity, return on assets, price earnings ratio, abnormal returns and superior cumulative abnormal returns (Braun & Sharma, 2007; Obiyo, Ofurum & Lenee, 2011; Al Farooque, Van Zijl, Dunstan & Karim, 2007). According to Braun and Sharma (2007), financial performance can be improved about how a firm performs the activities it is mandated to perform. In this regard if commercial recruits more loan members who have low chances of default then there are high chances of superior performance.

As indicated by Sebhathu (2011) if an institution is able to recruit and retain more customers then there are chances of attaining superior financial performance. As indicated by this study through development of an organization there are chances of poverty reduction, increased levels of financial sustainability among residents seeking services from a particular institution. In addition, an institution financial performance can be evaluated on the level of percentage change as influenced by several parameters of interest. Consequently, the current study seeks to examine the percentage change on profitability measures and customer satisfaction measurers as a result of an organization adoption and usage of enterprise risk management measurers.

Omondi and Muturi (2013) conducted a study on factors affecting the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. The study adopted an explanatory research design and 29 listed firms (excluding listed banks and insurance companies) which have consistently been operating at the Nairobi securities exchange during the period 2006-2012 were sampled. Study findings showed that leverage had a significant negative effect on financial performance. Company size also had a significant positive effect on financial performance

2.5 Critique of the Literature

Past studies have been conducted on the relationship between leverage and performance. However, there has not been clear consensus on the effect of leverage on financial performance. Perinpanatha (2014) investigated the impact of financial leverage on

financial performance Special Reference to John Keels Holdings PLC Sri Lanka. The findings of the study showed a negative relationship between the financial leverage and the financial performance. Wainaina (2014) conducted a similar study on the relationship between leverage and financial performance of top 100 small and medium enterprises in Kenya but found different results. The study found a positive relationship between leverage (debt equity ratio) and financial performance. Both study investigated the relationship between leverage and financial performance but their results were different. Ali (2014) conducted a study on the impact of financial leverage on firm performance: the case of non-financial firms in Kenya. The studies found that financial leverage have a negative impact on firm performance.

In addition, there is no consensus on the effect of liquidity on performance. Njeri (2014) conducted a study on the effects of liquidity on financial performance of deposit taking microfinance institutions in Kenya. The results revealed that there is a positive relationship between liquidity and financial performance. This study was not clear on the measure of liquidity. Omesa (2015) conducted a similar study on effect of liquidity on the financial performance of financial institutions listed in the Nairobi securities exchange but found different results. According to the study, liquidity has no significant effect on financial performance. Sanghani (2014) investigated the effect of liquidity on the financial performance of non-financial companies listed at the Nairobi securities exchange. The study revealed that liquidity positively affect the financial performance of non-financial companies listed at the NSE.

Mahfoudh (2013) sought to find the effect of selected firm characteristics namely firm size, leverage, firm age, liquidity, and board size on firm financial performance as measured by return on assets. The study found that firm size, leverage, firm age, and liquidity were positively related to firm financial performance and board size was the only variable that was negatively related to firm financial performance. The study used correlational research design. The study used firm age as an independent variable. Other studies for example Rafiq, Salim and Smyth (2016) studied the moderating role of firm age in the relationship between research and development (R&D) expenditure and

financial performance. The study found that firm age moderates the relationship between R&D activities and financial performance. Pervan, Pervan and Ćurak (2017) determined the moderating influence of age on firm performance with evidence from the Croatian Food Industry. This study used age as a moderating variable.

2.6 Research Gaps

Al-Tally (2014) investigated on the effect of financial leverage on firm financial performance in Saudi Arabia's public listed companies. The study was conducted in Saudi Arabia thus presenting a scope gap. The current study was conducted in Kenya. In addition the study focused on financial leverage as the only firm level factor that affects financial performance thus presenting a conceptual gap. The current study focused on four firm level factors which included; leverage, liquidity, asset tangibility and firm size.

Perinpanatha (2014) investigated the impact of financial leverage on financial performance special reference to John Keels Holdings PLC Sri Lanka. The study was conducted in Sri Lanka thus presenting a scope gap. The current study was conducted in Kenya. Wainaina (2014) conducted a study on the relationship between leverage and financial performance of top 100 small and medium enterprises in Kenya. The study focused on small and medium enterprises thus presenting a contextual gap. The current study will focus on financial and non-financial firms listed in NSE.

Banafa, Muturi and Ngugi (2015) examined impacts of leverage on financial performance of listed Kenyan non-financial firms. The study employed a causal research design thus presenting a methodological gap. The current study employed a cross-sectional research design. Omesa (2015) conducted a study on effect of liquidity on the financial performance of financial institutions listed in the Nairobi securities exchange. The study adopted descriptive research design thus presenting a methodological gap. The current study employed a cross-sectional research design. Njeri (2014) conducted a study on the effects of liquidity on financial performance of deposit taking microfinance institutions in Kenya. The study focused on financial leverage as the only firm level

factor that affects financial performance thus presenting a conceptual gap. The current study focused on four firm level factors which included; leverage, liquidity, asset tangibility and firm size.

Maaka (2013) conducted a study on the relationship between liquidity risk and financial performance of commercial banks in Kenya. The study adopted descriptive research design thus presenting a methodological gap. The current study employed a cross-sectional research design. Harc (2015) conducted a study on the relationship between tangible assets and capital structure of small and medium-sized companies in Croatia. The study was conducted in Croatia thus presenting a scope gap. The current study was conducted in Kenya. Koksall *et al.* (2013) investigated the factors that determine the capital structure choices in Turkey. The study was conducted in Turkey thus presenting a scope gap. The current study was conducted in Kenya.

Abbasi and Malik (2015) pinpointed the effect of firm size between the relationship of firm growth and firm performance. The study focused on firm size as a moderating variable of the relationship between firm growth and firm performance thus presenting a conceptual gap. The current study focused on firm size as a firm level factor that affects financial performance.

Mahfoudh (2013) sought to find the effect of selected firm characteristics namely firm size, leverage, firm age, liquidity, and board size on firm financial performance as measured by return on assets. The study used correlational research design thus presenting a methodological gap. The current study used cross-sectional research design. Naran (2013) investigated the effects of voluntary disclosure and company size on the financial performance of commercial banks in Kenya. The study focused on commercial banks thus presenting a scope gap. The current study focused on financial and non-financial firms listed in NSE.

Pervan, Pervan and Čurak (2017) determined the moderating influence of age on firm performance with evidence from the Croatian Food Industry. The study was conducted in Croatia thus presenting a scope gap. The current study was conducted in Kenya. Kaguri (2013) conducted a study using firm age as a moderating variable on the relationship between firm characteristics and financial performance of life insurance companies in Kenya. The study focused on life insurance firms thus presenting a contextual gap. The current study focused on financial and non-financial firms listed in NSE.

2.7 Summary of the Chapter

This chapter reviewed the various theories that explain the independent and dependent variables.

To start with is the trade – off theory. The theory discusses the various corporate finance choices that a corporation experiences. It also describes that the companies or firms are generally financed by both equities and debts. This theory is deemed relevant to this study. This is because it informs the dependent variable which is performance. Secondly is the liquidity preference theory. The theory holds the idea that investors demand a premium for securities with longer maturities, which entail greater risk, because they would prefer to hold cash, which entails less risk. This theory is deemed relevant to this study as it informs one of the independent variables which is liquidity. Concerning Economies of Scale theory, the association of firm size with scale and scope economies, market power, and the ability to aggregate inputs is widely believed to confer performance advantages on large firms. This discussion has been interpreted by many to mean that there are increasing returns in research and development (R&D). This is both to size establishment and to firm size.

The chapter also posits the conceptual framework that presented diagrammatically the independent variables showing the specific constituents that influence a particular variable. Independent variables included leverage, liquidity, asset tangibility and firm

size. The dependent variable (financial performance) was depicted by return on asset and return on equity. The moderating variable is firm age, since the firm age has a direct influence on the financial performance of firms listed in the NSE.

It is evident from the review that leverage, liquidity, firm size and asset tangibility affect financial performance of firms listed in the NSE. This effect can either be positive or negative. Finally, an empirical review was conducted where past studies both global and local was reviewed into a critique. It is from these critiques that the research gap was identified.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodology that was used in undertaking the study. It starts by explaining the research design that was adopted; according to Ritchie, Lewis, Nicholls and Ormston (2013) a central part of research is to develop an efficient research strategy. Based on the model and variables developed in Chapter two, this chapter covered the research design and research methodology used to test the variables. In particular, issues related to research design, the population, the type of data collected, sampling frame, sample and sampling techniques, data collection instrument, data collection procedure, and the data analysis will be discussed.

3.2 Research Philosophy

Research philosophy relates to the development of knowledge and the nature of that knowledge, and contains important assumptions about the way in which researchers view the world (Saunders, Lewis & Thornhill, 2007). There are two extreme philosophical views regarding knowledge and reality (schools of thought). These are Positivism (sometimes referred to as deduction research) and Phenomenology (also known as induction research). Phenomenology is a philosophy of science that focuses on the immediate experience. A phenomenology researcher starts from the unknown, is open and trusts experience. It describes things as they are and not as a researcher thinks they are. Phenomenological analysis is holistic rather than reductionist. They do not break down phenomena but study it as it is.

Positivistic research is undertaken in a value-free way as the researcher is external to the process of data collection as there is little that can be done to alter the substance of the data collected (Saunders et al., 2007). The researcher is independent of and neither affects or is affected by the subject of the research. Emphasis is on quantifiable

observations that lend themselves to statistical analysis. This study inclines more to the positivistic philosophy. The choice is because in order to empirically establish the relationships between the variables, hypotheses was formulated and tested and findings generalized. In this positivist paradigm, the scientific processes was followed in hypothesizing fundamental laws then deducing the observations so as to determine the truth or falsify the said hypothesis about the relationship that exists between value based management model and competitive advantage while taking into account the moderating effect of firm age on the determinants of financial performance. The study therefore sought to verify the propositions through empirical tests by operationalizing variables in the conceptual framework to allow for measurement.

3.3 Research Design

This study adopted a cross-sectional research design to analyze the effect of Firm Level Factors on Financial Performance of Listed Firms in the Nairobi Securities Exchange. Cross-sectional research design is a scientific method which comprises of observing and describing the behavior of a subject without influencing it in any way (Saunders et al., 2009). This design is suitable where the researcher is attempting to expound on how the phenomenon operates by identifying the underlying factors that produce change in it in which case there is no manipulation of the independent variable

3.4 Target Population

Population refers to the aggregation of elements from which the sample is selected (Rubin & Babbie, 2016). Target population represents the collection of cases the researcher is interested and which they intend to make generalizations (Sim & Wright, 2000). This study targeted all the 64 firms listed in Nairobi Securities Exchange. These firms were analyzed differently that is financial firms and non-financial firms. The years covered were 5 years from 2012-2016. A period of five years was selected because most NSE firms performed so poorly within this period causing a public outcry, For instance, the Kenya Airways, Mumias Sugar, Uchumi Supermarket, Trancentury among others. In

addition five years period was adequate to measure any significant change. This generated a total of 320 firm year observations.

3.5 Sample and Sampling Technique

Sampling is the process of selecting units (people, organizations) from accessible population to fairly generalize results to the target population (Orodho, 2009). A sample is a subset of a population (Kothari, 2004). No sampling was done and thus the study conducted a census of all the 64 firms listed in Nairobi Securities Exchange. The justification was on the basis that there were only a few firms. Census approach increase confidence interval. Data collection through census method gives opportunity to the researcher to have an intensive study about a problem. Census is more accurate when the universe is small and is suitable for Heterogeneous Units.

3.6 Data Collection Procedure

The researcher used a document review guide to extract and compile the required secondary data for analysis from the financial statements. The secondary data encompassed panel data. There are two types of panel data which includes balanced and unbalanced panel data. The current study used balanced panel data. In a balanced panel, the number of time periods, t , is the same for all individuals i . A combination of time series with cross-sections enhances the quality and quantity of data to levels that would otherwise be impossible to achieve with only one of the two dimensions (Gujarati & Porter, 2003). The cross sectional data consisted of the firms while the time series data were the years between 2012 and 2016. This is because the data for the periods are current data and easily available. The data for all the variables in the study was extracted from the annual published and audited annual reports and financial statements of the firms listed in NSE covering the years 2012-2016.

The specific financial statements from which the data was extracted from include the income statement, statement of financial position and the notes to the accounts. Consequently, the sample data begins in 2012 and ends in 2016. Consistent with Mathuva (2010), a number of filters were applied in order to ensure accuracy of the collected data. Observations of firms with anomalies such as negative values in their total assets, current assets, fixed assets, capital, depreciation or the interest paid were purged. Observations of items from the statement of financial position and statement of financial performance showing signs contrary to reasonable expectations was eradicated. Since the panel data analyzed had a number of influential observations and data errors as pointed out by Fama and French (1998), each year was treated as having missing values 1% of the observations in each tail of the distribution for each variable.

3.7 Data Analysis

The study employed a dynamic panel data regression model. Panel data contain observations of multiple phenomena obtained over multiple time periods for the same firms or individuals (Hsiao, 2007). The data was preferred because it revealed changes at the individual firms' level, established time order of variables and showed how relationships emerged (Frees, 2004).

Panel data regression was chosen for a number of reasons: Firstly, panel data allowed for the control of individual heterogeneity, making it possible to exclude biases deriving from the existence of individual effects (Hsiao, 2007). Secondly, panel data yielded more informative data, more variability and less collinearity among variables than was characteristic of cross-section or time-series data, more degree of freedom and more efficiency (Baltagi, 2005). Thirdly, panel data was used to obtain consistent estimators in the presence of omitted variables (Wooldridge, 2005). Panel data sets were also able to recognize and estimate the effects that could not be merely detected in pure cross-sections or pure time-series data (Baltagi, 2005). Since the study focused on 64 firms listed at the Nairobi Securities Exchange using cross-section data alone gave a small sample but incorporating the time series of 5 years, the sample expanded to 320

observations. The resultant large sample made it possible for the study to satisfy asymptotic requirements (Gujarati, & Porter, 2003).

Panel data model before interaction;

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + e \dots \dots \dots 3.1$$

In order to analyze the moderating effect of firm age on the relationship between firm level factors and financial performance of listed firms in the Nairobi securities exchange, the study modified the dynamic panel data model as depicted in equation 3.1 above.

Moderation effect was tested using Ongore and Kusa (2013) approach. The moderator (firm age) was interacted with each of the independent variable as presented in equation 3.2.

$$Y_{it} = \beta_0 + \beta_1 X_{1it} * M_{it} + \beta_2 X_{2it} * M_{it} + \beta_3 X_{3it} * M_{it} + \beta_4 X_{4it} * M_{it} + e \dots \dots \dots 3.2$$

Where;

Y_{it} = Financial Performance

X_{1it} = Leverage

X_{2it} = Liquidity

X_{3it} = Firm size

X_{4it} = Asset Tangibility

M = Firm age.

3.7.1 Measure of Study Variables

Table 3.1 shows the operationalization of the independent, moderating and dependent variables.

Table 3.1: Measurement of variables

Variable Type	Variable	Measurement
Independent	Leverage	Total debt/total assets
Independent	Liquidity	Current ratio
Independent	Asset Tangibility	Fixed asset to total asset
Independent	Firm size	Log of total asset
Moderating	Firm Age	Number of years in operation.
Dependent	Financial Performance	Return on Assets, Return on Equity

3.8 Diagnostic Tests

3.8.1 Panel Unit Root Test

Unit root tests will be conducted using the Levin-Lin-Chu (LLC) test to establish whether the variables were stationary or non-stationary. The purpose of this is to avoid spurious regression results being obtained by using non-stationary series. The null hypothesis of this test was that all panels had unit root. The alternative hypothesis is that at least one panel did not have unit roots or some panels did not have unit root (Choi, 2001). If any of the variables had unit root, the researcher would difference it and run the equations using the differenced variable.

3.8.2 Normality Tests

The normality assumption ($u_t \sim N(0, \sigma^2)$) was required in order to conduct single or joint hypothesis tests about the model parameters (Brooks, 2008). This study used a Skewness and Kurtosis test to check whether the data was normally distributed or not. The researcher tested the null hypothesis that the independent variables are not normally distributed. The researcher rejected the null hypothesis at the 5% level of significance, if the p-value is less than 0.05.

3.8.3 Multicollinearity

Multicollinearity is usually a situation in which there is a high degree of association between independent variables. Multicollinearity was tested using variance inflation factor (VIF). According to Myres (1990) $VIF \geq 10$ indicate presence of multicollinearity.

