EFFECT OF FREE CASH FLOW ON FINANCIAL PERFORMANCE OF FIRMS LISTED ON THE NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

This research project is my original work and has never been presented for partial award of postgraduate degree in any other university or academic institution for academic credit other than the University of Nairobi.

Signed ………………………………………..Date……………………………………

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The research has been submitted to the examining panel through my approval as the University Supervisor

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DEDICATION

I wish to dedicate this project to my entire family especially to my Mother Mrs Edith Njogu for

her support and encouragement, to My Children Keynes and Mweru I encourage them to work

hard in school and achieve their dreams.

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LIST OF ABBREVIATIONS

CMA - Capital Markets Authority

EBIT- Earning before interest and tax

DPR - Dividend Payout Ratio

FCF - Free Cash Flows

KSE- Karachi Stock Exchange

MM - Modigliani and Miller

NPV - Net Present Value

NSE - Nairobi Securities Exchange

ROAs- Return on assets

ROE – Return on equity

ROCE – Return on capital employed

ABSTRACT

In an organization free cash flow increases the tendency to hold a large share of a firm's assets in form of cash, which can be used in investment projects or payment of shareholders. Managers can decide to make profitable investments, which may end up increasing returns and the general profitability of the firm. However, poor investment and utilization of FCF have negative influence on the firms' profitability. The main objective of this study was therefore to examine the effect of free cash flow on financial performance of listed firms in NSE. The researcher used a descriptive survey design and the target population comprised of 65 firms that were listed in Nairobi Securities Exchange from the year 2013 to December, 2017. This study made use of 30 per cent of the companies listed in Nairobi Security Exchange and hence the sample size was 19 companies, which were selected using systematic sampling technique. This study used secondary panel data, which was collected form Capital Market Authority and Nairobi Security Exchange. Secondary data comprised of quantitative data. Inferential and descriptive statistic was used to analysis the quantitative data. Descriptive statistic entailed calculation of percentage, frequency, standard deviation and mean. Multiple regression analysis was used during the study to determine the existing relationship between free cash flow (independent variable) and financial performance (dependent variable). The study found that free cash flow has significant effect on the financial performance listed firms in NSE. The results revealed that liquidity ratio, investment and leverage have a significant influence on the financial performance the listed firms in NSE. Further, the study established that the size of firm and sales growth had no significant effect on the financial performance of the listed firms in NSE. This study recommends that firms listed in NSE should increase their free cash flow so as to improve their profitability. Firms listed in Nairobi Securities Exchange should put their focus on increasing sales volume, revenue and reduce expenses so as to increase their free cash flow. In addition, managers in firms listed in Nairobi Securities Exchange should make informed decisions on their investments so as to ensure that the investments have low risk. In addition, companies listed in Nairobi Securities Exchange should develop or improve their liquidity management practices so as to ensure that their firms remain liquid throughout a month.

CHAPTER 1: INTRODUCTION

1.1 Background of the Study

One of the main objectives of any company is to maximize shareholders' wealth. In regard to the financial performance of a company, this objective is normally realized by looking at its financial position from two perspectives (Buus, 2015). From the asset perspective, the focus is mainly on adding value to the wealth of the shareholders though taking advantage of the investment opportunities available, that is, by investing in positive NPV projects. From the perspective of the capital and liability side the focus is mainly on maximizing value through cost reduction in the financing of a firm's investments. Free cash flow influences shareholders value and hence it is used in the analysis of financial soundness of a company (Manian & Fathi, 2017). Managers that make who invest their companies' free cash flows in NPV projects as a result of efficient utilization of resources increase the value and profitability of their firms. However, managers can also use the free cash flow inefficiently and hence negative affect the value of their firms.

This study was anchored on three theories: Pecking Order, Modern Portfolio and FCF theory. The FCF theory indicates that excess free cash flow can lead to wastage in corporate resources, which might lead to agency cost as a burden to the wealth of stakeholders (Buus, 2015). Pecking Order Theory indicates organizations often prioritize their financial resources by first preferring the use of internal funds, followed by debt and make use of equity as the last option (Eldomiaty, Azzam & Mohamed, 2017). The modern portfolio theory highlights the benefits of diversifying investments and the use of different strategies for investments' portfolio. However, liquidity problems and free cash flow affect firms' ability to diversify its portfolio.

Free cash flow, all over the world, is prone to mismanagement by managers who are often the agents of custodians of shareholders, leading to conflict of interest among the shareholders. Since the economic crisis of 2008 corporate financial distresses have been witnessed in different multinational companies that included the American International Group (AIG) and Citibank (Brush & Hendrickx, 2012). In response the government of United State started financial bailout projects to save these corporations for the financial distress. However, some companies upon receiving the government funding, propose huge bonus compensation plans for the board of directors and management (Guizani, 2018). For instance, AIG proposed a $165 million compensation plan for the senior management. In addition, the availability of free cash flow increases chances of inefficient utilization of resources and even loss of money.

1.1.1 Free Cash Flow

Free cash flow (FCF) refers to the amount money a business is able to generate after deducting capital expenditures like equipment and buildings (Ali, Ormal & Ahmad, 2018). According to Manian and Fathi (2017), free cash flow refers to the liquidity and efficiency ratio that shows how much money a company generates than it uses after subtracting cost the cost of capital expenditures from the operating cash flow. Lachheb and Slim (2017) indicate that FCF is the available net income after clearing all bills, making new investments and making the required capital improvements. It is also defined as the cash flow available in an organization for investment or other uses after meeting on the other business financial requirements and needs; it is also referred to as idle cash flow. Jensen (1988) defines FCF as the amount of cash in excess that is required to finance all positive NPV projects. In an organization, FCF can come from different sources that include sales growth, debt or equity.

Firms can influence their free own cash flow by use of several methods that include increasing the duration of time they take to pay their bills, reducing the time allowed for customers to pay their debts and reducing inventory purchase. In addition, companies differ on the type of items that they can consider as capital expenditures and the ones that cannot be considered to be capital expenditures. Therefore, investors should know that the calculation of FCF differs from one company to another (Ojode, 2014). Free cash flow is related to liquidity in a firm and the maintenance of an appropriate of required liquidity amount is important to the efficient running or a firm's operations. In most organizations, managers have a tendency of holding large amounts of their companies' assets in form of cash or equivalents of cash so as to used it shareholders' payment, keep cash in the firm of reinvest in other physical assets (Ogbeide & Akanji, 2017). Nonetheless, the level of free cash a company can hold at a single point in time is normally described by the companies' policies on capital structure, investments, cash flow management and dividend payments.

1.1.2 Financial Performance

The level of efficiency of a firm's top management is normally measured though its performance as this reflects the efficiency of every individual in the company in performing their tasks. In addition, the performance of an organization shows how effectively and efficiently resources are utilized (Khidma & Rehman, 2014). Financial and non-financial performances are the two main categories of performance measurement. Financial performance is measured in terms of profitability, ROI, profit margin, ROE and ROA. Non-financial performance includes customer satisfaction, adoption rate of new products and market share.

Profitability is the capability of an enterprise or a firm to generate profits from its business activities. Lai, Latiff and Qun (2017) indicate that one of the main objectives of a firm its profit

maximization. The measurement of a company's profitability plays a major role in showing which strategies need to be revised or which ones needs to be introduced to increase inefficiency in the utilization of the available resources. Therefore, profitability ratios are used in the determination of the bottom line of a company and its investors' returns.

Most companies, globally, make use of financial performance measures such profit margin ratio, ROA, ROI and ROE. According to Eldomiaty, Azzam and Mohamed (2017), ROA is one of the most importance measures of financial performance. It generally shows how efficient management of assets in a firm generates income. Return on assets is the value obtained after dividing net income value against the values of total assets. Return on equity is a profitability measure of a company in relation to the shareholders equity book value. It is a result obtained through dividing net income of a firm with the shareholders equity. Return on investment is considered to be the ratio of net profit in a firm and its investment cost.

1.1.3 Relationship between Free Cash Flow and Financial Performance

Proper and appropriate planning of the components of working capital enables a firm to increase its free cash flows. If this free cash flow can be invested in profitable investments, they can generate profits for the firm and hence increase its general financial performance. Reduction of a firm's expenses and costs considerably affects the availability of free cash flows, which in turn allows the firm to take advantage of available investment opportunities that can subsequently lead to a high yield in positive NPV. Besides impacting profitability and revenues, free cash flow also impacts the balance sheet management of a firm. In case a firm fails to properly manage its working capital, free cash flow might decrease to a level lower than its net earnings.

Ojode (2014) indicates that FCF positively affects firms' financial performance and that improvement in free cash flow subsequently leads to improvement in the firm's profit and hence an increase in financial performance. However, this only happens when the management of the firm invests in positive NPV projects. In addition, the management of firms holding free cash flow can make a decision to hold the cash for speculative purposes as they wait for to invest business activities that are more profitable. Also, firms can also make a decision to invest in high risk investments with high returns probability. These investments can later yield better returns and hence make a company more profitable. Nonetheless, poor investment and utilization of free cash flow negatively affects firms' profitability. In addition, if a firm invests in very risky investments it may end up losing the cash.

Studies on free cash flow and financial performance show mixed results. For instance, Ogbeide and Akanji (2017) indicate that cash flow had significance influence on firm's financial performance (ROS and ROE) in Nigeria. In Malaysia, Lai, Latiff and Qun (2017) found that FCF has a negative effect on ROS and ROE. In Kenya, Mutende, Mwangi and Ochieng (2017) found that there was significant association between FCF and the firms' financial performance. However, Ojode (2014) found that free cash flow had an inverse significant effect on firms' profitability.

1.1.4 The Nairobi Securities Exchange

The NSE began when Kenya was still under British colonial rule and this was in 1954. It began as an overseas share exchange market and had the permit from the London market. NSE has membership in the African Share Exchanges Association. In terms of volumes of trading, it is the fourth largest share exchange market in Africa and the fifth in terms of the capitalization of the market as a percentage of Gross Domestic Product. The Exchange works in association with the

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security exchange firms in Dar es Salaam and Uganda, not excluding cross listing of numerous equities (Nairobi Security Exchange, 2017). In 2016, Electronic Trading System (ETS) was commissioned and is used in trading. The shares of 65 companies are listed in NSE. The companies are categorized into: services, commercial and construction and allied, banking, agricultural, automobile and accessories, investment services, energy and petroleum, investment, manufacturing firms and allied, exchange traded funds, insurance, real estate investment, technology and telecommunication.

Between the year 2016 and 2017, the NSE 20 share index decreased by 19.90 per cent. According to the Capital Market Authority (2017) report, this decline was attributed to poor financial performances of listed in companies in NSE, which led to some of the issuing profit warnings. This was also attributed to the uncertainties related to the introduction of the interest rate capping in the year 2016. In the year 2015, the total number of profit warnings amounted to eighteen and the same number issued profit warnings in the year 2016. Companies that have issued profit warnings in the last 3 years include Car and General, East African Cables, Standard Chartered Bank, Uchumi Supermarket, Express Ltd, Standard Group, Atlas Development, TPS East Africa, Mumias Sugar, BOC, Liberty Holdings, Pan African Insurance, BRITAM, Home Africa and Kurwitu Ventures among others (Nairobi Security Exchange, 2017).

