THE RELATIONSHIP BETWEEN FINANCIAL STRUCTURE AND FINANCIAL PERFORMANCE OF LISTED NON-FINANCIAL FIRMS IN KENYA

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE IN MASTER OF SCIENCE IN FINANCE, FACULTY OF BUSINESS AND MANAGEMENT SCIENCE, UNIVERSITY OF NAIROBI

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DECLARATION

This research project is my original work and has not been submitted for any award to any other college, institution or any academic institution.

Signature  Date ……**20.11.22**……

Eddy Mwangi Irungu

D63/9672/2018

This research project has been presented for examination having my approval as the University supervisor

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DEDICATION

This project is devoted to my family who have been a source of motivation in the various stages of the research work.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS AND ACRONYMS

CMA - Capital Markets Authority

DW - Durbin Watson

GDP - Gross Domestic Product

MM - Miller & Modigliani

NSE - Nairobi Securities Exchange

ROA - Return on Assets

ROE - Return on Equity

ROE - Return on Equity

SACCOs - Savings and Credit Cooperative Societies

VIF - Variance Inflation Factors

ABSTRACT

The decision-making process relating to financing structure of a company have a significant importance in corporate governance and accordingly to future success and development. However, despite the various theoretical support for financing structure, the determination of the optimal financing structure for investments and operations remains one of the most insightful and unsolved problem in corporate finance even up to date. In Kenya, the NSE since its formation has reliably provided a diverse, strong and first-class stage for bonds and stocks trading. However, despite their immense contribution to the economy, firms quoted at the NSE continue to face several difficulties such decline in profitability, swelling leverage levels and delisting. Various non-financial sector firms among them Mumias Sugar, Eveready, Kenya Airways and Uchumi reported losses worthy billions of shillings. This study aimed at determining the effect of financial structure on financial performance of quoted non-financial corporations in Kenya. The Modigliani and Miller (1958) theory, the agency theory, the pecking order theory and the tradeoff theory formed the study's theoretical foundation. The study utilized a descriptive study design and the undertook a census of the 45 non-financial entities as at 31st December 2020. The study used secondary which was retrieved for a period of 5 years from 2016 to 2020. Data was summarized using descriptive statistical tools and the regression model to determine the interrelationships. The study findings documented that financial structure had a negative and significant effect with ROA whereas firm size had a positive and significant association with ROA respectively. Liquidity had a positive and significant relationship with ROA while firm age had a positive and significant link with ROA respectively. The study concluded that financial structure, firm size, liquidity and firm age significantly enhances financial performance of listed nonfinancial firms at the NSE. The study recommended that the management of the listed nonfinancial firms should hold an optimal financial composition and an appropriate capital mix for their firms since high levels of debt increases the level of risks that the firm faces which adversely affect their entities financial performance.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Financial structure decision is part of the main vital choices taken by all businesses due to its influence on financial performance (Vătavu, 2015). Decisions on financing structure have huge significance in all financial decisions and in investments because of its effect on profitability, and the level of risks that the firm faces because of increased dependence and debt expansion (Liaqat et al., 2017). The goal of any financing decision is to maximize the shareholders' wealth; the possible means of determining the quality of the financing decisions is to determine their impact on corporation's financial performance. Therefore, the sub-optimal decisions occurring in the worst-case scenario, can lead to business failures (Memon et al., 2017). In financing decisions, managers are concerned in establishing an optimal financial composition and the best capital mix for the company (Salim & Yadav, 2012).

Theoretically, the Modigliani and Miller theory postulates that in an efficient financing market, financing decisions have no influence on corporation's value and it concludes that the value of levered entities is equivalent the market value of unlevered entities at equilibrium point (Salim & Yadav, 2012). The Pecking order hypothesis stipulates that a firm prioritize their financing sources from internal sources to external sources (Andani & Al-Hassan, 2012). The tradeoff hypothesis asserts that the company tradeoff their benefits with debt costs and equity funding and establishes the best financial composition after accounting for the market imperfections that includes taxes, agency and bankruptcy costs (Boodhoo, 2009). Agency theory supports that leverage financing reduces free cash-flows

in the company through payment of fixed interests on loan which forces managers to stop investing in projects of negative NPVs and act in owner's best interest (Vătavu, 2015).

In Kenya, the NSE serves as a center that promotes business opportunities to raise capital and optionally exchange securities (Akenga, 2017). The Kenyan capital market depends performance depends on the NSE quoted firms performance (Ater, 2017). However, while majority of the quoted NSE corporations have recorded improved performance, others firms have recorded deteriorating fortunes with a number of them being delisted from the exchange in the past decade (Wayongah, 2019). The non-financial companies have also recorded mixed performance results with at least 25% of all companies issuing profit warnings between 2014 and 2018 (Onsongo, Muathe & Mwangi, 2019).

1.1.1 Financial Structure

Financial structure is mentioned as the technique in which a business' assets are invested in, for instance long-term borrowings, short-term borrowings, and owners' equity (Rasyid, 2015). Financing composition comprises all the firm's liabilities, while capital structure comprises the long-term liability and equity (Andani & Al-Hassan, 2012). Financing structure deals with the all aspects of liabilities and the equities side of the firm's balance sheet (Memon et al., 2017). All proportions short-term debts, long-term debts and equities are recognized in the financial structure while the proportion of the long-term loans and equities in firm's total capital is referred to as capital structure (Mikócziová, 2010).

Financial structures are the funding decisions that a firm takes in its way of financing the company investments (Rasyid, 2015). A suitable financing structure is very important in any firm as it aids the operations in a competitive environment that all firms operate in

(Boodhoo, 2009). To achieve the company' objective of making returns on investments in the maximum possible way and simultaneously reducing company risks, the financing composition is very important (Mikócziová, 2010). An entity's financial structure shows a comparative total of the debt and equity capital used in funding its activities. A financing policy of the firm hence require managers to find means of financing new investments in creation of more wealth and ensure that the firms are well sustained (Andani & Al-Hassan, 2012).

Financing structure is determined through many way and among them includes; the proportion of long-term borrowings to equity, the short-term borrowings to aggregate assets as well as aggregate debt to the proportion of equity (Jangili & Kumar, 2010; Shahwan, 2018). The D/E ratio is part of the good - determinants of an entity's long-term financial solvency. The D/E ratio determines the riskiness of an entity's structure of financing and is measured through the division of aggregate debt (including leases, long-term and short-term leverage) with the total equity. This ratio shows to what extent the creditors and shareholders have claims on company assets (Boodhoo, 2009). High debt-equity ratios mean that the firm has been aggressively capitalizing its growth using debt capital (Jangili & Kumar, 2010). This study will use the long-term debt to equity ratio and the aggregate debt to equity ratio to proxy the financial structure of the non-financial firms.

1.1.2 Financial Performance

Financial performances majorly show firm influences and the outcomes that reveal financial soundness of sectors in a specified period (Mikócziová, 2010). Financial performance reveals how effectively entities are exploiting their resources in maximization

of shareholders' fund plus the profitability levels (Naz, Ijaz & Naqvi, 2016). It is a determinant of how much the business capacity is in producing and increasing profits (Fatihudin & Mochklas, 2018). Financial performance denotes the financial achievements of generating high sales volume, increased returns and the net-worth in a corporation through the management of its equity shares, short and fixed assets, financing, incomes and expenditures (Nuhiu, Hoti & Bektashi, 2017).

A good performance among listed companies benefits shareholders and stimulates further investment, which will bring additional growth in the economy, while poor corporate performance may lead to entity failures and crisis that has a negative impact on financial growth (Nuhiu, Hoti & Bektashi, 2017). Financial performances provide managers with definite information and by encouraging them to adopt sound financial decisions (Naz, Ijaz & Naqvi, 2016). Sound financial systems guarantee good returns to investors, stake-holders and the whole financial system that is directly or in-directly affected by the firm's operation (Vătavu, 2015).