3.8.4 Heteroscedasticity

Since the data for this research was a cross-section of firms, this raised concerns about the existence of heteroscedasticity. The CLRM assumed that the error term is homoskedastic, that is, it had constant variance. If the error variance was not constant, then there was heteroscedasticity in the data. Running a regression model without accounting for heteroscedasticity would lead to unbiased parameter estimates. To test for heteroscedasticity, the Breusch-Pagan test was used. The null hypothesis of this study was that the error variance was homoskedastic. If the null hypothesis was rejected and a conclusion made that heteroscedasticity was present in the panel data, then this would be accounted for by running a FGLS model.

3.8.5 Autocorrelation

Since the data involved both cross section and time-series, it raised the suspicion of the existence of serial correlation. The presence of serial correlation indicated that the variables in the model violated the assumptions of the regression (Anderson *et al.*,

2007). To cater for serial correlation, the Wooldridge test for autocorrelation was employed. Serial correlation is a common problem experienced in panel data analysis and has to be accounted for in order to achieve the correct model specification. According to Wooldridge (2003), failure to identify and account for serial correlation in the idiosyncratic error term in a panel model would result into biased standard errors and inefficient parameter estimates. The null hypothesis of this test was that the data has no serial correlation.

3.8.6 Test for Fixed or Random Effects

When performing panel data analysis, the study determined whether to run a fixed effects model or a random effects model. Whereas the fixed effect model assumed firm specific intercepts and captured effects of those variables that are specific to each firm and constant over time, the random effect model assumed that there was a single common intercept and it varied from firm to firm in a random manner (Baltagi, 2005). Thus, for estimating the models, first it was important to determine whether there exists a correlation between the independent variables. If the correlation existed then a fixed effect model gave consistent results otherwise random effect model were efficient estimators and it was estimated by generalized least square. To determine which of these two models was appropriate, both fixed and random effects were estimated. Hausman's specification test (1978) was used to determine whether fixed or random effect were to be used. If the null hypothesis that is $E(\mu_i / x_{it}) = 0$ is accepted, then random effect were an efficient estimator otherwise in case of rejection of null hypothesis, fixed effect estimation gave better or efficient estimation of betas. If Hausman test rejects the null hypothesis, therefore decision was taken to use fixed effect model. STATA was used to estimate the above models.

In the event that the Hausman test identified the fixed effects model as appropriate, then the researcher tested for inclusion of time-fixed effects in the study estimation. The time fixed effects tested if the dummies for all years are equal to zero and if they are, then there was no need for time fixed effects in the specification of the model to be estimated. To test whether the dummies for all years were equal to zero, F-test was used as proposed by Greene (2008). On the other hand, if the Hausman test selected the random effects model as the more suitable one then there was need to test whether the panel effects to determine whether to run a simple Ordinary Least Square (OLS) regression or the random effects model. Breusch-Pagan multiplier test proposed by Breusch and Pagan (1980) was used to choose between the simple Ordinary Least Square (OLS) regression and the random effects model. The null hypothesis of this test was that variance across the entities is zero, that is, there were no panel effects.

3.9 Hypothesis Testing

The summary of the hypothesis testing is as shown in Table 3.2.

Table 3.2: Summary of Statistical Test of Hypotheses

Objective	Hypotheses	Method
<p>Objective 1 To determine the effect of leverage on financial performance of listed firms in the Nairobi securities exchange.</p>	<p>H₀₁ Leverage has no significant impact on financial performance of listed firms in the Nairobi securities</p>	<p>Correlation Multiple Regression</p>
<p>Objective 2 To establish the effect of liquidity on financial performance of listed firms in the Nairobi securities exchange.</p>	<p>H₀₂ Liquidity has no significant impact on financial performance of listed firms in the Nairobi securities</p>	<p>Correlation Multiple Regression</p>
<p>Objective 3 To examine the effect of firm size on financial performance of listed firms in the Nairobi securities exchange.</p>	<p>H₀₃ Firm size has no significant impact on financial performance of listed firms in the Nairobi securities</p>	<p>Correlation Multiple Regression</p>
<p>Objective 4 To investigate the effect of Asset Tangibility on financial performance of listed firms in the Nairobi securities exchange.</p>	<p>H₀₄ Asset Tangibility has no significant impact on financial performance of listed firms in the Nairobi securities</p>	<p>Correlation Multiple Regression</p>
<p>Objective 5 To determine the moderating effect of firm age on the relationship between firm level factors and financial performance of listed firms in the Nairobi securities exchange.</p>	<p>H₀₅ Firm age does not moderate the relationship between firm level factors and financial performance of listed firms in the Nairobi securities exchange.</p>	<p>Correlation Multiple Regression</p>

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents the patterns of the results and their analyses as to their relevance to the objectives and hypotheses. The findings are presented in tables and narrations as per the specific objectives. The chapter presents descriptive statistics, trend analysis, and the pre-estimation and post-estimation tests. The chapter further presents the results of the models that was adopted in order to achieve the study's objective.

4.2 Descriptive Statistics

Table 4.1 and 4.2 shows the descriptive statistics for the financial and non-financial sector respectively for period 2012–2016.

Table 4.1: Descriptive Statistics for Financial Sector

DESCRIPTIVE STATISTICS FOR FINANCIAL SECTOR							
Statistics	Leverage	Liquidity	Asset Tangibility	Log Total Assets	Firm Age	ROA	ROE
Mean	0.474	2.827	0.890	0.890	16.004	21.158	0.0578
Median	0.554	1.320	0.949	0.9450	16.180	12.000	0.050
Maximum	0.773	31.451	0.998	0.998	18.107	53.000	0.442
Minimum	0.182	0.675	0.156	0.156	14.131	10.000	0.013
Std. Dev.	0.209	4.606	0.164	0.164498	0.990	24.610	0.061
Skewness	0.063	3.571	-2.982	-2.982	-0.094	0.427	4.256
Kurtosis	1.290	18.692	12.452	12.452	1.929	3.381	24.131
Jarque- Bera	11.630	1176.563	494.463	494.463	4.684	3.466	2054.353
Probability	0.053	0.060	0.073	0.073	0.096	0.177	0.000
Sum	45.077	268.588	84.589	84.589	1520.349	4575.000	5.489
Sum Sq. Dev.	4.115	1994.240	2.543	2.543	92.104	56932.630	0.348

The descriptive in the financial sector shows that the mean value for leverage was 0.474 with a minimum of 0.182 and a maximum of 0.773. The variation in Standard Deviation was 0.209. Further, liquidity had a mean of 2.827 with a minimum of 0.675 and a maximum of 31.451. The standard deviation for liquidity was 4.606. Asset tangibility had a mean of 0.890 with a minimum of 0.156 and a maximum of 0.998. The standard deviation for asset tangibility was 0.164. Log of total assets had a mean of 16.004 with a minimum of 14.131 and a maximum of 16.180. Firm age had a mean of 21 years with a minimum of 10 years and a maximum of 53 years. The mean value for Return on Assets was 0.058 with a minimum of 0.0134 and a maximum of 0.442. The mean value for Return on Equity was 0.227 with a minimum of 0.070 and a maximum of 0.443. The positive ROA and ROE indicates that financial firms recorded an increase in performance in the period 2013-2016. Overall, the probability values of the variables were above 0.05 and thus the data of all the variables were normally distributed in the financial sector.

Table 4.2: Descriptive Statistics for Non-Financial Sector

DESCRIPTIVE STATISTICS FOR NON-FINANCIAL SECTOR							
Statistics	Leverage	Liquidity	Asset Tangibility	Log Total Assets	Firm Age	ROA	ROE
Mean	0.459	2.219	0.634	14.110	27.641	0.112	0.116
Median	0.475	1.564	0.672	14.244	24.000	0.117	0.156
Maximum	1.135	9.639	0.988	17.674	65.000	0.565	0.715
Minimum	0.140	0.080	0.045	10.811	11.000	-0.357	-0.473
Std. Dev.	0.195	1.985	0.229	1.545	32.505	0.157	0.175
Skewness	0.385	1.800	-0.471	0.007	0.589	-0.291	-1.004
Kurtosis	2.448	5.703	2.492	2.664	3.037	4.065	5.602
Jarque-Bera	7.288	164.634	9.313	0.919	11.275	11.961	87.812
Probability	0.063	0.070	0.095	0.632	0.084	0.003	0.000
Sum	89.421	432.639	123.541	2751.424	12800.000	21.746	22.661
Sum Sq. Dev.	7.392	764.154	10.190	462.999	204974.900	4.778	5.920

In the non-financial sector, descriptive showed that the mean value for leverage was 0.459 with a minimum of 0.140 and a maximum of 1.135. The variation in Standard Deviation was 0.195. Liquidity had a mean of 2.218 with a minimum of 0.080 and a maximum of 9.638. The standard deviation for liquidity was 1.985. Asset tangibility had a mean of 0.634 with a minimum of 0.0445 and a maximum of 0.988. The standard deviation for asset tangibility was 0.229. Log of total assets had a mean of 14.110 with a minimum of 10.8106 and a maximum of 17.674. Firm age had a mean of 27 years with a minimum of 11 years and a maximum of 65 years. The mean value for Return on Assets was 0.112 with a minimum of -0.357 and a maximum of 0.565. The mean value for Return on Equity was 0.116 with a minimum of -0.473 and a maximum of 0.715. The negative ROA and ROE indicates that some non-financial firms recorded a decrease in performance in the period 2013-2016. Overall, the probability values of the variables were above 0.05 and thus the data of all the variables were normally distributed in the non-financial sector

4.3 Trend Analysis

This section presents the analysis of the trends of the variables. The study conducted a trend analysis to establish the movement of the variables overtime.

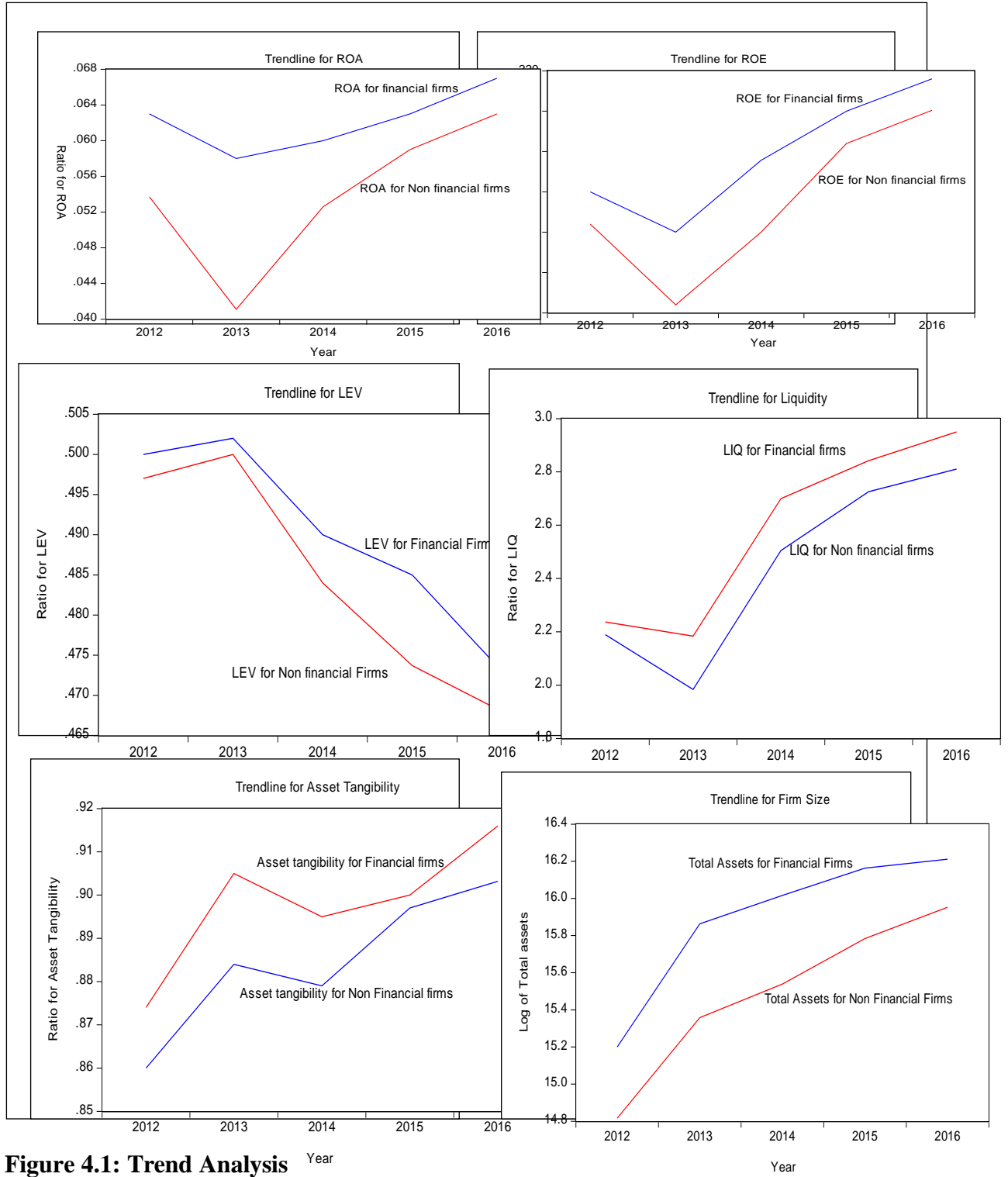


Figure 4.1: Trend Analysis

The trend line shows that ROA for financial firms was higher than that of non-financial firms for the period 2012 to 2014. The average in ROA for financial firms in 2012 was 0.63 where it had a sharp drop to 0.58 and maintained an increasing trend until 2016 to the highest average at 0.67. The average in ROA for non-financial firms in 2012 was 0.54 where it had a sharp drop to 0.42 and maintained an increasing trend until 2016 to the highest average at 0.62. The sharp decreases in ROA in both the financial and non-financial firms for the period 2013 can be attributed to the instability in the markets as a result of the election environment in 2013. According to Pervan and Višić (2012), return on assets gives investors an idea of how effectively the company is converting the money it has to invest into net income. The higher the ROA number, the better, because the company is earning more money on less investment.

The trend line shows that ROE for financial firms was higher than that of non-financial firms for the period 2012 to 2014. The average in ROE for financial firms in 2012 was 0.205 where it had a sharp drop to 0.200 and maintained an increasing trend until 2016 to the highest average at 0.218. The average in ROE for non-financial firms in 2012 was 0.200 where it had a sharp drop to 0.192 and maintained an increasing trend until 2016 to the highest average at 0.215. Again, the sharp decreases in ROA in both the financial and non-financial firms for the period 2013 can be attributed to the instability in the markets as a result of the election environment. Ali (2014) points out that return on equity is an important measure for a company because it compares it against its peers. With return on equity, it measures performance and generally the higher the better.

The leverage level for financial firms was higher than that of non-financial firms. Both the financial and non-financial firms had a decreasing trend from 0.50 and 0.495 respectively to 0.475 and 0.470. Cheng and Tzeng (2010) argue that leverage allows a financial institution to increase the potential gains or losses on a position or investment beyond what would be possible through a direct investment of its own funds.

The trend line shows that liquidity for financial firms was higher than that of non-financial firms for the period 2012 to 2014. The average in liquidity for financial firms in 2012 was 2.3 where it had a slight drop to 2.1 and maintained an increasing trend until 2016 to the highest average at 2.9. The average in liquidity for non-financial firms in 2012 was 2.2 where it had a sharp drop to 1.9 and maintained an increasing trend until 2016 to the highest average at 2.7. The drop in liquidity in 2013 can be associated with firms' conversion of liquid money to assets in the period. Vishnani and Shah (2007) affirmed that a higher current ratio indicates a larger investment in current assets which means, a low rate of return on investment for the firm, as excess investment in current assets will not yield enough returns.

Asset tangibility for both financial and non-financial firms rose sharply from year 2012 to 2013 from 87.5 and 86 to 90.5 and 88.5 respectively. The trend then increased steadily up to the year 2016 where financial and non-financial firms recorded 91.5 and 90 respectively. The sharp increase of in 2013 can be associated with increased acquiring of fixed assets that led to increase on asset tangibility during the period. Herciu and Ogorean (2012) argues that a firm is highly competitive as long as its managers are able to mix tangible and intangible assets in the most effective and efficient manner. Therefore, a firm can get the same score of competitiveness by using a different combination of assets and by giving different importance coefficients to the tangible and intangible assets.

The trend line shows that the log total asset measured by logarithm of total assets have been increasing overtime since 2012 to 2016. Financial firms had a record of 15.2 in 2012 and increased steadily to record 16.2 in the year 2016. Non-financial firms had a record of 14.8 in 2012 and increased steadily to record 16 in the year 2016. Tahir and Razali (2011) points out that size influences a firm performance because large firm can increase their current size very fast by accumulating earnings from past performance and this enhances their value.

4.4 Correlation Analysis

The study conducted a spearman's correlation analysis for the financial firms on variables that are leverage, liquidity, asset tangibility and firm size on ROA and ROE in order to examine the nature of the statistical relationships between each pair of variables. Table 4.3 shows the correlation matrix of all the variables under financial firms.