1.2 Research Problem

Free cash flow increases the tendency of managers to hold a large share of a firm's assets in form of cash, which can be used in investment projects, shareholders' payment of be kept in the firm. Managers can decline to invest on FCF so as to protect the interest of shareholders. They can hold on to the FCT or invest in negative NPV projects that may end benefiting them through allocation of bonuses and investment in internal projects. The problem of conflicting interest

among organizational shareholders incase payout policies are unfavorable and a firm is generating substantial amount of FCF. Therefore, the decision on how to utilize free cash flow in an organization can influence its ability to generate profits and hence influence financial performance.

In the last five years, different companies have been issuing profit warnings in Nairobi Stock Exchange highlighting poor performance. In the year 2013, 11 companies listed in NSE issued profit warnings. In the year 2015, the number of companies whose profits decreased by more than 25% in Nairobi Security Exchange increased to 18, from 11 in the year 2014. The introduction of interest rate capping by the government of Kenya significant affected the performance of firms listed in NSE. Debt being one of the sources of finance to many firms, interest rate capping influenced the accessibility of debt and hence free cash flow in these firms. In one day, listed commercial banks lost Ksh. 47 billion as a result of foreign investors retreat. In November 2016, Family Bank issued a profit warning indicating that its profits were expected to decrease by more than 25 per cent, an issue that was attributed partly to interest rate capping (Ngugi, 2016). In June 2017, the Capital Market Authority fined the National Bank of Kenya for failing to issue profit warnings for its less more than 25 per cent decrease in profits in the year 2016. In the year 2015, the Standard Chartered bank also issued profit warnings as a result of poor performance.

Numerous studies have been carried out on free cash flow and financial performance globally and locally. For instance, Ali, Ormal and Ahmad (2018) researched on the influence of FCF on profitability of automobile firms in Germany and found that free cash flow was positively and significantly associated with profitability. Manian and Fathi (2017) researched on the influence

of FCF on performance prediction in listed companies in Tehran Stock Exchange and found that free cash flow negatively affects return on equity, but positively affects return on assets.

Regionally, Ogbeide and Akanji (2017) examined the association between FCF and financial performance of selected insurance firms in Nigeria and established that the association between FCF and ROE and ROS was insignificant. Lachheb and Slim (2017) examined the effect of FCF on firm performance in Tunisia and found that FCF had a positive influence on firm value and operating performance. Ikechukwu, Nwakaego and Celestine (2015) researched on the influence of FCF on profitability of listed automobile firms'and found that FCF was positively and significantly associated with listed automobile firms' profitability.

Studies conducted in Kenya show mixed findings on the association between FCF and financial performance. Mutende, Mwangi and Ochieng (2017) researched how free cash flow influenced the performance of listed firms in NSE and established that there was significant association between FCF and firms' financial performance. Ojode (2014) conducted a research to assess the relationship between FCF and financial performance of the firms that were listed in NSE and found that FCF had an inverse significant effect on firms' profitability. In addition, studied conducted in Kenya on the influence of free cash flow on financial performance covered the period before the year 2016 when interest rate capping was introduced. Interest rate capping influences free cash flow availability. This study therefore sought to answer the question: what is the effect of the effect of FCF on financial performance of firms listed in NSE?

1.3 Research Objective

The objective of the study was to examine the effect of free cash flow on financial performance of firms listed on the NSE.

1.4 Value of the Study

The study's findings is beneficial to academicians and researchers, local and foreign investors, financial analysts and consultants, as well as policy makers. To other researchers and academicians carrying studies on the association between FCF and financial performance, the study provides research material that can be used as literature review. Also, the study provides essential information (to the body of knowledge) on the effect of cash flow on financial performance. In addition, the study forms a basis for further research to fill in the research gaps in the finance field.

The stock market and more specifically companies listed in Nairobi Security Exchange play a tremendous role in development of national economic. Hence, policy makers the study provides information on how free cash flow affects firm's financial performance and how the information can be used to develop FCF policies aimed at improving financial performance.

To the local and foreign investors, the study provides useful information which should be taken into consideration when making critical investment decision as well as diversification of firm's portfolios with the intent of improving organizational performance. To all consultants and financial analysts, the study provides information on how they can improve on their financial performances through making critical investment decisions.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This study is informed on the basis of several theoretical frameworks that operating cash flow as well as the extent to which operating policy affects performance of corporate company. This chapter covers the literature review on key indicators of organizational financial performance. The section also entails presentation of theoretical and literal review, summary of the literature review and presentation of conceptual framework on previous studies related to effect of FCF on firms' financial performance.

2.2 Theoretical Review

The study was based on three theories which include: Modern Portfolio Theory, Pecking Order Theory and Free Cash Flow Theory. The theories tend to provide theoretical evidences or arguments made by various academicians and scholars with regard to the effect of FCF on firms' financial performance.

2.2.1 Free Cash Flow Theory

The theory of free Cash Flow was developed by Michael Jensen in the year 1988. It indicates that managers with access or responsible for free cash flow in an organization will prefer to invest the negative present values (NPVs) instead of paying it as a divided to shareholders. Jensen (1988) also indicated that cash flow in an organization involves all cash flow that remains after an organization has investment on available positive NPV projects.

The theory also indicates that free cash flow can be considered idle cash flow at the discretion of the management to allocate. In addition, excess free cash flow would lead to wastage in corporate resources, which might lead to agency cost as a burden to the wealth of stakeholders (Buus, 2015). Further, the theory indicates that on top of free cash flow the management's self-

interest motive is a key factor that may lead to agency costs. This is mostly true when the interests of the management and stakeholders are in conflict. As a result, the interests of stakeholders are dominated by those of the management. Buus (2015) indicates that in case a firm generates has an excessive free cash flow and there are no profitable investments available at the moment, the management of the firm can abuse the free cash at hand leading to an increase in agency costs, wrongful investments as well as inefficient allocation of resources.

The FCF theory was used in this study to show the how firms' financial performance is affected by free cash flow. The availability of FCF among listed firms in the absence of profitable investment opportunities, can lead to misuse of available resources or inefficient allocation of resources by the firms' management. This is because managers of a listed firm may prefer to make use of the FCF rather than pay it to the shareholders as dividends. This may in the long run lead to reduced profits or even losses. This argument is supported by Lin and Lin (2014) argument that too much cash flow might negatively affect the profitability (ROS and ROE) of firms.

2.2.2 The Theory of Pecking Order

Pecking order theory was developed in the year 1984 by Majluf and. Myers. The theory indicates that financing cost in a firm increases with the increase in information asymmetry (Myers & Majluf, 1984). The three main sources of financing include internal funds, equity and debt. Firms normally prioritize their financial sources by first preferring the use of internal funds, debts and utilization of equity as the last option. Therefore, organization start by using internal funds and when these funds are completely used they issue debt. When it becomes no longer reasonable and practical to use debt, firms issue equity (Eldomiaty, Azzam & Mohamed, 2017).

This theory indicates that firms observe and follow the financing sources' hierarchy and prefer to utilize internal funds when they are available. However, when internal funds are not enough, debt is preferred over equity (Myers & Majluf, 1984). This is because equity would lead to issuance of shares, which subsequently means that there is an introduction of new external ownership in the firm. However, the decision to borrow (debt) is a signal that the company requires external financing.

The pecking order theory has two assumptions. First, it assumes that firm managers have more information pertaining to organizational prospects compared to investors. Therefore, when a firm makes a decision to issue equity to pool resources to finance the new investments, it is considered by other or external investors as a signal that the prospects of the firm are not very good. The investors may argue that the new equity issuance is undervalued and hence lead to a decline in the share prices of a firm (Mukherjee & Mahakud, 2012). The theory also assumes that managers will always do their level best to protect the interest of an organization and its shareholders so as by improving on organizational performance. Therefore, managers will even make a decision to forego positive NPV projects, if taking them would make the company to offer undervalued equity at a high cost to new investors, thus compromising the existing shareholders.

The pecking order theory explains how FCF can influence the performance of firms. Companies make use of the three sources of financing: internal funds, equity and debt. These sources of financing have an influence on the availability FCF in a firm. For instance, a firm cannot go for debt until it depletes its internal funds. The depletion of the internal funds is the reduction in free cash flow. In addition, a company will prefer the use of debt to increase its FCF as compared to the use of equity issuance. However, the need for another source of financing depends on the

firm's management honesty and the efficient utilization of resources. In addition, the utilization of the provided finances efficiently can lead to an increase in profitability, but inefficient utilization of these resources can lead to a negative performance. Therefore, the use of debt and equity sources of funds to increase FCF can either lead to improvement or decrease in the financial performance of a firm.

2.2.3 The Theory of Modern Portfolio

The theory of modern portfolio was founded by Harry Markowitz in the year 1952. This theory focuses on the maximization of returns through risk minization. It highlights the benefits of diversifying investments and the use of different strategies for investments' portfolio. The concept in this theory is that having different types of financial assets has less risk as compared to having one type of financial asset. This theory is normally applied investments like options, stocks, bonds as well as futures (Lachheb & Slim, 2017). Modern portfolio theory looks at investment through the examination of the economy and the entire stock market. This theory is considered as an alternative to the older portfolio allocation methods that looked at analyzed the merits of each investment. Using this theory, investors look at the merits of each investment, they analyze a single investment worrying on how different types of investments with perform in relation to each other. In contrast, modern portfolio theory emphasizes on the correlation between various investments.

Modern portfolio theory shows how risk in a portfolio can be reduced through the combination of assets whose returns show the existence of below perfect positive correlation. By exploiting the low correlation between assets, modern portfolio theory shows that incase the correlation between any two assets is quite low, then the portfolio risk is less than the average risk of the assets. A portfolio can be reduced by distributing the available investment funds in various

opportunities, each with different levels of risks. Over the years, investors have been using equity and property as their main investments (Bäuerle & Grether, 2015).

The MPT theory indicates that the management of property is associated with high costs, which are normally increased by scattered portfolio where it is impossible to obtain scale of efficiencies. Other additional costs include monitoring charges by the management agencies. Therefore, some investors prefer to concentrate their portfolio in a few markets thus disregarding the benefits of diversification. Liquidity problems affect the ability of a firm to diversify its portfolio.

2.3 Determinants of financial performance

Financial performance is a measure of financial activity of any firm in terms of ROE as well as ROS. In detailed explanation, financial performance the extent in which anticipated financial objectives are accomplished. It is also a process of measuring organizational results with regard to operationalization of monetary terms and policies. Moreover, it is used in measuring the overall financial health of a firm over a stipulated time frame and in making comparison on organizational performances which are in aggregation. Financial performance a measure of the performance level of a given firm within a stipulated time frame and it is normally expressed in terms of overall profitability or losses incurred during the specified period under performance evaluation (Bäuerle & Grether, 2015).

