FINANCIAL STRUCTURE AND FINANCIAL GROWTH OF FINANCIAL FIRMS LISTED AT NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

This thesis is my original work and has not been presented for the award of a degree in any other University or for any other award. No part of this thesis may be reproduced without my permission or that of Kenyatta University.

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This is to confirm that this work has been submitted for examination with our approval as the University Supervisors.

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DEDICATION

This thesis is dedicated to The Almighty God for successfully seeing me through my first and second semesters of my Masters of Science in Finance course in the Kenyatta University and for the success of this research work in preparation of my Thesis. I also dedicate it to my beloved family members, especially my Mom who has really continued to encourage me about the value of education, colleagues and fellow classmates for all their support.

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OPERATIONAL DEFINITION OF TERMS

Debt-Equity Debt to Equity was used as the ratio of firm's total liabilities to its stockholders' equity. It was used to measure firm's financial leverage in the study

Financial Firms: Financial firms were used as the firms listed at stock market under the banking and insurance in NSE.

Financial growth: Financial growth in the study was used in terms of significant positive earnings.

Firm Size: Firm Size was used as the level of assets held by a firm. It was computed as the natural logarithm of total assets and acts as a proxy for the size of non-financial firms listed at the NSE

Long-Term Debt: Long-Term Debt was used as the portion of debt capital that is payable after twelve months of the balance sheet date.

Profitability: Profitability was used as a measure of the financial gain generated from investment.

Retained earnings Retained earnings were used as the net earnings after dividends that are available for reinvestment in the firm's core business or to pay down its debt

Return on capital employed Return on capital employed was used as a financial ratio used in comparing the relative profitability of companies after taking into account the amount of capital used

Share capital: Share capital was used to describe the amount of capital raised by the company by issuing shares.

Short Term Debt: Short Term Debt was used as the portion of debt capital that becomes payable within twelve months on deposits.

ABBREVIATIONS AND ACRONYMS

CAPM- Capital Asset Pricing Model

CMA- Capital Market Authority

GDP- Gross Domestic Product

GP- Gross Profit

LTD- Long Term Debt

NP- Net Profit

NSE- Nairobi Securities Exchange

POT- Pecking Order Theory

RE- Return Earning

ROA- Return on Assets

STD- Short Term Debt

TA- Total Assets

TD- Total Debt

TSE- Tehran Stock Exchange

ROE- Return on Equity

EPS- Earnings Per Share

ROCE- Return on Capital Employed

ABSTRACT

Decline in performance deter investor from investing in firms. Some of the financial firms listed at Nairobi Securities Exchange have been experiencing decline performance. As such, the firms struggle to raise funds for their operations. The purpose of this study was to establish the effect of financial structure on financial growth of financial firms listed at Nairobi Securities Exchange. The study aimed to evaluate the effect of short term debt, long term debt, retained earnings and share capital on financial growth as well as how they are moderated by firm size on financial firms. The theories informing the study included Modigliani-Miller theory, Trade-off Theory, Pecking Order Theory and Agency theory. This study was guided by the positivism philosophy and a descriptive research design. The target population of the study comprised of 21 financial firms listed at the NSE for a period of 8 years from 2010 to 2017. The study adopted a census technique where all financial firms listed at NSE was considered. Data was collected using a secondary data collection template. The study conducted both descriptive statistics analysis and panel data analysis model. The diagnostics tests included normality, multicollinearity, fixed or random effects, serial correlation, heteroscedasticity and unit root tests which all met the assumptions. The regression model was tested at 95% confidence interval. The moderation effect was calculated by interacting firm size with the independent variables. The findings indicated that a positive and significant relationship between Short-term Debt and financial growth of the financial firms listed at Nairobi Securities Exchange. Long-term Debt had a negative and insignificant relationship with financial growth of the financial firms listed at Nairobi Securities Exchange. Retained Earnings had a positive and significant relationship with financial growth of the financial firms listed at Nairobi Securities Exchange. Share capital indicated a positive and significant relationship with financial growth of the financial firms listed at Nairobi Securities Exchange. Firm size was found to be a significantly moderator of the relationship between the financial structure and financial growth of financial firms listed at Nairobi Securities Exchange. The study recommends that policy makers in the financial sector to embrace indicators on short term debts, long term debts, retained earnings, the share capital and firm size on their strategic decision-making. These indicators will further guide in expanding the interpretation of the financial structures in the listed firms at the Nairobi securities exchange and other related firms. Firm size is thus crucial in a finance company due to their market power where larger firms are able to charge higher prices and hence earn higher profits.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Listed firms contribute in many ways to the Kenyan economy. They provide employment in the firms thus reducing unemployment problems. They pay taxes to the government which is utilized to provide the necessary products and services to the citizen of the country and also contribute to the research and development thus increasing innovation (Ongore & Kusa, 2018). Therefore, firms' growth is critical if they are to fulfill their stakeholders interest (Kopyakova, 2017). Financing decisions result to some form of financial structure. Financing choices are major corporate decisions because an optimal capital structure, representing the corporate financing mix, can maximize the market share price and the value of the company (Buvanendra, Sridharan & Thiyagarajan, 2017). Modigliani and Miller (1958) demonstrated the irrelevance of capital structure in firm value, although the assumption is valuable only in perfect market conditions, where all investors have free access to market information, there are zero transaction costs and no tax difference between dividends and capital gains.

The financial growth of listed firms in Kenya have not been impressive since several of these firms have been making losses due to exposure arising from their financing decisions (Opungu, 2019). Their financing decisions differ from firm to firm and sector to sector. This explains the varying financial growth and performance gaps among the listed firms. The financial structure of these firms is not uniform and firms make financing decisions depending on how they view the various financing models and how they perceive the various capital structure theories (Githire & Muturi, 2018). While others do not take regard of the various financing models and the optimal capital

structure mix. Firms faced with such challenges require that their management make informed financing decisions to manage their financial structure in a way that it enhances financial growth and stakeholders' wealth (Muchiri, Muturi & Ngumi, 2016). The financial firms listed at NSE include banking and insurance companies (NSE, 2019). The financial services sector, banking and insurance sectors are highly regulated by Central Bank prudential guidelines and Insurance Act respectively on issues of liquidity, asset and capital holding, and provision for bad debts. The financial firms listed at NSE formed the focus of the study.

Firms finance only a part of their assets with equity (ordinary, preference and retained earnings) capital, while the other part is financed by other resources such as long term financial debt or liabilities (like bonds, bank loans and other loans) and other short term liabilities for example trade payables (Gambacorta, Yang & Tsatsaronis, 2020). Firms can choose among many alternative financial structures. For example, short term debt financing, long term debt financing, share capital and retained earnings. A firm can also arrange lease financing, use warrants, issue convertible bonds, sign forward contracts or trade bond swaps. Firms can also issue dozens of distinct securities in countless combinations to maximize overall market value (Dare & Sola, 2019). Financial structure is therefore very critical and fundamental in the business life cycle not only to maximize shareholders wealth but also due to the impact it has on firm growth (Ishaya & Abduljeleel, 2018).

1.1.1 Financial Structure

Financial structure adopted by various firms all over the world differs considerably (Gambacorta, Yang & Tsatsaronis, 2020). According to Succurro and Mannarino (2014), the relative importance of financial structure of firms ranges from 20% in the United States to over 60% in Austria, Hungary and New Zealand. Firms can choose among many alternative financial structures. For

example, firms can arrange lease financing, short term debt, long term debt financing, retained earnings or share capital (Jansen, 2018). In Czech Republic, Slovakia, Poland, Hungary, Germany, France and Greece, Mokhova and Zinecker (2019) asserted that there is a strong negative significant relation between total debt ratio and short-term debt ratio of firms and financial performance of firms. According to Ammar and Muhammad, (2017) short term debt to capital ratio, long term debt to capital ratio and total debt to capital ratio are major determinants of financial structure.

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In support of trade off theory, Owalabo and Inyang (2019) stated that firm's optimal debt ratio is determined by a trade-off between the bankruptcy cost and tax advantage of borrowing and it is achieved at the point when the marginal present value of the tax on additional debt is equal to the increase in the present value of financial distress costs. Short-term debt is positively correlated with firm's growth opportunities (Nunes & Serrasqueiro, 2016). It is higher in stronger and more

flexible firms, when there are big differences between short term and long term interest rates and when firms have more growth opportunities. According to Njanja and Pellisier (2017), short-term debt is the best financing tool because it is perceived to be cheaper. In contrast with previous models, support was provided for the proposition that the determinants of short-term debt and long-term debt are different, for instance short-term debt is not affected by the tradeoff between tax benefits and bankruptcy costs where long-term debt is affected by collateralisable assets but short-term debt is not (Ruri & Omagwa, 2018).

Financing choice is vital to every firm as the optimal financial structure between debt and equity impacts on the firm's valuation and its stock prices in the securities market (Vătavu, 2020). The financial structure of a firm can influence their governance structure, which in turn, may influence the ability of a firm to make strategic decision to enhance their performance in financial terms (Kiiru, 2018).