The financial performances takes into account the various types of performance measurements and the mostly preferred performance measure used in finance and statistical inferences is the financial ratios (Naz, Ijaz & Naqvi, 2016). To measure a firm's performance, many scholars prefer accounting based indicators. The mostly used financial indicators by firms are the ROA and ROE. ROA determines the overall firm performance while ROE determines the return on equity investments (Mehta & Bhavani, 2017). Financial performance in this research shall be determined by the ROA ratio.

1.1.3 Financing Structure and Financial Performance

Various models have been presented supporting the link between financial structures and performance. For instance, the agency theory argues that capital structure decisions especially debt can help to mitigate the existing agency costs (Mikócziová, 2010). The trade-off theory supports that the more profitable firms are good in servicing their debt capacity and they have more taxable income to protect (Boodhoo, 2009). The pecking order theory indicates that the financing hierarchy used by managers reveals the capacities of retaining company control, reducing the agency and equity costs (Azarmi, 2014). However, the MM theory indicates that financial structure changes will have no effect on firm value (Bilbas & Saalih, 2017).

Empirically, Bilbas and Saalih (2017) studied how financial structure affected profitability and revealed the existence of a significant but negative link between profitability and debt. Setiadharma (2014) assessed impact of financial structure on profitability and growth and found that the debt ratio significantly affected company's value. Salim and Yadav (2014) analyzed how financial structure affects profitability and revelaed that financial structure directly influenced firm performance. Liaqat et al (2017) looked on how financial structure affected the profitability of Pakistani corporations and documented that financial structure adversely affected the companies' profitability.

1.1.4 Listed Non-Financial Firms in Kenya

Nairobi Securities Exchange (NSE) is the main stocks market in Kenya, licensed by the Capital Market Authority, whose main role is to regulate the securities market and allow securities trading by bringing together those with surplus cash with those with in need of

cash at a lower cost (Onsongo, Muathe & Mwangi, 2019). The NSE offers introduces foreign investors to the Kenyan market and since many publicly traded companies have extended beyond Kenyan borders, the bourse serves as an entry point into the regional economy (Wayongah, 2019). The exchange is focused on facilitating clearing arrangements for stocks, derivatives and other interrelated financial instruments. It also provides an exchange platform for listed stocks and monitors its member companies (Onchangwa, 2019).

The NSE is considered the fourth-largest bourse within the Sub-Saharan Africa region. Listed firms in Kenya accounts for a substantial percentage of the GDP. In 2018, quoted entities contributed approximately 13.4% of the GDP (Onsongo, Muathe & Mwangi, 2019). Non-financial companies' stocks are entities not undertaking financial services provision. Non-financial companies at the exchange are categorized under the manufacturing, agricultural, telecommunications and technology, petroleum and energy, automobiles, construction and allied, and lastly the commercial and services segments respectively (Akenga, 2017). There are currently 45 non-financial entities quoted at the bourse (Onchangwa, 2019).

Corporations quoted at NSE are anticipated to be stable commercially to contribute to growth of the economy and build stockholders' confidence (Ater, 2017). However, the NSE recently encountered extreme oscillations in marketplace security prices that considerably influenced the net worth of numerous quoted companies. Fiscal performance is still as key challenge for most of the NSE-listed non-financial companies. Statistics indicate that 39% of listed nonfinancial firms have faced several problems oscillating from deteriorating profits, suspension and delisting from exchange. For instance, the period

between 2013 and 2017 companies previously listed under the automobiles and manufacturing segments downsized their operations (Onsongo, Muathe & Mwangi, 2019).

1.2 Research Problem

The decision-making process relating to financing structure of a company have a significant importance in corporate governance and accordingly to future success and development (Azarmi, 2014). The pecking order model contends that, due to information asymmetries, companies must capitalize on their reserved profits in financing their projects and if the internal finances are inadequate, then they use the debt first and lastly the equity capital (Boodhoo, 2009). The agency theory explains that short and long term debt financing that are part of the capital composition can be used to reduce the agency conflict since debt is associated with restrictive covenants (Irfan, 2011). However, despite the various theoretical support for financing structure, the determination of the optimal financing structure for investments and operations remains one of the most insightful and unsolved problem in corporate finance even up to date (Memon et al., 2017).

The NSE since its formation has reliably provided a diverse, strong and first-class stage for bonds and stocks trading (Wayongah, 2019). However, despite their immense contribution to the economy, firms quoted at the NSE continue to face several difficulties such decline in profitability, swelling leverage levels and delisting (Akenga, 2017). Various firms in the non-financial sector among them Mumias Sugar, Eveready, Kenya Airways and Uchumi reported losses worthy billions of shillings (Onsongo, Muathe & Mwangi, 2019). Ater (2017) posits that many of the problems experienced by the non-financial firms is mainly attributed to financing structure leading loss of investors' confidence and wealth in the

bourse. Most NSE listed entities have huge debts, pushing entities to coming up with survival strategies. Large amounts of debt have led companies to owe more than their net worth (Onchangwa, 2019).

Empirically, several studies explain link between financing structure and company performance. For instance, Azarmi (2014) found a non-significant link between financial composition and profitability in a sample of textile firms in Turkey but the study focused on textile firms. Lislevand (2012) revealed that there was no significance connection between debt-equity ratios and MFIs performance but the study focused on MFIs. However, Memon et al (2017) assessed how financing decisions affected performances in the quoted companies of Pakistan and revealed that financing decisions significantly affected performance though the study concentrated on listed nonfinancial and financial firms.

In Kenya, Mwangi and Birundu (2015) found an insignificant impact of financial structures on SMEs profitability however; Ronoh and Ntoiti (2015) concluded that debt and equity significantly but adversely impacted banking entities performance. Kirimi, Simiyu and Murithi (2017) also assessed how debt financing affects SACCOs performance and revealed a direct effect of leverage financing on ROA though the context was Sacco's. Numerous researches have been undertaken on company's financing structures and firm's performance but the studies provide conflicting findings and cover a variety of firms in different industrial sectors, which use different financing modes. In addition, studies in Kenya on financial structure and performance focus more on all listed firms compared to non-financial firms. Therefore, the need to determine, how financial structures affects the financial performance of quoted non-financial entities in Kenya?

1.3 Research Objective

To establish the effects of financial structure on financial performance of quoted non-financial corporations in Kenya.

1.4 Value of the Study

The foremost significance of this research applies to listed non-financial firms' managers who may adopt the study recommendations and conclusions to assess how corporate productivity is influenced by the adopted financial structure. The non-financial firms' administration may adopt the recommendations to develop and adopt the best financing structures.

Policy-making entities among them the Nairobi Securities Exchange and the CMA-Kenya, which formulate guidelines and policies aimed at enhancing listed non-financial firms' stability. The policymaking institutions can adopt the recommendations made by the study to come up with tactical strategies on effective financing structures not just in listed non-financial firms but other Kenyan organizations.

This research shall in addition complement and supplement the accessible information on financial structure, firm performance in addition to theoretical underpinnings on agency theory, MM hypothesis, trade off and the Pecking order theories. This study will further recommend areas that may need additional review.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section give discussions related to the study theories adopted, various factors influencing firms' financial performance and reviews on the empirical studies. It further highlights the study's conceptual structure and lastly the summary of reviewed studies.

2.2 Theoretical Review

The theoretical foundation of the study will be made up of the Modigliani and Miller (1958) theory, the pecking order theory, the agency theory and the tradeoff theory

2.2.1 Modigliani and Miller Theory

The financial structure irrelevance theory as conceptualized by Modigliani and Miller (1958) explains that an entity's value is irrelevant to its structure of financing. The MM principle is believed to be the best reference the inference capital structure theories (Boodhoo, 2009). The theory suggests that if the market performs competitively, the firms' performances are not influenced by their financial structure decisions that translate to a non-significant association between financial structures and performance (Mikócziová, 2010). Based on this theory, the only determinants of firms' value are; future earnings power/the anticipated cash flows and consequently capital structure decisions becomes irrelevant (Memon et al., 2017).