Hence performance is the indicator of how efficiently the organization is managed and how effectively and efficiently the human and other resources are utilized in the firm. Financial Performance is a representation of firm's profitability ratio before tax charges are imposed on total assets- a key variable that indicates the capacity of an institution to generate income from

available assets. The key measures of performance of firms include: growth in sales, firm size, current assets, investments and leverages (Buus, 2015).

2.3.1 Size of the Firm

According to Ikechukwu, Nwakaego and Celestine (2015), the variables which are used in measuring of firm size are the value of total assets as turnovers. Larger firms are in a position to enjoy much higher turnovers compared to smaller firms since they are in a better position to access capital markets (Guizani, 2018). Different academicians have used different indexes to measure performance of firms. For instance, Khidmat and Rehman (2014) used the sales logarithm; Manian an Fathi (2017) made use of the assets logarithm while Lachheb and Slim (2017) made use of the value of capital market logarithm. Due to factors such historical values of assets, the use of sales is much better to determine the firm size compared to other indexes. Therefore, natural net logarithm of sales is employed in this research to determine the size of the firms.

2.3.2 Leverage

Leverage is also a key factor used in measuring financial performance; it is normally measured by use of diverse financial ratios. According to Tarasi and Walker (2013), leverage is a ratio of the total debt of a firm and its total equity or a ratio of total debt of a firm to its total asset values (variable used in this study). Leverage ratio negatively affects the profitability of a firm due to the fact that, increase in debt values tend to require the firm to generate more resources so as to repay its debt thus led to reduction in investment funds. The findings of Ogbeiden and Akanji (2017) revealed that high leverage decisions tend to reduce conflict which may arise between the firms' shareholders and the management. The leverage sometimes acts as a punitive tool which control or inhibit the management of the firms from excessive utilization of their resources.

2.3.3 Sales Growth

Sales growth is another measure of financial performance, sales growth of any firm is normally measured in terms of its ability to achieve anticipated sales growth. Sale growth enables a firm to gain additional income, facilitate expansion of the firm thus result to increase in its profitability (Mutende et al., 2017).

2.3.4 Investment

The physical investment capital is anticipated to positively affect the profitability of a firm in that it result to improvement in production and sales, generation of more cash flow. Using the available data on financial statements and assumption that most of new investments are materialized by increase in fixed assets, the variable is normally calculated in terms of growth rate of the gross fixed assets within a period of two consecutive years (Khidmat & Rehman, 2014).

2.3.5 Working Capital/Liquidity

Liquidity is the inefficient management of working capital where firm that has more than enough stocks or receivables which make it difficult for a firm to sell its products or generate more revenue from previous sales and thus resulting to negative impact on performance (Lin & Lin, 2014).

2.4 Empirical Review

Ali, Ormal and Ahmad (2018) researched on the influence of FCF on profitability of automobile firms in Germany. The study used times series analysis and from the year 2007 to 2016. The results indicated that FCF has a positively and significantly associated with listed automobile firms' profitability (return on assets). However, leverage had an inverse and insignificant effect on return on assets. In Pakistan, Khidmat and Rehman (2014) examined how FCF influenced the

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performance of listed firms in Karachi Stock Exchange. A total of 123 companies from 8 different sectors were used in the study and covered a period of between 2003 and 2009. The study found out that there was significant association between agency costs and FCF. In addition, the study found that FCF has negative influence on financial performance of listed firms in Karachi Stock Exchange.

In Iran, Manian and Fathi (2017) studied the influence of FCF on the performance prediction in listed companies in Tehran Stock Exchange. The study focused on 102 companies listed in TSE and covered a period of between 2011 and 2015. The results indicated that FCF has a negative influence on ROE. However, the results also indicated that FCF positively and significantly affects ROE. Lai, Latiff and Qun (2017) researched on the influence of FCF on performance of firms in Malaysia. The study used a panel data from 2008 to 2012. The results indicated that FCF has a negative influence on performance of firms measured in terms of ROS and ROE.

In Nigeria, Ikechukwu, Nwakaego and Celestine (2015) examined the influence of FCF on profitability of banking industry in Nigeria. The study was limited to three commercial banks and covered a period of between 2009 and 2013. The results indicated that operation and financial cash flow have a significant influence on profitability of financial institutions in Nigeria. However, investing cash flow had a negative effect on profitability. Ogbeide and Akanji (2017) researched on the influence of FCF on performance of insurance companies in Nigeria. The study used time series data and covered the period between 2009 and 2014. The study found that FCF has a significant influence on performance of listed insurance firms measured in terms of ROE and ROS. However, the relationship was not statistically significant.

Mutende, Mwangi and Ochieng (2017 assessed the influence of FCF on the financial performance of firms that were listed in NSE during the period of 2006 to 2015. The researcher used time series data from the period of 2006 to 2015. The study found that FCF has a significance influence on financial performance the firms that were listed in NSE. Ojode (2014) conducted a research to determine the influence of FCF on financial performance of listed firms in NSE. The study used a descriptive survey design and covered the period between the year 2009 and 2013. The results indicated that capital liquidity and FCF had an inverse effect on firms' profitability. The study thus concluded that free cash flow had an inverse significant effect on firms' profitability.

2.5 Summary of Literature Review

This study is anchored on Modern Portfolio, Free Cash Flow and Pecking Order theories. The FCF theory indicates that excess free cash flow would lead to wastage in corporate resources, which might lead to agency cost as a burden to the wealth of stakeholders. Pecking Order Theory indicates that the three main sources of financing in firms include internal funds, equity and debt. These sources are used to increase liquidity and free cash flow. In regard to Modern Portfolio Theory, the theoretical literature shows that liquidity problems affect the ability of a firm to diversify its portfolio.

The empirical literature indicates that the influence of FCF on financial performance differs from country to country and with different periods to time. Nonetheless, most of the studies conducted outside Kenya shows that FCF has a positive influence on financial performance (Ali, Ormal & Ahmad, 2018; Manian & Fathi, 2017). However, some studies showed FCF has a negative influence on organizational financial performance (Latiff & Qun, 2017). In Kenya, studies conducted on the influence of free cash flow on organizational financial performance show

mixed findings, with some showing positive relationship (Mutende, Mwangi & Ochieng, 2017) and others showing negative relationship (Ojode, 2014). This study will seek to establish the significance and the relationship between FCF and performance of firms listed in NSE.

2.6 Conceptual Framework

The study examined the influence of FCF performance of firms listed in NSE. The independent variables are free cash flow and control variables (capital liquidity, leverage, investment, sales growth and size of the firm). The dependent variable (financial performance) was measured in terms of ROA. Figure 2.1 indicates a conceptual framework of dependent and independent variable.

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┌─────────────────────────────┐
│      Free Cash flow          │
└─────────────────────────────┘

┌─────────────────────────────┐          ┌──────────────────────────┐
│      Control variables       │          │  Financial Performance   │
│   • Capital Liquidity        │  ─────▶  │   • Return on Assets      │
│   • Size of the Firm         │          │                          │
│   • Leverage                 │          └──────────────────────────┘
│   • Investment               │
│   • Sales Growth             │
└─────────────────────────────┘
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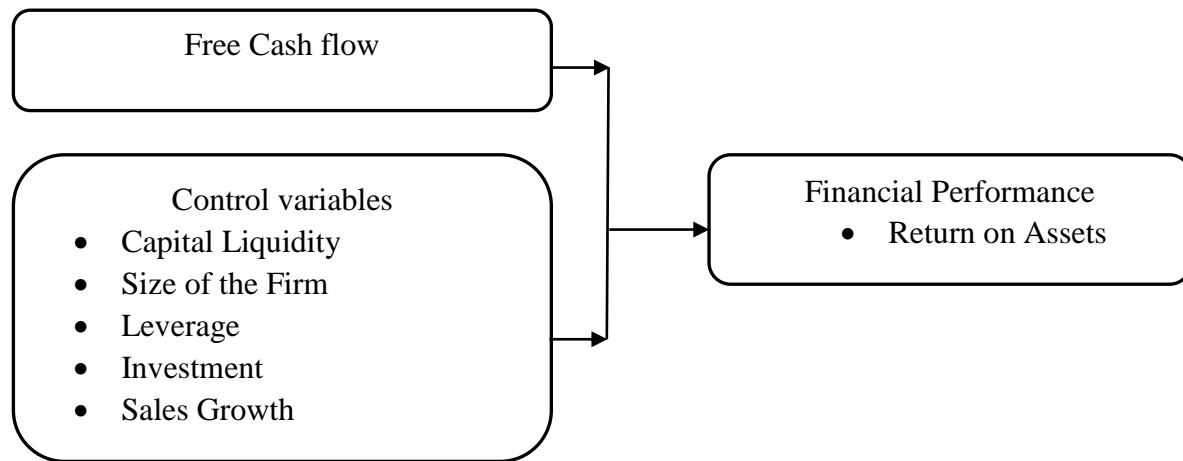
Independent variables   **Dependent Variable**

Figure 2. 1: Conceptual Framework

CHAPTER THREE: RESEARCH METHODOLY

3.1 Introduction

This chapter covers the methods as well as procedures that was used in collection of data and analysis. Specifically, the chapter has sub sections which highlight on research design, the target population, sample size, procedure of collecting and analyzing data.

3.2 Research Design

This researcher used a descriptive survey design to analyze the effect of free cash flow on the financial performance of listed firms in NSE. Descriptive research main describes the characteristics of a phenomenon, population, subject, behavior or object being studied. It involves observation and description of the problem or subject without manipulating of influencing the variables in any way (Babbie, 2009). This research design was adopted in this study as it also involves the establishment of predictions of causal relationships between variables.

A panel data of 65 listed firms in NSE from 2013 to 2017 was used during the study. A panel data set comprises of time series and cross sectional units. A panel data regression model that was used in this study was as shown below.

$$[Y_{it} = \alpha + X_{it}\beta + \mu_{it}] \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(1)}$$

where i represents the number of companies and t subscript represents the time (years); Y signifies the dependent variable (Return on Assets); X symbolizes the independent variable; β represents regression coefficient ; μ is the error term and α is the Y intercept.

3.3 Target Population

A target population comprises of individuals, events or collection of items that are supposed to be investigated (Bhattacherjee, 2012). The target population of a study should show some observable attributes that enables the researcher to generalize the findings. This study's target population comprised of 65 firms that were listed in NSE from the year 2013 to December, 2017. The study used a panel data from the year 2013 to 2017.

3.4 Sample Size

This study made use of 30% of the companies listed in Nairobi Security Exchange. According to Bryman and Cramer (2012), a 30% sample size is adequate for a population below 100. Therefore, the sample size of the study was 19 companies. These companies were selected by use of systematic sampling technique. Starting from the firms company in the list, the researcher selected every 3 company until the sample size of 19 is achieved.