Table 4.3: Correlation Matrix for Financial Firms

VARIABLE	ROA	ROE	Leverage	Liquidity	Asset Tangibility	Firm Size
ROA	1.000					
ROE	1.000	1.000				
	0.000					
Leverage	-0.316	-0.216	1.000			
	0.002	0.002				
Liquidity	0.294	0.314	0.172	1.000		
	0.000	0.000	0.095			
Asset Tangibility	0.114	0.211	0.068	0.177	1.000	
	0.027	0.013	0.051	0.000		
Firm Size	0.297	0.130	0.324	0.166	0.054	1.000
	0.003	0.010	0.001	0.107	0.016	

The results in Table 4.3 show that leverage ($r=-0.316$, $p=0.002$) had a negative and significance relationship with Return on asset of financial NSE firms. This implied that an increase in leverage would result to a decrease in ROA. These findings agreed with that of Al-Tally (2014) who found that financial leverage had a significant effect on performance. The findings also agreed with that of Perinpanatha (2014) whose study showed a negative relationship between the financial leverage and the financial performance of the John Keells Holdings plc. In addition Perinpanatha (2014) found that

financial leverage had a significant impact on the financial performance of the John Keells Holdings plc in Sri Lanka.

The study also found that liquidity had a positive and significance relationship with Return on asset ($r=0.294$, $p=0.000$). This implied that an increase in liquidity would result to an increase in ROA. These findings agreed with that of Omesa (2015) who found a weak relationship between liquidity and financial performance. The findings also agreed with that of Njeri (2014) whose findings revealed that there is a positive relationship between liquidity and financial performance. The study also found that asset tangibility had a positive and significance relationship with Return on asset ($r=0.114$, $p=0.027$). This implied that an increase in asset tangibility would result to an increase in ROA. These findings agreed with that of Campello (2006) who found that asset tangibility positively affects corporate performance under external financing.

The study also found that firm size had a positive and significant relationship with return on assets ($r=0.297$, $p=0.003$). This implied that an increase in firm size would result to an increase in ROA. These findings agreed with that of Mahfoudh (2013) who found that firm size were positively related to firm financial performance. These findings also agreed with that of Njoroge (2014) whose study indicated that firm size was positively related to financial performance.

The study further conducted correlation analysis for the non-financial firms on variables that are leverage, liquidity, asset tangibility and firm size on ROA and ROE in order to examine the nature of the statistical relationships between each pair of variables. Table 4.4 shows the correlation matrix of all the variables under financial firms.

Table 4.4: Correlation Matrix for Non-Financial Firms

VARIABLE	ROA	ROE	Leverage	Liquidity	Asset Tangibility	Firm Size
ROA	1.000					
ROE	0.984	1.000				
	0.000					
Leverage	-0.258	-0.560	1.000			
	0.000	0.000				
Liquidity	0.488	0.473	0.351	1.000		
	0.000	0.000	0.000			
Asset Tangibility	0.352	0.498	0.275	0.067	1.000	
	0.000	0.000	0.000	0.349		
Firm Size	0.149	0.465	0.261	0.338	0.279	1.000
	0.000	0.000	0.000	0.000	0.000	

The results in Table 4.4 show that leverage ($\beta = -0.258$, $p=0.000$) had a negative and significance relationship with Return on Asset. These findings agreed with that of Perinpanatha (2014) who found that financial leverage had a significant impact on the financial performance of the John Keells Holdings plc in Sri Lanka.

The study further found that liquidity had a positive and significant association with ROE of non-financial firms ($\beta = 0.488$, $p=0.000$). This implied that an increase in liquidity would result to an increase in ROA. The findings also agreed with that of Njeri (2014) whose findings revealed that there is a positive relationship between liquidity and financial performance.

The study also found that asset tangibility had a positive and significance relationship with Return on asset of non-financial firms ($\beta = 0.352$, $p=0.000$). This implied that an increase in asset tangibility would result to an increase in ROA. These findings agreed

with that of Campello (2006) who found that asset tangibility positively affects corporate performance under external financing.

The study also found that firm size had a positive and significant relationship with return on assets ($\beta = 0.149$, $p = 0.000$). This implied that an increase in firm size would result to an increase in ROA. These findings agreed with that of Njoroge (2014) whose study indicated that firm size was positively related to financial performance.

4.5 Diagnostic Tests

The study carried out different diagnostic tests to make sure that the postulations of Classical Linear Regression Model (CLRM) are not contravened and to select the appropriate models for investigation in the event that the CLRM postulations are violated. Thus, prior to running a regression model pre-estimation and post estimation tests have been conducted. The pre-estimation tests conducted in this case are the multicollinearity test and unit root tests while the post estimation tests are normality test, test for heteroscedasticity, test for autocorrelation, and Hausman specification test. The study has performed these tests to avoid spurious regression results.

4.5.1 Panel Unit Root Tests

A unit root test was conducted using the LLC test to establish whether the variables were stationary or non-stationary. The purpose of this was to avoid spurious regression results being obtained by using non-stationary series. Results in Table 4.6 indicated that all variables are stationary (i.e. absence of unit roots) at 5% level of significance.

Table 4.6: Unit root

Financial Sector						
Variable name	Statistic (adjusted)	P-value	Comment	Statistic (adjusted)	P-value	Comment
ROA	2.232	0.006	Stationary	2.273	0.003	Stationary
ROE	2.278	0.020	Stationary	2.028	0.010	Stationary
Leverage	4.035	0.004	Stationary	4.403	0.001	Stationary
Liquidity	9.145	0.000	Stationary	9.171	0.000	Stationary
Asset						
Tangibility	2.824	0.003	Stationary	2.623	0.002	Stationary
Log Total						
Asset	3.001	0.000	Stationary	3.200	0.000	Stationary

The study therefore concludes that all the variables under consideration did not have unit root and are therefore used in levels. This means that the results obtained are not spurious (Gujarati & Porter, 2003).

4.5.2 Test for Normality

The normality assumption ($ut \sim N(0, \sigma^2)$) was required in order to conduct single or joint hypothesis tests about the model parameters (Brooks, 2008). Table 4.7 shows the normality results using for skewness and Kurtosis test for the financial firms.

Table 4.7: Normality Test for Financial Sector

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adjchi2(2)	Prob>chi2
ROA	95	0.11310	0.32000	18.07000	0.12100
ROE	95	0.11310	0.21000	18.07000	0.26100
Leverage	95	0.210000	0.11000	27.12000	0.10000
Liquidity	95	0.40000	0.12000	72.09000	0.22000
Asset tangibility	95	0.30000	0.46000	54.69000	0.47000
Log of total asset	95	0.59820	0.31000	22.58000	0.36000

Table 4.7 shows the normality results using skewness and Kurtosis test for the non-financial firms. The P-values were higher than the critical 0.05 and thus we conclude that the data is normally distributed.

Table 4.8: Normality Test for Non-Financial Sector

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adjchi2(2)	Prob>chi2
Roa	195	0.630	0.290	13.780	0.100
Roe	195	0.180	0.370	15.120	0.500
Leverage	195	0.552	0.100	56.100	0.061
Liquidity	195	0.400	0.249	14.600	0.207
Asset tangibility	195	0.200	0.158	13.410	0.120
Log of total asset	195	0.936	0.142	5.870	0.530

The results in Table 4.8 indicate that the residuals are normally distributed. The P-values were higher than the critical 0.05 and thus we conclude that the data is normally distributed.

4.5.3 Test for Multicollinearity

According to William et al. (2013), multicollinearity refers to the presence of correlations between the predictor variables. In severe cases of perfect correlations between predictor variables, multicollinearity can imply that a unique least squares solution to a regression analysis cannot be computed (Field, 2009). Multicollinearity inflates the standard errors and confidence intervals leading to unstable estimates of the coefficients for individual predictors (Belsley *et al.*, 1980). Multicollinearity was assessed in this study using the variance inflation factors (VIF). According to Field (2009) VIF values in excess of 10 is an indication of the presence of Multicollinearity. The results in Table 4.5 indicated absence of multicollinearity since the VIF of all the variables were less than 10.

Table 4.5: Multicollinearity Results

	Financial Sector	Non-Financial Sector
Variable	VIF	VIF
Leverage	1.21	1.68
Liquidity	1.17	1.31
Asset Tangibility	1.41	1.23
Log Total Asset	1.71	1.51
Firm Age	1.62	1.47
Mean VIF	1.42	1.36

4.5.4 Heteroskedasticity Test

Breusch-Pagan test was used to test for heteroskedasticity. The null hypothesis in the test is that error terms have a constant variance (i.e. should be Homoskedastic). The results in the Table 4.9 below indicate that the error terms are heteroskedastic, given that

the p-value (ROA=0.7431, ROE=0.6914) was less than the 5% (0.000) for financial firms and p-value (ROA=0.692, ROE=0.634) was less than the 5% (0.000) for non-financial firms.

Table 4.9: Heteroskedasticity Test Results

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity					
Ho: Constant variance					
		Financial Sector		Non-Financial Sector	
Variable: fitted values		ROA	ROE	ROA	ROE
chi2(1)	=	0.013	0.04	0.01	0.03
Prob > chi2	=	0.7431	0.6914	0.692	0.634

4.5.5 Test for Autocorrelation

The study employed the Wooldridge test for autocorrelation to detect the existence of autocorrelation in the data, that is, whether or not the residual are serially correlated over time and the results are shown in Table 4.10. The null hypothesis of this test was that there is no first order serial/autocorrelation existed in the data. The test statistic reported is F-test with one and fifty seven degrees of freedom and a value of 1.528. The P-value of the F-test is 0.361 for financial firms indicating that the F-test is not statistically significant at 5% level. The P-value of the F-test is 0.281 for non-financial firms indicating that the F-test is not statistically significant at 5% level. Hence, the null hypothesis of no autocorrelation is supported and the study concludes that there was no auto correlation in the residuals.

Table 4.10: Serial Correlation Tests

Financial Firms
Wooldridge test for autocorrelation in panel data
H₀: no first-order autocorrelation
F(1, 57) = 2.394
Prob > F = 0.361
Non- Financial Firms
Wooldridge test for autocorrelation in panel data
H₀: no first-order autocorrelation
F(1, 57) = 1.528
Prob > F = 0.281

4.5.6 Hausman Test

When performing panel data analysis, one has to determine whether to run a random effects model or a fixed effects model (Baltagi, 2005). In order to make a decision on the most suitable model to use, whether random and fixed effects estimate coefficients. The study used the Hausman's specification test (1978) to choose between fixed and random effect models. Table 4.10 and 4.11 shows the results of Hausman test.

Table 4.11: Hausman Test for ROA

Financial Sector				
	(b)	(B)	(b-B)	Sqrt (diag(V_b-V_B))
	Fixed	Random	Difference	S.E.
Leverage	-0.227	-0.123	-0.014	0.025
Liquidity	0.215	0.215	-0.109	0.020
Asset Tangibility	0.525	0.230	0.295	0.059
Firm Size	-0.012	-0.009	-0.003	0.002
chi2(4)	25.810			
Prob>chi2	0.581			
Non-Financial Sector				
	(b)	(B)	(b-B)	Sqrt (diag(V_b-V_B))
	fixed	Random	Difference	S.E.
Leverage	-0.077	-0.123	-0.014	0.029
Liquidity	0.106	0.215	-0.109	0.020
Asset Tangibility	0.525	0.230	0.295	0.059
Firm Size	-0.012	-0.009	-0.003	0.016
chi2(4)	21.370			
Prob>chi2	0.438			

The null hypothesis of the Hausman test is that the random effects model is preferred to the fixed effects model. For ROA model, Hausman test reveals a chi-square of 25.810 with a p-value of 0.581 for financial firms and 21.370 with a p-value of 0.438 for non-financial firms indicating that at 5 percent level, the chi-square value obtained is statistically insignificant. Thus, the researcher does not reject the null hypothesis that random effects model is preferred to fixed effect model for ROA as suggested by Greene (2008). Therefore, the random effects model for ROA is therefore adopted.

Table 4.12: Hausman Test for ROE

Financial Sector				
	(b)	(B)	(b-B)	Sqrt (diag(V_b-V_B))
	fixed	Random	Difference	S.E.
Leverage	-0.601	-0.117	-0.015	0.003
Liquidity	0.225	0.206	-0.102	0.013
Asset Tangibility	0.571	0.222	0.304	0.058
Firm Size	-0.042	-0.009	-0.004	0.010
chi2(4)	17.610			
Prob>chi2	1.979			
Non-Financial Sector				
	(b)	(B)	(b-B)	Sqrt (diag(V_b-V_B))
	fixed	Random	Difference	S.E.
Leverage	-0.271	-0.117	-0.015	0.002
Liquidity	0.105	0.206	-0.102	0.018
Asset Tangibility	0.526	0.222	0.304	0.058
Firm Size	-0.012	-0.009	-0.004	0.002
chi2(4)	12.420			
Prob>chi2	1.720			

In order to select between the fixed and random effect models, where return on equity (ROE) is the dependent variable, the Hausman test is applied and the results are shown in Table 4.10. The null hypothesis of the Hausman test is that the random effects is preferred to the fixed effects model. Hausman test reveals a chi-square of 17.610 with a p-value of 1.979 for financial firms and 12.420 with a p-value of 1.720 for non-financial firms indicating that at 5 percent level, the chi-square value obtained is statistically insignificant. Hence, the study did not reject the null hypothesis as suggested by Greene (2008). Thus, the study adopted the random effects model.

4.6 Panel Regression Analysis Results

The study sought to carry out panel regression analysis to establish the statistical significance relationship between the independent variables that is leverage, liquidity, asset tangibility and firm size on the dependent variables that was Return on Assets (ROA) and Return on Equity (ROE). According to Rencher and Schaalje (2009), regression analysis is a statistical process of estimating the relationship among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent and one or more independent variables.

Regression analysis helps one to understand how the typical value of the dependent variable changes when any one of the independent variable is varied, while the other independent variables are held fixed (Mugenda & Mugenda, 2010). On the same note, Wan (2013) contends that regression analysis helps in generating an equation that describes the statistical relationship between one or more predictor variables and the response variable

4.6.1 Effect of Leverage on ROA

Regression analysis was conducted on both financial and non-financial firms to determine whether there was a significant relationship between leverage and ROA. Table 4.13 presents the regression model on leverage versus ROA in the financial sector.

Table 4.13: Leverage on ROA for Financial Firms

ROA	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
Leverage	-0.126	0.040	-3.17	0.002	-0.204	-0.048
cons	0.270	0.014	19.46	0.000	0.243	0.296
R-squared:	0.359					
F(1,94)	10.070					
Prob	0.015					

The fitted model from the result is

$$Y = 0.270 - 0.126X$$

Where: Y = ROA (Return on Asset)

X = Leverage

As presented in the table, the coefficient of determination R Square is 0.359. The model indicates that leverage explains 35.87% of the variation in ROA. This means 35.87% of the variations in ROA is influenced by leverage. The findings further confirm that the regression model of ROA on leverage index is negative and significant with a coefficient of ($\beta = -0.126$, $p=0.000$) supported by $F=10.07$. This implies that there exist a negative and significant relationship between leverage and ROA since the coefficient value was negative and the p-values was 0.002 which is less than 0.05. This means that a unitary increase in leverage leads to a decrease in ROA by 0.3818 units holding other factors constant. These findings agreed with that of Perinpanatha (2014) found that financial leverage had a significant impact on the financial performance of the John Keells Holdings plc in Sri Lanka.

Table 4.14 presents the regression model on leverage versus ROA in the non-financial sector.

Table 4.14: Leverage on ROA for Non-Financial Firms

ROA	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
Leverage	-0.382	0.043	-8.870	0.000	-0.466	-0.297
constant	0.313	0.026	11.910	0.000	0.261	0.364
R-squared:	=0.379					
F(1,194)	=78.730					
Prob	=0.000					

The fitted model from the result is

$$Y = 0.313 - 0.382 X$$

Where: Y = ROA (Return on Asset)

X = Leverage

As presented in the table, the coefficient of determination R Square is 0.379. The model indicates that leverage explains 37.90% of the variations in ROA. This means 37.88% of the variation in ROA is influenced by leverage. The findings further confirm that the regression model of ROA on leverage index is negative and significant with a coefficient of ($\beta = -0.382$, $p=0.000$) supported by $F=78.73$. This implies that there exist a negative and significant relationship between leverage and ROA since the coefficient value was negative and the p-values was 0.000 which is less than 0.05. This means that a unitary increase in leverage leads to a decrease in ROA by 0.126 units holding other factors constant. This is consistent with Perinpanatha (2014) who found a negative relationship between the financial leverage and the financial performance of the John Keells Holdings plc. The findings also agreed with that of Ali (2014) who found a significant negative relationship between leverage and return on assets. The findings disagree with that of Wainaina (2014) who found a positive relationship between leverage (debt equity ratio) and financial performance.