The theory postulates that the firm's market value, power of earning profits, the real asset risk with satisfaction of other assumptions, and company's capital investment held constant; the independent choice of financial structure is the combined marketplace value

of a company's equity and leverage (Liaqat et al., 2017). The MM theory is pegged on some limiting assumptions that investors have homogenous expectations, perfect capital markets, and a tax-free economy having no transaction costs. The investors will be motivated to sell the overvalued shares and buy shares that are under-valued in order to acquire profits. In addition, while the investors take advantage of the arbitrage opportunities, the price of undervalued shares rises and the overvalued shares falls until the two prices are at equilibrium (Salim & Yadav, 2012).

The MM irrelevance hypothesis is basically criticized because of the assumptions that it holds that are not likely to be practical at least in the end (Vătavu, 2015). Theoretical researches indicate that the MM-irrelevance theorem fails in several instances and the common factors includes the; consideration of taxes, bankruptcy costs, agency conflicts, transaction costs, market opportunities of varying times, adverse selection and investor clients (Rasyid, 2015). The M&M theory in this study demonstrates that being more profitable makes the debt-ridden firms to have an increased net worth and the financial advisors to form an optimal debt level using this theory

2.2.2 Pecking Order Theory

Donaldson (1961) initially conceptualized this theory, which presupposes that company decisions relating to financial structures are largely dependent on the company's hierarchy for information asymmetries and the costs of transaction (Setiadharma, 2014). Relating to these information asymmetries, the existing investors are not in favor of new shares issuance to prospective investors, since the latter may ignore the securities intrinsic value

and that of corporate opportunities and requiring high returns, thus in turn reduce the returns of existing shareholders (Bilbas & Saalih, 2017).

The theory supports that for the minimizing of extra costs relating to information asymmetries, managers should choose well among the various external financial sources (Jangili & Kumar, 2010). The theory thus suggests that firms have their chosen financing hierarchy and the best choice is the use of internal funds before getting to other forms of financing (Lislevand, 2012). Companies will opt to use internal finances; however, where there is necessity of external financing, debt capital should be opted. However, this hypothesis fails to bring out an optimal structure of financing as the target other than using company's preference of first exploiting the internal capital sources instead of external sources initially (Shahwan, 2018).

The hypothesis holds that firms adhere to their financing hierarchy and they will opt for the available internal finances, and debt capital is chosen over equity capital when external finances are required (Setiadharma, 2014). The theory however assumes that firm's managers have much knowledge relating to the current earnings of the company and the opportunities presentable than the external investors. Managers acts in best interests for the existing shareholders (Jangili & Kumar, 2010). In this study, the theory support that profitable corporations are less likely to acquire debt for financing new projects since they purposefully have availability of internal funds for this.

2.2.3 Agency Theory

Jensen and Meckling (1976) advanced this theory, which grounded, on the view that the interest of the firms' managers and those of shareholders are not perfectly linked (Bilbas

& Saalih, 2017). The theory introduces the agency cost concepts that includes monitoring expenses, expenses associated with the agents' obligations and other residual losses. This theory explains that; because there are various stakeholders ranging from shareholders, government to the management in a company, conflicts of interest shall be potentially available in a company that in turn will lead to agency problems and increased agency costs (Azarmi, 2014).

This hypothesis presumes that the managers' interests will not be perfectly aligned to those of the shareholders, even though they should act as proxies, they may not continuously accord to the shareholders' interests, and they will try to achieve personal benefits over that of the investor (Setiadharma, 2014). Managers are responsible of directing the company towards maximizing shareholders returns instead of achieving their personal objectives. Therefore, the main conflict that faces the shareholders is in ensuring that the managers do not plough the free cash flow in non-viable business ventures. This theory however does not suggest an optimal financial structure and only supports that debt financing can be used a discipline tactic for managers (Mikócziová, 2010).

The theory argues that the best financial structure is achieved through the reduction of the agency costs that could be a resultant of managers, owners and debt holders' conflicts (Azarmi, 2014). It is claimed that increased use of debt finances reduces the agency costs by presenting liquidation threats that can lead personal losses on the managers' reputation, their salaries and by pressuring them to generate cash flows for paying out the interest expenses (Jangili & Kumar, 2010). In relation to this study, the agency theory affirms that by choosing the best financial structure, firms can be able to encounter the agency conflicts thus decreasing agency costs. To this hypothesis as a result, it is accorded that high

leverage/debt ratio will help firms in reducing their agency costs along with mitigating against conflicts

2.2.4 Trade off Theory

Kraus and Litzenberger (1973) made advancements of this theory and they presume that corporations benefit from trade-offs, debt costs to equity financing and seeks the best financial structure having considerations of tax advantages, agency and bankruptcy costs (Andani & Al-Hassan, 2012). The theory however focuses on the tradeoff in between the costs of insolvency and liability tax benefit, considers equity, and retained earnings financing. It argues that by holding the firm's investment decision and assets constant, the best financial structure will be achieved when tax benefits on debt equals to cost of debt, and this includes financial distress, agency and bankruptcy costs (Boodhoo, 2009).

An ideal financial structure is achieved when the PV of the costs of fiscal distress usually offsets the PV of tax shield. Trade-off hypothesis supposes that companies chooses appropriate debt levels so as to attain balanced benefits due to interest tax shield and the related prospective financial distress overheads or with the existing financial inflexibility (Rasyid, 2015). It is presupposed that firms focuses on substituting debt for equity capital, and vice versa to establish the best debt ratio in maximization of the company's net worth (Lislevand, 2012). In this study, this theory summarized the balancing differences between the costs and benefits related to debt finances.

2.3 Determinants of Financial Performance

The paper shall discuss firm size, liquidity and age as the central determinants that affect entities financial performance.

2.3.1 Firm Size

Corporation size is considered a vital indicator by researchers explaining company performance, and several studies have investigated how company size affects company performance (Wayongah, 2019). The size of a company relates to its capacity to affects its investing decisions. Therefore, bigger companies employ economies of scale indicator in activities to finance in multiple economic industries to reduce costs and maximize returns (Vătavu, 2015). This could be an indicator of increasing the diversification of opportunities, which lowers the institutional risk. Bigger institutions have reduced costs because they enjoy benefits of economies to scale; and they can acquire finances with reduced costs (Garoui, Sessi & Jarboui, 2013).

Size is taken to be part of the central determinants for institutional profitability. In generally, a growing firm has positive influences on profitability to a definite point. Conversely, institutional size can as well negatively influence profitability in those institutions that become exceptionally large because of bureaucratic and bad motives (Garoui, Sessi & Jarboui, 2013). Larger firms generally generate their services and outputs in a cheaper and efficient manner than small institutions because of the economies of scale that they benefit as such; there is tendency for them to generate higher profits (Vătavu, 2015).

2.3.2 Liquidity

Liquidity denotes an entity's proficiency to translate its resources into cash (Farooq & Bouaich, 2012). Corporations whose liquidity is high can take advantage of high-profit opportunities while protecting the company from bankruptcy in times of financial distress

(Fatihudin & Mochklas, 2018). A company that is capable of meeting its commitments when they are outstanding creates a good picture with its clients and with its creditors (Akenga, 2017). Problems associated with liquidity can largely influence the firms' profitability and leads to solvency problems (Fatihudin & Mochklas, 2018).

The aim of managing liquidity is to permit a company to maximize the profit from its business operations while covering future operating costs and short-term debt (Farooq & Bouaich, 2012). To attain the goal, the company should, on the one hand, eliminate the inability to cover its current obligations and avoid excessive working capital investments (Fatihudin & Mochklas, 2018). Excessive liquidity investments can lead managers to invest in maximizing their own good at the expense of profitability (Kipesha, 2013). Liquidity is usually assessed through the current ratio

2.3.3 Firm Age

The age of the company is a key attribute of company performance as it demonstrates the company's experience regarding its operational business (Fatihudin & Mochklas, 2018). Companies learn and well over time discover how efficient they are and learn to be more efficient (Kipesha, 2013). When companies are younger, they can change in line with environmental changes by developing and implementing new strategies, creating new products, innovations and new markets. With age, older companies lose their inertia and may not change as quickly with environmental changes that allow new entrants to dominate the market (Kipesha, 2013).