1.1.2 Financial Growth

A firm's financial growth is measured by how better off an investor like a shareholder is at the end of a period, than he was at the beginning. This can be determined by use of earnings per share (EPS) derived from financial statements that is the statement of comprehensive income and financial position (Berger & Patti, 2021). These ratios give an indication of whether the firm is achieving the owners' objectives of making them wealthier, and can be used to compare a firm's ratios with other firms or to find trends of growth over time.

Nasir, Huynh and Tram (2019) asserts that an adequate growth measure ought to give an account of all the consequences of investments, on the wealth of shareholders. The main objective of shareholders in investing in a business is to increase their wealth. Thus, the measurement of growth

of the business must give an indication of how wealthier the firms are. Nairobi Securities Exchange (2020) indicated that there were reduced earnings per share (EPS) for financial listed firms.

1.1.3 Financial Structure and Financial Growth

In Pakistan, firms both financial and non-financial firms are constantly on the run to reduce the cost of financing assets when financial structure decision taken into account, so that value maximizations of the firms is enhanced (Ahmed & Wang, 2019). Firms in Pakistan keep balance in composition of financial structure which is very necessary for return of the firms because it attaches the level of risk of return if the composition includes more debt instead of equity with results the disturbance of cash flows in companies (Younus, 2014). Further, financial structure of firms in Pakistan is highly depended on firm size, ownership, profitability, various costs, earning growth and liquidity of company's assets (Faruk & Ayub, 2021). The optimum benefits of the debt and equity depend upon the managers that are engaged in management of the financial issues of financial firms in Pakistan (Gambacorta, Yang & Tsatsaronis, 2020).

In Bangladesh, financial and non-financial companies are keenly focused on the capital market. Financial structure of firms in Bangladesh has been developing at an exponential rate and dedicated research in this field is required (Ali, & Chowdhury, 2020). Financial and non-financial companies play a major role in this respect because they provide a large portion of institutional support to the capital market (Safiuddin, Islam & Anisuzzaman, 2015). It is evident that a prudent financial structure decision can lead a firm to have high profitability and low risk thus increase the value of the firm (Deesomsak *et al.,* 2016). Regarding this, financial structure decision is one of the most important issues in corporate finance among financial and non-financial in Bangladesh (Siddiqui, 2012). It has been established that lack of proper efficiency in taking financing decisions in Bangladeshi financial and nonfinancial companies which cause trouble in financial sectors. As a

result, many companies in Bangladesh are positively encouraged to ensure sound knowledge over financial structure decisions. It will ultimately lead to make good earnings in the business organizations (Sayeed, 2019).

The financial structure of firms in most of Sub Saharan Africa (SSA) countries is fairly developed with some markets under-developed (Khémiri & Noubbigh, 2018). In Ghana, Abor (2015) indicated that short term debt of listed companies has positive significant relationship with firm performance measured as return on equity in Ghana. Firms which earn a lot use more short-term debt to finance their business. Financial structure in Ghana has impacted positively on the performance of Ghanaian firms (Yazdanfar & Öhman, 2015). The financial structure of a firm concerns the mix of debt and equity the firm uses in its operation. Brealey and Myers (2013) contend that the choice of financial structure is fundamentally a marketing problem. Accordingly, the optimal financial structure is the one that maximizes the market value of the firm's outstanding shares.

In Nigeria, Onaolapo and Kajola (2018) indicated that financial structures of non-financial companies listed Nigeria Stock Exchange have a significant negative effect on financial measures (ROA and ROE). Financial decision is a major factor every business enterprise must consider at startup and during operations. These decisions affect the growth of a business entity (Foyeke, Olusola & Aderemi, 2016). According to Akintoye (2018), the sensitivity of performance to financial structure of non-financial listed firms in Nigeria shows that performance indicators to turnover (retained earnings, Earnings per Share and Dividend per Share) are significantly sensitive. The impact of financial structure on firm's profitability in Nigeria shows that debt ratio has a significant negative relationship with the performance of the firms (Adekunle, 2019). Firms are

majorly financed either by equity capital or a mix of equity capital and short-term financing (Olokoyo, 2018).

In Mauritius, the Stock Exchange of Mauritius (SEM) is relatively developed as compared to other stock exchanges of other Sub Saharan countries except South Africa (Ahmed & Wahid, 2017). The financial structure has changed the operating environment of Mauritian Non-Financial Firms inclusive. It also makes the firms more flexible for the Mauritian financial managers in decision making concerning the firm's financial structure (Omrawoo, Jaunky & Ramesh, 2017).. The common problem that the firms have to face in Mauritius concerns more with financing, for instance, whether to raise debt or equity capital (Dimitris & Psillaki, 2018). Thus, it is necessary for non-financial firms in Mauritius to be able to finance their business operations (Aviral & Raveesh, 2015). Mauritian non-financial listed firms consider debt levels in determining current levels.

1.1.4 Financial firms listed at NSE

Nairobi Securities Exchange plays an important role in mobilizing domestic savings which bringing about the reallocation of financial resources. It has also facilitated transfer of securities between shareholders by making long-term liquid (NSE, 2019). It also enabled companies to engage local participation in their equity, thereby giving Kenyans a chance to own shares. Companies can also raise extra finance which is essential for expansion and development. Nairobi Securities Exchange also enhances the inflow of international capital. They can also be useful tools for privatization programs. The financial firms are those companies that are involved in the provision of financial intermediary services (Muiruri, 2014). The financial firms listed at NSE include banking and insurance companies (NSE, 2019). The financial services sector, banking and insurance sectors are highly regulated by Central Bank prudential guidelines and Insurance Act

respectively on issues of liquidity, asset and capital holding, and provision for bad debts. The financial firms listed at NSE formed the focus of the study.

1.2 Statement of the Problem

The growth of financial firms listed at Nairobi Securities Exchange was 3.7% in 2017 against 4.2% in 2019 (NSE, 20220). Decline in performance deter investor from investing in such firms (NSE, 2020). For instance, Standard Chartered bank reduced its profits by Sh3.7 billion in 2020 compared to Sh1.8 billion in 2019. In insurance, two-thirds of the listed firms recorded a drop in profits comparing the 2017 to 2018 performance (NSE, 2019). According to Maina and Sakwa (2017), firms list with the Stock exchange to raise more money and gain access to the capital markets. The capital markets offer a ready form of funding for these listed companies, enabling them to embark on growth and expansion plans or to fund their working capital with greater ease. However, some of the financial firms listed at Nairobi Securities Exchange have been experiencing decline in financial growth and thus reporting lower returns to the investors (Muchiri, Muturi & Ngumi, 2020).

Empirical studies present contentious results on the effect of financial structure on firm growth measured as either return on assets or return on equity. Muchiri *et al.,* (2016) did a study to determine the effects of financial structure on performance of listed investment firms in Kenya and the findings revealed that, long term debt and ordinary share capital had a significant positive relationship with ROA and ROE. The study did not explicitly indicate to what extent long term debt and ordinary share capital influences the growth of listed investment firms. Further, the study focused only on investment firms listed at the Nairobi Securities Exchange therefore creating a methodological and contextual gap. Akbarpour (2019) investigated the relationship between financial structure and accounting measurement for evaluating performance (ROA, ROE) for the

period 2005-2010 in listed firms in Tehran and the results indicate that there was a significant relationship between financial structure and ROA, but there isn't such a significant relationship between financial structure and ROE.

Majority of the studies conducted; Akbarpour (2019), Muchiri, Muturi and Ngumi (2016), Shubita and Alsawalhah (2017), Habib, Khan and Wazir (2016) and Chen (2014) focused on capital structure while basing their argument on accounting concept. Unlike non-financial structure, short term liabilities do not contribute to capital structure (Opungu, 2016; Muchiri, Muturi & Ngumi, 2016) thereby creating a conceptual gap. There are also inconsistencies of results from previous empirical studies on the effects of long term debt and short term debt of financial performance of financial firms listed (Ferati & Ejupi, 2018; Menike & Prabath, 2014; Muchiri, Muturi & Ngumi, 2016). The study intended to fill this conceptual gap by focusing on the effect of financial structure on financial growth of financial firms listed at Nairobi Securities Exchange.

1.3 Research Objectives

The study was guided by general objective and specific objectives.

1.3.1 General Objective

The general objective of the study was to establish the effect of financial structure on financial growth of financial firms listed at Nairobi Securities Exchange.

1.3.2 Specific Objectives

i. To establish the effect of Short-term debt on financial growth of financial firms listed at Nairobi Securities Exchange.
ii. To assess the effect of Long-term debt on financial growth of financial firms listed at Nairobi Securities Exchange.

iii. To determine the effect of Retained earnings on financial growth of financial firms listed at Nairobi Securities Exchange.

iv. To examine the effect of Share capital on financial growth of financial firms listed at Nairobi Securities Exchange.

v. To explore the moderating effect of Firm size on the relationship between financial structure and financial growth of financial firms listed at Nairobi Securities Exchange.

1.4 Hypothesis Testing

H_{o1}: There is no significant effect of Short term debt on financial growth of financial firms listed at Nairobi Securities Exchange.

H_{o2}: There is no significant effect of Long term debt on financial growth of financial firms listed at Nairobi Securities Exchange.

H_{o3}: There is no significant effect of Retained earnings on financial growth of financial firms listed at Nairobi Securities Exchange.