4.6.2 Effect of Leverage on ROE

Regression analysis was conducted on both financial and non-financial firms to determine whether there was a significant relationship between leverage and variation in ROA. Table 4.15 presents the regression model on leverage versus ROE in financial firms.

Table 4.15: Leverage on ROE for Financial Firms

ROE	Coef.	Std. Err.	t	P> t 	[95% Conf.	Interval]
Leverage	-0.031	0.042	-2.740	0.014	-0.112	0.051
Constant	0.124	0.018	15.580	0.000	0.247	0.318
R-squared:	0.411					
F(1,94)	53.710					
Prob	0.000					

The fitted model from the result is

$$Y = 0.124 - 0.307X$$

Where: Y = ROE (Return on Equity)

$$X = \text{Leverage}$$

As presented in the table, the coefficient of determination R Square is 0.411. The model indicates that leverage explains 41.1% of the variation in ROE. This means 41.1% of the variation in ROE is influenced by leverage. The findings further confirm that the regression model of ROE on leverage index is negative and significant with a coefficient of ($\beta = -0.031$, $p=0.014$) supported by $F=53.71$. This implies that there exist a negative but significant relationship between leverage and ROE since the coefficient value was negative and the p-values was 0.014 which is less than 0.05. This means that a unitary increase in leverage leads to a decrease in ROE by 0.0307 units holding other factors constant. The findings also agreed with that of Perinpanatha (2014) whose study showed a negative relationship between the financial leverage and the financial performance of the John Keells Holdings plc. In addition Perinpanatha (2014) found that financial leverage had a significant impact on the financial performance of the John Keells Holdings plc in Sri Lanka. These findings disagreed with that of Ali (2014) who found a positive insignificant relationship between financial leverage and firm performance. The

findings also disagree with that of Wainaina (2014) who found a positive relationship between leverage (debt equity ratio) and financial performance.

Table 4.16 presents the regression model on leverage versus ROE in the non-financial sector.

Table 4.16: Leverage on ROE for Non-Financial Firms

ROE	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
Leverage	-0.362	0.044	-8.230	0.000	-0.448	-0.276
Constant	0.309	0.027	11.440	0.000	0.256	0.362
R-squared:	0.508					
F(1,194)	67.740					
Prob	0.000					

The fitted model from the result is

$$Y = 0.309 - 0.362X$$

Where: Y = ROE (Return on Equity)

$$X = \text{Leverage}$$

The coefficient of determination R Square is 0.508. The model indicates that leverage explains 50.8% of the variation in ROE. This means 50.8% of the variation in ROE is influenced by leverage. The findings further confirm that the regression model of ROE on leverage index is negative and significant with a coefficient of ($\beta = -0.362$, $p=0.000$) supported by $F=67.74$. This implies that there exist a negative significant relationship between leverage and ROE since the coefficient value was negative and the p-value was 0.000 which is less than 0.05. This means that a unitary increase in leverage leads to a decrease in ROE by 0.362 units holding other factors constant. This is consistent with

Naceur and Goaid (2008) who found that leverage allows a greater potential returns to the investor than otherwise would have been available, but the potential loss is also greater: if the investment becomes worthless, the loan principal and all accrued interest on the loan still need to be repaid. The findings disagree with that of Wainaina (2014) who found a positive relationship between leverage (debt equity ratio) and financial performance.

4.6.3 Effect of Liquidity on ROA

Regression analysis was conducted in both financial and non-financial firms to determine whether there was a significant relationship between liquidity and ROA. Table 4.17 presents the regression model on liquidity versus ROA for the financial firms

Table 4.17: Liquidity on ROA for Financial Firms

ROA	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
Liquidity	0.230	0.041	5.590	0.000	0.150	0.311
Constant	0.170	0.012	14.480	0.000	0.147	0.080
R-squared:	0.350					
F(1,94)	31.28					
Prob	0.000					

The fitted model from the result is;

$$Y = 0.170 + 0.230X$$

Where: Y = ROA (Return on Assets)

$$X = \text{Liquidity}$$

As presented in the table, the coefficient of determination R Squared is 0.350. The model indicates that liquidity explains 35.0% of the variation in ROA. This means 35.0% of the ROA is influenced by liquidity. The findings further confirm that the

regression model of ROA on liquidity index is positive and significant with a coefficient of ($\beta = 0.230$, $p=0.000$) supported by $F=70.54$. This implies that there exist a positive significant relationship between liquidity and ROA since the coefficient value was positive and the p-value was 0.000 that is less than 0.05. This means that a unitary improvement in liquidity leads to an improvement in ROA by 0.230 units holding other factors constant.

The findings are in agreement with that of Maaka (2013) who found that there was positive correlation coefficient between return on assets and customer deposits, cash balance and size of firm though a weak positive correlation between return on assets and liquidity gap existed. Further, the findings agreed with that of Alshatti (2015) who concluded that, there is an effect of the liquidity management on profitability as measured by ROE or ROA

Table 4.18 presents the regression model on liquidity versus ROA in the non-financial firms.

Table 4.18: Liquidity on ROA for Non-Financial Firms

ROA	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
Liquidity	0.264	0.034	7.660	0.000	0.196	0.331
Constant	0.004		0.180	0.853	0.041	0.193
R-squared:		0.023				
F(1,194)	0.440					
Prob	58.620					

The fitted model from the result is;

$$Y = 0.170 + 0.230X$$

Where: Y = ROA (Return on Assets)

X = Liquidity

The coefficient of determination R Squared is 0.440. The model indicates that liquidity explains 44% of the variation in ROA. This means 44% of the variations in ROA are influenced by liquidity. The findings further confirm that the regression model of ROA on liquidity index is positive and significant with a coefficient of ($\beta = 0.264$, $p=0.000$) supported by $F=58.62$. This implies that there exist a positive significant relationship between liquidity and ROA since the coefficient value was positive and the p-value was 0.000 that is less than 0.05. This means that a unitary improvement in liquidity leads to an improvement in ROA by 0.264 units holding other factors constant. This is in agreement with Maaka (2013) who found a positive correlation coefficient between return on assets and liquidity. The results also agree with Njeri (2014) who found that there is a positive relationship between liquidity and financial performance. The findings further concurs with the study by Sanghani (2014) also found that liquidity positively affect the financial performance of non-financial companies listed at the NSE.

4.6.4 Effect of Liquidity on ROE

Regression analysis was conducted on financial and non-financial firms to determine whether there was a significant relationship between liquidity and ROE. Table 4.19 presents the regression model on liquidity versus ROE for financial firms.

Table 4.19: Liquidity on ROE for Financial Firms

ROE	Coef.	Std. Err.	t	P> t 	[95% Conf.	Interval]
Liquidity	0.153	0.033	7.710	0.000	0.189	0.318
constant	0.034	0.014	4.660	0.000	0.037	0.091
R-squared:	0.425					
F(1,94)	51.210					
Prob	0.000					

The fitted model from the result is

$$Y = 0.034 + 0.153X$$

Where: Y = ROE (Return on Equity)

$$X = \text{Liquidity}$$

As presented in the table, the coefficient of determination R Squared is 0.425. The model indicates that liquidity explains 42.48% of the variation in ROE. This means 42.5% of the variation ROE is influenced by liquidity. The findings further confirm that the regression model of ROE on liquidity index is significant with a coefficient of ($\beta = 0.153$, $p=0.000$) supported by $F=51.21$. This implies that there exists a significant relationship between liquidity and ROE since the coefficient value was positive and the p-values of 0.000 that is less than 0.05. This means that a unitary improvement in liquidity leads to an improvement in ROE by 0.153 units holding other factors constant. This findings are consistent with that of Owolabi (2012) who found that liquidity as measured in terms of cash conversion cycle, cash flows and credit policy have a

significant effect on company financial performance. The findings also concurred with the findings of Njure (2014) who established a significant positive relationship between liquidity and profitability of nonfinancial companies quoted on Nairobi Securities Exchange.

Table 4.20 presents the regression model on liquidity versus ROE for non-financial firms.

Table 4.20: Liquidity on ROE for Non-financial Firms

ROE	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
Liquidity	0.250	0.035	7.140	0.000	0.182	0.319
Constant	0.016	0.023	4.660	0.000	0.037	0.062
R-squared:	0.481					
F(1,194)	51.050					
Prob	0.000					

The fitted model from the result is

$$Y = 0.016 + 0.250X$$

Where: Y = ROE (Return on Equity)

$$X = \text{Liquidity}$$

The coefficient of determination R Squared is 0.481. The model indicates that liquidity explains 48.1% of the variation in ROE. This means that 48.1% of the variation ROE is influenced by liquidity. The findings further confirm that the regression model of ROE on liquidity index is significant with a coefficient of ($\beta = 0.250$, $p=0.00$) supported by $F=51.05$. This implies that there exist a significant relationship between liquidity and ROE since the coefficient value was positive and the p-values of 0.000 that is less than

0.05. This means that a unitary improvement in liquidity leads to an improvement in ROE by 0.250 units holding other factors constant.

This is consistent with Njeri (2014) who conducted a study on the effects of liquidity on financial performance of deposit taking microfinance institutions in Kenya and noted that efforts to stimulate the MFIs' liquidity would see the micro financial sector realize increased financial performance that would result to increased efficiency in the sector's operations. Strategies to facilitate increased liquidity of MFIs ought to be adopted, emphasize on asset growth as a stimulator of financial performance and competitiveness as well as improvements in operational efficiency through application of modern technology and innovative operational strategies to enhance performance. These findings agreed with that of Sanghani (2014) who found that liquidity positively affect the financial performance of non-financial companies listed at the NSE. The findings also concurred with that of Omesa (2015) who indicated that the relationship between liquidity and financial performance is weak.

4.6.5 Effect of Asset Tangibility on ROA

Regression analysis was conducted on both financial and non-financial firms to determine whether there was a significant relationship between asset tangibility and ROA. Table 4.21 presents the regression model on asset tangibility versus ROA for financial firms.

Table 4.21: Asset Tangibility on ROA for Financial

ROA	Coef.	Std. Err.	t	P> t 	[95% Conf. Interval]
Asset Tangibility	0.289	0.067	10.350	0.000	0.558 0.820
Constant	0.148	0.030	4.970	0.000	0.206 0.089
R-squared:	0.382				
F(1,94)	37.120				
Prob	0.000				

The fitted model from the result is

$$Y = 0.148 + 0.289X$$

Where: Y = ROA (Return on Asset)

X = Asset Tangibility

As presented in the table, the coefficient of determination R Square is 0.382. The model indicates that asset tangibility explains 38.21% of the variation in ROA. This means 38.2% of the variation ROA is influenced by asset tangibility. The findings further confirm that the regression model of ROA on asset tangibility index is positive and significant with a coefficient of ($\beta= 0.289$, $p=0.000$) supported by $F=37.12$. This implies that there exist a positive significant relationship between asset tangibility and ROA since the coefficient value was positive and the p-values was 0.000 that is less than 0.05. This means that a unitary improvement in asset tangibility leads to an improvement in ROA by 0.289 units holding other factors constant. The findings agreed with that of Psillaki and Daskalakis (2008) investigated the capital structure of Greek, French, Italian and Portuguese small and medium-sized enterprises. These findings also agreed with that of Campello (2006) who found that asset tangibility positively affects corporate performance under external financing.

Table 4.22 presents the regression model on asset tangibility versus ROA for financial firms.

Table 4.22: Asset Tangibility on ROA for Non-Financial Firms

ROA	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Asset Tangibility	0.068	0.067	10.350	0.000	0.558 0.320
Constant	0.163	0.030	2.970	0.000	0.106 0.084
R-squared:	0.393				
F(1,194)	38.140				
Prob	0.000				

The fitted model from the result is

$$Y = 0.163 + 0.689X$$

Where: Y = ROA (Return on Asset)

X = Asset Tangibility

The coefficient of determination R Square is 0.393. The model indicates that asset tangibility explains 39.3% of the variation in ROA. This means 39.3% of the variation ROA is influenced by asset tangibility. The findings further confirm that the regression model of ROA on asset tangibility index is positive and significant with a coefficient of ($\beta = 0.068$, $p = 0.000$) supported by $F = 37.12$. This implies that there exist a positive significant relationship between asset tangibility and ROA since the coefficient value was positive and the p-values was 0.000 that is less than 0.05. This means that a unitary improvement in asset tangibility leads to an improvement in ROA by 0.068 units holding other factors constant.

This is in agreement with Harc (2015) who found that tangible assets have a positive impact on the long-term debt of SMEs.

4.6.6 Effect of Asset Tangibility on ROE

Regression analysis was conducted on financial and non-financial firms to determine whether there was a significant relationship between asset tangibility and ROE. Table 4.23 presents the regression model on asset tangibility versus ROE for the financial firms.

Table 4.23: Asset Tangibility on ROE for Financial Firms

ROE	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
Asset Tangibility	0.072	0.030	2.450	0.014	0.014	0.130
Constant	0.293	0.027	10.980	0.000	0.241	0.345
R-squared:	0.415					
F(1,94)	95.070					
Prob	0.000					

The fitted model from the result is

$$Y = 0.293 + 0.072X$$

Where: Y = ROE (Return on Equity)

X = Asset Tangibility

As presented in the table, the coefficient of determination R Square is 0.415. The model indicates that asset tangibility explains 41.5% of the variation in ROE. This means 41.5% of the variation ROE is influenced by asset tangibility. The findings further confirm that the regression model of ROE on asset tangibility index is positive and significant with a coefficient of ($\beta = 0.723$, $p=0.000$) supported by $F=61.07$. This implies that there exist a positive significant relationship between asset tangibility and ROE since the coefficient value was positive and the p-values was 0.014 that is less than 0.05. This means that a unitary improvement in asset tangibility leads to an improvement in ROE by 0.0723 units holding other factors constant.

Table 4.24 presents the regression model on asset tangibility versus ROE for the non-financial firms.

Table 4.24: Asset Tangibility on ROE for Non-financial firms

ROE	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Asset Tangibility	0.660	0.068	9.750	0.000	0.526 0.793
constant	0.131	0.030	4.330	0.000	0.190 0.071
R-squared:	0.356				
F(1,194)	95.070				
Prob	0.000				

The fitted model from the result is

$$Y = 0.131 + 0.660X$$

Where: Y = ROE (Return on Equity)

X = Asset Tangibility

As presented in the table, the coefficient of determination R Square is 0.356. The model indicates that asset tangibility explains 35.56% of the variation in ROE. This means 35.6% of the variation ROE is influenced by asset tangibility. The findings further confirm that the regression model of ROE on asset tangibility index is positive and significant with a coefficient of ($\beta = 0.660$, $p=0.000$) supported by $F=95.07$. This implies that there exist a positive significant relationship between asset tangibility and ROE since the coefficient value was positive and the p-values was 0.000 that is less than 0.05. This means that a unitary improvement in asset tangibility leads to an improvement in ROE by 0.660 units holding other factors constant. This is consistent with Herciu and Ogrean (2012) who argued that a firm is highly competitive as long as its managers are able to mix tangible and intangible assets in the most effective and efficient manner.

Therefore, a firm can get the same score of competitiveness by using a different combination of assets and by giving different importance coefficients to the tangible and intangible assets. The findings were also consistent with that of Campello and Giambina (2011) who found that redeployability of tangible assets is the main determinant of corporate performance.

4.6.7 Effect of Firm Size on ROA

Regression analysis was conducted on financial and non-financial firms to determine whether there was a significant relationship between firm size and ROA. Table 4.25 presents the regression model on log total asset versus ROA for financial firms.

Table 4.25: Firm Size on ROA for Financial Firms

ROA	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
Firm Size	0.072	0.030	2.450	0.001	0.130	0.014
Constant	0.293	0.027	10.980	0.000	0.241	0.345
R-squared:	0.422					
F(1,94)	12.520					
Prob	0.014					

The fitted model from the result is;

$$Y = 0.293 + 0.072X$$

Where: Y = ROA (Return on Asset)

X = Log Total Assets

As presented in the table, the coefficient of determination R Square is 0.422. The model indicates that log total asset explains 42.2% of the variation in ROA. This means 42.2% of the ROA is influenced by firm size. The findings further confirm that the regression model of ROA on log total asset index is positive and significant with a coefficient of ($\beta = 0.072$, $p=0.000$) supported by $F=12.52$. This implies that there exist a positive significant relationship between firm size and ROA since the coefficient value was positive and the p-value was 0.000 that is less than 0.05. This means that a unitary improvement in firm size leads to an improvement in ROA by 0.072 units holding other factors constant. This finding is consistent with that of Pervan and Višić (2012) who found that firm size had a significant positive (although weak) influence on firm profitability. Additionally, results showed that assets turnover and debt ratio also statistically significantly influence firms' performance while current ratio did not prove to be an important explanatory variable of firms' profitability. These findings agreed with that of Tahir and Razali (2011) who indicated that there is positive relationship between firm size and firm value. The size influences a firm performance because large firm can increase their current size very fast by accumulating earnings from past performance and this enhances their value. The findings also concurred with that of Liargovas and Skandalis (2008) who did a study on the financial performance and size of manufacturing firms in Greece and found out that financial performance of majority of the firms was affected by firm size. In addition, the study argued that firm size is a basis of competitive advantage in the sense that larger companies tend to be more efficient than their smaller counterparts and have better resources to survive economic downturns.