The age of companies can affect company performance as the organizational inertia in older companies, which makes such entities inflexible, and fail to take account for

environmental changes (Fatihudin & Mochklas, 2018). The older the company, the more the experience and resilience it is. The market challenges and shocks they face gives them an additional advantage in terms of stability, sales growth and profitability (Farooq & Bouaich, 2012). A company's performance also deteriorates with age as older companies experience sluggishness in profitability. Older businesses also have outdated assets, declining investments, high labor costs and rent-seeking behaviors such as large boards and higher salaries for CEOs. The age of a company is proxied through the years an entity has been in existence (Wayongah, 2019).

2.4 Empirical Review

2.4.1 International Studies

Bortych (2017) investigated how financial structure affects financial performance. The study collected secondary data from on private and analysis was done through the fixed effect regression. He established that capital structure positively influenced performance, excluding the influence of short-term debts on ROA for quoted entities and noncurrent debts effect on ROA for the unlisted entities. The study however focused on public and private firms and not public listed entities.

Bashiru and Bukar (2016) examined how financial structure affects financial performance of the quoted companies in Nigerian Oil and Gas industry using an ex-post facto study design and the research used panel data from 2005-2014. The paper used a panel data technique to analyse data. The results revealed that equity financing and total debt had significant but negative connection of financial performance with the corporation’s

tangibility and size having a direct and significant link on EPS and ROA. The paper focused on financial composition and firms' performance in the oil and gas industry.

Lawal (2016) studies how financial composition affected performance of the listed institutions. The paper focused in Nigerian commercial banks from 2010 to 2015. Study was conducted from 2013 to 2015. Secondary data was gathered and a descriptive survey utilized. A census was conducted in to get the population of the study of 134 banks. Multiple regression analysis was conducted and the study confirmed that capital structure had insignificant influence over company's value.

In Nigeria, Akinyomi and Olagunju (2013) studied how financing structure affects the firm's performance. In their paper, descriptive surveys were done and collected data from 86 manufacturing firms from 2003-2012. The correlation and regression techniques were adopted for analysis and the research outcomes documented that debt had negative relationships with the corporation's size had a direct association with profitability, growth and assets tangibility.

Irfan (2011) investigated how financial structure affected the performance of non-financial companies in Pakistan. Data was collected from 2003 to 2008 and the regression model utilized in data analysis. The paper established negative associations of productivity and debt, positive connections of growth and long-term debts and payout and aggregate leverage of the companies.

2.4.2 Local Studies

Njagi, Kimani and Kariuki, (2017) assessed whether equity financing affects Kenyan SMEs performance. Their paper used descriptive study design and sampled 60 SMEs. Data

collection was done using self-administered questionnaire and analyzed using multiple regression. The authors documented that equity finances are directly connected to SMEs profitability and that equity gives a long lasting financing opportunity having no or minimal cash-outflows in the form of interests. This paper however focused on SMEs and not listed institutions.

Muturi and Githire (2015) studied financial structure and its effects on performances of the quoted entities at NSE from 2008-2013. The paper used explanatory non-experimental study design and regression model for analysis. The outcomes indicated that equity and noncurrent leverage directly and significantly impacts SMEs productivity. The study concluded that short term leverage and equity impacts SMEs performance.

Githaigo and Kabiru (2015) investigated how leverage financing affects SMEs performance. The authors sampled 50 SMEs in Eldoret town and used quantitative secondary data gathered from SMEs' accounting reports from 2011 to 2013 with multiple regression being employed for analysis. It was documented that long-term debts have negative impacts on the performance of SMEs. It was affirmed that long-term debts lower SMEs' financial performances. The paper only looked at debt financing and had not considered other measures of financial structure.

Kulati (2014) analyzed how the net worth of companies quoted with NSE was affected from the various capital structure decisions that were adopted. The study was conducted from 2010 to 2013 and utilized secondary data for analysis which was readily available in the websites of the firms. A census was conducted in arriving at the population of the study of 61 companies and regression adopted for analysis. The study confirmed that the

application of debt by the firms declined their returns which negatively affected their values.

Kibet (2013), investigated how financial structure affected share prices of Energy listed firms at NSE. Study data was collected from 2006-2011 and the multiple regression method adopted for the analysis and the outcomes revealed that equity, gearing and leverage ratios are significant factors determining share prices. The study also found that gearing ratio and leverage ratio were established to be positively influencing the share prices, and the share price was negatively impacted by equity.

2.5 Conceptual Framework

In the study, financial structure shall be the independent variable and the dependent variable shall be financial performance. Figure 2.1 depicts the theoretical framework.

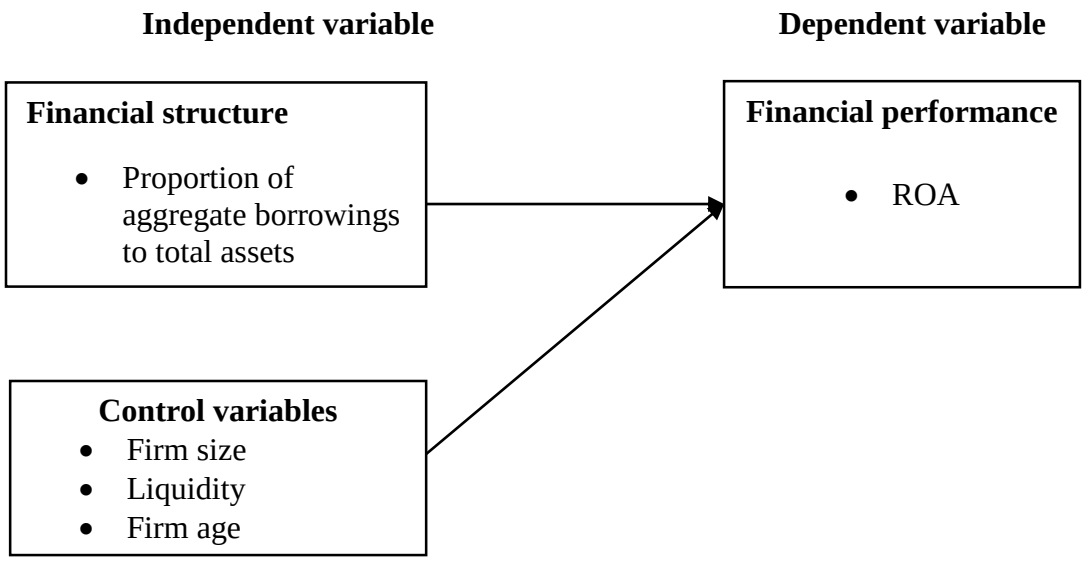

Figure 2.1: Conceptual Model

Source: Author (2021)

2.6 Summary of Literature Review

The literature review entailed a review of various studies among them Bortych (2017) which focused on public and private firms and not listed firms whereas Bashiru and Bukar (2016) focused on banks and not listed firms while Lawal (2016) focused on performance of listed banks. Akinyomi and Olagunju (2013 focused on manufacturing entities while Irfan (2011) focused on non-financial firms in Pakistan. In Kenya, Njagi, Kimani and Kariuki, (2017) focused on SMEs in Kenya, while Githire and Muturi (2015) examined all companies quoted with NSE whereas Githaigo and Kabiru (2015) dealt with SMEs. The reviewed international and locals' studies have focused on different sectors hence the results may not be generalized among non-financial quoted entities.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section encompasses the study design, the targeted population and the data collection technique. The section further entails the diagnostic tests and finally under section 3.6 the approaches of analyzing data.

3.2 Research Design

Research designs are termed as the key preparations, which outline the methodologies and processes of gathering study data as well analyzing the requisite piece of data set (Sekaran & Bougie, 2013). This paper utilized a descriptive study design. A descriptive survey is generally organized and precisely intended to study the characteristics termed in the research questions. A descriptive study provides a selection of study and intends for instance the explanations of certain facts or features connected to a focus population, estimation of fractions for the population that has those features plus the finding of connections amongst various factors.