3.5 Data Collection

The researcher used secondary panel data. A panel data is defined as a dataset with observable characteristics of a particular phenomenon over a specified duration. Secondary data is data that is readily available from other sources (Greener, 2008). A data extraction tool was used to obtain data on free cash flow, capital liquidity, leverage, investment, sales growth, size of the firm, ROE and ROE from the annual financial statement report of l9 firms. Other information was obtained from Capital Market Authority and Nairobi Security Exchange.

3.6 Data Analysis

Secondary data comprised of quantitative data. Inferential and descriptive statistic was used to analysis the quantitative data. Both inferential and descriptive statistics enabled the researcher to determine the relationship between dependent (financial performance) and dependent (free cash

flow) variable. Descriptive statistic entailed calculation of percentage, frequency, standard deviation and mean. Otherwise, inferential statistics entailed presentation of regression analysis results which were obtained through the use of statistical package known as STATA version 14.

The study employed multivariate regression analysis to examine the effect of free cash flow on financial performance. While there are several measures of financial performance that include ROE, ROI and ROA, this study measured performance in terms of ROA only.

The regression model will be as follows;

$$ROA = \beta_0 + \beta_{1it}LOG\ (FCF)_{it} + \beta_{2it}CL_{it} + \beta_{3it}SF_{it} + \beta_{4it}L_{it} + \beta_{5it}I_{it} + \beta_{it}SG_{it} + \varepsilon_{it}$$

Where;

      ROA (financial performance) is the dependent variable

      FCF is Free Cash Flow (independent variable)

      CL is Capital Liquidity (control variable)

      SF is Size of the Firm (control variable)

      I is Investment (control variable)

      SG is Sales Growth (control variable)

      i denotes the cross-section dimension

      t subscript denotes the time dimension

      ε is the Error Term

The regression results provided the ANOVA F-test and T-test, which was used in testing significance. R-squared was used in testing variation in financial performance (dependent variable) that could be explained by (free cash flow) independent variable. A test on linear regression assumption was conducted followed by inferential analysis. Shapiro Wilk test was used in determining the normality of data in frequentist statistics. Multicollinearity was examined by the use of variance inflation factor. Linearity was tested by the use of scatter plot.

The study used Breusch-Godfrey Langrage Multiplier test for autocorrelation and Breusch-Pagan test was used to test for heteroscedasticity. The ADF (Augmented Dickey Fuller) unit root test was used to test for the existence of unit root in the variables.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter covers the presentation of the results, interpretations and discussion of the findings as per the purpose of the study, which was to examine the effect of free cash flow on the financial performance the listed firms in NSE. The chapter covers descriptive analysis of the data, followed by testing of regression assumptions, unit root test, Huisman test and regression analysis. The sample size of the study was 19 companies listed in Nairobi Securities Exchange. Data was collected on annual basis for five years, giving 85 observations.

4.2 Descriptive Analysis

In this study, descriptive statistics entailed calculation of standard deviation, mean, maximum and minimum of dependent variable (financial performance) and the independent variable (free cash flow) and control variables (capital liquidity, leverage, investment, sales growth and size of the firm).

4.2.1 Mean Estimation

This sub-section entailed presentation of standard deviation(s), minimum(s), mean (s) and maximum values of the variables. The results were as depicted in table 4.1.

Table 4. 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	95	2.349679	1.961771	-1.34	7.93
LogFCF	95	3.561042	.6465521	1.113943	4.742529
LR	95	.9014789	1.476178	.06	9.67
SoF	95	139730.3	143874.2	2204	646668
SG	95	-5.565895	170.7005	-1521.08	333.02
IV	95	40125.19	76404.99	9	422685
L	95	9991.716	10697.4	22	43268

There were 19 observations for 19 companies listed in Nairobi Securities Exchange covering duration of 5 years (2013 to 2017).

According to the results, the average ROS for the 19 firms from 2013 to 2017 was 2.349679 per cent and the std. dv was 0.2012735 per cent. The minimum ROA was -1.34 per cent and the maximum was 7.93 per cent. In addition, the average Log of free cash flow was an average of 3.561042 and the standard deviation was 0.0663348. The minimum LogFCF 1.113943 and the maximum LogFCF was 4.742529.

Also, the average liquidity ratio for the 19 listed companies for the period between 2013 and 2017 was 0.9014789 and a standard deviation of 0.1514526. The minimum liquidity ratio in all the 19 listed companies for the period between 2013 and 2017 was 0.06 and the maximum was 9.67. The average firm size (total assets) for the 19 companies during the study period was Ksh. 139,730.3 million and the standard deviation was Ksh. 14,761.18 million. The minimum total assets in all the 19 companies during the study period was Ksh. 2,204 million and the maximum total assets was Ksh. 646,668 million.

The average sales growth during the study period for 19 companies was -5.565895 per cent and the standard deviation was 17.5135 per cent. The minimum sales growth in all the companies was -1,521.08 per cent and the maximum was 333.02 per cent. The average investment for the 19 companies during the study period was Ksh. 40,125.19 million and the standard deviation was Ksh. 7,838.987 million. The minimum investment in all the 19 companies during the study period was Ksh. 9 million and the maximum was Ksh. 422,685 million.

In addition, the average leverage measured in terms of total debt for the period between 2013 and 2017 was Ksh. 9,991.716 million and the standard deviation was Ksh. 1,097.53 million. The minimum leverage was during the study period in all the 19 companies was Ksh. 22 million and the maximum was Ksh. 43,268 million.

4.3 Diagnostic Tests

The researcher used diagnostic tests to measure the assumptions of ordinary least squares technique. Diagnostic tests focused on autocorrelation test, heteroscedasticity test, linear test, multicollinearity tests, Haussmann test and unit root tests.

4.3.1 Linearity Test

The main assumption in linear regression is that the existing association between independent variable (free cash flow) and financial performance (dependent variable) is always leaner in nature.

Scatter plots were used to test for the linearity. Similarity between scatter plots and line graphs is that they both use x and y axis when plotting data points. Therefore, the influence of independent variables on dependent variables can be presented in a scatter plot. In a scatter plot, positive value (+1) represents a very perfect correlation while negative value (-1) indicates that there is

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absence of correlation. Values that are very close to +1 and -1, represents a very strong correlation. Otherwise, when a value is very close to zero, it represents a very weak correlation.
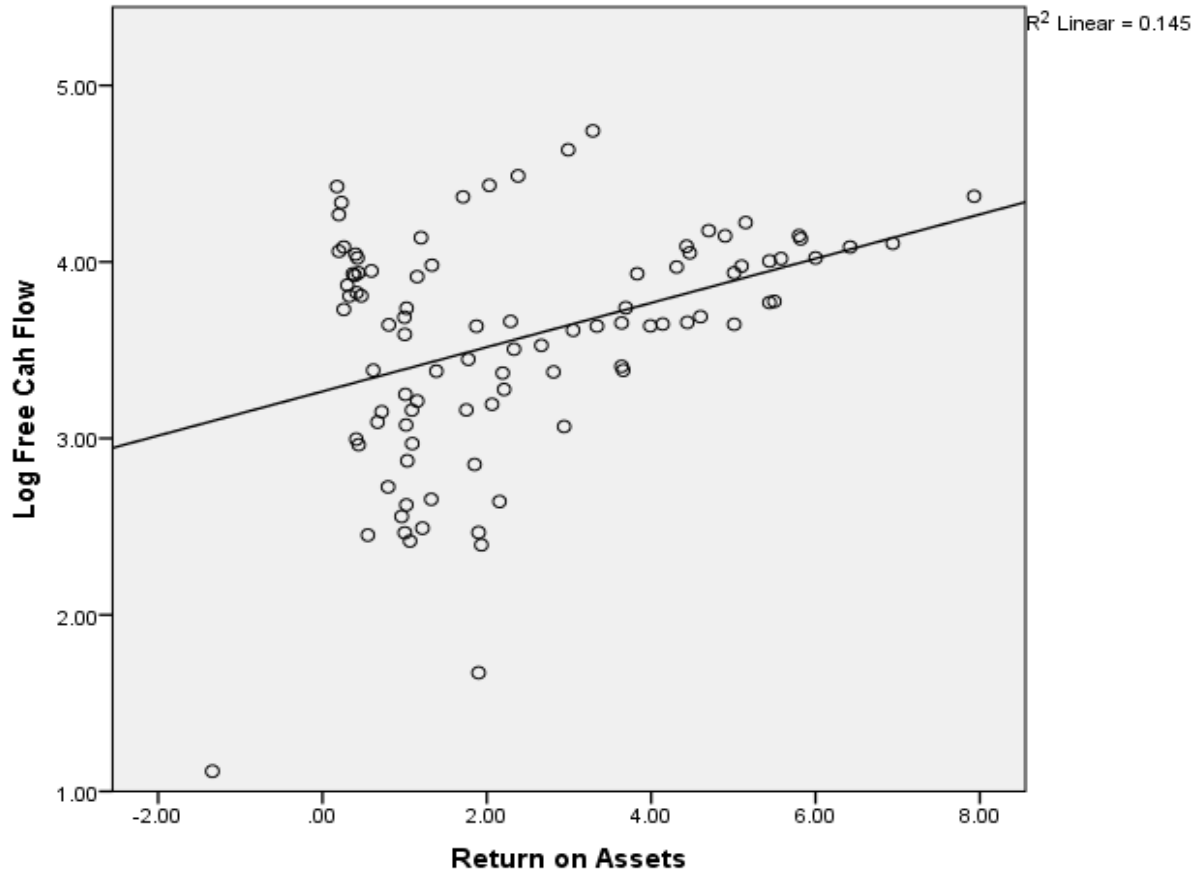
Figure 4. 1: Log Free Cash Flow and ROA