Table 4.26 presents the regression model on log total asset versus ROA for non-financial firms.

Table 4.26: Firm Size on ROA for Non-financial Firms

ROA	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
Firm Size	0.043	0.007	5.810	0.000	0.057	0.028
Constant	0.442	0.050	8.830	0.000	0.343	0.541
R-squared:	0.479					
F(1,194)	37.720					
Prob	0.000					

The fitted model from the result is

$$Y = 0.442 + 0.043X$$

Where: Y = ROA (Return on Asset)

$$X = \text{Log Total Assets}$$

The coefficient of determination R Square is 0.422. The model indicates that log total asset explains 42.2% of the variation in ROA. This means 42.2% of the ROA is influenced by firm size. The findings further confirm that the regression model of ROA on log total asset index is positive and significant with a coefficient of ($\beta = 0.0427$, $p=0.000$) supported by $F=37.72$. This implies that there exist a positive significant relationship between firm size and ROA since the coefficient value was positive and the p-value was 0.000 that is less than 0.05. This means that a unitary improvement in firm size leads to an improvement in ROA by 0.0427 units holding other factors constant. These findings agreed with that of Pervan and Višić (2012) who found that assets turnover and debt ratio also statistically significantly influence firms' performance while current ratio did not prove to be an important explanatory variable of firms' profitability.

4.6.8 Effect of Firm Size on ROE

Regression analysis was conducted on financial and non-financial firms to determine whether there was a significant relationship between firm size and ROE. Table 4.27 presents the regression model on log total asset versus ROE for financial firms.

Table 4.27: Firm Size on ROE for Financial Firms

ROE	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
Firm Size	0.016	0.005	5.430	0.003	0.026	0.005
Constant	0.325	0.033	9.900	0.000	0.261	0.390
R-squared:	0.428					
F(1,94)	26.410					
Prob > F	0.002					

The fitted model from the result is

$$Y = 0.325 + 0.016X$$

Where: Y = ROE (Return on Equity)

X = Log Total Assets

As presented in the table, the coefficient of determination R Square is 0.428. The model indicates that log total asset explains 42.8% of the variation in ROE. This means 42.8% of the ROE is influenced by firm size. The findings further confirm that the regression model of ROE on firm size index is positive and significant with a coefficient of ($\beta=0.016$, $p=0.003$) supported by $F=29.49$. This implies that there exist a positive significant relationship between firm size and ROE since the coefficient value was

positive and the p-value was 0.003 that is less than 0.05. This means that a unitary improvement in firm size leads to an improvement in ROE by 0.0158 units holding other factors constant.

A positive relationship between firm size and profitability was found by Vijayakumar and Tamizhselvan (2010). In their study, which was based on a simple semi-logarithmic specification of the model, the authors used different measures of size (sales and total assets) and profitability (profit margin and profit on total assets) while applying model on a sample of 15 companies operating in South India. Papadognas (2017) conducted analysis on a sample of 3035 Greek manufacturing firms. After dividing firms into four size classes he applied regression analysis which revealed that for all size classes, firms' profitability is positively influenced by firm size. Using a sample of 1020 Indian firms, Majumdar (2017) investigated the impact that firm size has on profitability and productivity of a firm. While controlling for other variables that can influence firm performance, he found evidence that larger firms are less productive but more profitable.

Table 4.28 presents the regression model on log total asset versus ROE for non-financial firms.

Table 4.28: Firm Size on ROE for Non-Financial Firms

ROE	Coef.	Std. Err.	t	P> t 	[95% Conf.	Interval]
Firm Size	0.021	0.027	5.430	0.012	0.024	0.025
Constant	0.124	0.050	8.520	0.000	0.330	0.228
R-squared:	0.413					
F(1,194)	21.610					
Prob > F	0.001					

The fitted model from the result is

$$Y = 0.124 + 0.021X$$

Where: Y = ROE (Return on Equity)

X = Log Total Assets

The coefficient of determination R Square is 0.4127. The model indicates that log total asset explains 41.27% of the variation in ROE. This means 41.27% of the ROE is influenced by firm size. The findings further confirm that the regression model of ROE on firm size index is positive and significant with a coefficient of ($\beta = 0.021$, $p = 0.012$) supported by $F = 21.61$. This implies that there exist a positive significant relationship between firm size and ROE since the coefficient value was positive and the p-value was 0.012 that is less than 0.05. This means that a unitary improvement in firm size leads to an improvement in ROE by 0.021 units holding other factors constant. These findings agreed with that of Mahfoudh (2013) who found that firm size were positively related to firm financial performance. These findings also agreed with that of Njoroge (2014) whose study indicated that firm size were positively related to financial performance.

4.6.9 Multiple Regression of Firm Level Factors on ROA

An overall regression analysis was conducted between firm level factors that included leverage, liquidity, asset tangibility and firm size on the dependent variable that was ROA. According to Rencher and Schaalje (2009), regression analysis is a statistical process of estimating the relationship among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent and one or more independent variables. More specifically, regression analysis helps one to understand how the typical value of the dependent variable changes when any one of the independent variable is varied, while the other independent variables are held fixed (Mugenda & Mugenda, 2010). In addition, Wan (2013) contends that regression analysis helps in generating an equation that describes the statistical relationship between one or more predictor variables and the response variable.

Multiple regressions for the firm level factors under the financial firms is as shown in Table 4.29.

The regression model was;

$$Y = 0.033 - 0.600X_1 + 0.369X_2 + 0.184X_3 + 0.068X_4$$

Where: Y = ROA (Return on Assets)

X₁ = Leverage

X₂ = Liquidity

X₃ = Asset Tangibility

X₄ = Firm Size

Table 4.29: Multiple Regression on ROA for Financial Firms

ROA	Coef.	Std. Err.	T	P> t	[95% Conf.	Interval]
Leverage	-0.600	0.033	-9.810	0.007	-0.125	0.005
Liquidity	0.369	0.049	7.460	0.000	0.272	0.465
Asset Tangibility	0.184	0.036	5.080	0.000	0.113	0.664
Firm Size	0.068	0.004	5.540	0.012	0.015	0.002
Constant	0.033	0.053	6.620	0.005	0.071	0.138
R-squared:	0.583					
F(4,91)	51.610					
Prob	0.000					

The R squared was used to check how well the model fitted the data. The study was supported by coefficient of determination R square of 0.583. This means that leverage, liquidity, asset tangibility and firm size explain 58.3% of the variations in the dependent variable that is ROA. The results revealed that there was a negative and significant relationship between leverage and ROA ($\beta = -0.600$, $p = 0.007$). This was supported by a calculated t-statistic of 9.810 that is larger than the critical t-statistic of 1.96. Thaddeus and Chigbu (2012) studied the effect of financial leverage on bank performance using six banks from Nigeria. The findings showed mixed results. While some banks reported positive relationship between leverage and performance, others revealed negative relationship between leverage and performance. The findings disagree with that of Wainaina (2014) who found a positive relationship between leverage (debt equity ratio) and financial performance.

There was a positive and significant relationship between liquidity and ROA ($\beta = 0.369$, $p = 0.000$). This was supported by a calculated t-statistic of 7.460 that is larger than the critical t-statistic of 1.96. The findings are in agreement with that of Maaka (2013) who found that there was positive correlation coefficient between return on assets and customer deposits, cash balance and size of firm though a weak positive correlation between return on assets and liquidity gap existed. Further, the findings agreed with that of Alshatti (2015) who concluded that, there is an effect of the liquidity management on profitability as measured by ROE or ROA. The findings also concurred with that of Njure (2014) who established a significant positive relationship between liquidity and profitability of nonfinancial companies quoted on Nairobi Securities Exchange.

Further, the results revealed that there was a positive and significant relationship between asset tangibility and ROA ($\beta = 0.184$, $p = 0.000$). This was supported by a calculated t-statistic of 5.080 that is larger than the critical t-statistic of 1.96. This implied that an increase in asset tangibility would result to an increase in ROA. These findings agreed with that of Campello (2006) who found out that asset tangibility positively affects corporate performance under external financing.

Lastly, there was a positive and significant relationship between firm size and ROA ($\beta = 0.068$, $p=0.012$). This was supported by a calculated t-statistic of 5.540 that is larger than the critical t-statistic of 1.96. These findings agreed with that of Mahfoudh (2013) who found that firm size were positively related to firm financial performance. These findings also agreed with that of Njoroge (2014) whose study indicated that firm size was positively related to financial performance.

Further, multiple regressions for the firm level factors under the non-financial firms is as shown in Table 4.30.

The regression model was;

$$Y = 0.129 - 0.154X_1 + 0.176X_2 + 0.3278X_3 + 0.011X_4$$

Where: Y = ROA (Return on Assets)

X_1 = Leverage

X_2 = Liquidity

X_3 = Asset Tangibility

X_4 = Firm Size

Table 4.30: Multiple Regression on ROA for Non-Financial Firms

ROA	Coef.	Std. Err.	T	P> t	[95% Conf.	Interval]
Leverage	-0.154	0.047	-3.270	0.001	-0.247	0.062
Liquidity	0.176	0.033	5.290	0.000	0.111	0.465
Asset Tangibility	0.328	0.040	8.290	0.000	0.250	0.664
Firm Size	0.011	0.069	5.260	0.020	0.029	0.002
Constant	0.129	0.053	4.860	0.006	0.007	0.265
R-squared:	0.692					
F(4,191)	51.610					
Prob	0.000					

The R squared was used to check how well the model fitted the data. The study was supported by coefficient of determination R square of 0.692. This means that leverage, liquidity, asset tangibility and firm size explain 69.2% of the variations in the dependent variable that is ROA. The results revealed that there was a negative and significant relationship between leverage and ROA ($\beta = -0.154$, $p = 0.001$). This was supported by a calculated t-statistic of 3.27 that is larger than the critical t-statistic of 1.96. These findings disagreed with that of Ali (2014) who found a positive insignificant relationship between financial leverage and firm performance while the older firms showed an increase in its market value; this is an indication of investors' confidence on the older firms who have built their reputation over a long period. There was a positive and significant relationship between liquidity and ROA ($\beta = 0.1757$, $p = 0.000$). This was supported by a calculated t-statistic of 5.29 that is larger than the critical t-statistic of 1.96. These findings agreed with that of Sanghani (2014) who found that an increase in debt to equity ratio positively affects the financial performance of non-financial companies listed at the NSE. These findings further agreed with that of Njure (2014) who established a significant positive relationship between liquidity and profitability of non-financial companies quoted on Nairobi Securities Exchange.

Further, the results revealed that there was a positive and significant relationship between asset tangibility and ROA ($\beta = 0.328$, $p = 0.000$). This was supported by a calculated t-statistic of 8.29 that is larger than the critical t-statistic of 1.96. These findings agreed with that of Campello (2006) who found out that asset tangibility positively affects corporate performance under external financing. Lastly, there was a positive and significant relationship between firm size and ROA ($\beta = 0.011$, $p = 0.020$). This was supported by a calculated t-statistic of 5.26 that is larger than the critical t-statistic of 1.96. These findings agreed with that of Mahfoudh (2013) who found out that firm size was positively related to firm financial performance. These findings also agreed with that of Njoroge (2014) whose study indicated that firm size was positively related to financial performance.

4.6.10 Multiple Regression of Firm Level Factors on ROE

An overall regression analysis was conducted between firm level factors that included leverage, liquidity, asset tangibility and firm size on the dependent variable that was ROE. Multiple regressions for the firm level factors under the financial firms is as shown in Table 4.31.

The regression model was;

$$Y = 0.300 - 0.039X_1 + 0.047X_2 + 0.047X_3 + 0.006X_4$$

Where: Y = ROE (Return on Equity)

X₁ = Leverage

X₂ = Liquidity

X₃ = Asset Tangibility

X₄ = Firm Size

Table 4.31: Multiple Regression on ROE for Financial Firms

ROE	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Leverage	-0.004	0.039	-3.430	0.009	-0.208 -0.082
Liquidity	0.039	0.034	3.110	0.002	0.039 0.171
Asset Tangibility	0.047	0.063	8.350	0.000	0.402 0.651
Firm Size	0.006	0.007	3.271	0.001	0.026 0.001
Constant	0.300	0.057	0.530	0.059	-0.082 0.439
R-squared:	0.719				
F(4,91)	45.130				
Prob	0.000				

The R squared was used to check how well the model fitted the data. The study was supported by coefficient of determination R square of 0.719. This means that leverage, liquidity, asset tangibility and firm size explain 71.9% of the variations in the dependent variable that is ROE.

The results further revealed that there was a negative and significant relationship between leverage and ROE ($\beta = -0.004$, $p = 0.009$). This was supported by a calculated t-statistic of 3.43 that is larger than the critical t-statistic of 1.96. These findings agreed with that of Al-Tally (2014) who found that financial leverage had a significant effect on performance. The findings also agreed with that of Perinpanatha (2014) whose study showed a negative relationship between the financial leverage and the financial performance of the John Keells Holdings plc. In addition Perinpanatha (2014) found that financial leverage had a significant impact on the financial performance of the John Keells Holdings plc in Sri Lanka. These findings disagreed with that of Ali (2014) who found a positive insignificant relationship between financial leverage and firm performance while the older firms showed an increase in its market value; this is an indication of investors' confidence on the older firms who have built their reputation over a long period.

There was a positive and significant relationship between liquidity and ROE ($\beta = 0.040$, $p = 0.002$). This was supported by a calculated t-statistic of 3.110 that is larger than the critical t-statistic of 1.96. These findings agreed with that of Omesa (2015) a weak relationship between liquidity and financial performance. The findings also agreed with that of Njeri (2014) whose findings revealed that there is a positive relationship between liquidity and financial performance.

Further, the results revealed that there was a positive and significant relationship between asset tangibility and ROE ($\beta = 0.047$, $p = 0.000$). This was supported by a calculated t-statistic of 8.350 that is larger than the critical t-statistic of 1.96. These findings agreed with that of Campello (2006) conducted who found that asset tangibility positively affects corporate performance under external financing.

Lastly, there was a positive and significant relationship between firm size and ROE ($r=0.006$, $p=0.001$). This was supported by a calculated t-statistic of 3.271 that is larger than the critical t-statistic of 1.96. These findings agreed with that of Mahfoudh (2013) who found that firm size was positively related to firm financial performance.

Further, multiple regressions for the firm level factors under the non-financial firms is as shown in Table 4.32.

The regression model was;

$$Y = 0.128 - 0.147X_1 + 0.168X_2 + 0.321X_3 + 0.010X_4$$

Where: Y = ROE (Return on Equity)

X_1 = Leverage

X_2 = Liquidity

X_3 = Asset Tangibility

X_4 = Firm Size

Table 4.32: Multiple Regression on ROE for Non-Financial Firms

ROE	Coef.	Std. Err.	T	P> t	[95% Conf.	Interval]
Leverage	-0.147	0.039	-2.970	0.003	-0.208	-0.501
Liquidity	0.168	0.034	4.780	0.000	0.039	0.236
Asset Tangibility	0.321	0.063	7.580	0.000	0.402	0.404
Firm Size	0.010	0.007	3.720	0.002	0.026	0.008
Constant	0.128	0.057	5.300	0.008	-0.082	0.272
R-squared:	0.645					
F(4,91)	176.730					
Prob	0.000					

The R squared was used to check how well the model fitted the data. The study was supported by coefficient of determination R square of 0.645. This means that leverage, liquidity, asset tangibility and firm size explain 64.48% of the variations in the dependent variable that is ROE.