3.3 Population of the Study

Population denotes the element's formation from which samples are obtained (Sekaran & Bougie, 2013). The study's population comprised of 45 non-financial companies trading at NSE as of 31st December 2020 (see appendix II). The study therefore undertook a census of the 45 non-financial firms. The census is a suitable approach for smaller and heterogeneous populations.

3.4 Data Collection

In this study, secondary data was used and it was retrieved from the listed non-financial corporations yearly financial reports and statements. The statements were obtained from the individual firm websites and from the NSE handbooks. The data was retrieved for a 5 years period from 2016 to 2020.

3.5 Diagnostic Tests

The key diagnostic tests which were undertaken included the test for normality, homoscedasticity test, multicollinearity test, autocorrelation and linearity tests. This paper employed the Shapiro Wilk test to assess for normality while homoscedasticity was tested through the Breusch-Pagan test. Further, multicollinearity was tested using variance inflation factors (VIF) whereas autocorrelation was assessed through the Breusch-Godfrey test.

3.6 Data Analysis

In this paper, the descriptive as well as inferential statistical tools were employed to analyze the collected data by use of SPSS statistical software. In descriptive statistics, central measures, such as average, maximum, minimum, and standard deviation, were adopted in the organizing along with the summarizing of the collected data into a meaningful way. The inferential statistics entailed the regression model that was adopted to establish the link connecting the dependent to the explanatory variables.

3.6.1 Analytical Model

Formulation of regression equation was shown as indicated below

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where;

Y = Financial performance measured using average ROA ratio

X_1 = Financial structure proxied by the ratio of aggregate borrowings to aggregate assets

X_2 = Firm size through the natural log of assets

X_3 = Liquidity assessed through the current ratio

X_4 = Firm age proxied by number of years of since incorporation

β_0 = Constant

β_1- β_4 = Regression coefficients

ε = Error term

3.6.2 Tests of Significance

The T-test and the F-test were adopted in testing the statistical significance of the explanatory variables and the response variable correspondingly. The statistical significance test were done at 5% levels of significance. Additionally, the r square was also utilized in assessing the explained variation from total variation.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This section documents the outcomes and results of the analysed data. The section thus entails the response rate results, summary results, diagnostic tests results, correlation and regression outcomes and lastly the discussion of the research results.

4.2 Response Rate

In this study, a census of the 45 non-financial companies trading at NSE as of 31st December 2020 was undertaken. However, complete data was gathered from 34 firms, which led to 75.6% response rate. The 75.6% response rate was deemed adequate since it was more than 50% as supported by Baibe (2012) who indicated that 50% response rates is acceptable for analysis, 70% are excellent whereas 60% is good.

4.3 Descriptive Statistics

Descriptive statistical tools including the mean, minimum, standard deviation (SD) and maximum value were adopted to summarize the collected study data. Table 4.1 depicts the findings.

Table 4.1: Descriptive Statistics

	N	**Minimum**	**Maximum**	**Mean**	**SD**
ROA	170	-.694	.346	.03171	.123435
Financial structure	170	.000	.817	.13431	.169026
Firm size	170	5.316	9.653	7.02245	.926727
Liquidity	170	.149	14.199	2.75181	2.971549
Firm age	170	8.0	118.0	65.265	31.3600

Source: Research Data (2021)

Table 4.1 depicts that financial performance (ROA) had a mean of 0.03171(SD=0.123435) whose minimum was -0.694 and maximum was 0.346 correspondingly. This shows that the firms average ROA was 3.171% with the negative value of -0.694 indicating that some firms had made losses during the period. Financial structure (proportion of aggregate borrowings to aggregate assets) had a mean of 0.13431(SD=0.169026) whose minimum was 0.000 and maximum was 0.817 correspondingly. The outcomes thus implies that the mean proportion of aggregate debt to total assets among the entities was 13.431% with the minimum figure of 0.000 signifying that some entities did have debt in their financial structure. Firm size had a mean of 7.02245 (SD=0.926727) whose minimum was 5.316 and maximum was 9.653 respectively. Liquidity had a mean of 2.75181(SD=2.971549) whose minimum was 0.149 and maximum was 14.199 whereas firm age had a mean of 65.265(SD=31.3600) whose minimum was 8.0 and maximum was 118.0 respectively.

4.4 Diagnostic Tests

This research undertook a test for normality, homoscedasticity test, a test for autocorrelation and a test for multicollinearity.

4.4.1 Normality Test

Table 4.2 depicts the results.

Table 4.2: Test for Normality

	Kolmogorov-Smirnov[a]			**Shapiro-Wilk**		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residuals	.114	170	.200*	.956	170	.256

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction
Source: Research Data (2021)

The assumption of normality determines how likely it is for the data set to be distributed normally as variables that not normally distributed can distort relations and tests of significance. Table 4.2 indicates that the gathered data was asymmetrical as the P values of under Kolmogorov-Smirnov and Shapiro-Wilk test were 0.200 and 0.256 both of which were greater than 0.05 respectively.

4.4.2 Homoscedasticity Test

Homoscedasticity was tested using the Breusch-Pagan heteroscedasticity test. Table 4.3 depicts the outcomes.

Table 4.3: Homoscedasticity Test

Breusch-Pagan test
OLS, using observations 1-170
Test statistic: LM = 8.337057,
with p-value = P(Chi-square(4) > 8.337057) = 0.138612

Source: Research Data (2021)

Homoscedasticity denotes a condition where the term error (i.e. the random noise that exists between the response and the explanatory variables) is similar for all values of the independent variables. Table 4.3 illustrates that the Chi-square P-value of 0.138612<0.05 hence a suggestion that the data set was homoscedastic. Thus, the homoscedasticity assumption has not been violated.

4.4.3 Test for Autocorrelation

The Durbin Watson (DW) test was employed for serial correlation testing. Table 4.4 depicts the results.

Table 4.4: Autocorrelation Test

Model	Durbin-Watson	Cut off criteria
1	1.693	1.5>DW<2.5

Source: Research Data (2021)

Autocorrelation arises when residuals in different periods are not independent of each other. The findings on table 4.4 depicts that the DW test statistic was 1.1693, which lies between the commended statistical threshold values of 1.5 and 2.5. This finding indicates the absence of serial correlation.

4.4.4 Multicollinearity Test

Variance Inflation Factors (VIF) were employed for multicollinearity assessment. Table 4.5 depicts the findings.

Table 4.5: Multicollinearity Test

	Tolerance	VIF
Financial structure	.778	1.285
Firm size	.864	1.157
Liquidity	.684	1.461
Firm age	.923	1.083

Source: Research Data (2021)

Multicollinearity arises when the explanatory variables are fail to be independent of each other. The collinearity outcomes on table 4.5 depicts that the VIFs (1.285, 1.157, 1.461 and 1.083) are below the recommended threshold value of 10. This shows that the dataset does not contain multicollinearity and that the multicollinearity assumption has not been violated.

4.5 Correlation Analysis

Correlation was undertaken to determine the degree and strength of association between the research variables as illustrated under table 4.6.

Table 4.6: Correlation Matrix

	ROA	**Financial structure**	**Firm size**	**Liquidity**	**Firm age**
ROA	1				
Financial structure	-.314**	1			
Firm size	.185*	.117	1		
Liquidity	.173*	-.451**	-.344**	1	
Firm age	.074	.040	-.195*	.199**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Research Data (2021)

Table 4.6 depicts that financial structure had a negative (r=-0.314) and weak correlation with ROA whilst firm size had a positive (r=0.185) and weak correlation with ROA. The results further show that liquidity had weak and positive (r=0.173) correlation with ROA whereas firm age had a weak and positive (r=0.074) correlation with the firms' ROA. The calculated correlation coefficients do not exceed 0.7 thus indicating that the research variables were not greatly correlated.

4.6 Regression Analysis

Regression was employed in assessing the relation between financial structure (ratio of aggregate borrowings to aggregate assets), corporate size, liquidity and firm age. The outcomes were documented below.