Positive linear relationship between Log FCF (Free Cash Flow) and ROA was determined by the use of scatter plot. Moreover, Log FCF can explain 14.5% (R^2) of financial performances (measured interms of ROA) of listed firms in NSE.
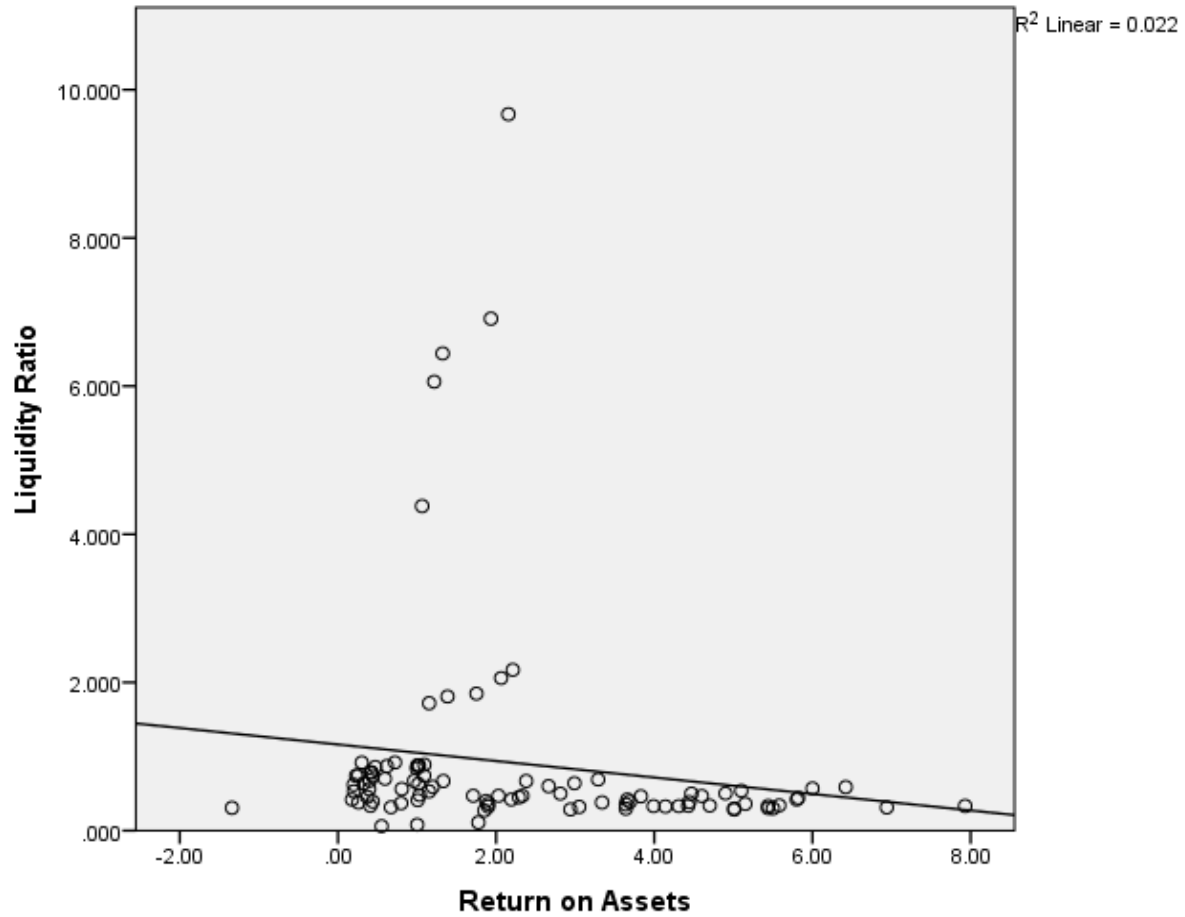
Figure 4. 2: Liquidity Ratio and ROA

The results in Figure 4.2 revealed there was an inverse linear association between liquidity ratio and financial performance. Further, liquidity ratio can explain 2.2% (R^2) of the financial performances (measured in terms of ROA) of the listed firms in NSE.
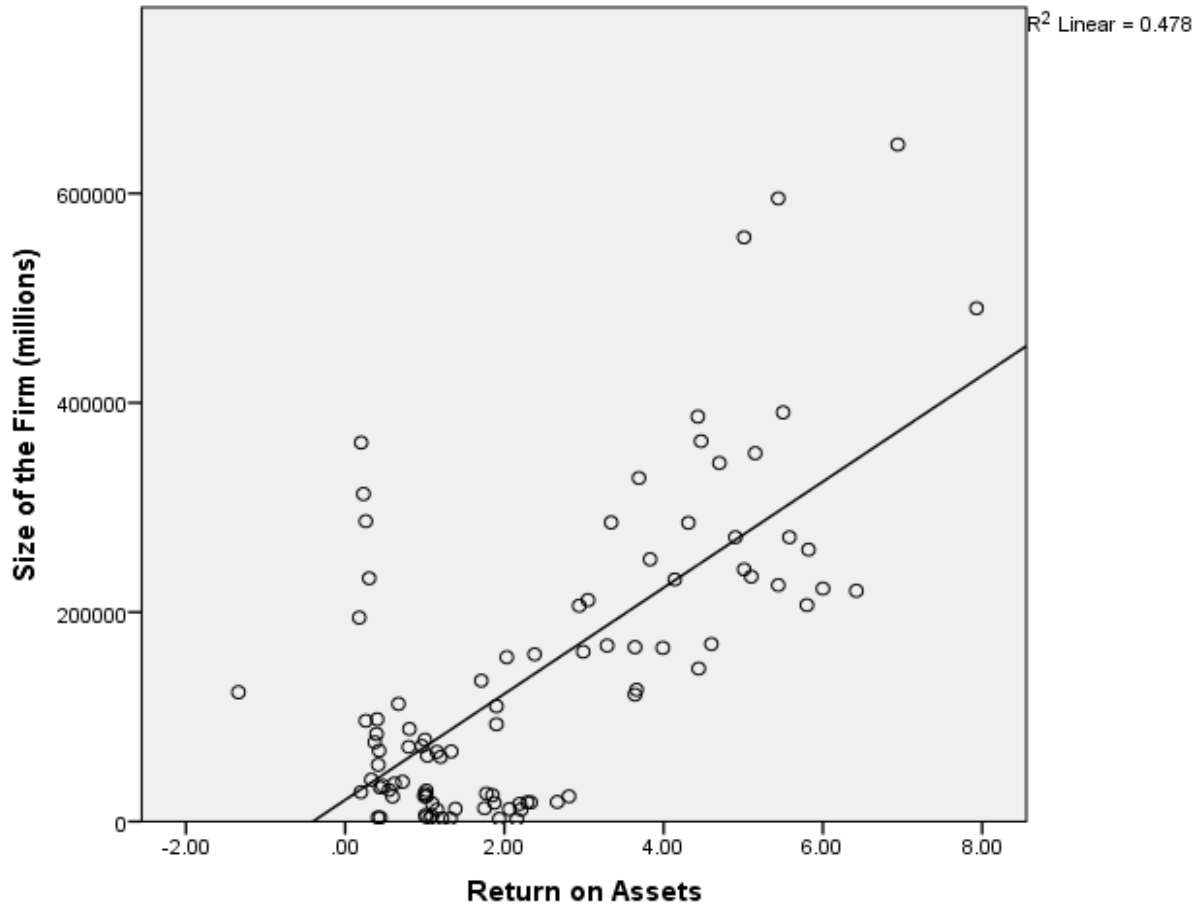
Figure 4. 3: Size of the Firm and Return on Assets

The results in Figure 4.3 show that a direct linear association exists between firm size (total assets) and financial performance. Further, the size of the firm (total assets) can explain 47.8% (R^2) of the financial performance listed companies in NSE.
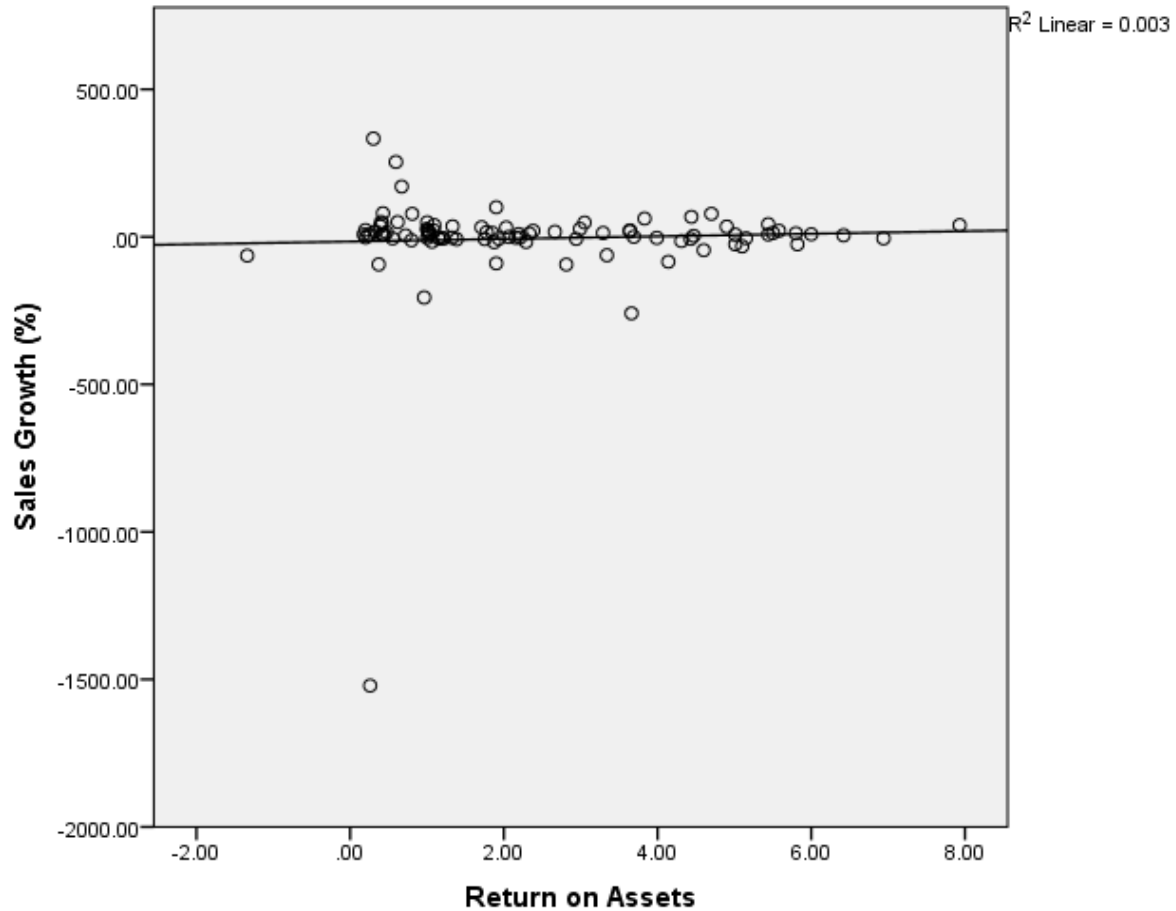
Figure 4. 4: Sales Growth and Return on Assets