H_{04}: There is no significant effect of Share capital on financial growth of financial firms listed at Nairobi Securities Exchange.

H_{05}: Firm size does not significantly moderate the relationship between financial structure and financial growth of financial firms listed at Nairobi Securities Exchange.

1.5 Significance of the Study

The study findings provided information on the effect of financial structure on financial growth of financial firms listed at Nairobi Securities Exchange. The findings of the study are useful to various groups of interested parties as outlined. The groups include management of financial firms, shareholders, capital market authority and academicians.

1.5.1 Management

The findings of this study will help the investors and managers of firms on the empirical relationship between earnings retention on stock returns of financial-listed firms. Firm executives and investors can therefore make informed choices in relation to retention of earnings. The management will be able to choose between financing firm operations using debt or equity. There is need for a balance between financing firm operations via debt or equity.

1.5.2 Shareholders

The study findings will be of value to shareholders. It will enable them to have adequate knowledge on the level of investment to be held at any particular time. Shareholders invest in profitable firms to maximize their wealth.

1.5.3 Academicians and Scholars

Students and other Scholars at large will be able to recognize the effect of financial structure on financial growth of financial firms listed at NSE. This will form a basis for further research especially financial firms at NSE. The study will also contribute to finance theories particularly Modigliani-Miller theory, Agency cost theory**,** Pecking Order Theory, Trade-off Theory and Market Timing Theory by presenting a critique.

1.5.4 Capital Market Authority (CMA)

The CMA will use this research to institute sound policies and guidance/advice on financial structures to be held by listed firms. Capital Market Authority will be in an informed position to provide supervising and licensing all the capital markets in the country.

1.6 Scope of the Study

The study focused on the effect of financial structure on financial growth of financial firms listed at Nairobi Securities Exchange. The reason as to why listed firms at the NSE were chosen is mainly the availability and the dependability of the financial statements in that they are subjected to the thorough auditing by internationally recognized audit firms. Specifically, the study looked at whether short term debt, long term debt, retained earnings and share capital intervened by firm size influence financial growth of financial firms listed at Nairobi Securities Exchange. The study considered 21 financial firms quoted at the Nairobi Securities Exchange for the period between 2010 and 2017. The choice of 2010 and 2017 was informed by the fact that during this period, majority of financial firms listed at the Nairobi Securities Exchange been experiencing decline in financial growth.

1.7 Limitations of the Study

The study was limited to secondary data that is prone to errors and incompleteness. However, researcher ensured that the data was collected correctly and cheeked for completeness before embarking on the main data analysis.

1.8 Organization of the study

Chapter one focused on the background of the study, research problem, the research objectives as well as the significance of the study. The scope, limitations and organization of the study were also highlighted. Chapter two addressed the theoretical foundations upon which the study is hinged. Further, the section presented a comparison with other studies, research gaps and the conceptual research gap. Chapter three presented the research methodology in terms of research design, target population, sampling procedure and size, data collection methods as well as the data

analysis method. Chapter four presented the research findings and discussion while chapter five presented the summary, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

A review of both theoretical and empirical literature on financial structure and financial growth of financial firms listed at Nairobi Securities Exchange is presented. The chapter starts by looking at the theoretical literature review where the theories that anchor the study are discussed. The chapter further presents conceptual framework, empirical literature review, critique of existing literature and the research gap. The chapter presents the linkages between theoretical and empirical literature to establish the existing relationships among the variables. The chapter lastly presents the chapter summary.

2.2 Theoretical Review

A theory is a generalization about a phenomenon, an explanation of how or why something occurs. Theories describe, explain, predict, or control human phenomena in a variety of contexts. According to McMillan and Schumacher (2006), a theory is an explanation, a systematic account of relationships among phenomena. This study is guided by the Modigliani-Miller theory, Trade-off Theory, Pecking Order Theory and Agency cost theory. Each theory is stated, explained and related to the study. The study is anchored on Modigliani and Miller theory on capital structure.

2.2.1 Modigliani and Miller theory

Modigliani and Miller (1958) advanced the capital structure irrelevance theory. The Modigliani-Miller theorem on the irrelevancy of financial structure implicitly assumes that the market possesses full information about the activities of firms and that information asymmetry influences firm growth (Miller, 1988). Two capital irrelevance propositions were advanced by Modigliani

and Miller. Proposition I states that the market value of any firm is independent of the amount of debt or equity in capital structure. Proposition II states that the cost of equity is directly related and incremental to the percentage of debt in capital structure. The first proposition was the arbitrage-based irrelevance proposition which indicated that investors would engage in arbitrage to ensure that firm growth would not be affected by its leverage (Cline, 2015). However, the classic arbitrage based irrelevance proposition had serious limitations that challenged its applicability since it ignored crucial factors such as transaction costs, taxes, adverse selection, agency conflicts, investor clientele effects, bankruptcy costs and the integration between financing and operations of the firm (Heinkel,1982). The theory also assumed symmetric information among the various classes of investors in perfect capital markets. Miller and Modigliani (1963) advanced the second capital structure irrelevance proposition that posited that when a firm chooses a given investment policy, the financing structure it will select would not influence its value. This however assumed perfect markets.

The theory is relevant to the study as Modigliani-Miller theorem Theory asserts that there is perfect information flow among various players in the market. The study examined whether the mix of long term debt and Short term debt that financial firms apply in their financial structure influence their financial performance as well as financial growth.

2.2.2 Trade-off theory

Trade-Off theory postulated by Myers (1984) emphasize a balance between tax saving arising from debt, decrease in agent cost and financial distress and firm growth (Shahar, Shahar, Bahari, Ahmad, Fisal & Rafdi, 2015). Myers (1984) finds that the benefit of tax shield is offset by the firm costs of financial distress and agency cost. In other word, optimal level of leverage is achieved by balancing the benefits from interest payments and costs of issuing debt (Jahanzeb, Bajuri, Karami,

& Ahmadimousaabad, 2014). The balance between tax saving arising from debt, decrease in agent cost and financial distress has a significant effect of firm growth. Sheikh and Wang (2010) argue that the Trade Off theory is expected to choose a target financial structure that maximizes the firm growth by minimizing the costs of prevailing market imperfections. The Trade-off theory is also referred to as tax based theories and bankruptcy costs. It assumed each source of money has its own cost and return. These are associates with the firm's earning capacity and its business as well as insolvency risks (Awan & Amin, 2014). Therefore, firm with more tax advantage will issue more debt to finance business operations and the cost of financial distress as well as benefit from tax shield are balanced (Chen, 2011).

Trade-off theory is relevant for the study as it explains the fact that corporations are usually financed partly with debt and partly with equity. It states that there is an advantage to financing with debt, the tax benefits of debt and there is a cost of financing with debt, the costs of financial distress including bankruptcy costs of debt and non-bankruptcy costs. The marginal benefit of further increases in debt declines as debt increases, while the marginal cost increases, so that a firm that is optimizing its overall value focused on this trade-off when choosing how much debt and equity to use for financing.

2.2.3 Pecking order theory

Donaldson (1961) postulated this theory but it received its first rigorous theoretical foundation by Myers and Majluf (1984). Myers and Majluf (1984) said that firms have a particular preference order for capital used to finance their business. Pecking order theory predicts that due to the information asymmetry between the firm and outside investors regarding the real value of both current operations and future income stream and prospects, external capital will always be relatively costly compared to internal capital (Olakunle & Oni, 2014). Myers and Majluf (1984)

argued that if firms issue no new security but only use its retained earnings to support the investment opportunities, the information asymmetry can be resolved. This implies that issuing equity become more expensive as information asymmetry between insiders and outsiders increases hence leading to undervalued securities.

Wamiori, Sakwa and Namusonge (2016) said that pecking order theory describes firm's debt position as the accumulated outcome of past investment and capital decisions. Managers will prefer financing new investments by internal sources (that is, retained earnings) first, if this source is not enough then managers seeks for external sources from debt as second and equity as last (Serrasqueiro & Caetano, 2015). Thus, according to the pecking order theory firms that are profitable and, therefore, generate high earnings to be retained are expected to use less debt in their capital structure than those that do not generate high earnings, since they are able to finance their investment opportunities with retained earnings (Fama & French, 2002). Pecking Order theory states that companies prioritize their sources of financing from internal financing to equity. Therefore, internal financing is used first then when that is depleted, then debt is issued and when it is no longer sensible to issue any more debt, equity is issued (Seifert & Gonenc, 2019).

The pecking order theory is applied in this study to establish whether high profitable firms in the financial sector select to have retained earnings as their preferred mode of financing its operations. If this theory applies in the financial firms listed in the NSE, it is expected that financial firms would have lower interest payments since they are expected to use equity (retained earnings) as their major source of financing. The ones that are not highly profitable are expected to use more debt and hence pay more in interest expenses. The scenario in the long run tends to influence firm growth. The study hence sought to answer objective three by anchoring it onto pecking order theory.

2.2.4 Agency theory

Jensen and Meckling (1976) advanced the agency theory which states that a firm has an optimal financial structure that stimulates optimum firm growth. This optimum financial structure is obtained by ensuring that agency costs that arise from the conflicts between the managers and owners of the business are reduced by having a certain proportion of debt in the capital structure (Leland, 1998). This lowering of agency conflicts would lead to reduction in agency costs which would lead to improved firm growth. The use of debt in the firm as observed by Jensen and Meckling can be used to control and monitor managers in the firm to ensure that they follows objectives that are beneficial to the firm (Aliu, 2010).