4.6.1 Model Summary

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.418[a]	.175	.155	.113482

a. Predictors: (Constant), Firm age, Financial structure, Firm size, Liquidity

Source: Research Data (2021)

Table 4.7 depicts that the R square value of 0.175, specifies that 17.5% of the variation in the firms' financial performance (ROA) was accounted for by firm age, financial structure, corporate size, liquidity. Thus, 82.5% is explained by other variables.

4.6.2 Analysis of Variance

Table 4.8: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.450	4	.113	8.736	.000[b]
	Residual	2.125	165	.013		
	Total	2.575	169			

a. Dependent Variable: ROA

b. Predictors: (Constant), Firm age, Financial structure, Firm size, Liquidity

Source: Research Data (2021)

Table 4.8 depicts that regression model was suitable and apt to undertake this research. This is indicated by the value of F-statistics (8.736) which is significant (Sig-value=0.000<0.05) correspondingly.

4.6.3 Regression Coefficients

Table 4.9: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.245	.080		-3.062	.003
	Financial structure	-.220	.059	-.302	-3.766	.000
	Firm size	.037	.010	.281	3.700	.000
	Liquidity	.015	.004	.110	3.750	.000
	Firm age	.011	.002	.109	5.501	.000

a. Dependent Variable: ROA

Source: Research Data (2021)

Table 4.9 depicts that financial structure had a negative (B=-0.245) and significant (P=0.000<0.05) effect with ROA whereas firm size had a positive (B=0.037) and significant (P=0.000<0.05) association with ROA respectively. Liquidity had a positive (B=0.015) and significant (P=0.000<0.05) link with ROA while firm age had a positive (B=0.011) and significant (P=0.000<0.05) link with ROA respectively. From the findings the subsequent regression equation was formulated

$$Y = -0.245 - 0.220X_1 + 0.037X_2 + 0.015X_3 + 0.011X_4 + \varepsilon$$

4.7 Discussion of the Findings

The study outcomes documented a negative (B=-0.220) and significant link between financial structure and ROA. This shows that the increased unit of debt in the financial structure reduces the ROA of the listed non-financial entities by 0.220 units, thus the level

of debt in a firm's financial structure negatively and significantly affects entity's financial performance. To support this finding, Bilbas and Saalih (2017) revealed the existence of a significant but negative link between profitability and debt. Liaqat et al (2017) also documented that financial structure adversely affected the companies' profitability. However, Salim and Yadav (2014) revealed that financial structure directly influenced firm performance. Bashiru and Bukar (2016) revealed that equity financing and total debt had significant but negative connection of financial performance and Bortych (2017) documented financing structure positively influenced performance.

Secondly, the study results documented that firm size positively (B=0.037) and significantly affected the quoted nonfinancial firms ROA. The outcomes show that one unit increase in firm size (assets) will raise the ROA of listed nonfinancial firms by 0.037, thus firm size significantly affects the firms' financial performance. In support of this finding, Garoui, Sessi and Jarboui (2013) documented that in a generally, a growing firm has positive influences on profitability to a definite point. Conversely, institutional size can as well negatively influence profitability in those institutions that become exceptionally large because of bureaucratic and bad motives. Bashiru and Bukar (2016) documented that corporation's tangibility and size have a direct and significant link on ROA. Akinyomi and Olagunju (2013) documented that corporation's size had a direct association with profitability.

The research results also showed a positive (B = 0.015) and significant link between the liquidity and the firms ROA. Hence, the outcome shows that a one-unit rise in the listed nonfinancial firms' liquidity raises the entities ROA by 0.015 units; therefore, liquidity directly and significantly affects the firms' financial performance. In support of this

finding, Fatihudin and Mochklas (2018) documented that corporations whose liquidity is high can take advantage of high-profit opportunities while protecting the company from bankruptcy in times of financial distress. Akenga (2017) also documented that a company that is capable of meeting its commitments when they are outstanding creates a good picture with its clients and with its creditors.

The results also documented that firm age positively (B=0.011) and significantly affected the nonfinancial entities ROA. This implies a unit increase in the nonfinancial firms' age translates to increase in the firms ROA by 0.011 unit, so firm age has significantly influences the firms' financial performance. In support of this finding, Fatihudin and Mochklas (2018) documented that the age of companies can affect company performance as the organizational inertia in older companies, which makes such entities inflexible, and fail to take account for environmental changes. Wayongah (2019) however documented that a company's performance also deteriorates with age as older companies experience sluggishness in profitability.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section provides the summarized findings and gives the study conclusions and recommendations. The section also highlights the study limitations and propositions for further research.

5.2 Summary

This study aimed at determining the effect of financial structure on financial performance of listed non-financial corporations in Kenya. The Modigliani and Miller (1958) theory, the pecking order theory, the agency theory and the tradeoff theory formed the study's theoretical foundation. The study utilized a descriptive study design and the undertook a census of the 45 non-financial firms as at 31st December 2020. The study used secondary which was retrieved for a 5 years period from 2016 to 2020. Data was summarized using descriptive statistical tools and the regression model to determine the interrelationships. Complete data was obtained from 34 firms, which led to 75.6% response rate that was deemed adequate.

The descriptive analysis outcomes revealed that the firms average ROA was 3.171% with the negative value of -0.694 indicating that some firms had made losses during the period. The mean proportion of aggregate debt to total assets (financial structure) among the entities was 13.431% with the minimum figure of 0.000 signifying that entities firms did

not have debt in their financial structure. Corporation size a mean was 7.02245 while liquidity had a mean of 2.75181 whereas the firms mean age was 65.265 respectively.

Correlation analysis results revealed financial structure had a negative (r=-0.314) and weak correlation with ROA whilst firm size had a positive (r=0.185) and weak correlation with ROA. The results further show that liquidity had weak and positive (r=0.173) correlation with ROA whereas firm age had a weak and positive (r=0.074) correlation with the firms' ROA.

The regression results documented that financial structure had a negative (B=-0.245) and significant link on ROA whereas firm size had a positive (B=0.037) and significant association with ROA respectively. Liquidity had a positive (B=0.015) and significant link with ROA while firm age had a positive (B=0.011) and significant link with ROA respectively.

5.3 Conclusions

This study sought to determine whether financial structure affects listed nonfinancial firm's financial performance. The outcomes documented a negative and significant link between financial structure and the listed nonfinancial firms' ROA. From this finding, the study concluded that financial structure adversely and significantly, affects financial performance on NSE listed nonfinancial firms. Further, study documented that firm size positively and significantly affected the NSE listed nonfinancial firms ROA. As per this outcome, the study concludes that firm size has a significant and positive effect of NSE listed nonfinancial firms' financial performance hence investment in assets by the firms positively enhances their financial performance.

The research results show that liquidity positively and significantly influences the listed nonfinancial firms' ROA. Based on this outcome, the research concludes that liquidity significantly affects the NSE listed nonfinancial firms' financial performance, thus increasing liquid assets among the nonfinancial firms will increase their profitability. Finally, the study documented that firm age had a significant and positive effect on the listed nonfinancial firms' ROA. The study therefore concludes that firm age positively and significantly affects the NSE the listed nonfinancial firms' financial performance hence the more the firms age the higher the firms' financial performance.

5.4 Recommendations

The study established that an increase in debt in a firm's financial structure reduces the listed nonfinancial firm's at the NSE financial performance. Therefore, the study recommends that the management of the listed nonfinancial firms should hold an optimal financial composition and an appropriate capital mix for their firms since high levels of debt increases the level of risks that the firm faces which adversely affect their entities financial performance.

The study further concluded that firm size significantly affected the NSE listed nonfinancial firms ROA; meaning investing in the firm assets will increase their profitability. Therefore, the study suggests that the executives of the NSE listed nonfinancial firms should invest more in fixed assets and other short-term investments to increase the profitability and to maximize shareholders wealth.

Further, another study's conclusion was that liquidity had a positive and significant effect on the NSE listed nonfinancial firms ROA suggesting thus an increase in liquid assets

among the listed financial firms' increases their profitability. That said, the research recommends that listed nonfinancial firms management should have optimal liquidity as high liquidity levels reduce profitability while lower liquidity levels would affect their ability to meet current obligation as and when they fall due.