The results further revealed that there was a negative and significant relationship between leverage and ROE ($\beta = -0.147$, $p = 0.003$). This was supported by a calculated t-statistic of 2.97 that is larger than the critical t-statistic of 1.96. These findings agreed with that of Al-Tally (2014) who found that financial leverage had a significant effect on performance. The findings also agreed with that of Perinpanatha (2014) whose study showed a negative relationship between the financial leverage and the financial performance of the John Keells Holdings plc. In addition Perinpanatha (2014) found that financial leverage had a significant impact on the financial performance of the John Keells Holdings plc in Sri Lanka. There was a positive and significant relationship between liquidity and ROE ($\beta = 0.168$, $p = 0.000$). This was supported by a calculated t-statistic of 4.78 that is larger than the critical t-statistic of 1.96. These findings agreed with that of Sanghani (2014) who revealed that liquidity positively affect the financial performance of non-financial companies listed at the NSE. The study established that current ratio positively affects the financial performance of non-financial companies listed at the NSE. The findings also concurred with that of Khidmat and Rehman (2014) who concluded that liquidity ratio affects ROA positively while it impacts negatively on solvency. Further, the results revealed that there was a positive and significant relationship between asset tangibility and ROE ($\beta = 0.321$, $p = 0.000$). This was supported by a calculated t-statistic of 7.58 that is larger than the critical t-statistic of 1.96. These findings agreed with that of Sanyal and Mann (2010) who found that start-ups with more tangible assets as potential collateral are more likely to use external debt in the financial structure, since these assets have a high liquidation value. The findings also agreed with that of Psillaki and Daskalakis (2008) who argued that the costs of financial distress depend on the types of assets that a firm employs. If a firm retains large investments in land, equipment and other tangible assets, it will have smaller costs of financial distress

than a firm that relies on intangible assets. Thus, firms with more tangible assets should issue more debt. Lastly, there was a positive and significant relationship between firm size and ROE ($r=0.0100$, $p=0.002$). This was supported by a calculated t-statistic of 3.72 that is larger than the critical t-statistic of 1.96. These findings agreed with that of Mahfoudh (2013) who found that firm size were positively related to firm financial performance. These findings also agreed with that of Njoroge (2014) whose study indicated that firm size were positively related to financial performance.

4.6.11 Moderation Effect of Firm Age on ROA

The objective was to establish the moderating effect of firm age on the relationship between firm level factors and ROA of listed firms in the Nairobi securities exchange. Each of the independent variables was moderated by the variable firm age. Results for the financial firms are presented in Table 4.33.

$$Y = 0.124 - 0.025X_1 * M + 0.004X_2 * M + 0.004X_3 * M + 0.006X_4 * M$$

Where: Y = ROA (Return on Asset)

X_1 = Leverage

X_2 = Liquidity

X_3 = Asset Tangibility

X_4 = Firm Size

M = Firm Age (Moderator)

Table 4.33: Moderation Effect of Firm Age Results on ROA for Financial Firms

ROA	Coef.	Std. Err.	T	P> t	[95% Conf.	Interval]
Leverage*Firm Age	-0.025	0.001	-3.160	0.001	-0.002	-0.002
Liquidity*Firm Age	0.004	0.000	7.130	0.000	0.002	0.003
Asset Tangibility*Firm Age	0.004	0.000	9.160	0.000	0.003	0.004
Firm Size*Firm Age	0.006	0.000	3.800	0.000	0.000	0.000
Constant	0.124	0.020	6.470	0.000	0.092	0.132
R-squared:	0.633					
F(4,91)	191.220					
Prob	0.000					

The R^2 for firm level factors before moderation was 58.32% but after moderation, the R^2 increased significantly to 63.3%. This implies that firm age moderates leverage, liquidity, asset tangibility and firm size on ROA. The moderated effect of firm age revealed that there was a negative and significant relationship between leverage and ROA ($\beta = -0.025$, $p=0.001$). This was supported by a calculated t-statistic of 3.16 that is larger than the critical t-statistic of 1.96. The moderating effect of firm age had a positive and significant effect on the relationship between liquidity and ROA ($\beta = 0.0041$, $p=0.000$). This was supported by a calculated t-statistic of 7.130 that is larger than the critical t-statistic of 1.96. Further, the results revealed that the moderating effect of firm age had a positive and significant relationship between asset tangibility and ROA ($\beta = 0.004$, $p=0.000$). This was supported by a calculated t-statistic of 9.160 that is larger than the critical t-statistic of 1.96. Lastly, the moderating effect of firm age had a positive and significant relationship between firm size and ROA ($\beta = 0.0061$, $p=0.000$). This was supported by a calculated t-statistic of 3.800 that is larger than the critical t-statistic of 1.96.

The moderating effect of firm age on the relationship between firm level factors and ROA of financial listed firms was analyzed. Each of the independent variables was moderated by the variable firm age. Results for the non-financial firms are presented in Table 4.34.

$$Y = 0.2236 - 0.014X_1 * M + 0.0241X_2 * M + 0.0037X_3 * M + 0.0061X_4 * M$$

Where: Y = ROA (Return on Asset)

X₁ = Leverage

X₂ = Liquidity

X₃ = Asset Tangibility

X₄ = Firm Size

M = Firm Age (Moderator)

Table 4.34: Moderation Effect of Firm Age Results on ROA for Non-Financial Firms

ROA	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Leverage*Firm Age	-0.014	0.001	-4.260	0.024	-0.002 -0.003
Liquidity*Firm Age	0.024	0.000	4.130	0.000	0.002 0.003
Asset Tangibility*Firm Age	0.014	0.000	5.170	0.002	0.003 0.004
Firm Size*Firm Age	0.006	0.000	4.800	0.010	0.000 0.000
Constant	0.224	0.020	6.450	0.030	0.092 0.131
R-squared:	0.701				
F(4,91)	11.220				
Prob	0.000				

The R² for firm level factors before moderation was 69.2% but after moderation, the R² increased significantly to 70.1%. This implies that firm age moderates leverage, liquidity, asset tangibility and firm size on ROA. The moderated effect of firm age revealed that there was a negative and significant relationship between leverage and ROA ($\beta = -0.014$, $p = 0.024$). This was supported by a calculated t-statistic of 4.26 that is larger than the critical t-statistic of 1.96. The moderating effect of firm age had a positive and significant effect on the relationship between liquidity and ROA ($\beta = 0.024$, $p = 0.000$). This was supported by a calculated t-statistic of 4.130 that is larger than the critical t-statistic of 1.96. Further, the results revealed that the moderating effect of firm age had a positive and significant relationship between asset tangibility and ROA ($\beta = 0.014$, $p = 0.002$). This was supported by a calculated t-statistic of 5.17 that is larger than the critical t-statistic of 1.96. Lastly, the moderating effect of firm age had a positive and significant relationship between firm size and ROA ($\beta = 0.006$, $p = 0.010$). This was supported by a calculated t-statistic of 4.800 that is larger than the critical t-statistic of 1.96. This is in agreement with Kaguri (2013), who indicate that the joint effect of size, diversification, leverage, liquidity, age, premium growth and claim experience are statistically significance to influencing financial performance of life insurance companies as indicated by the positive and strong Pearson correlation coefficients. This implies that premium growth is relied upon to make conclusions about the financial performance of life insurance companies' as shown by its strong and positive correlation coefficients.

4.6.12 Moderation Effect of Firm Age on ROE

The objective was to establish the moderating effect of firm size on the relationship between firm level factors and ROE of listed firms in the Nairobi securities exchange. Each of the independent variables was moderated by the variable firm age. Results for the financial firms are presented in Table 4.35.

Table 4.35: Moderation Effect of Firm Age Results on ROE for Financial Firms

ROE	Coef.	Std. Err.	t	P> t	[95%Conf.	Interval]
Leverage*Firm Age	-0.035	0.001	-2.110	0.025	-0.002	0.000
Liquidity*Firm Age	0.003	0.001	6.480	0.000	0.002	0.004
Asset Tangibility*Firm Age	0.003	0.000	8.350	0.000	0.003	0.004
Firm Size*Firm Age	0.004	0.000	3.330	0.001	0.000	0.000
Constant	0.244	0.021	6.330	0.000	0.093	0.176
R-squared:	0.742					
F(4,91)	142.260					
Prob	=0.000					

$$Y = 0.244 - 0.035X_1 *M + 0.003X_2 *M + 0.003X_3 *M + 0.004X_4 *M$$

Where: Y = ROE (Return on Equity)

X₁ = Leverage

X₂ = Liquidity

X₃ = Asset Tangibility

X₄ = Firm Size

M = Firm Age (Moderator)

The R² for firm level factors before moderation was 71.9% but after moderation, the R² increased significantly to 74.2%. This implies that firm age moderates leverage, liquidity, asset tangibility and firm size on ROE. The moderating effect of firm age

revealed that there was a negative and significant relationship between leverage and ROE ($\beta = -0.035$, $p = 0.025$). This was supported by a calculated t-statistic of 2.110 that is larger than the critical t-statistic of 1.96. The moderating effect of firm age had a positive and significant on the relationship between liquidity and ROE ($\beta = 0.003$, $p = 0.000$). This was supported by a calculated t-statistic of 6.48 that is larger than the critical t-statistic of 1.96. Further, the results revealed that the moderating effect of firm age had a positive and significant relationship between asset tangibility and ROE ($\beta = 0.003$, $p = 0.000$). This was supported by a calculated t-statistic of 8.35 that is larger than the critical t-statistic of 1.96. Lastly, the moderating effect of firm age had a positive and significant relationship between firm size and ROE ($\beta = 0.0002$, $p = 0.001$). This was supported by a calculated t-statistic of 3.330 that is larger than the critical t-statistic of 1.96.

These findings agreed with that of Pervan, Pervan and Ćurak (2017) who found that age negatively affects firm's performance. As firms get older, benefits of their accumulated knowledge in all crucial aspects of the business (technology, supply channels, customers relations, human capital and financing costs) become overcome with their inertia, inflexibility and ossified by accumulated rules, routines and organizational structure. These findings also agreed with that of Kaguri (2013) who indicated that joint effect of variables are statistically significance to influencing financial performance of life insurance companies as indicated by the positive and strong Pearson correlation coefficients. The moderating effect of firm age on the relationship between firm level factors and ROE of non-financial listed firms was analyzed. Each of the independent variables was moderated by the variable firm age. Results for the non-financial firms are presented in Table 4.36.

Table 4.36: Moderation Effect of Firm Age Results on ROE for Non-Financial Firms

ROE	Coef.	Std. Err.	T	P> t	[95% Conf.	Interval]
Leverage*Firm Age	-0.025	0.002	-4.110	0.015	-0.003	-0.002
Liquidity*Firm Age	0.013	0.003	6.480	0.003	0.002	0.004
Asset Tangibility*Firm Age	0.007	0.000	8.350	0.000	0.003	0.004
Firm Size*Firm Age	0.003	0.000	3.330	0.002	0.000	0.000
Constant	0.372	0.021	4.210	0.005	0.093	0.172
R-squared:	0.685					
F(4,91)	57.730					
Prob	0.000					

$$Y = 0.372 - 0.025X_1 *M + 0.013X_2 *M + 0.007X_3 *M + 0.003X_4 *M$$

Where: Y = ROE (Return on Equity)

X₁ = Leverage

X₂ = Liquidity

X₃ = Asset Tangibility

X₄ = Firm Size

M = Firm Age (Moderator)

The R² for firm level factors before moderation was 64.5% but after moderation, the R² increased significantly to 68.5%. This implies that firm age moderates leverage, liquidity, asset tangibility and firm size on ROE. The moderating effect of firm age revealed that there was a negative and significant relationship between leverage and ROE ($\beta = -0.025$, $p = 0.015$). This was supported by a calculated t-statistic of 4.110 that is

larger than the critical t-statistic of 1.96. The moderating effect of firm age had a positive and significant on the relationship between liquidity and ROE ($\beta = 0.013$, $p=0.003$). This was supported by a calculated t-statistic of 6.480 that is larger than the critical t-statistic of 1.96. Further, the results revealed that the moderating effect of firm age had a positive and significant relationship between asset tangibility and ROE ($\beta = 0.007$, $p=0.000$). This was supported by a calculated t-statistic of 8.35 that is larger than the critical t-statistic of 1.96. Lastly, the moderating effect of firm age had a positive and significant relationship between firm size and ROE ($\beta = 0.003$, $p=0.002$). This was supported by a calculated t-statistic of 3.33 that is larger than the critical t-statistic of 1.96. These findings agreed with that of Liargovas and Skandalis (2008) who stated that older firms are prone to inertia, and the bureaucratic ossification that goes along with age; they might have developed routines, which are out of touch with changes in market conditions, in which case an inverse relationship between age and profitability or growth could be observed. In addition, newer and smaller firms, as a result, take away market share in spite of disadvantages like lack of capital, brand names and corporate reputation with older firms.

4.7 Hypotheses Testing

Hypotheses were tested using multiple linear regression analysis as represented in Table 4.29, 4.30, 4.31 and 4.32.

4.7.1 Objective One

The first hypothesis to be tested was:

H₀₁: Leverage has no significant effect on financial performance of listed firms in the Nairobi securities exchange.

The hypothesis was tested by using multiple linear regression and determined using p-value. The acceptance/rejection criterion was that, if the p value is less than 0.05, we reject the H₀₁ but if it is more than 0.05, the H₀₁ is not rejected. The results in Table

4.29, 4.30, 4.31 and 4.32 for ROA and ROE indicate that leverage had a negative and significant relationship on ROA for financial and non-financial firms respectively ($\beta = -0.600, 0.007$; $\beta = -0.1542, 0.001$) and ROE for financial and non-financial firms respectively ($\beta = -0.004, 0.009$, $\beta = -0.147, 0.003$). The null hypothesis was therefore rejected. The study therefore adopted the alternative hypothesis that leverage has a significant effect on financial performance of listed firms in the Nairobi securities exchange. These findings agreed with that of Al-Tally (2014) who found that financial leverage had a significant effect on performance. The findings also agreed with that of Perinpanatha (2014) whose study showed a negative relationship between the financial leverage and the financial performance of the John Keells Holdings plc. In addition Perinpanatha (2014) found that financial leverage had a significant impact on the financial performance of the John Keells Holdings plc in Sri Lanka.

4.7.2 Objective Two

The second hypothesis to be tested was:

H₀₂: Liquidity has no significant effect on financial performance of listed firms in the Nairobi securities exchange.

The hypothesis was tested by using multiple linear regression and determined using p-value. The acceptance/rejection criterion was that, if the p value is less than 0.05, we reject the H₀₂ but if it is more than 0.05, the H₀₂ is not rejected. The results in Table 4.29, 4.30, 4.31 and 4.32 for ROA and ROE in financial and for financial firms indicate that liquidity had a positive and significant relationship on ROA for financial and non-financial firms respectively ($\beta = 0.3685, 0.000$; $\beta = 0.1757, 0.000$) and ROE for financial and non-financial firms respectively ($\beta = 0.0393, 0.002$; $\beta = 0.1676, 0.000$). The null hypothesis was therefore rejected. The study therefore adopted the alternative hypothesis that liquidity has significant effect on financial performance of listed firms in the Nairobi securities exchange. These findings agreed with that of Omesa (2015) who established a weak relationship between liquidity and financial performance. The

findings also agreed with that of Njeri (2014) whose findings revealed that there is a positive relationship between liquidity and financial performance.

4.7.3 Objective Three

The third hypothesis to be tested was:

H₀₃: Asset Tangibility has no significant effect on financial performance of listed firms in the Nairobi securities exchange.

The hypothesis was tested by using multiple linear regression and determined using p-value. The acceptance/rejection criterion was that, if the p value is less than 0.05, we reject the H₀₃ but if it is more than 0.05, the H₀₃ is not rejected. The results in Table 4.29, 4.30, 4.31 and 4.32 for ROA and ROE in financial and for financial firms indicate that asset tangibility had a positive and significant relationship on ROA for financial and non-financial firms respectively ($\beta=0.1838$, 0.000; $\beta=0.328$, 0.000) and ROE for financial and non-financial firms respectively ($\beta=0.0472$, 0.000; $\beta=0.321$, 0.000). The null hypothesis was therefore rejected. The study therefore adopted the alternative hypothesis that asset tangibility has a significant effect on financial performance of listed firms in the Nairobi Securities Exchange. These findings agreed with that of Omesa (2015) who found a weak relationship between liquidity and financial performance. The findings also agreed with that of Njeri (2014) whose findings revealed that there is a positive relationship between liquidity and financial performance.

4.7.4 Objective Four

The fourth hypothesis to be tested was:

H₀₄: Firm Size has no significant effect on financial performance of listed firms in the Nairobi securities exchange.

The hypothesis was tested by using multiple linear regression and determined using p-value. The acceptance/rejection criterion was that, if the p value is less than 0.05, we reject the H₀₄ but if it is more than 0.05, the H₀₄ is not rejected. The results in Table 44.29, 4.30, 4.31 and 4.32 for ROA and ROE in financial and for financial firms indicate that firm size had a positive and significant relationship on ROA for financial and non-financial firms respectively ($\beta = 0.068, 0.012$; $\beta = 0.011, 0.020$) and ROE for financial and non-financial firms respectively ($\beta = 0.006, 0.001$; $\beta = 0.010, 0.002$). The null hypothesis was therefore rejected. The study therefore adopted the alternative hypothesis that firm size has a significant effect on financial performance of listed firms in the Nairobi securities exchange. These findings agreed with that of Mahfoudh (2013) who found that firm size were positively related to firm financial performance. These findings also agreed with that of Njoroge (2014) whose study indicated that firm size were positively related to financial performance.