Buferna, Bangassa and Hodgkinson (2015) supported this theory by indicating that inclusion of debt in the capital structure provides a motivation for managers to stimulate the growth of a company so as to have cash flows that would satisfy repayments of debts. This leads to the enhancement of the firm's profitability (Dawar, 2014). This theory postulates that short term debt and any other form of debt that the firm uses reduces agency conflicts between managers and shareholders of the firm and hence boosts firm growth (Rashid, 2015).

The agency theory is relevant to the study as it plays a crucial role in financing decisions because of the problems that arise between the debt holders and the shareholders. Stock mispricing is significantly and positively related to agency costs. Further, stock options, which mainly designed to resolve the conflicts of interest between agents (managers), and principals (shareholders), amplify the problem and this incident is obvious particularly, when companies are overvalued.

2.3 Empirical Literature

This section discusses past studies according to the objectives of the study. The section reviews literature on the effect of financial structure on financial growth of financial firms listed at Nairobi Securities Exchange, Kenya. The review of empirical literature plays a key role in establishing research gaps upon which a study builds on.

2.3.1 Short Term Debt and Financial Growth

Forsberg (2018) conducted a study on short-term debt financing during the financial crisis. The study data showed that the financial crisis caused firms to increase the amount of short-term debt they employed from 1.3% of assets in 2006 to 2.2% in 2017. This increase in short-term debt financing was completely reversed by the end of 2018 suggesting that the increase in short-term debt financing was undesired and was reversed as soon as the financial crisis abated. The proximate causes of the spike in short-term debt financing include a reduction in accounts payable financing from suppliers and a decline in long-term debt and equity financing. A significant decrease in asset sales also contributed to the need for more short-term debt financing. A regression analysis indicated that almost all of the increase in short-term debt financing was caused by the financial crisis and not the simultaneous recession. The study focused on the recession in the United States and overseas while the current study was conducted locally.

Baum, Schafer and Talavera (2016) conducted a study on the effects of short-term liabilities on profitability, a comparison of German and US firms. The specific objective was to establish the effects of short-term liabilities on profitability by comparing German and US firms. The paper adopted the methodology of the empirical finance literature to analyze a common question that liability maturity structure has an impact on firm performance. A comparison is made between two

countries, the US and Germany, with different types of financial systems. They study found that German firms rely more heavily on short-term liabilities are likely to be more profitable. The link between liability maturity structure and profitability does not appear in the results from the US sample, which reflects the importance of institutional factors. The study was conducted in the United States while the current study was conducted locally.

Teruel and Solane (2018) analyzed the Spanish SMEs Corporate cash holdings and found that firms with a higher amount of short-term debt will hold higher levels of cash, because it might lower the risks of the non-renewal the short-term debt. The specific objectives were to establish the effect short-term debt, long-term capital and tangibility on firm's profitability. The study adopted descriptive survey research design. Teruel and Solane (2018) in their study on debt financing suggest that aggressive liquidity policy combine the higher levels of normally lower cost short-term debt and less long-term capital. Although capital costs are reduced, this increases the risk of a short-term liquidity. They established that total and short-term debt is positively related to firm's profitability, which might be the most important factor in accessing outside financing in countries with weak collateral laws. From their studies they also found out that a negative relation between tangibility and short-term debt and a positive relationship between tangibility and long-term debt exists. The study was conducted in the in Spanish SMEs while the current study was conducted in the listed firms.

Pouraghajan, Malekian, Emamgholipour, Lotfollahpour and Bagheri (2017) conducted a study on relationship between capital structure and firm performance evaluation measures: Evidence from the Tehran Stock Exchange. Descriptive research design was applied. A panel data model was used to data collected. The results established that short term debt and long term debt asset ratio do not have a significant effect on profitability.

Habib, Khan and Wazir (2016) conducted a study on the impact of debt on profitability of firms; evidence from financial sector of Pakistan. Entire financial sector of Pakistan was selected for this study, but due to unavailability of data of few years in some companies, these companies were eliminated from the analysis. After eliminating such companies, the data consist of 340 firms listed on Karachi Stock Exchange (KSE) for the period 2003–2012 has been used for analysis. Panel research design was employed (Pouraghajan, Malekian, Emamgholipour, Lotfollahpour, Bagheri, 2017). Random effect regression analysis was used to find out the impact of debt on profitability. Results indicated a significant but negative relationship between short term debt, long term debt, total debt, and return on assets. The study was measured against profitability while the current study was measured against financial growth.

2.3.2 Long Term Debt and Financial Growth

Mohammadzadeh (2019) conducted a study in Iran on how capital structure affects the profitability of firms in the pharmaceutical industry. Top 30 Iranian pharmaceutical companies were defined as study samples and their financial data were gathered for the period of 2010-2018. The study focused on firms that were quoted in the Tehran Stock Exchange (TSE). The study established the effect of short term debt and long term debt on profitability of the pharmaceutical companies. The variables used in this study are divided into three groups. The first is related to the capital structure including: The Debt to Total Asset ratio (TD/TA), short-term Debt to Total Asset ratio (ST/TA), and the long-term Debt to Total Asset ratio (LD/TA). The study revealed that both short term and long term debt had significant negative effects on profitability of the pharmaceutical companies. Moreover, the study determined that pharmaceutical firms in Iran followed the pecking order theory where they preferred financing their activities using in-house generated funds rather than

using external funds and also preferred using debt rather than issuing stock. The study was conducted in Iran while the current study was conducted locally.

Opungu (2016) conducted a study to investigate the effect of capital structure on profitability of financial firms listed at Nairobi Stock Exchange (NSE). The study tested the null hypotheses that there is no relationship between short term debt-equity ratio, long term debt-equity ratio and equity on profitability of financial firms listed at NSE. The theoretical basis of the study was on agency theory, static trade off theory, pecking order theory and Modigliani-Miller capital structure irrelevance theorem. Descriptive research design was applied in this research study. The study findings indicate that short term debt equity ratio negatively and significantly affects ROA, ROE and ROCE. Long term debt equity ratio has a negative effect on return on assets and return on equity but has an insignificant effect on ROCE. Equity has a positive and significant relationship with ROE and ROCE but has an insignificant effect on ROA. The study was measured against profitability while the current study was measured against financial growth.

Chen (2014) conducted a study on the determinants of capital structure of Chinese-listed companies. The study followed a descriptive study design. This study uses data from the annual report of 88 Chinese public-listed companies for the period 1995 - 2000. The study employed panel design. The results revealed that there exists a very weak and insignificant relationship between retained earnings and stock returns and the relationship is inverse since the coefficient corresponding to retained earnings in the model was always negative. The study concluded that retention of earnings is irrelevant in influencing the amount of stock returns earned by the investors of Chinese-listed companies. The study was conducted in China while the current study was conducted locally.

Salawu and Agboola (2018) examined the determinants of capital structure of financial firms in Nigeria using a panel of 33 large firms. Statistical tests are performed for the period 1990-2004. This study covered quoted companies on the first and second tiers of Nigerian Stock Exchange. Thirty-three firms with market capitalization of five hundred million naira and above were regarded as large firms and included in the sample. Data were obtained from the annual reports of the sampled firms and publications of the Nigerian Stock Exchange. Panel design was used. The results reveal that profitability, tangibility and company size are positively related to total debt and long-term debt, and growth opportunities are negatively associated with total debt. The empirical results indicate that the financing decisions of large firms in Nigeria can be explained by the determinants suggested by trade-off theory. The study covered listed companies on the first and second tiers of Nigerian Stock Exchange while the current study covered financial listed firms.

Ater (2017) conducted a study on capital structure and firm value of financial firms listed at the Nairobi Securities Exchange. The study used the period 2014-2016. The results indicate there was a statistically significant relationship between the capital structure and value of financial firms listed on the Nairobi Securities Exchange. The study showed that firms are strongly advised always to compare the marginal benefit of using long-term debt to the marginal costs of long-term debt before concluding on using it in financing their operations. This finding came as a result as shown by the study. Long-term debt impacts positively on firm's value just like equity capital. The study only used 3 years while the current study used 8 years.

Githire and Muturi (2015) conducted a study to examine the effect of capital structure on the performance of firms listed at the Nairobi Securities Exchange. Specific objectives were to determine the effect of equity financing on financial performance of firms listed at the Nairobi Securities Exchange, to establish the effect of long term debt financing on financial performance

of firms listed at the Nairobi Securities Exchange and to establish the effect of short term debt financing on financial performance of firms listed at the Nairobi Securities Exchange. The population of interest was the firms listed at the Nairobi Securities Exchange and a census of all firms listed at the Nairobi Securities Exchange from year 2008-2013 was the sample. The study adopted an explanatory no experimental research. The findings showed that equity and long term debt have a positive and significant effect on financial performance, while short term debt has a negative and significant effect on financial performance. The study concluded that equity and short debt financing enhances financial performance, while short term debts reduce financial performance. The study covered quoted companies while the current study covered financial listed firms.