Finally, the study concluded that firm age positively and significantly affected the NSE listed nonfinancial firms ROA henceforth the older the listed firm the more the profitability. Therefore, the study recommends the listed nonfinancial firms' management should take advantage of the experience they have accrued over the years to develop effective policies, which would enhance their entities financial performance.

5.5 Limitations of the Study

In this study, secondary data sources of data were collected annually over a 5-years period from 2016 to 2020 were employed. Although secondary data is readily available and can be obtained from the listed entities accounting reports, it has some limitations. First, secondary data ignores qualitative aspects that may affect research variables. Second, secondary data is historical and may not represent a company's current state. In addition, secondary data does not incorporate the qualitative opinions of the executives running the organization.

This study focused on listed non-financial firms at the NSE and did not collect data from the listed financial firms. The findings therefore are limited to the considered firms and may not be generalized to listed financial institutions at the NSE. This study measured financial structure through the debt ratio, firm size through the firm's assets, financial performance through ROA, liquidity through the current assets ratio and firm age through

the number of years since existence. However, other measures can be used to measure the study variables. The study is thus limited to the considered variable measures.

This study also used the regression model to determine the variables relationships. The regression model however is based on restrictive assumptions that can lead to dropping of some variables and other adjustments to make sure the data does not fail any of the assumptions. The study also failed to achieve a 100% response rate, as some firms had been delisted; others were suspended while others have not been available for the past five years. These limitations however do not dilute the study findings as every other study has its own inherent limitations.

5.6 Suggestion for Further Research

The study's model summary documented that firm age, financial structure, firm size, liquidity accounted for 17.5% of the variation in the dependent variable (ROA). This is an indication that several other factor influence financial performance by the nonfinancial firms. The study thus recommends an additional research on the other quantitative and qualitative factors that influence listed nonfinancial firms ROA. The study also used specific measures to operationalize the study variables. Other variables measures can also be adopted to establish the interrelationship.

The study only focused on listed nonfinancial firms. However, financial firms like banks and insurance firms at the NSE finance their investment through debt as well other sources of financial structure. The study thus recommends a study whose context would be financial firms listed at the NSE. The NSE is also grouped into various segments and

dividend of payment as well the levels of financing structure (debt) may vary in different segments hence the study recommends a study on the different listing segments at the NSE.

In this study, the regression model was used for analysis of data despite its restrictive assumptions. To circumvent this problem, this study suggests a similar study, which can used non-parametric techniques like chi square or general mores that do not limit the researchers scope. With the use of secondary sources, the qualitative views and opinions of the nonfinancial firms executives on whether financial structure affects financial performance were not incorporated, hence the need to undertake a similar research using primary data, which can be obtained from interviews and questionnaires so as to get an-depth opinion of the variables interrelationships.

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APPENDICES

Appendix I: Data Collection Sheet

Firm _____

	2016	**2017**	**2018**	**2019**	**2020**
Shareholders' equity					
Total borrowings					
Total assets					
Total equity					
Current assets					
Current liabilities					
Firm age					

Appendix II: List of Non-Financial Firms in Kenya

1. Eaagads
2. Sameer Africa
3. Kenya Airways
4. Nation Media
5. Standard Group
6. TPS Eastern Africa
7. Scangroup
8. Uchumi Supermarket
9. Longhorn Publishers
10. Deacons Plc
11. Nairobi Business Ventures
12. Kapchorua Tea
13. ARM
14. Bamburi Cement
15. Crown Paints
16. E.A. Cables
17. E.A. Portland
18. Total Kenya
19. KenGen
20. Kenya Power
21. Umeme Ltd
22. Olympia Capital
23. Kakuzi
24. Centum Investment
25. Trans-Century
26. Homes Afrika
27. Kurwitu Ventures
28. Nairobi Securities Exchange
29. B.O.C
30. BAT
31. Carbacid Investments
32. EABL
33. Mumias Sugar
34. Limuru
35. Unga Group
36. Eveready East Africa
37. Kenya Orchards
38. Flame Tree Group
39. Safaricom PLC
40. Stanlib Fahari I-REIT
41. Rea Vipingo
42. Sasini
43. Williamson Tea
44. Car and General
45. Express

Appendix III: Study Data

Net income	Total assets	Age	Debt	Current liabilities	Current Assets
1,129,000	43,059,000	69	2,327,000	6,881,000	6,322,000
359,000	43,989,000	68	3,828,000	7,009,000	8,986,000
614,000	37,913,000	67	2,010,000	8,020,000	12,444,000
1,973,000	47,203,000	66	-	6,677,000	13,978,000
5,890,000	40,811,000	65	-	7,040,000	19,000,000
5,517,492	21,706,000	113	67,557	8,274,000	10,792,000
3,885,649	21,936,000	112	188,601	10,221,000	11,251,000
4,084,523	12,546,234	111	1,222,200	5,792,023	9,215,573
3,336,006	17,805,588	110	1,239,000	6,574,643	8,665,252
4,234,334	18,499,800	109	2,976,976	6,345,960	8,968,350
101,656	2,089,258	32	-	473,922	1,191,299
55,901	1,992,639	31	-	546,693	1,080,913
65,577	2,141,747	30	40,297	622,251	1,172,050
39,379	2,228,669	29	23,767	617,322	1,206,161
126,323	2,215,302	28	8,536	534,389	1,200,592
274,134	11,903,486	67	3,692,628	5,721,837	4,952,022
182,359	11,483,744	66	4,658,810	6,356,590	5,549,830
219,628	10,173,507	65	3,430,771	5,078,562	5,029,246
81,004	9,400,007	64	3,545,912	4,835,729	4,812,213
217,426	9,705,198	63	3,389,099	5,636,222	5,666,853
324,654	3,627,831	59	-	183,294	1,056,326
264,589	3,503,511	58	-	167,957	956,355
298,526	3,371,233	57	-	113,003	1,065,394
352,300	3,306,974	56	-	148,192	1,008,052
375,568	3,081,768	55	-	167,632	1,188,255
4,628,316	101,863,604	53	18,090,076	9,583,770	17,107,297
4,120,246	101,763,653	52	24,403,263	8,500,193	14,619,918
2,791,897	96,288,084	51	21,254,255	4,999,634	13,389,581
8,310,292	88,385,608	50	17,416,137	8,126,278	12,095,303
9,947,630	78,054,000	49	13,024,100	6,399,203	10,197,460
599,505	5,630,862	62	807,322	3,217,132	3,821,241
317,236	5,521,541	61	1,061,782	3,638,198	3,635,358
183,813	5,475,693	60	1,211,294	3,844,073	3,893,824
223,294	5,871,607	59	731,275	3,817,884	4,545,367
131,796	5,059,029	58	714,592	3,250,210	3,781,745
(69,997)	948,581	74	-	49,830	110,328
2,647	942,324	73	-	20,464	142,890
(62,527)	905,895	72	-	13,554	118,928
18,107	922,802	71	-	11,500	147,539
477	644,781	70	-	20,317	224,955
7,020,915	88,658,406	98	41,006,253	31,044,600	25,968,419
11,515,130	87,065,627	97	36,319,744	33,659,381	29,602,381
7,255,555	71,246,826	96	30,665,456	25,783,768	21,525,962
8,514,568	66,666,312	95	27,488,274	21,983,714	22,134,600
10,270,813	61,746,000	94	26,648,750	27,969,422	21,556,000
(2,766,838)	35,176,893	87	7,523,601	16,243,768	2,414,244
(3,288,772)	36,541,105	86	5,527,789	13,789,101	3,618,444
7,797,547	38,027,520	85	5,338,440	7,993,035	1,985,639
(1,471,361)	27,357,388	84	2,638,624	1,926,021	1,949,095
4,145,755	27,842,120	83	3,783,376	4,962,120	2,114,848
(69,010)	207,108	53	13,431	151,926	157,949
(30,354)	248,526	52	12,692	129,678	194,757
(116,395)	573,768	51	12,882	127,254	322,266
267,173	772,652	50	4,500	214,435	577,860
(206,505)	1,082,806	49	443,274	587,381	266,553
(12,062)	463,892	102	279,907	43,432	74,011
(21,779)	471,738	101	272,902	50,715	75,912
(69,691)	320,942	100	262,049	121,964	75,456
(26,824)	375,032	99	185,135	162,076	100,087
(96,938)	379,575	98	200,966	114,737	97,764
(340,250,370)	4,442,602,465	12	1,111,559,092	6,724,031	3,998,200
(888,808,078)	4,347,807,922	11	921,560,824	6,288,986	3,955,348