4.7.5 Objective Five

The fifth hypothesis to be tested was:

H₀₅: Firm age does not moderate the relationship between the firm level factors and financial performance of listed firms in the Nairobi securities exchange.

The hypothesis was tested by using multiple linear regression and determined using p-value. The acceptance/rejection criterion was that, if the p value is less than 0.05, we reject the H₀₅ but if it is more than 0.05, the H₀₅ is not rejected. Firm age had a negative and significant moderating effect on the relationship between leverage and ROA for

financial and non-financial firms respectively at $0.001 < 0.05$; $0.024 < 0.05$ and ROE for financial and non-financial firms at $0.025 < 0.05$; $0.015 < 0.05$. In addition, firm age had a positive and significant moderating effect on the relationship between liquidity with ROA for financial and non-financial firms at $0.000 < 0.05$; $0.000 < 0.05$ and ROE for financial and non-financial firms respectively at $0.000 < 0.05$; $0.003 < 0.05$.

Firm age had a positive and significant moderating effect on the relationship between asset tangibility with ROA for financial and non-financial firms respectively at $0.000 < 0.05$; $0.002 < 0.05$ and ROE for financial and non-financial firms respectively at $0.000 < 0.050$; $0.002 < 0.050$. Finally, firm age had a positive and significant moderating effect on the relationship between firm size with ROA for financial and non-financial firms respectively at $0.000 < 0.05$; $0.010 < 0.05$ and ROE for financial and non-financial firms respectively at $0.001 < 0.050$; $0.002 < 0.050$.

Firm age as a moderator of firm level factors on ROA in financial firms improved R^2 from 58.32% to 63.26%. Firm age as a moderator of firm level factors on ROA in non-financial firms improved R^2 from 69.19% to 70.12%. Further, Firm age as a moderator of firm level factors on ROE in financial firms improved R^2 from 71.91% to 74.16%. Lastly, firm age as a moderator of firm level factors on ROE in non-financial firms improved R^2 from 64.48% to 68.47%. These findings agreed with that of Pervan, Pervan and Čurak (2017) who found that age negatively affects firm's performance. As firms get older, benefits of their accumulated knowledge in all crucial aspects of the business (technology, supply channels, customers relations, human capital and financing costs) become overcome with their inertia, inflexibility and ossified by accumulated rules, routines and organizational structure.

4.8 Discussion of Key Findings

4.8.1 Effects of Leverage on Financial Performance

The first objective of the study was to determine the effect of leverage on financial performance of listed firms in the Nairobi securities exchange. Regression of coefficient results on financial firms revealed that there was a negative and significant relationship between leverage and ROA ($\beta=-0.600$, $p=0.007$). The results on non-financial revealed that there was a negative and significant relationship between leverage and ROA ($\beta=-0.154$, $p=0.001$). Under ROE, Regression of coefficient results on financial firms further revealed that there was a negative and significant relationship between leverage and ROE ($\beta =-0.004$, $p=0.009$). The results further revealed that for non-financial there was a negative and significant relationship between leverage and ROE ($\beta =-0.147$, $p=0.003$). This means that a unitary increase in leverage leads to a reduction in financial performance by 0.600 and 0.154 units for ROA in financial and non-financial firms respectively and 0.004 and 0.147for ROE in financial and non-financial firms respectively holding other factors constant.

This is in agreement with Ali (2014) who conducted a study on the impact of financial leverage on firm performance: the case of non-financial firms in Kenya. The study took performance measures in a wider perspective using ROA, ROE and Tobin's Q. Findings from the Tobin's Q model indicated that large firms have a positive insignificant relationship between financial leverage and firm performance while the older firms showed an increase in its market value; this is an indication of investors' confidence on the older firms who have built their reputation over a long period.

4.8.2 Effects of Liquidity on Financial Performance

The second objective of the study was to determine the effect of liquidity on financial performance of listed firms in the Nairobi securities exchange. Regression of coefficient results revealed there was a positive and significant relationship between liquidity and

ROA for financial firms ($\beta = 0.369$, $p=0.000$). This was supported by a calculated t-statistic of 7.460 that is larger than the critical t-statistic of 1.96. There was a positive and significant relationship between liquidity and ROA for nonfinancial firms ($\beta = 0.176$, $p=0.000$). This was supported by a calculated t-statistic of 7.460 that is larger than the critical t-statistic of 1.96.

In ROE, there was a positive and significant relationship between liquidity and ROE for financial firms ($\beta = 0.039$, $p=0.002$). This was supported by a calculated t-statistic of 3.110 that is larger than the critical t-statistic of 1.96. There was a positive and significant relationship between liquidity and ROE for non-financial firms ($\beta=0.168$, $p=0.000$). This was supported by a calculated t-statistic of 4.78 that is larger than the critical t-statistic of 1.96. This means that a unitary improvement in liquidity leads to an improvement in financial performance by 0.3685 and 0.176 units in ROA for financial and non-financial firms 0.039 and 0.168 in ROE for financial and non-financial firms respectively holding other factors constant.

This is consistent with Sanghani (2014) who investigated the effect of liquidity on financial performance of non-financial companies listed at the NSE. The study established that current ratio positively affects the financial performance of non-financial companies listed at the NSE. The study also revealed that an increase in operating cash flow ratio positively affects the financial performance of non-financial companies listed at the NSE. The study found that an increase in debt to equity positively affects the financial performance of non-financial companies listed at the NSE.

4.8.3 Effects of Asset Tangibility on Financial Performance

The third objective of the study was to determine the effect of asset tangibility on financial performance of listed firms in the Nairobi securities exchange. Regression of coefficient for results revealed that there was a positive and significant relationship between asset tangibility and ROA for financial firms ($\beta = 0.184$, $p=0.000$). This was

supported by a calculated t-statistic of 5.080 that is larger than the critical t-statistic of 1.96. The results further revealed that there was a positive and significant relationship between asset tangibility and ROA for non-financial firms ($\beta = 0.328$, $p = 0.000$). This was supported by a calculated t-statistic of 8.29 that is larger than the critical t-statistic of 1.96.

Regression results showed that there was a positive and significant relationship between asset tangibility and ROE for financial firms ($\beta = 0.047$, $p = 0.000$). This was supported by a calculated t-statistic of 8.350 that is larger than the critical t-statistic of 1.96. Further, results revealed that there was a positive and significant relationship between asset tangibility and ROE for non-financial firms ($\beta = 0.321$, $p = 0.000$). This was supported by a calculated t-statistic of 7.58 that is larger than the critical t-statistic of 1.96. This means that a unitary improvement in asset tangibility leads to an improvement in financial performance by 0.1838 and 0.328 units in ROA in financial and non-financial firms respectively and 0.047, 0.321 in ROE for financial and non-financial firms respectively holding other factors constant.

This in agreement with Harc (2015) conducted a study on the relationship between tangible assets and capital structure of small and medium-sized companies in Croatia. The study found out that the relationship between tangible assets and long-term leverage is positive in all observed years and statistically significant. The results show that small and medium-sized companies use their collateral to attract long-term debt, which means that small and medium-sized companies use lower costs and the interest rate of long-term debt in relation to short-term debt. These findings correspond with the maturity matching principle, according to which long-term assets are financed with long-term financing and short-term assets are financed with short-term funds. These findings are consistent with the trade-off theory, which predicts a positive relation between leverage and tangibility, but also with the pecking order theory, which is generally interpreted as predicting a negative relation between leverage and tangibility.

4.8.4 Effects of Firm Size on Financial Performance

The fourth objective of the study was to determine the effect of firm size on financial performance of listed firms in the Nairobi securities exchange. Regression of coefficient revealed there was a positive and significant relationship between firm size and ROA for financial firms ($\beta = 0.068$, $p = 0.012$). This was supported by a calculated t-statistic of 5.540 that is larger than the critical t-statistic of 1.96. There was a positive and significant relationship between firm size and ROA for non-financial firms ($\beta = 0.011$, $p = 0.020$). This was supported by a calculated t-statistic of 4.86 that is larger than the critical t-statistic of 1.96.

In ROE, there was a positive and significant relationship between firm size and ROE for financial firms ($\beta = 0.0062$, $p = 0.001$). This was supported by a calculated t-statistic of 3.271 that is larger than the critical t-statistic of 1.96. There was a positive and significant relationship between firm size and ROE for non-financial firms ($\beta = 0.010$, $p = 0.002$). This was supported by a calculated t-statistic of 3.72 that is larger than the critical t-statistic of 1.96. This means that a unitary improvement in firm size leads to an improvement in financial performance by 0.0681 and 0.011 units in ROA for financial and non-financial firms, 0.006 and 0.010 in ROE for financial and non-financial firms respectively holding other factors constant.

This is consistent with Abbasi and Malik (2015) who pinpointed the effect of firm size between the relationship of firm growth and firm performance. The results of the regression analysis were demonstrating that the alternative hypothesis of the research that firm size had inspiration between independent variable (Firm growth) and dependent variable (Firm performance) was accepted. The study is cooperative for the management to keep an eye on firm size along with firm growth while enhancing the firm performance.

4.8.5 Effects of Firm Age as a Moderator of Firm Level Factors on Financial Performance

The fifth objective of the study was to establish the moderating effect of firm age on the relationship between firm level factors and financial performance, of listed firms in the Nairobi securities exchange. Firm age was a significant moderating variable for leverage and ROA for financial and non-financial firms respectively at $0.001 < 0.05$, $0.024 < 0.05$ and ROE $0.025 < 0.05$, $0.015 < 0.05$ for financial and non-financial firms respectively. In addition, firm age had a positive and significant moderating effect on the relationship between liquidity with ROA for financial and non-financial firms at $0.00 < 0.05$; $0.00 < 0.05$ and ROE for financial and non-financial firms at $0.00 < 0.05$; $0.03 < 0.05$.

Firm age had a positive and significant moderating effect on the relationship between asset tangibility with ROA for financial and non-financial firms at $0.00 < 0.05$; $0.02 < 0.05$ and ROE for financial and non-financial firms at $0.00 < 0.05$; $0.00 < 0.05$. Finally, firm age had a positive and significant moderating effect on the relationship between firm size with ROA for financial and non-financial firms at $0.00 < 0.05$; $0.010 < 0.05$ and ROE for financial and non-financial firms at $0.001 < 0.05$; $0.02 < 0.05$.

Firm age as a moderator of firm level factors on ROA in financial firms improved R^2 from 58.32% to 63.26%. Firm age as a moderator of firm level factors on ROA in non-financial firms improved R^2 from 69.19% to 70.12%. Further, Firm age as a moderator of firm level factors on ROE in financial firms improved R^2 from 71.91% to 74.16%. Lastly, firm age as a moderator of firm level factors on ROE in non-financial firms improved R^2 from 64.48% to 68.47%.

This is in agreement with Kaguri (2013), who conducted a study using firm age as a moderating variable on the relationship between firm characteristics and financial performance of life insurance companies in Kenya. The study used size, diversification, leverage, liquidity, age, premium growth and claim experience as the independent variables and financial performance as the dependent variable. The study findings

indicate that the joint effect of variables are statistically significance to influencing financial performance of life insurance companies as indicated by the positive and strong Pearson correlation coefficients. This implies that premium growth is relied upon to make conclusions about the financial performance of life insurance companies' as shown by its strong and positive correlation coefficients.

4.9 Summary of Hypotheses

The summary results of the hypotheses are presented in Table 4.37.

Table 4.37: Summary of Hypotheses

Objective No	Objective	Hypothesis	Rule	p-value	Comment
Objective 1	To determine the effect of leverage on financial performance of listed firms in the Nairobi securities exchange.	Ho Leverage has no significant effect on financial performance of listed firms in the Nairobi securities exchange.	Reject Ho if p value <0.05	p<0.05	The results fail to accept the hypothesis; therefore, Leverage has a significant effect on financial performance of listed firms in the Nairobi securities exchange.
Objective 2	To determine the effect of liquidity on financial performance of listed firms in the Nairobi securities exchange.	Ho: Liquidity has no significant effect on financial performance of listed firms in the Nairobi securities exchange.	Reject Ho if p value <0.05	p<0.05	The results fail to accept the hypothesis; therefore, Liquidity has a significant effect on financial performance of listed firms in the Nairobi securities exchange.
Objective 3	To determine the effect of asset tangibility on financial performance of listed firms in the Nairobi securities exchange.	Ho: Asset tangibility has no significant effect on financial performance of listed firms in the Nairobi securities exchange.	Reject Ho if p value <0.05	p<0.05	The results fail to accept the hypothesis; therefore, Asset tangibility has a significant effect on financial performance of listed firms in the Nairobi securities exchange.

Objective No	Objective	Hypothesis	Rule	p-value	Comment
Objective 4	To determine the effect of firm size on financial performance of listed firms in the Nairobi securities exchange	Ho: Firm size has no significant effect on financial performance of listed firms in the Nairobi securities exchange.	Reject Ho if p value <0.05	p<0.05	The results fail to accept the hypothesis; therefore, Firm size has a significant effect on financial performance of listed firms in the Nairobi securities exchange.
Objective 5	To establish the moderating effect of firm age on the relationship between firm level factors and financial performance, of listed firms in the Nairobi securities exchange	Ho: Firm age does not moderate the relationship between the firm level factors and financial performance of listed firms in the Nairobi securities exchange.	Reject Ho if p value <0.05	p<0.05	The results fail to accept the hypothesis; therefore, Firm age moderates the relationship between the firm level factors and financial performance of listed firms in the Nairobi securities exchange.

4.10 Model Optimization and Revised Conceptual Framework

Based on the results in Table 4.29, 4.30, 4.31 and 4.32 a model optimization was conducted. The aim of model optimization was to guide in derivation of the final model (revised conceptual framework) where only the significant variables are included for objectivity. Results were arrived at through running multiple regressions. No variable was dropped since all the variables were significant. The variables were arranged in order of their impact they have on the dependent variable. Results of the new conceptual framework are presented in Figure 4.2.

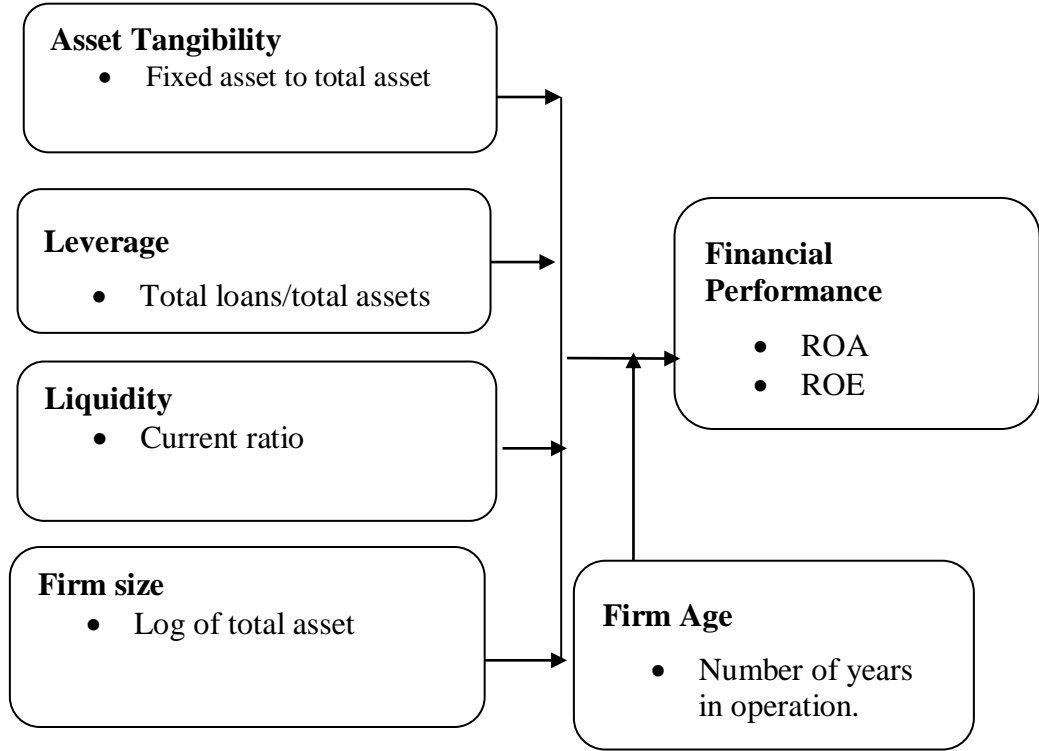


Figure 4.2: Revised Conceptual Framework

The summary of the regression coefficients is as shown in Table 4.38.