2.3.3 Retained Earnings and Financial Growth

Nsukka and Adeniyi (2017) conducted a study on the effect of capital structure on the performance of Nigerian listed manufacturing firms from 2004-2013. This is to determine the overall impact of capital structure on corporate performance of Nigerian quoted firms by establishing the relationship that exists between the capital structure choices of firms in Nigeria and their return on assets, return on equity, sales growth and earnings per share (as proxies to measure corporate performance). This study utilized correlation design as it attempts to correlate the effect of capital structure on corporate performance of quoted Manufacturing firms in Nigeria using the four widely used proxies (i.e. Return on Equity, Return on Assets, Sales Growth, and Earnings per share) for measuring firm performance. Multiple regression were used as a tool of data analysis and result of the findings revealed that, capital structure has no significant effect on return on equity but has significant effect on return of assets, earnings per share and sales growth of listed manufacturing

firms in Nigeria. The study used manufacturing listed companies while the current study covered financial listed firms.

El-Chaarani (2014) conducted a study on the impact of financial structure on the performance of European Listed Firms. The research methodology involves a quantitative analysis to identify the impact of capital structure on the performance of listed firms by considering the different regimes of legal protection. The study tested two hypotheses; in the case of low legal protection, there is a negative impact of leverage on the performance of listed firms and in the case of high legal protection, there is a positive impact of leverage on the performance of listed firms. By considering different systems of legal protection this study examines the impact of capital structure on the performance of listed firms in European region. Based on 5050 listed firms in eight European countries, the results of the study reveal that the owners in low level of legal protection are more likely to use the capital structure of the firms in order to serve their proper interests. In high level of legal protection, the market based system and the debts are enrolled to constraint the expropriation of private benefits. The study was conducted in Europe while the current study was conducted locally.

Isola and Akanni (2015) conducted a study on corporate financial structure of financial quoted companies in Nigeria. To achieve this, 63 nonfinancial firms listed on the Nigerian stock exchange were selected based on data availability for the period of 2001 to 2010. Financial firms were excluded because of their similar regulatory framework and in order to ease the comparability of results. The empirical findings from the static panel regression analysis confirms that Nigerian firms tends toward internal financing through retained earnings, equity and other short term funds, against long term financing majorly through debts and other long term loans. One factor that could be said to account for this decision is the ill developed bond market in the country as well as the

accessibility of firms to long term finances from the existing sources that is marred with high interest rates and huge collaterals.

Muchiri, Muturi and Ngumi (2016) conducted a study on relationship between financial structure and financial performance of firms listed at East Africa Securities Exchange (EASE). The specific objectives were the influence of short term debt, long term debt, retained earnings and share capital on financial performance of firms listed at EASE. The study also evaluated the moderating effect of GDP growth rate on the relationship between financial structure and financial performance of firms listed at EASE. The study employed explanatory research design with secondary panel data from the financial statements of 61 firms retrieved from the securities exchanges hand books for the period December 2006-2014. The study found out that in isolation, short term debt, long term debt, retained earnings and external equity had insignificant negative relationship with return on assets but insignificant positive relationship with return on equity. While combined, financial structure had a significant positive and negative relationship with return on equity and return on assets respectively. On moderation of the relationship between financial structure and financial performance, it was found out that gross domestic product growth rate had a significant moderating effect. However, the current study used only the financial listed firms.

2.3.4 Share Capital and Financial Growth

Younus *et al.* (2014) identified the impact between financial structure and financial performance of Sugar companies listed in Karachi Stock Exchange Pakistan (KSE Pakistan). This research includes 33 sugar companies listed in KSE Pakistan from the year of 2006-2011. This study tested these hypotheses; capital structure and financial performance have the negative relationship, there is a significance impact of capital structure on financial performance and that capital structure and financial performance have the positive relationship. Panel data research design was used.

Secondary data was utilized from company's financial reports, annual reports and state bank of Pakistan in financial review for the period of six years (2006-2011). The results showed that there was weak positive correlation. The study was conducted in Pakistan while the current study was conducted locally.

Akbarpour (2019) investigated the relationship between financial structure and accounting measurement for evaluating performance (ROA, ROE) for the period 2005-2010 in listed firms of Tehran exchange. The aim of this paper is to examine important theories of financial management in the field, which in fact will be carried out through evaluating the relationship between financial structures and profitability measures of listed firms in Tehran Security Exchange. The study adopted panel design. The results indicate that there was a significant relationship between financial structure and ROA, but there isn't such a significant relationship between financial structure and ROE. It was established that financial structure plays an important role in the profitability of enterprises. The study was conducted in Iran while the current study was conducted locally.

Tsoy and Heshmati (2017) conducted a study on the impact of financial crises on dynamics of capital structure of Korean Listed Companies. Using a data set covering 1,159 Korean listed non-financial firms from 10 industrial sectors over period 1985-2015, the pattern of firms' capital structure before and after the crises is investigated and the speed of adjustment toward the optimal leverage identified. The empirical analysis revealed that Korean non-financial listed companies on average decreased their debt ratios over the entire study period, with leverage being highest before the Asian crisis and lowest after the Global financial crisis. The results also show that the debt ratio of Korean chaebols is higher than that of non-chaebols. Moreover, the high level of leverage

is associated with tangible assets, share capital, size and age of the firm, non-debt tax shield, and uniqueness. The study was conducted in Korea while the current study was conducted locally.

Arulvel and Ajanthan (2014) conducted a study on capital structure and financial performance of listed trading companies in Sri lanka. This study investigated the relationship of capital structure and financial performance of trading companies which are listed in CSE (Colombo Stock Exchange) from 2007 to 2011. The study employed panel design. The results show that debt ratio is negatively correlated with all financial performance measures [Gross Profit (GP); Net Profit (NP); Return on Equity (ROE) and Earnings Per Share (EPS)] similarly debt-equity ratio (D/E) is negatively correlated with all financial performance measures except GP and only (D/E) ratio shows significant relationship with NP. The study was conducted in Sri lanka while the current study was conducted locally.

El-Sayed and Ebaid (2019) conducted a study to impact of capital-structure choice on firm performance: empirical evidence from Egypt. Return on Asset and Return on equity were used as the measures of firm performance while Short-term Debt, Long-term Debt and Total Debt represented capital structure indicators. The research design used was a descriptive research. The study found that share capital and long term debt has significant relationship with return on assets but not with return on equity. It was concluded that capital structure changes do affect firm's performance.

2.3.5 Financial Structure, Firm Size and Financial Growth

Ater, Sifunjo, Kisaka, Iraya, Mwangi (2017) did a study on the moderating effect of firm size on the relationship between capital structure and firm value among financial listed firms at the Nairobi Securities Exchange. A target population of 36 financial firms at the NSE was selected. The study

used stepwise multiple regression analysis and in testing of hypothesized variables. Findings pointed that firm size has a significant moderating effect and is thus a critical tool that can be used by management when doing capital structures adjustments to ensure efficiency and optimality as firms grow.

Tale (2014) conducted a study to establish the effect of firm size on the relationship between financial structure and financial performance of financial firms listed at the Nairobi securities exchange in Kenya between the years 2008 to 2013. This study used cross-sectional research design. From, the study, there exists a linear significant positive relationship between financial performance of the firm and debt ratio. In addition, there is a positive insignificant relationship between financial performance and tangible assets. However, the results show that there exists a linear insignificant negative relationship between financial performance of the firm and size and growth of the firm. The study covered listed companies of Nairobi Stock Exchange while the current study covered financial listed firms.

Muigai (2016) conducted a study on the effect of capital structure on financial distress of financial companies listed in Nairobi Securities Exchange. The study investigated the moderating effect of firm size and the listing sector on the relationship between capital structure and financial distress of the firms. The study used quantitative research design. The study employed secondary data extracted from audited financial statements and annual reports of individual companies for the ten - year period covering 2004 – 2013. The study was undertaken using quantitative research design. The study established that the firm size and the listing sector have significant moderating effect on the relationship between capital structure and financial distress. The study was measured against financial distress while the current study was measured against financial growth.

Zariyawati, Annuar and Pui-San (2016) provide evidence regarding the determinants of working capital management among small and large firms listed on the Bursa Malaysia Stock Exchange for 2009 to 2013 period. The aim of this paper was to provide evidence regarding the determinants of working capital management among small and large firms listed on the Bursa Malaysia stock exchange. Panel research design was employed. Secondary data from 2009-2013 was analyzed using Stata12 software. Results of random effects model demonstrate 38 that firm leverage, firm performance, capital expenditure, operating cash flow, executive compensation and economic conditions are the most significant determinants working capital management. The current study extended the study by Zariyawati *et al.* (2016) by considering the intervening effect of firm size on the relationship between financial structure and financial growth of financial firms listed at Nairobi Securities Exchange, Kenya.

Azeem and Marsap (2015) investigated the factors determining the working capital requirements in Pakistani financial companies listed at Karachi Stock Exchange over a period of six years (2004–2009). The study intended to find out the relationships between working capital and different factors like size, leverage, economic growth, etc. A Pooled Ordinary Least Square (OLS) regression results indicate that return on assets, leverage and firm size is negatively and significantly related to working capital requirements of a firm whereas sales growth is positively and significantly related to working capital requirements. The current study extended the study by Azeem and Marsap (2015) by considering the intervening effect of firm size on the relationship between financial structure and financial growth of financial firms listed at Nairobi Securities Exchange, Kenya.