(346,205,088)	4,502,462,316	10	803,049,894	5,554,832	3,822,330
(181,435,212)	4,477,827,992	9	687,095,878	4,822,553	3,796,815
(168,458,361)	3,930,010,782	8	687,095,878	3,953,105	3,182,933
622,034	6,906,816	114	-	259,897	2,916,774
713,439	6,461,035	113	-	235,663	2,593,020
481,594	5,941,042	112	-	389,964	2,316,917
593,378	5,746,126	111	-	616,900	2,407,204
568,361	3,015,067	110	-	416,738	965,720
19,437	1,942,002	111	-	180,948	875,728
(125,665)	2,033,173	110	-	193,329	872,389
166,405	2,489,043	109	-	375,599	1,096,632
(51,769)	2,030,309	108	-	227,766	788,704
106,696	2,144,587	107	-	210,298	895,577
18,377,093	412,926,930	66	145,831,163	17,056,053	34,038,073
7,884,335	401,422,249	65	141,234,900	25,597,466	33,629,173
7,980,633	379,353,005	64	131,908,369	20,879,478	31,412,067
9,057,131	377,196,543	63	138,714,088	20,093,197	29,639,369
6,743,492	367,248,796	62	136,906,012	18,190,059	21,916,420
(939,482)	325,267,359	98	109,961,593	117,475,761	42,626,939
261,553	328,004,926	97	111,383,416	115,190,801	44,220,940
3,268,626	332,269,373	96	113,029,384	106,257,796	54,620,181
7,266,131	341,653,227	95	122,016,122	75,257,967	61,293,386
7,196,563	297,542,180	94	113,868,712	50,914,903	47,318,241
(36,219)	171,462,000	43	92,539	85,330,000	27,173,000
(12,985)	195,673,000	42	76,093	67,815,000	25,660,000
(7,558,000)	136,634,000	41	82,548	129,512,000	27,976,000
(6,418,000)	146,144,000	40	140,049	10,327,000	26,747,000
(26,225,000)	158,415,000	39	120,606	7,294,200	29,710,000
(3,665)	229,696	85	-	19,649	135,900
1,900	235,670	84	-	16,671	139,615
2,548	268,255	83	-	45,550	159,521
(22,134)	262,009	82	-	39,439	140,277
(19,074)	282,193	81	-	27,920	144,218
(225,870)	2,450,164	27	1,154,777	1,360,660	1,304,243
185,125	2,344,234	26	630,547	1,239,930	1,473,850
183,604	2,407,529	25	584,799	1,367,891	1,653,829
133,876	1,858,734	24	280,886	913,028	1,250,875
104,063	1,866,944	23	476,728	919,377	1,512,918
167,918	2,313,146	66	-	84,460	1,142,725
80,153	2,242,401	65	-	119,122	935,465
190,678	2,218,388	64	-	119,929	1,138,874
218,806	2,108,220	63	-	89,008	1,072,384
183,956	2,013,745	62	-	137,696	1,009,195
47,900	11,820,600	61		3,410,100	6,957,400
856,000	12,096,700	60	-	3,573,700	6,912,000
1,117,500	11,198,000	59	-	3,290,400	6,428,000
1,350,900	11,320,300	58	-	3,128,100	6,311,100
1,634,000	12,174,100	57	-	3,456,000	7,163,300
10,412	1,705,872	52	118,113	201,000	339,059
5,743	1,626,599	51	86,636	206,524	329,583
(3,488)	1,647,834	50	75,910	231,907	404,337
39,835	1,556,804	49	89,108	202,821	354,201
14,834	1,527,522	48	49,279	175,841	419,499
73,657,900	213,224,900	21	8,000,000	56,500,700	48,822,200
62,491,000	192,476,000	20	4,032,000	46,259,000	49,959,000
55,289,000	167,439,000	19	4,040,000	43,525,000	27,462,000
48,444,418	161,686,996	18	16,544,151	54,197,753	25,159,823
38,104,290	159,182,485	17	-	42,443,538	29,940,441
43,478	1,047,155	51	744,208	218,588	323,387
(1,061,947)	1,530,847	50	869,897	1,001,255	867,098
(529,320)	2,587,824	49	975,236	1,438,597	1,300,172
13,029	2,969,868	48	561,840	1,096,854	1,698,490
(652,101)	3,290,867	47	825,615	1,449,092	2,290,282
12,605	14,577,755	68	-	345,714	1,983,194
(337,737)	14,674,359	67	114,488	443,597	1,886,882
293,523	12,961,380	66	-	459,079	2,645,431

339,407	13,196,025	65	-	703,941	2,985,170
576,985	16,818,463	64	-	570,323	2,784,857
(1,732,528)	8,741,883	21	-	3,330,943	7,746,631
158,792	12,803,173	20	409,644	5,355,126	10,709,743
612,209	14,425,198	19	502,106	5,430,739	11,240,951
477,943	13,758,912	18	-	4,787,863	10,924,015
410,727	13,486,398	17	-	4,673,097	11,112,161
(301,632)	4,054,840	118		2,562,965	1,299,986
(484,067)	4,195,946	117	985,368	2,320,660	1,385,279
261,285	4,676,133	116	1,249,306	2,183,681	1,991,597
(210,838)	4,459,637	115	1,215,502	2,213,332	1,874,462
198,521	4,404,931	114	616,934	1,711,903	2,001,691
3,296,532	42,987,172	61	-	14,287,129	29,311,647
2,534,532	37,564,704	60	748,587	11,057,028	23,829,220
2,312,582	39,258,921	59	-	15,404,167	27,261,288
2,738,216	38,012,115	58	5,168,353	15,255,690	26,478,526
2,234,392	36,185,372	57	3,804,232	15,409,648	25,379,450
(1,210,007)	17,307,210	23	4,963,551	2,229,787	1,484,265
181,747	17,986,459	22	4,234,722	2,887,776	1,920,152
179,005	17,598,123	21	4,732,619	4,875,071	2,115,014
119,465	17,486,823	20	4,476,834	2,453,397	2,646,657
119,175	16,983,115	19	3,703,181	2,050,420	3,362,680
66,161	12,050,876	112	829,701	5,018,383	7,912,949
544,814	10,646,066	111	1,062,865	3,413,608	6,676,636
783,203	9,932,664	110	892,189	3,079,519	6,595,371
(7,039)	10,267,471	109	345,125	4,025,952	6,599,371
508,816	9,199,783	108	465,365	2,531,888	5,819,762
43,081	2,665,040	16	517,104	975,716	531,236
139,152	2,541,774	15	556,934	755,906	550,076
132,815	2,344,158	14	528,535	755,580	337,604
35,494	2,349,433	13	89,608	714,960	430,880
99,747	2,191,859	12	205,766	546,184	475,701
137,202	7,900,570	111	-	565,233	2,212,782
(172,362)	9,271,918	110	37,380	695,651	2,807,783
502,769	9,505,074	109	97,481	1,432,760	3,657,136
676,960	8,382,127	108	156,432	867,813	3,031,119
482,747	8,931,395	107	205,766	682,091	3,380,625
356,491	5,831,004	81		350,175	3,158,684
384,220	5,367,185	80	169,411	323,145	2,742,197
1,361,166	5,100,213	79	127,645	377,106	2,868,343
935,887	4,609,500	78	-	181,289	2,574,107
1,407,729	4,186,797	77	-	203,785	2,353,060