Table 4.38: Summary of Findings

Before Moderation

Variable	FINANCIAL				NON FINANCIAL			
	ROA		ROE		ROA		ROE	
	Coef.	P> t	Coef.	P> t	Coef.	P> t	Coef.	P> t
Leverage	-0.600	0.007	-0.004	0.009	-0.154	0.001	-0.147	0.003
Liquidity	0.369	0.000	0.039	0.002	0.176	0.000	0.168	0.000
Asset Tangibility	0.184	0.000	0.047	0.000	0.328	0.000	0.321	0.000
Firm Size	0.068	0.012	0.006	0.001	0.011	0.020	0.010	0.002

Moderation Effect

Variable	FINANCIAL				NON FINANCIAL			
	ROA		ROE		ROA		ROE	
	Coef.	P> t	Coef.	P> t	Coef.	P> t	Coef.	P> t
Leverage*Firm Age	-	0.00	-	0.02	-	0.02	-	0.01
Liquidity*Firm Age	0.025	1	0.035	5	0.014	4	0.025	5
Asset Tangibility*Firm Age	0.004	0	0.003	0	0.024	0	0.013	3
Firm Size*Firm Age	0.006	0	0.000	1	0.006	0	0.003	2

4.11 Summary of the Chapter

This chapter has presented the analysis of the data collected and discussion of the findings. The study utilized descriptive statistics, correlation analysis and regression analysis. The regression analysis results revealed that leverage had a negative and significant relationship with financial performance whereas liquidity, asset tangibility and firm size had a positive and significant relationship with financial performance of listed firms in the Nairobi Securities Exchange.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of major findings of this study, sets out the relevant conclusions and makes recommendations for practice and suggestions for further research based on the findings of this study. The study sought to establish the effect of firm level factors on financial performance of listed firms in the Nairobi Securities Exchange. It established the relationship between leverage, liquidity, asset tangibility and firm size, moderated by firm age on financial performance.

5.2 Summary of Major Findings

This section contained the summary of the findings.

5.2.1 Effect of Leverage on Financial Performance

The first objective of the study was to establish the influence of leverage on Financial Performance of Listed Firms in the Nairobi Securities Exchange. Leverage was found to be satisfactory in explaining financial performance. Further, results showed that leverage is a good predictor of financial performance. Correlation analysis revealed that leverage was negatively and significantly associated to financial performance. Regression of coefficient results on financial firms revealed that there was a negative and significant relationship between leverage and ROA. The results revealed that for non-financial firms, there was a negative and significant relationship between leverage and ROA. Under ROE, Regression of coefficient results on financial firms revealed that there was a negative and significant relationship between leverage and ROE. The results further revealed that there was a negative and significant relationship between leverage and ROE for non-financial firms. This means that a unitary increase in leverage leads to a reduction in financial performance.

5.2.2 Effect of Liquidity on Financial Performance

The second objective of the study was to establish the influence of liquidity on Financial Performance of Listed Firms in the Nairobi Securities Exchange. Liquidity was found to be satisfactory in explaining financial performance. Further, results showed that liquidity is a good predictor of financial performance. Correlation analysis revealed that liquidity was positive and significantly associated to financial performance. Regression of coefficient results revealed there was a positive and significant relationship between liquidity and ROA for financial firms. There was a positive and significant relationship between liquidity and ROA for nonfinancial firms.

On ROE, there was a positive and significant relationship between liquidity and ROE for financial firms. There was a positive and significant relationship between liquidity and ROE for non-financial firms. This means that a unitary improvement in liquidity leads to an improvement in financial performance.

5.2.3 Effect of Asset Tangibility on Financial Performance

The third objective of the study was to establish the influence of asset tangibility on Financial Performance of Listed Firms in the Nairobi Securities Exchange. Asset tangibility was found to be satisfactory in explaining financial performance. Further, results showed that asset tangibility is a good predictor of financial performance. Correlation analysis revealed that asset tangibility was positive and significantly associated to financial performance. Regression of coefficient for results revealed that there was a positive and significant relationship between asset tangibility and ROA for financial firms. The results further revealed that there was a positive and significant relationship between asset tangibility and ROA for non-financial firms.

Regression results showed that there was a positive and significant relationship between asset tangibility and ROE for financial firms. Further, results revealed that there was a positive and significant relationship between asset tangibility and ROE for non-financial

firms. This means that a unitary improvement in asset tangibility leads to an improvement in financial performance.

5.2.4 Effect of Firm Size on Financial Performance

The fourth objective of the study was to establish the influence of firm size on Financial Performance of Listed Firms in the Nairobi Securities Exchange. Firm size was found to be satisfactory in explaining financial performance. Further, results showed that firm size is a good predictor of financial performance. Correlation analysis revealed that firm size was positive and significantly associated to financial performance. Regression of coefficient revealed there was a positive and significant relationship between firm size and ROA for financial firms. There was a positive and significant relationship between firm size and ROA for non-financial firms.

In ROE, there was a positive and significant relationship between firm size and ROE for financial firms. There was a positive and significant relationship between firm size and ROE for non-financial firms. This means that a unitary improvement in firm size leads to an improvement in financial performance.

5.2.5 Moderating Effect of Firm Age and Firm Level Factors on Financial Performance

The fifth objective of the study was to assess the moderating effect of firm age on the relationship between the firm level factors and financial performance of Listed Firms in the Nairobi Securities Exchange. Firm age was a significant moderating variable for leverage and ROA for financial and non-financial firms. In addition, firm age had a positive and significant moderating effect on the relationship between liquidity with ROA for financial and non-financial firms.

Firm age had a positive and significant moderating effect on the relationship between asset tangibility with ROA for financial and non-financial firms. Finally, firm age had a positive and significant moderating effect on the relationship between firm size with ROA for financial and non-financial firms.

5.3 Conclusion

5.3.1 Leverage

Based on the findings, the study concluded that leverage has a negative and significant effect on financial performance of Listed Firms in the Nairobi Securities Exchange. Leverage allows a financial institution to increase the potential gains or losses on a position or investment beyond what would be possible through a direct investment of its own funds. The leverage ratio can thus be thought of as a measure of balance sheet or, to the extent that it also includes off-balance-sheet exposures economic leverage. A firm can finance its investment by debt and/or equity. The use of fixed-charged funds, such as debt and preference capital along with the owner's equity in the capital structure is described as financial leverage or gearing. Leverage allows a greater potential returns to the investor than otherwise would have been available, but the potential loss is also greater: if the investment becomes worthless, the loan principal and all accrued interest on the loan still need to be repaid. This constitutes financial risk. The degree of this financial risk is related to the firm's financial structure

5.3.2 Liquidity

Based on the findings, the study concluded that liquidity has a positive and significant effect on financial performance of Listed Firms in the Nairobi Securities Exchange. Liquidity plays a crucial role in the successful functioning of a business firm. Liquidity not only helps to ensure that a person or business always has a reliable supply of cash close at hand, but it is a powerful tool when it comes to determining the financial health of future investments as well. It principally has an effect on financial costs reduction or

growth, changes in the sales dynamic, as well as it influences on company risk level. The decisive significance of liquidity means that it is important for company development and at the same is one of the fundamental endogenous factors that are responsible for company market position. The significance of liquidity to company performance might lead to the conclusion that it determines the profitability level of company. The current ratio is used to test a firm's liquidity, that is, its current or working capital position by deriving the proportion of the firm's current assets available to cover its current liability. A higher current ratio indicates a larger investment in current assets which means, a low rate of return on investment for the firm, as excess investment in current assets will not yield enough returns. A low current ratio means smaller investment in current assets which means a high rate of return on investment for the firm, as no unused investment is tied up in current assets.

5.3.3 Asset Tangibility

Based on the findings, the study concluded that asset tangibility has a positive and significant effect on financial performance of Listed Firms in the Nairobi Securities Exchange. A firm is highly competitive when as its managers are able to mix tangible and intangible assets in the most effective and efficient manner. Therefore, a firm can get the same score of competitiveness by using a different combination of assets and by giving different importance coefficients to the tangible and intangible assets. Tangible assets are positively related to firm performance and the trade-off theory predicts a positive relation between leverage and tangibility. This relationship exists because tangible assets are easier to collateralize and they suffer a smaller loss of value when firms go into distress. Since firms tend to match the maturity of assets with maturity of liabilities. A larger share of tangible assets increases the liquidation value of a company. This is because the tangible assets constitute collateral for the debt in case of bankruptcy. When a firm is solvent, tangible asset increase the firm value by allocating assets to better uses. In addition, when the firm is in distress, tangible asset sales represent the cheapest source of funds for the firm. Moreover, asset sales allow the firm to finance continued operation of its remaining assets without requiring external capital.

5.3.4 Firm Size

Based on the findings, the study concluded that firm size has a positive and significant effect on financial performance of Listed Firms in the Nairobi Securities Exchange. The size influences a firm performance because large firm can increase their current size very fast by accumulating earnings from past performance and this enhances their value. In terms of structure, that is firm's characteristics, institutional shareholders can influence any decision by management of firms. The accumulation of funds assists in putting up effective risk management structures. Firm size is a basis of competitive advantage in the sense that larger companies tend to be more efficient than their smaller counterparts and have better resources to survive economic downturns.

5.3.5 Moderating Effect of Firm Age

Based on the findings, the study concluded that firm age moderates firm level factors that are leverage, liquidity, asset tangibility and firm size. The liability of newness suggests that newer firms are disadvantaged vis-à-vis older firms because newer firms lack experience, lack external ties and lack legitimacy. The return on investment in older firms is likely to be higher because it has benefited from exposure, repetition and learning by doing that assist older firms to refine their strategies and build firm-specific human capital. Younger companies are more dynamic and more volatile in their growth experience than older companies are. Maturity brings stability in growth as firms learn more precisely their market positioning, cost structures and efficiency levels. Older firms are prone to inertia, and the bureaucratic ossification that goes along with age; they might have developed routines, which are out of touch with changes in market conditions, in which case an inverse relationship between age and profitability. Newer and smaller firms, as a result, take away market share in spite of disadvantages like lack of capital, brand names and corporate reputation with older firms.

5.4 Recommendations

5.4.1 Recommendations for Management

The study recommends the management on firms listed at the Nairobi Securities Exchange to focus on leverage, liquidity, asset tangibility and firm size since they were found to have a significant effect on the financial performance. This study noted that leverage, liquidity, asset tangibility and firm size contributed largely towards a financial performance of firms. Leverage helps to access the financial risks. It also helps in attaining trading on equity. Achieving leverage can enable significant competitive advantages despite the risk, however, as it can accelerate the speed of revenue acquisition exponentially.

Liquidity is a crucial factor in a firm. Inability to meet the short-term liabilities may affect the company's operations and in many cases, it may affect its reputation too. Lack of cash or liquid assets on hand may force a company to miss the incentives given by the suppliers of credit, services, and goods. There is always a need for the company to maintain certain degree of liquidity. Supplier of goods will check the liquidity of the company before selling goods on credit. Employees are also have interest in the liquidity to know whether the company can meet its employees' related obligations.

The firm size is crucial in a company due to their market power larger firms are able to charge higher prices and hence earn higher profits. Additionally, higher profits could also be result of economies of scale and stronger negotiating power that provides larger firms more favorable financing conditions.

The Nairobi Securities Exchange and Capital markets authority supervisory framework guidelines should be adhered to foster credibility and performance of the listed companies.

5.4.2 Policy Recommendations

The study found out that the firm level factors have a significant effect on financial performance of firms listed at the Nairobi Securities Exchange. Therefore, the researcher recommends that the policy makers in the financial sector to embrace indicators such as leverage, liquidity, asset tangibility and firm size on their strategic decision-making. These indicators will further guide in expanding the interpretation of the financial dynamics in the listed firms at the Nairobi securities exchange and other related firms. The government policy makers will also find the findings beneficial in interpreting of performance of the listed companies based on the firm level factors.

5.4.3 Academic Recommendations

The current study has contributed knowledge on firm level factors and it has further advanced the existing literature on financial performance. The study recommends that the academicians and scholars should team up to develop theories financial performance that will enhance the knowledge of finance in the developing world instead of relying more on theories from the western world.

5.5 Contribution to the Body of Knowledge

The study contributed to the body of knowledge in the following ways; the findings of the study will assist the firm managers to evaluate leverage, liquidity, asset tangibility and firm size and firm age as the study discovered that the stated factors contribute to financial performance. By undertaking the study, the firm level factors and financial performance was explored. This went a long way in adding value to the past findings and enabled users have information and a deeper understanding of the need for enhancing leverage, liquidity, asset tangibility and firm size and firm age to improve on financial performance. The study also offered a logical ground on which empirical indicators and hypotheses could be identified and tested to verify the theories. It contributed to the body of knowledge and to other researchers, as they will be able to

appreciate the effects of the stated factors, inspire similar and further research in other areas, and contribute to the existing literature on financial performance.

5.6 Areas for further research

This study sought to determine the effect of Firm Level Factors on Financial Performance of Listed Firms in the Nairobi Securities Exchange only, thus area for further studies could consider other companies in Kenya for purpose of making a comparison of the findings with those of the current study.

This study used only five variables that is leverage, liquidity, asset tangibility and firm size as the only variables that influence financial performance. Future studies can incorporate other variables like exchange rates, economic growth and inflation rates since they can influence financial performance.

This study used firm age as a moderating variable. There are other factors that can affect by mediating or intervening that could be researched further for example exchange rates. Therefore, future studies can introduce other moderating or an intervening variable in their models.

Since the R squared was not 100% it seems there are other firm level characteristics that affect financial performance that were not addressed by the study. Other studies should therefore focus on other firm level characteristics for example growth and profitability that affect financial performance.

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APPENDICES

Appendix I: Target Population

No	Firms Listed in NSE
	Agricultural
1	Eaagads Ltd
2	Kakuzi Ltd
3	Kapchorua Tea Co. Ltd
4	The Limuru Tea Co. Ltd
5	Rea Vipingo Plantations Ltd
6	Sasini Ltd
7	Williamson Tea Kenya Ltd
	Automobiles and Accessories
8	Car & General (K) Ltd
9	Marshalls (E.A.) Ltd
10	Sameer Africa Ltd
	Banking
11	Barclays Bank of Kenya Ltd
12	CFC Stanbic of Kenya Holdings Ltd
13	Diamond Trust Bank Kenya Ltd
14	Equity Bank Ltd
15	Housing Finance Co. Kenya Ltd
16	I&M Holdings Ltd
17	Kenya Commercial Bank Ltd
18	National Bank of Kenya Ltd
19	NIC Bank Ltd
20	Standard Chartered Bank Kenya Ltd
21	The Co-operative Bank of Kenya Ltd
	Commercial and Services

No	Firms Listed in NSE
22	Express Ltd
23	Nation Media Group
24	Standard Group Ltd
25	TPS Eastern Africa (Serena) Ltd
26	Scangroup Ltd
27	Hutchings Biemer Ltd
28	Longhorn Publishers Ltd
29	Atlas Development and Support Services
30	Deacons (East Africa) Plc
	Construction and Allied
31	ARM Cement Ltd
32	Bamburi Cement Ltd
33	Crown Paints Kenya Ltd
34	E.A.Cables Ltd
35	E.A.Portland Cement Co. Ltd
	Energy and Petroleum
36	KenGen Co. Ltd
37	KenolKobil Ltd
38	Kenya Power & Lighting Co Ltd
39	Total Kenya Ltd
40	Umeme Ltd
	Insurance
41	British-American Investments Co. Ltd
42	CIC Insurance Group Ltd
43	Jubilee Holdings Ltd
44	Kenya Re Insurance Corporation Ltd
45	Liberty Kenya Holdings Ltd
46	Pan Africa Insurance Holdings Ltd

No	Firms Listed in NSE
	Investment
47	Centum Investment Co Ltd
48	Olympia Capital Holdings Ltd
49	Trans-Century Ltd
50	Home Afrika Ltd Ord 1.00
51	Kurwitu Ventures
	Investment Services
52	Nairobi Securities Exchange Ltd
	Manufacturing and Allied
53	B.O.C Kenya Ltd
54	British American Tobacco Kenya Ltd
55	Carbacid Investments Ltd
56	East African Breweries Ltd
57	Mumias Sugar Co. Ltd
58	Unga Group Ltd
59	Eveready East Africa Ltd
60	Kenya Orchards Ltd
61	A.Baumann CO Ltd
62	Flame Tree Group Holdings Ltd
	Telecommunications and Technology
63	Safaricom Ltd
	Real Estate Investment Trust
64	Stanlib Fahari I-REIT

Appendix II: Secondary Data Collection Template

Year	Firm	Total debt	Total asset	Current asset	Current liability	Number of years in operation	Fixed asset	ROA	ROE
2011	1								
2012	1								
2013	1								
2014	1								
2015	1								
2016	1								
2011	2								
2012	2								
2013	2								
2014	2								
2015	2								
2016	2								