Ali, Mukulu, Kihoro and Nzulwa (2016) conducted a study on the moderating effect of firm size on the relationship between functional integration and firm performance. The study used

descriptive survey approach. A structured and semi structured questionnaire was administered to 176 manufacturing firms in Nairobi and surrounding areas. The study also concluded that, firm size is not moderator in the relationship between functional integration and firm performance. This implies that, irrespective of firm size, functional integration as a strategic capability is available to both small, medium and large manufacturing firms in Kenya. The study covered manufacturing listed companies of Nairobi Stock Exchange while the current study covered financial listed firms.

Lopez- Valeiras, Gomez- Conde and Fernandez- Rodriguez (2016) conducted a study on firm size and financial performance: intermediate effects of indebtedness. Using archival data collected from 83 companies belonging to livestock industries, the empirical findings confirm the hypothesis that indebtedness leverages the effect of size on financial performance. That is to say, indebtedness can enhance the realization of the potential benefits of a larger organizational size. Contrary to expectations, these results reveal that the relationship between size and financial performance is negatively mediated by indebtedness.

Abbasi and Malik (2015) conducted a study on firms' size moderating financial performance in growing firms in Pakistan. For this purpose, 50 financial firms concerning to different sectors have been targeted to get the data for year 2012. The data has been collected from the financial statements of the companies, listed in Karachi stock Exchange, for year 2012. The data has been collected from the financial statements of the companies, listed in Karachi stock Exchange, for year 2012. The results of the regression analysis demonstrated that firm size has a moderating inspiration between firm growth and firm performance.

Bongoye, Banafa and Kingi (2016) conducted a study on the effect of firm specific factors on financial performance of financial firms listed at Nairobi Securities Exchange. This study adopted a descriptive research design. The study used secondary panel data over the 5 year-period from

2011 to 2015 covering a target population of 37 financial firms listed at NSE. The findings of the study revealed that firm specific factors generally have a positive relationship with financial performance (measured by ROA) of financial firms listed at NSE. Firm size, firm liquidity and growth opportunities were found to have a positive relationship with financial performance as measured by ROA.

2.4 Research Gap

A study by Shubita and Alsawalhah (2017) established that there was a significantly negative relationship between profitability and short-term debt to asset ratio of Jordan firms. The findings also indicated that there was a significantly negative relationship between long term debt to asset ratio and profitability. However, the study focused on general performance of firms and was not specifically focused on financial listed firms at stock exchange. Makori (2017) found that the interaction between the short-term financing decision components had a significant effect on financial performance of financial firms listed at the Nairobi Securities Exchange. However, the study was specifically limited to short term financing. The study did not include other variables like long term debt, share capital or retained earnings.

Nunes and Serrasqueiro (2016) found negative relationship between profitability and short-term debt, and the statistically insignificant relationship between profitability and long-term debt of small and medium-sized hospitality firms. However, the study focused on SMEs where the current study is on financial firms listed at the Nairobi Securities Exchange. The operations of the two sectors may not be the same hence we cannot generalize the results to apply to financial firms listed at the Nairobi Securities Exchange. Maniagi, Mwalati, Ondiek, Musiega and Ruto (2013) revealed that long term debt and ordinary share capital had a significant positive relationship with ROA of performance of listed investment firms in Kenya. Long term debt was found to be

positively and significantly related to ROE of listed investment firms. The study did not explicitly indicate to what extend does long term debt and ordinary share capital influence the performance of listed investment firms. Further, the study focused only on investment firms listed at the Nairobi Securities Exchange. The summary is illustrated in Table 2.1.

Table 2.1: Summary of Research Gaps

Author	Topic	Finding	Gap
Makori (2017)	Short-term financing decisions and financial performance of non-financial firms listed at the Nairobi Securities Exchange	Found that the interaction between the short-term financing decision components had a significant effect on financial performance of financial firms listed at the Nairobi Securities Exchange	However, the study was specifically limited to short term financing. The study did not include other variables like long-term debt, share capital or retained earnings.
Nunes and Serrasqueiro (2016)	Capital structure decisions: old issues, new insights from high-tech firms	Found negative relationship between profitability and short-term debt, and the statistically insignificant relationship between profitability and long-term debt	The study focused on technology firms where the current study is on financial firms listed at the Nairobi Securities Exchange. The operations of the two sectors may not be the same hence we cannot generalize the results to apply to financial firms listed at the Nairobi Securities Exchange
Maniagi, Mwalati, Ondiek, Musiega and Ruto (2013)	Capital structure and performance: Evidence from listed non-financial firms on Nairobi Securities Exchange, Kenya.	Established that long term debt and ordinary share capital had a significant positive relationship with ROA of performance of listed investment firms in Kenya	The study did not explicitly indicate to what extend does long term debt and ordinary share capital influence the performance of listed investment firms

Author	Topic	Finding	Gap
Forsberg (2018)	Short-term debt financing during the financial crisis	The regression analysis indicated that almost all of the increase in short-term debt financing was caused by the financial crisis and not the simultaneous recession.	The study focused on the recession in the United States and overseas while the current study was conducted locally
Pouraghajan, Malekian, Emamgholipour, Lotfollahpour and Bagheri (2017)	Relationship between capital structure and firm performance evaluation measures: Evidence from the Tehran Stock Exchange.	The results established that short term debt and long term debt asset ratio do not have a significant effect on profitability	The study was measured against profitability while the current study was measured against financial growth
Mohammadzadeh (2019)	How capital structure affects the profitability of firms in the pharmaceutical industry	The study established the effect of short term debt and long term debt on profitability of the pharmaceutical companies.	The study was conducted in Iran while the current study was conducted locally
Opungu (2016)	The effect of capital structure on profitability of financial firms listed at Nairobi Stock Exchange (NSE).	The study findings indicate that short term debt equity ratio negatively and significantly affects profitability.	The study was measured against profitability while the current study was measured against financial growth
Chen (2014)	The determinants of capital structure of Chinese-listed companies.	The results revealed that there exists a very weak and insignificant relationship between retained earnings and stock returns	The study was conducted in China while the current study was conducted locally
Muigai (2016)	The effect of capital structure on financial distress of financial companies listed in Nairobi Securities Exchange.	The study established that the firm size and the listing sector have significant moderating effect on the relationship between capital structure and financial distress	The study was measured against financial distress while the current study was measured against financial growth

Author	Topic	Finding	Gap
Shubita and Alsawalhah (2017)	The relationship between Capital Structure and Profitability	Established a significantly negative relationship between profitability and short-term debt to asset ratio of Jordan firms	The study focused on general performance of firms and was not specifically focused on financial listed firms at stock exchange. The current study was conducted on Financials Nairobi Securities Exchange

2.5 Conceptual Framework

Conceptual framework is a visual or written product, one that explains either graphically or in narrative form the main things to be studied, the key factors, concepts or variables and the presumed relationships among them (Jessen, Amariglio, Van Boxtel, Breteler, Ceccaldi, Chételat & Glodzik., 2014). Conceptual framework provides a snapshot of the objectives of this study. It considers the theoretical and conceptual issues surrounding research work and forms a coherent and consistent foundation that underpin the identification and development of existing variables. The conceptual framework attempts to bring into focus the following variables; the independent variables namely; short term debt, long term debt, retained earnings, share capital and firm size as the moderating variable. The dependent variable is the financial growth of financial firms listed at Nairobi Securities Exchange in Kenya.