As depicted in Figure 4.4, there was a very weak linear association between sales growth and financial performance listed companies in NSE. In addition, sales growth can explain 0.3% (R^2) of the financial performance (measured in terms of ROA) of firms that are listed in NSE.
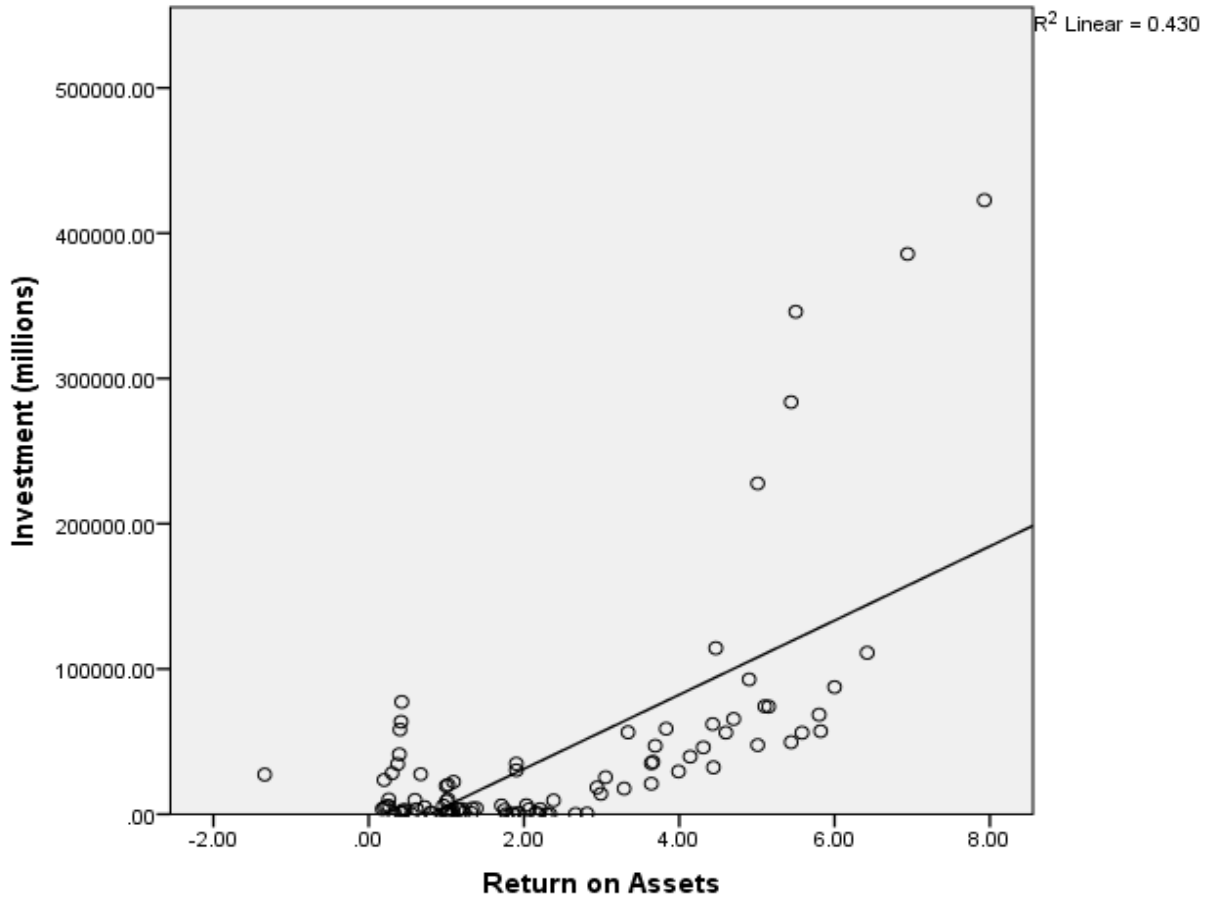
Figure 4. 5: Investment and Return on Assets

As depicted in Figure 4.5, there was a positive and linear relationship between investments and financial performance of the listed firms in NSE. In addition, investments can explain 43% (R^2) of the financial performance (measured in terms of ROA) of the firms that are listed in NSE.
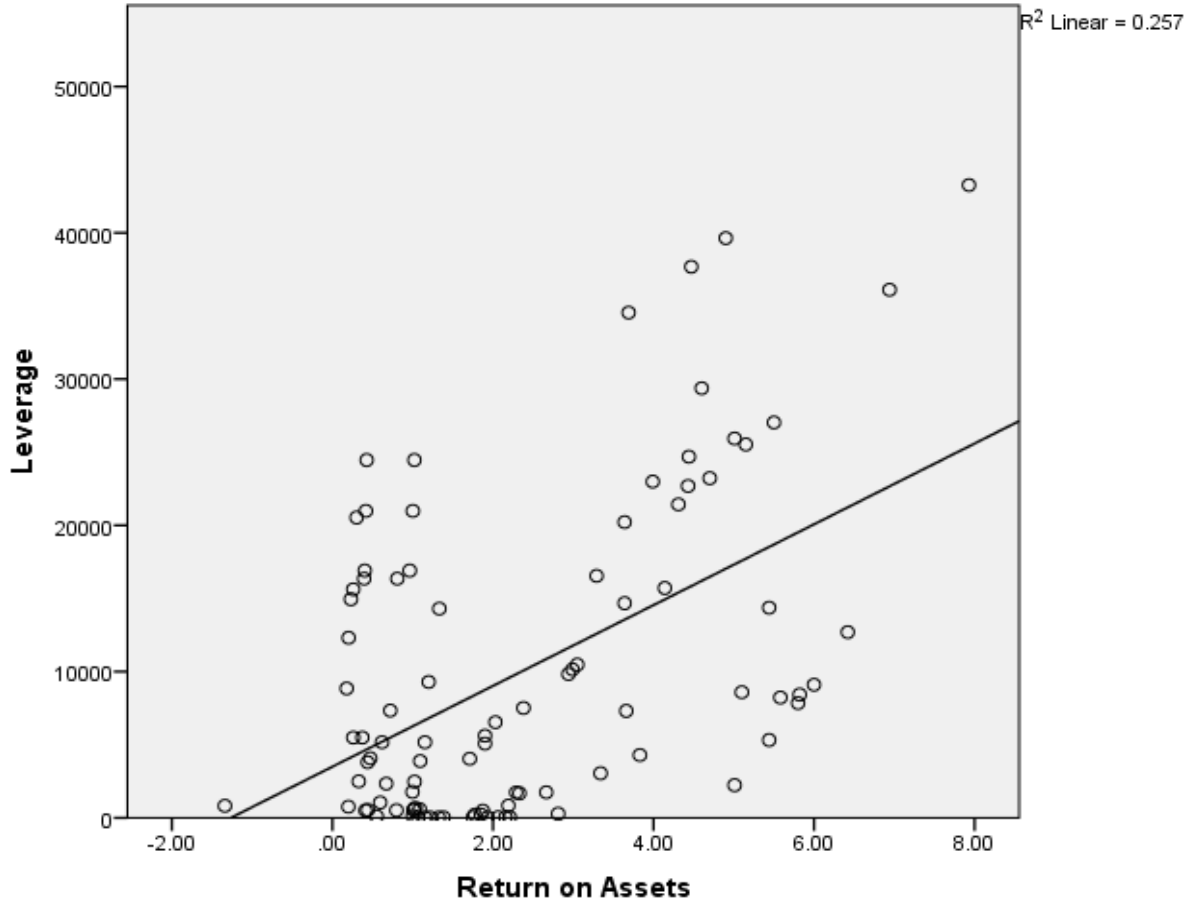
Figure 4. 6: Investment and Return on Assets

As depicted in figure 4.6, there is a linear association between firms 'leverage and financial performance of the listed firms in NSE. In addition, leverage can explain 25.7% (R^2) of the financial performance (measured in terms of ROA) of the listed firms in NSE.

4.3.2 Test for Normality

To test for data normality, the study used Shapiro-Wilk W test (Babbie, 2009). Null hypothesis in Shapiro-Wilk W test is that data is obtained from a population that is distributed normally. Therefore, if p value is much greater than alpha value, the null hypothesis is rejected. Otherwise if the p value is less than alpha value, it denotes that data has not been obtained from a normal

distribution. Moreover, in case the alpha value is above the p value, then it implies that the data is obtained from

Table 4. 2: Tests of Normality

	Shapiro-Wilk		
	Statistic	**df**	**Sig.**
Return on Assets	.915	95	.248
Log Free Cah Flow	.938	95	.312
Liquidity Ratio	.932	95	.289
Size of the Firm	.847	95	.134
Sales Growth (%)	.936	95	.292
Investment	.926	95	.253
Leverage	.851	95	.201

The results indicated that return on assets (p-value=0.248), Log Free Cash Flow (p =0.312), liquidity ratio (p =0.289), firm size (p =0.134), sales growth (p =0.292), investment (p =0.253) and leverage (p=0.201) were normally distributed. These findings imply that the dataset of this study were distributed normally and hence could be used in running inferential statistics.

4.3.3 Heteroscedasticity test

According to Bhattacherjee (2012), Cook- Weisberg test for heteroscedasticity. Heteroscedasticity is defined as population that has different variabilities (dependent and independent variables). Homoscedasticity occurs due to variation in the size of error terms across values of independent variables. When there is an increase in heteroscedasticity, then the degrees of assumption that violates the influence of homoscedasticity.

Table 4. 3: Breusch-Pagan/Cook-Weisberg test for heteroscedasticity

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of ROA

        chi2(1)      =       5.06
        Prob > chi2  =    0.0245
```

As depicted in table 4.4, the p value 0.0245 is less than 0.05 (significance level). This implied that there was homoscedasticity across values of independent variables.

4.3.4 Multicollinearity Test

The presence of multicollinearity is normally determined by Variance Inflation Factor (VIF) when conducting statistical inferences about a particular dataset. The presence of multicollinearity indicates that the data is not reliable. This test is used to provide variance measurement index that tend to increase due to collinearity of a particular estimated regression coefficients. In case the VIF is greater than 10 then there is need to investigate the variables.

Table 4. 4: Variance Inflation Factor

Variable	VIF	1/VIF
SoF	3.37	0.297056
IV	2.63	0.379766
L	2.06	0.486478
LogFCF	1.43	0.701289
LR	1.18	0.845436
SG	1.01	0.988521
Mean VIF	1.95	

From the findings, the VIFs for the variables, size of the firm (3.37), investment (2.63), leverage (2.06), Log Free cash flow (1.43), liquidity ratio (1.19) and sales growth (1.01). This implied that

there was no multicollinearity between the variables and hence the variables were not highly correlated.

4.3.5 Autocorrelation Test

According to Bryman and Cramer (2012), random effect regression or simple OLS regression can tested by the used of Lagrangaian multiplication test. Variances between entities are indicated by Zero value (0), which is the null hypothesis in this test. Across all units, there is absence of panel effect.

Table 4. 5: Breusch and Pagan Lagrangian multiplier test for Random Effects

```
Breusch and Pagan Lagrangian multiplier test for random effects

        ROA[Co,t] = Xb + u[Co] + e[Co,t]

        Estimated results:
                                Var        sd = sqrt(Var)
                       ─────────────────────────────────────
                 ROA      3.848546          1.961771
                   e      .2720187          .5215542
                   u      2.084606          1.443816