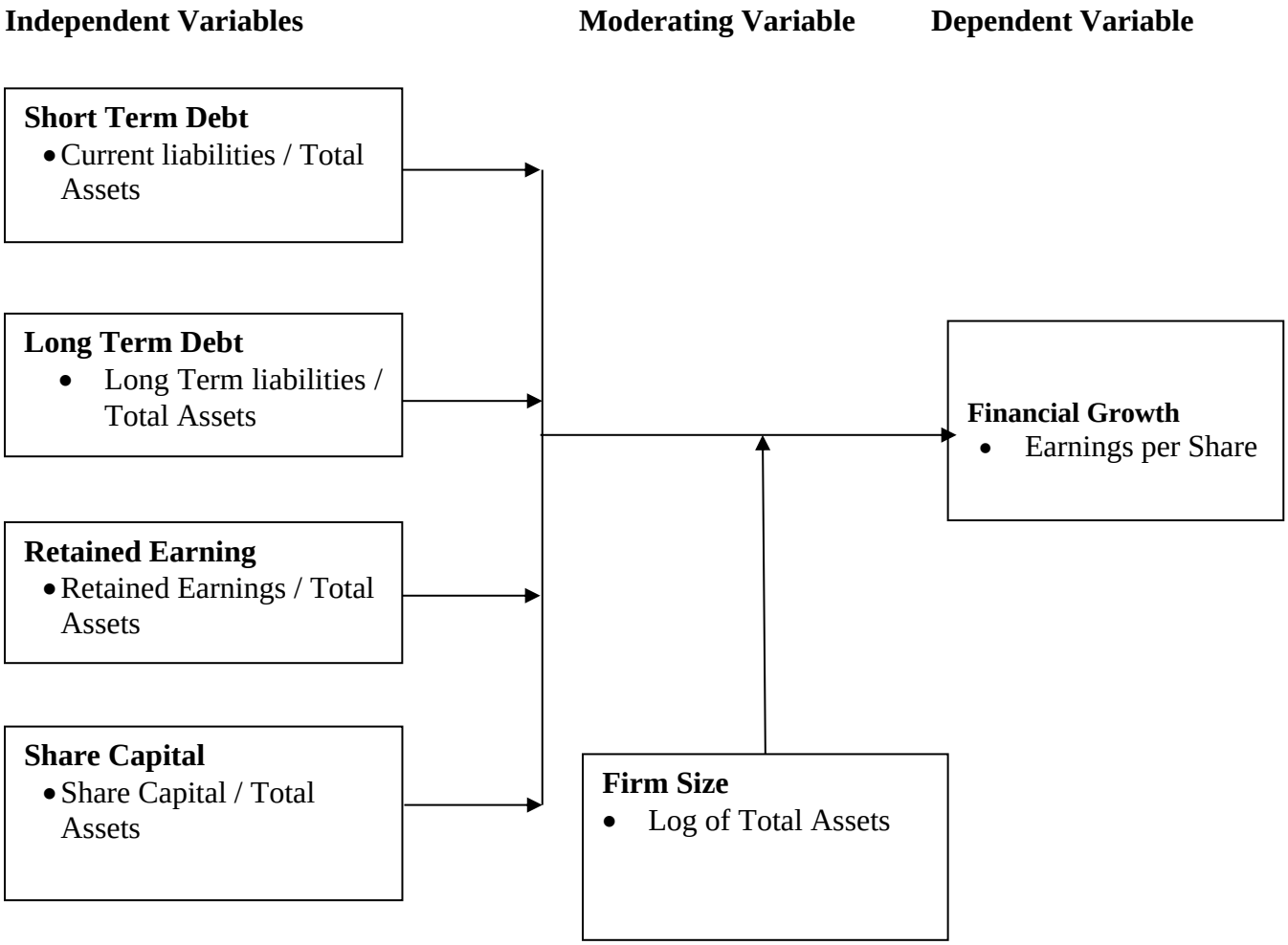

Figure 2.1: Conceptual Model

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodology used to achieve the study objectives. The chapter particularly discusses the research design, empirical model, and operationalization and measurement of variables. It also covers the target population, the sampling design and sample size, and the data collection instruments and procedure. The chapter ends with a description of data analysis techniques and ethical considerations.

3.2 Research Philosophy

Research philosophy relates to the foundation of knowledge upon which important assumptions and predispositions of a study are based (Cooper & Schindler, 2016). Positivist philosophy premises that knowledge is based on facts and that no abstractions or subjective status of individuals is considered (Bryman & Bell, 2011). Positivism thus derives a quantitative perspective which holds that there is an objective reality that can be expressed numerically, with explanatory and predictive power (Furrer, Thomas & Goussevkaia, 2018). This study was guided by the positivism philosophy because the study depends on quantifiable observations that lead to statistical analysis the study is also highly structured methodology which enabled generalization and quantifiable observations and evaluate the result with the help of statistical methods (Antwi & Hamza, 2015). Further, the study is theory-based and conceptual framework guiding the study is developed from existing literature and appropriate hypotheses are formulated and was tested through statistical analysis leading to accepting or rejecting hypotheses.

3.3 Research Design

The study adopted panel design. A panel design is used when researchers sample a group, or panel, of participants and then measure some variable or variables of interest at more than one point in time from this sample. According to Kothari (2004), the main purpose of panel design was to describe the state of affairs within the study area at the time of the study. Panel data refer to data containing time series observations of a number of individuals (McKenzie, 2012). Therefore, observations in panel data involve at least two dimensions; a cross-sectional dimension, indicated by subscript i, and a time series dimension, indicated by subscript t (Hsiao, 2007). Panel data analysis is a method of studying an exacting subject within multiple sites, periodically observed over a defined time frame. Panel analysis permits the researcher to study the dynamics of change with short time series. The combination of time series with cross-section can enhance the quality and quantity of data in ways that would be impossible using only one of these two dimensions (Gujarati, 2003). Panel data analysis can provide a rich and powerful study of a set of people, if one is willing to consider both the space and time dimension of the data (Burlig, Preonasm & Woerman, 2017).

3.4 Research Model

Panel data regression has been chosen for a number of reasons. Firstly, panel data allows for the control of individual heterogeneity, making it possible to exclude biases deriving from the existence of individual effects (Hsiao, 2003). Secondly, panel data yields more informative data, more variability and less collinearity among variables than is characteristic of cross-section or time-series data, more degree of freedom and more efficiency (Baltagi, 2005). Thirdly, panel data can be used to obtain consistent estimators in the presence of omitted variables (Wooldridge,

2002). Panel data sets are also able to recognize and estimate the effects that cannot be merely detected in pure cross-sections or pure time-series data (Baltagi, 2005).

Panel data model before interaction;

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

Where;

Y_{it} = Financial Growth

X_{1it} = Short term Debt

X_{2it} = Long term Debt

X_{3it} = Retained Earnings

X_{4it} = Share Capital

β_0 =Constant

$\beta_{1...4}$=Coefficient of the variables

e=Error term

3.4.1 Test for Moderation

In order to analyze the moderating effect of firm size on the relationship between financial structure on financial growth of financial firms listed at Nairobi Securities Exchange, the study modified the dynamic panel data model used by Ban˜os-Caballero, *et al*. (2012) as depicted in equation 3.1 above. Moderation effect was tested using Kenny and Barron (1986) approach and the R-squared change value. The moderator (firm size) was interacted with each of the independent variable as presented in equation 3.2.

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

Where;

Y_{it} = Financial Growth

X_{1it} = Short term Debt

X_{2it} = Long term Debt

X_{3it} = Retained Earnings

X_{4it} = Share Capital

M = Firm Size

3.5 Operationalization and Measurement of Variables

The dependent variable of the study is financial growth of financial firms listed at Nairobi Securities Exchange. Short-term debt, long term debt, retained earnings and share capital forms the explanatory variables for the study. The moderating variable is firm size. This section provided details of how each of the study variables was measured and operationalized.

Table 3.1: Operationalization and Measurement of Variables

Variable	Period	Measurement of Variable (s)	
Short Term Debt	2010-2017	• Current liabilities / Total Assets	OECD (2018), World Bank 2019), BIS (2020)
Long Term Debt	2010-2017	• Long Term liabilities / Total Assets	OECD (2018), World Bank 2019), BIS (2020)
Retained Earning	2010-2017	• Retained Earnings / Total Assets	OECD (2018), World Bank 2019), BIS (2020)
Share Capital	2010-2017	• Share Capital / Total Assets	OECD (2018), World Bank 2019), BIS (2020)
Firm Size	2010-2017	• Natural log of Total Assets	OECD (2018), World Bank 2019), BIS (2020)
Financial Growth	2010-2017	• Earnings per share	OECD (2018), World Bank 2019), BIS (2020)

3.6 Target Population

Population is the total collection of elements about which inference is made to all possible cases which are of interest in the study (Sekeran & Bougie, 2010). The target population of the study comprised 21 financial firms listed at the NSE and been actively trading for a period of 8 years from 2010-2017 (NSE, 2017). The study employed unbalanced data analysis technique. Table 3.2 shows the target population of the study.

Table: 3.2 Target population

Sector	Financial Listed Firms
Banking	11
Insurance	6
Investment	4
Total	**21**

(Source: NSE, 2017)

3.7 Sample and Sampling Technique

Sampling is the process of selecting units (people, organizations) from accessible population to fairly generalize results to the target population (Orodho, 2009). A sample is a subset of a population (Kothari, 2004). The study adopted a census technique where all financial firms listed at NSE was considered. This includes all the 11 banking, 6 insurance firms and 4 investment firms listed at NSE totaling to 21 firms. Census approach is the total inclusion of all observation in the study (Bryman, 2015). According to Sekaran and Bougie (2016), a census approach improves legitimacy of the collected data by embracing certain cases with rich information.

3.8 Data Collection Instruments

The study used a secondary data collection template. (Appendix 1). Secondary data was extracted from published audited financial statements. Using the published audited financial statements, Panel data covered a period of 8 years beginning from 2010 and ending in 2017.

3.9 Data Analysis and Presentation

The study is going to employ a dynamic panel data regression model. Panel data contain observations of multiple phenomena obtained over multiple time periods for the same firms or

individuals (Hsiao, 2013). The data is preferred because it reveals changes at the individual firms' level, establishes time order of variables and shows how relationships emerge (Frees, 2014). During data analysis descriptive was conducted. Descriptive statistics included mean, minimum, maximum, range standard deviations and trend analysis. Hypothesis testing was done using regression analysis. The study rejected the null hypothesis if the t-calculated is less than the t-critical value of 1.96 thus accepting the alternative hypothesis. If t-calculated is greater than the t-critical value the study would not reject the null hypothesis. The results of the study were presented in form of tables, figures and graphs.