        Test:    Var(u) = 0
                              chibar2(01) =    116.04
                            Prob > chibar2 =   0.0000
```

The p value 0.000 was less than 0.05 (significant level), we can conclude that variances across the entities were not zero, implying that there is a panel effect across the units.

4.3.6 Unit Root Test

According to Greener (2008) IPS test is used to test cross section dimensions and time series dimension information. Therefore, the study employed IPS test since it was the most effective method to analyze panel data. A unit root represents a null hypothesis while partial unit roots are used to represent alternative hypothesis.

Table 4. 6: Unit Root Test

Variable	Number of panels	Number of periods	Fixed N exact critical value			P-value
			1%	5%	10%	
ROA	19	5	-2.610	-2.180	-2.000	0.897
Log Free Cash Flow	19	5	-2.610	-2.180	-2.000	0.679
Liquidity Ratio	19	5	-2.610	-2.180	-2.000	0.782
Size of the Firm	19	5	-2.610	-2.180	-2.000	0.983
Sales Growth (%)	19	5	-2.610	-2.180	-2.000	0.872
Investment	19	5	-2.610	-2.180	-2.000	0.782
Leverage	19	5	-2.610	-2.180	-2.000	0.623

The results show that the return on assets (p-value=0.897), Log Free Cash Flow (p-value= 0.679), liquidity ratio (p = 0.782), firm size (p = 0.983), sales growth (p=0.872), investment (p = 0.782) and leverage (p = 0.623). The p-values for all the variables were greater than 0.05 (significant level). This implied that the all variables have unit roots.

4.3.7 Hausman Test

Hausman Test was used to detect the presence of endogenous repressors in a particular regression model (Bryman & Cramer, 2012). The presence of endogenous repressor leads to failure of OLS estimator. Hence, it is assumed that there is absence of correlation between error terms and predator variables. The null hypothesis in this study was that random influence was the most preferable model while fixed influence model was alternative hypothesis.

Table 4. 7: Hausman Specification Test

| | —— Coefficients —— | | | |
| | (b) | (B) | (b-B) | sqrt(diag(V_b-V_B)) |
	fixed	random	Difference	S.E.
LogFCF	.6293768	.6324277	-.0030509	.0394682
LR	.2928011	.2338777	.0589233	.0638589
SoF	-1.78e-06	-2.60e-07	-1.52e-06	8.19e-07
SG	-.0002525	-.0001281	-.0001244	.0000835
IV	8.13e-06	.0000106	-2.42e-06	2.17e-06
L	.000043	.0000351	7.86e-06	6.89e-06

```
                    b = consistent under Ho and Ha; obtained from xtreg
          B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

              chi2(3) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                      =        3.19
            Prob>chi2 =     0.3626
            (V_b-V_B is not positive definite)
```

As illustrated in table 4.7, Hausman specification test p value (0.0701) was greater than the significance level of this study which was 0.05. This implied that the null hypothesis was acceptable and the most preferred model was random effect. Hence, the study used random effect model.

4.4 Regression Analysis

In order to estimate the functional model, where free cash flow, capital liquidity; leverage, investment, sales growth and size of the firm are the independent variables while financial

The model of this study was as specified below:

$$ROA = \beta_0 + \beta_{1it}LOG\ (FCF)_{it} + \beta_{2it}CL_{it} + \beta_{3it}SF_{it} + \beta_{4it}L_{it} + \beta_{5it}I_{it} + \beta_{it}SG_{it} + \varepsilon_{it}$$

Where; **ROA** (financial performance or dependent variable); **FCF** is Free Cash Flow (an independent variable); **CL** is Capital Liquidity (control variable); **SF** is Size of the Firm (control variable); **I** is Investment (control variable); **SG** is Sales Growth (control variable); i denotes cross-sectional dimension; ε is the Error Term and t represents time.

Table 4. 8: Regression Analysis

```
Random-effects GLS regression                    Number of obs      =          95
Group variable: Co                               Number of groups   =          19

R-sq:  within  = 0.5176                           Obs per group: min =           5
       between = 0.4379                                          avg =         5.0
       overall = 0.4459                                          max =           5

                                                  Wald chi2(6)       =       89.13
corr(u_i, X)   = 0 (assumed)                      Prob > chi2        =      0.0000
```

ROA	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
LogFCF	.6324277	.1639843	3.86	0.000	.3110243	.9538311
LR	.2338777	.116173	2.01	0.044	.0061829	.4615726
SoF	-2.60e-07	1.39e-06	-0.19	0.852	-2.99e-06	2.47e-06
SG	-.0001281	.0003859	-0.33	0.740	-.0008844	.0006282
IV	.0000106	3.16e-06	3.34	0.001	4.36e-06	.0000168
L	.0000351	.0000149	2.36	0.018	5.98e-06	.0000643
_cons	-.8523506	.6713943	-1.27	0.204	-2.168259	.463558
sigma_u	1.4438164					
sigma_e	.52155415					
rho	.88457273	(fraction of variance due to u_i)				

R-square was used to indicate the variation in dependent variable (financial performance) that could be explained by (free cash flow) independent variable. As depicted in table 4.8, the r-square of this study was 0.04459. This implied free cash flow, capital liquidity, leverage, investment, sales growth and size of the firm (independent variables) could explain 44.59% of the ROA. F-test was used to assess whether this model fit the data collected during the study.

The p value of this F-test was 0.000, less than the 0.05 (significant level). Therefore, the model fits the data of this study.

The result revealed that log of free cash flow has a significant influence on ROA (β= 0.6324, p=0.000). The p-value (0.000) was less than 0.05 (significant level). This means that log of free cash flow has a significant effect on the financial performance of the listed firms in NSE.

The results indicated that liquidity ratio has a positive influence on return on assets (β= 0.2339, p =0.044). The p-value (0.044) was slightly below 0.05 (significant level). Hence the influence of liquidity ratio on financial performance of the listed firms in NSE was significant. This implies that liquidity ratio has a significance influence on the financial performance listed firms in NSE.

The result revealed that the firm size has an inverse effect on return on assets (β =0.00000026, p =0.852). The p-value (0.852) was above 0.05 (significant level) hence the effect of size of firm on the financial performance of the listed firms in NSE was not significant.

The result also revealed that sales growth had an inverse effect on return on assets (β = 0.0001281, p =0.740). Moreover, the p-value (0.740) was above 0.05 (significant level) and hence the effect of sales growth on financial performance of firms listed in NSE was not significant.

The results revealed that investment has significant effect on return on assets (β = 0.0000106, p =0.001). The p-value (0.001) is less than 0.05 (significant level) hence the effect of investment on financial performance of firms listed in NSE was significant. This implies that investment has a positive and significant effect on the financial performance of firms listed in NSE.

The results further show that leverage has a positive effect on return on assets ($\beta = 0.0000351$, p=0.018). The p-value (0.018) was less than 0.05 (significant level) hence the influence of leverage on financial performance of listed companies in NSE was significant. This implies that leverage has a positive effect on the financial performance the selected firms in NSE.

4.5 Discussion of the Findings

The study established that free cash flow has significant effect on the financial performance of the firms listed in NSE. These findings agree with Ali, Ormal and Ahmad (2018) findings that FCF was positively and significantly associated with listed automobile firms' profitability (ROA). However, the findings of the study were contrary to Khidmat and Rehman (2014) findings that FCF has a negative influence on financial performance of firms in Karachi Stock Exchange. In addition, the findings are contrary to Ogbeide and Akanji (2017) findings that FCF has no significant effect on the performance of listed insurance firms in Nigeria.

The result revealed that liquidity ratio had a positive effect on the financial performance of companies in NSE. The finding is in line with Lin and Lin (2014) finding that liquidity of a firm significantly and positively affects financial performance of any organization. The finding of the study revealed that the size of firm has insignificant effect on the financial performance of the listed firms in NSE. The finding contradicts Ikechukwu, Nwakaego and Celestine (2015) finding that firm size has a significant influence on financial performance of an organization. Larger firms are in a position to enjoy much higher turnovers compared to smaller firms since they are in a better position to access capital markets.

The study found that sale growth has insignificant influence on the financial performance of the listed companies in NSE. These findings are contrary to Mutende et al. (2017) findings that sales

growth enables a firm to gain additional income, facilitate expansion of the firm thus result to increase in its profitability. The result revealed that investment had a positive and significant effect on the financial performance of firms listed in NSE. These findings agree with Khidmat and Rehman (2014) argument that the physical investment capital is anticipated to positively affect the profitability of a firm in that it result to improvement in production and sales, generation of more cash flow.

Moreover, the study found that leverage had a positive effect on the financial performance of firms listed in NSE. These findings are contrary to Tarasi and Walker (2013) findings that leverage ratio negatively affects the profitability of a firm due to the fact that, increase in debt values tend to require the firm to generate more resources so as to repay its debt thus led to reduction in investment funds. However, the findings agree with Ogbeiden and Akanji (2017) argument that high leverage decisions tend to reduce conflict which may arise between the firms' shareholders and the management, which in turn improves profitability.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the study's summary of the findings conclusions as per the objectives of the study, recommendations for practice, policy and further studies. The chapter starts with the summary of the findings, which are presented as per the objectives of the study. This is then followed by conclusions, limitations of the study, recommendations and suggestions for further research.

5.2 Summary

The study found that free cash flow has a significant influence on the financial performance of firms listed in NSE. Free cash flow in an organization can be invested in profitable investments, which can in turn generate profits for the firm and hence increase its general financial performance. Reduction of a firm's expenses and costs considerably affects the availability of free cash flows, which in turn allows the firm to take advantage of available investment opportunities that can subsequently lead to a high yield in positive NPV and hence increase profitability. Besides impacting profitability and revenues, free cash flow also impacts the balance sheet management of a firm. In case a firm fails to properly manage its working capital, free cash flow might decrease to a level lower than its net earnings. Nonetheless, poor investment and utilization of free cash flow negatively affect profitability of firms. In addition, if a firm invests in very risky investments it may end up losing the cash.

The study also found that liquidity ratio has a significant influence on the financial performance of companies listed in NSE. Low liquidity involves inefficient management of working capital

where a firm that has more than enough stocks or receivables which make it difficult for a firm to sell its products or generate more revenue from previous sales and thus resulting to negative impact on performance. However, high liquidity ration implies that a firm is able to meet all its financial obligations such as paying staff and bills, which can considerably affect its operations and hence financial performance.

The finding of the study revealed that the firm size has insignificant influence on the financial performance listed companies in NSE. The total asset of a firm is the most common measure of the size of a firm. Larger firms are in a position to enjoy much higher turnovers compared to smaller firms since they are in a better position to access capital markets. In turn, high turnovers significantly affect the profitability of firms. The study found that sales growth has no significant effect on the financial performance of listed companies in NSE. Sales growth of any firm is normally measured in terms of its ability to achieve anticipated sales growth. Sale growth enables a firm to gain additional income, facilitate expansion of the firm thus result to increase in its profitability.

The study found that investment has significant influence on the financial performance listed firms in NSE. The physical investment capital is anticipated to positively affect the profitability of a firm in that it result to improvement in production and sales, generation of more cash flow. In addition, the study found that leverage had a positive effect on the financial performance of listed firms in NSE. Generally, leverage was expected to negatively affect firm's profitability. Leverage is normally used to enhance estimated returns in an organization while at the same time it acts as a threat to the interest of shareholders. Therefore, firms with high profitability normally have lower leverage levels as compared to firms with low profitability. In addition, leverage has an effect on the cost of capital thus, affecting the profitability of firms.

5.3 Conclusion and Recommendations

The study concludes that free cash flow (FCF) has a significant effect on the financial performance of listed firms in NSE. If FCF can be invested in profitable investments, they can generate profits for the firm and hence increase its general financial performance. Reduction of a firm's expenses and costs considerably affects the availability of free cash flows, which in turn allows the firm to take advantage of available investment opportunities and hence increase profitability. The study also concludes that liquidity ratio, investment and leverage have a significant effect on financial performance listed companies in NSE. The study also concludes that the size of firm and sales growths has insignificant effect on the financial performance of listed companies in NSE.

The study found that free cash flow had a positive effect on financial performance of listed companies. Therefore, it recommends that firms listed in NSE should seek to increase their free cash flow so as to improve their profitability. Firms listed in NSE should put their focus on increasing sales volume, revenue and reduce expenses so as to increase their free cash flow.

The study found that inappropriate investment of FCF can lead to losses in an organization. Therefore, managers in firms listed in NSE should make informed decisions on their investments so as to ensure that the investments have low risk. In addition, high free cash flow can lead to poor investment and inappropriate utilization of free cash flow. Therefore, companies listed in NSE should develop policies to govern and guide utilization of free cash flow.

The study found that liquidity ratio has a significant influence on financial performance. The study therefore recommends that companies listed in NSE should develop or improve their liquidity management practices so as to ensure that their firms remain liquid throughout a month.

5.4 Limitations and Suggestions for Further Research

The unavailability of data in Nairobi Securities Exchange, Capital Market Authority and company websites on leverage, return on assets, investment and liquidity ratio was one of the main challenges faced during the process of conducting this study. Individual company websites present financial statements on quarterly and annual basis, but does not present data on liquidity ratio and return on assets.

This study covered 19 companies out of the 65 firms listed in NSE, which limits the applicability of the its findings. Focusing on 19 companies only implies that the findings of the study are not generalizable or applicable to other listed firms in NSE.

Secondary data was utilized in this study and hence it was not possible to assess some of the issues highlighted further. For instance, it was not possible to assess why leverage had a positive effect, which was against the expected negative effect. However, this information can be obtained by conducting qualitative research. In addition, the secondary data covered 5 years. Even though this period was sufficient for data analysis, it was not long enough to provide completely reliable data. As such, this limits the findings applicability.

This research study was conducted in 19 companies listed in NSE and hence the findings cannot be generalized to all the other 65 firms listed in NSE. In addition, the six variables used in this study, free cash flow, capital liquidity, leverage, investment, sales growth and size of the firm could only explain 44.59% of financial performance of listed companies in NSE. Therefore, further studies should be conducted on other factors affecting financial performance of listed

companies in NSE. Further, this study covered a period of five years (2013-2018) and hence further studies should be conducted to cover longer periods of time, like 10 years or more.

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APPENDICES

Appendix I: Data

Company	Year	Free Cash Flow(millions)	ROA	Liquidity ration	Size of the Firm (millions)	Sales Growth (%)	Investment property (millions)
Safaricom	2013	23352	1.71	0.69	134601	32.21	17619
Safaricom	2014	27136	2.03	0.47	156958	31.91	14030
Safaricom	2015	30715	2.38	0.67	159793	20.83	6220
Safaricom	2016	43171	2.99	0.47	162137	26.67	5956
Safaricom	2017	55275	3.29	0.64	168062	13.13	9497
Barclays Bank	2013	14097	5.8	0.42	206739	12.22	49546
Barclays Bank	2014	10110	5.44	0.442	225841	42.69	57166
Barclays Bank	2015	8669	5.01	0.341	240877	-25.21	47592
Barclays Bank	2016	13515	4.02	0.283	259718	-25.31	56070
Barclays Bank	2017	10439	3.68	0.334	271572	20.97	68479
Kenya Commercial Bank	2013	5971	5.5	0.333	390852	13.24	227722
Kenya Commercial Bank	2014	23557	5.93	0.313	490338	39.74	283732
Kenya Commercial Bank	2015	4426	5.01	0.3	558094	7.7	345969
Kenya Commercial Bank	2016	5884	5.64	0.303	595240	8.29	385745
Kenya Commercial Bank	2017	12720	4.94	0.3	646668	-5.09	422685
Standard Chartered	2013	12147	6	0.3801	220391	5.23	56430
Standard Chartered	2014	10529	6.42	0.4628	222496	8.61	58855
Standard Chartered	2015	9472	3.83	0.5374	233965	-32.24	74309
Standard Chartered	2016	8574	5.1	0.5693	250482	62.13	87553
Standard Chartered	2017	4326	3.34	0.5873	285724	-62.41	111139
Cooperative Bank of Kenya	2013	4440	4.7	0.326	231215	-84.21	39660
Cooperative Bank of Kenya	2014	9349	4.43	0.338	285396	-14.29	46006
Cooperative Bank of Kenya	2015	15045	4.14	0.361	342500	78.14	65548
Cooperative Bank of Kenya	2016	16709	5.15	0.332	351829	-4.65	62044

Cooperative Bank of Kenya	2017	12265	4.31	0.335	386858	-7.27	74086
National Bank of Kenya	2013	47	1.9	0.42	92964	-89.67	27537
National Bank of Kenya	2014	13	1.9	0.315	123554	-63.78	30259
National Bank of Kenya	2015	2431	-1.34	0.307	125923	-259.21	27315
National Bank of Kenya	2016	1236	3.66	0.326	112388	170.6	34783
National Bank of Kenya	2017	293	0.67	0.363	110184	100.12	36052
NIC Bank	2013	2560	4.6	0.2854	121256	22.45	18392
NIC Bank	2014	4543	4.44	0.3308	146079	67.79	20958
NIC Bank	2015	4338	3.99	0.298	165865	-3.37	29430
NIC Bank	2016	4894	3.64	0.3852	169537	-45.14	32206
NIC Bank	2017	1167	2.94	0.4672	206172	-6.92	56171
Diamond Trust Bank	2013	4507	4.9	0.32	166540	18.11	25446
Diamond Trust Bank	2014	4100	4.47	0.355	211553	48.42	35101
Diamond Trust Bank	2015	14042	3.69	0.39	271623	34.82	47067
Diamond Trust Bank	2016	5493	3.64	0.502	328165	0.17	92778
Diamond Trust Bank	2017	11249	3.05	0.499	363372	3.44	114351
KenolKobil	2013	18532	0.198421165	0.62	28122	23.19	23560
KenolKobil	2014	8885	0.595024043	0.7	23915	253.72	19465
KenolKobil	2015	934	1.092248374	0.88	17377	39.49	20171
KenolKobil	2016	4859	0.997025039	0.84	24202	27.16	22325
KenolKobil	2017	5462	1.022864019	0.89	24099	4.02	9811
Total Kenya	2013	6408	0.328131253	0.64	39984	18.25	4980
Total Kenya	2014	8661	0.437588347	0.74	32542	9.19	499
Total Kenya	2015	6419	0.471877283	0.87	34225	15.06	2616
Total Kenya	2016	2433	0.617382893	0.86	36185	50.28	3525
Total Kenya	2017	1416	0.720298853	0.92	38012	4.99	2819
KPLC	2013	26725	0.176880316	0.42	194821	8.12	4660
KPLC	2014	7378	0.30097384	0.53	232379	333.02	10176
KPLC	2015	12151	0.259034129	1.19	286912	6.15	28231
KPLC	2016	21686	0.230047819	0.75	312848	6.89	5503

KPLC	2017	11479	0.200748178	0.74	361946	-2.43	3538
Kakuzi	2013	920	0.440117365	0.743	3749	6.23	920
Kakuzi	2014	989	0.410572235	0.631	3897	7.49	989
Kakuzi	2015	1191	1.017024099	0.392	4523	20.4	1191
Kakuzi	2016	1446	1.087882307	0.411	5166	21.43	1446
Kakuzi	2017	1774	1.008174387	0.335	5872	22.66	1774
Jubilee Insurance	2013	6703	0.415706517	0.455	54245	45.54	34478
Jubilee Insurance	2014	10534	0.425588509	0.676	67671	80.33	41265
Jubilee Insurance	2015	8551	0.371553819	0.562	75736	-93.5	58194
Jubilee Insurance	2016	8388	0.394019791	0.787	83676	35.37	63683
Jubilee Insurance	2017	11064	0.402386483	0.787	97717	49.88	77342
Centum Investment	2013	420	1.020373687	0.379	29597	15.21	844
Centum Investment	2014	361	0.962606083	0.878	72231	-205.46	9006
Centum Investment	2015	3881	1.001358034	0.673	78054	49.26	10197
Centum Investment	2016	4400	0.807028262	0.879	88386	78.25	5639
Centum Investment	2017	5380	0.259430043	0.562	96288	-1521.08	5820
EABL	2013	747	1.032036395	0.37	62866	12.23	1101
EABL	2014	9583	1.331490887	0.59	66940	35.98	3005
EABL	2015	13707	1.198620154	0.48	61746	-3.76	1221
EABL	2016	8247	1.151561516	0.67	66666	-2.29	3907
EABL	2017	531	0.797787977	0.53	71247	-11.76	3588
Unga Limited	2013	283	0.551604971	0.5	30094	-5.65	417
Unga Limited	2014	292	1.001628062	0.27	27026	-3.56	348
Unga Limited	2015	711	1.850523884	0.11	25101	13.53	19
Unga Limited	2016	2806	1.774933771	0.08	26801	15.53	118
Unga Limited	2017	2379	2.811838446	0.06	24091	-93.54	9
BAT	2013	2346	2.192393736	0.6	16986	9.12	198
BAT	2014	3201	2.330995946	0.42	18254	11.43	112
BAT	2015	3366	2.663668968	0.4	18681	17.12	126
BAT	2016	4601	2.288648649	0.47	18500	-17.2	61

BAT	2017	4322	1.873525778	0.45	17806	-17.67	47
Nation Media	2013	1894	2.209891646	2.17	11444	-2.21	4094
Nation Media	2014	1560	2.062960482	2.06	11944	-0.17	3452
Nation Media	2015	1449	1.750807277	1.85	12697	-7.58	3063
Nation Media	2016	2404	1.384918679	1.72	12174	-8.22	3447
Nation Media	2017	1628	1.152826855	1.81	11320	-6.18	3307
Carbacid	2013	439	2.155172414	9.67	2204	-2.9	697
Carbacid	2014	249	1.934465061	6.06	2533	-5.9	749
Carbacid	2015	452	1.323678006	4.38	2969	-2.81	911
Carbacid	2016	310	1.216742375	6.91	3082	-5.64	963
Carbacid	2017	262	1.06440883	6.44	3307	-16.63	762