3.10 Diagnostic Tests

The study conducted out different diagnostic tests to make sure that the postulations of Classical Linear Regression Model (CLRM) are not contravened. The pre-estimation tests conducted in this case were the Normality test, Multicollinearity, Test for Fixed or Random Effects, Wooldridge Test for Serial Correlation, Heteroscedasticity Test and unit root tests. The study performed these tests to avoid spurious regression results.

3.10.1 Normality Tests

The normality assumption ($ut \sim N(0, \sigma 2)$) is required in order to conduct single or joint hypothesis tests about the model parameters (Brooks, 2008). In order to check if the data is normally distributed two different methods was used. Firstly, normal probability plots were used and if there is a systematic deviation of the plots from a straight line this means that the data is non-normal distributed. However, if the plots are reasonably close to the line the data can be seen as normally distributed (Rupert, 2004). Secondly, in some cases it can be hard to establish if the data is normally distributed by just looking at the scatter plot and hence Bera and Jarque (1981) tests of

normality was performed. The study tested the null hypothesis that the disturbances are not normally distributed. If the p-value is less than 0.05, the null of normality at the 5% level was rejected. If the data is not normally distributed a nonparametric test was most appropriate.

3.10.2 Multicollinearity

The study employed Variance Inflation Factor (VIF) to measure multicollinearity (Gujarati, 2003; Cooper & Schindler, 2008). Failure to account for perfect multicollinearity results into indeterminate regression coefficients and infinite standard errors while existence of imperfect multicollinearity results into large standard errors. Large standard errors affect the precision and accuracy of rejection or failure to reject the null hypothesis. During estimation, the problem is not the presence of multicollinearity but rather its severity. When VIF $<$ 10; there is no multicollinearity; when VIF $\geq$ 10 presence of multicollinearity.

3.10.3 Heteroscedasticity

Since the data for this research is a cross-section of firms, this raises concerns about the existence of heteroscedasticity. The Classical Linear Regression Model (CLRM) assumes that the error term is homoskedastic, that is, it has constant variance. If the error variance is not constant, then there is heteroscedasticity in the data. Running a regression model without accounting for heteroscedasticity would lead to unbiased parameter estimates. To test for heteroscedasticity, the Breusch-Pagan/Godfrey test was used. The null hypothesis of this study was that the error variance is homoskedastic. If the null hypothesis is rejected and a conclusion made that heteroscedasticity is present in the panel data, then this would be accounted for by running a Feasible Generalized Least Squares (FGLS) model. When p-value$<$0.05, there is Heteroscedasticity; when p-value$>$0.05, there is no Heteroscedasticity

3.10.4 Autocorrelation

Since the data involves both cross section and time-series, it raises the suspicion of the existence of serial correlation. The presence of serial correlation indicates that the variables in the model violate the assumptions of the regression (Anderson *et al*., 2007). To cater for serial correlation, the Woodridge test for autocorrelation was employed. Serial correlation is a common problem experienced in panel data analysis and has to be accounted for in order to achieve the correct model specification. According to Wooldridge (2002), failure to identify and account for serial correlation in the idiosyncratic error term in a panel model would result into biased standard errors and inefficient parameter estimates. The null hypothesis of this test is that the data has no serial correlation. The p value of > 0.05 indicates absence of serial correlation.

3.10.5 Unit Root Test

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

3.11 Ethical Considerations

Ethical concerns were associated with the ethical standards that a scholar needed to observe in all the research methods at all stages of the study plan. The study used secondary data that is prone to errors and incompleteness. The researcher ensured that the data was factual before embarking on the main data analysis. In addition, the researcher ensured that the thesis was not plagiarized.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This section presented the findings from the results and their analyses as to their relevance to the objectives and hypotheses. The findings are presented in tables and narrations as per the specific objectives. In addition, we have presented the descriptive statistics and the diagnostic tests. The chapter further presented the results of the models that was adopted in order to achieve the study's objective.

4.2 Descriptive Statistics

The descriptive statistics shows the mean, standard deviation, minimum and maximum values of the variables financial growth, short term debt, long term debt, retained earnings, share capital and firm size. Financial growth was determined by earnings per share while short term debt was determined from current liabilities to total assets. long term debt was determined from long term liabilities to total finance while retained earnings was determined from retained earnings to total assets. Share capital was determined from share capital to total assets while firm size was determined from the log of total assets for the Banking, Insurance and Investment NSE companies in the period 2010-2017. The results are presented in Table 4.1.

Table 4.1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Earnings Per share	168	3.580	1.940	0.241	7.520
Short Term Debt	168	0.190	0.171	0.011	0.582
Long Term Debt	168	0.358	0.230	0.007	0.786
Retained Earnings	168	0.230	0.151	0.010	0.500
Share capital	168	2.285	1.443	0.135	4.981

Source (Research Data)

The descriptive results indicated that Earnings Per share had a mean of 3.580 and a standard deviation of 1.940. The minimum was 0.241 with a maximum of 7.520. This indicated that there was a large margin in financial growth among the financial firms. Short Term Debt had a mean of 0.190 and a standard deviation of 0.171. The minimum was 0.011 with a maximum of 0.582. The maximum values indicated that there were firms operating more than half capital on short term debts. Long Term Debt had a mean of 0.358 and a standard deviation of 0.230. The minimum was 0.007 with a maximum of 0.786. This also indicated that on average there was high long term debts in the financial firms. Retained Earnings had a mean of 0.230 and a standard deviation of 0.151. The minimum was 0.010 with a maximum of 0.500. This indicated that most of the firms did not retained earnings. Share capital had a mean of 2.285 and a standard deviation of 1.443. The minimum was 0.135 with a maximum of 4.981. This implied that majority of the firms adopted share capital in raising funds for their growth.

4.3 Inferential Statistics

4.3.1 Correlation Analysis

The study conducted correlation analysis for the various variables that are financial growth, short term debt, long term debt, retained earnings, share capital and firm size for the Banking, Insurance and Investment firms at Nairobi Securities Exchange in order to examine the nature of the statistical relationships between each pair of variables. Table 4.2 shows the correlation matrix of all the variables included in the study.

Table 4.2: Correlation Matrix

	Financial Growth	Short Term Debt	Long Term Debt	Retained Earnings	Share capital
Financial Growth	1.000				
Short Term Debt	0.693	1.000			
	0.000				
Long Term Debt	-0.645	-0.672	1.000		
	0.000	0.000			
Retained Earnings	0.740	0.635	-0.689	1.000	
	0.000	0.000	0.000		
Share capital	0.753	0.628	-0.676	0.642	1.000
	0.000	0.000	0.000	0.000	

Source (Research Data)

The results in Table 4.7 show that short term debt (r=0.693, p=0.000) had a positive and significance relationship on financial growth for the financial and investments companies in the Nairobi Securities Exchange. Long Term Debt (r= -0.645, p=0.000) had a negative and a significance relationship with financial growth for the financial and investments companies in the

Nairobi Securities Exchange. Retained Earnings (r= 0.740, p= 0.000) had a positive and significance relationship with financial growth for the financial and investments companies in the Nairobi Securities Exchange. Lastly, share capital (r=0.753, p=0.000) had a positive and a significance relationship with financial growth for the financial and investments companies in the Nairobi Securities Exchange.

The positive coefficient implied that an increase in Short Term Debt, Retained Earnings and Share capital led to an increase on financial growth for the financial and investments companies in the Nairobi Securities Exchange. However, the negative coefficient implied that increase in the Long Term Debt had a negative effect on financial growth for the financial and investments companies in the Nairobi Securities Exchange.

4.3.2 Diagnostics

The study sought to carry out regression analysis to establish the statistical significance relationship between financial structures on financial growth of financial firms listed at Nairobi Securities Exchange. Prior to the regression analysis, diagnostics tests were conducted. The study conducted out different diagnostic tests to make sure that the postulations of Classical Linear Regression Model (CLRM) are not contravened. The pre-estimation tests conducted in this case were the Normality test, Multicollinearity, Test for Fixed or Random Effects, Wooldridge Test for Serial Correlation, Heteroscedasticity Test and unit root tests. The study performed these tests to avoid spurious regression results.

4.3.3 Multicollinearity

The study used Variance Inflation Factor (VIF) to measure multicollinearity where VIF < 10; there is no multicollinearity; when VIF ≥ 10 presence of multicollinearity.

Table 4.3: Multicollinearity

Variable	VIF	1/VIF
Retained Earnings	2.980	0.336
Share capital	2.870	0.349
Short Term Debt	2.860	0.349
Long Term Debt	2.580	0.387
Firm Size	2.470	0.405
Mean VIF	2.750	

Source (Research Data)

As shown in Table 4.3, Retained Earnings had a VIF of 2.980, Share capital had a VIF of 2.870, Short Term debt had a VIF of 2.860, Long Term Debt had a VIF of 2.580 and firm size had a VIF value of 2.470. Therefore, the results revealed that there was no multicollinearity since all the values for VIF were less than 10.

4.3.4 Normality Tests

To test for normality, the study applied the Jaque Bera test method. The Jarque–Bera test is a goodness-of-fit test of whether sample data have the skewness and kurtosis matching a normal distribution. Normality was checked on the residuals of a model, because those assumptions apply to the unexplained variance of a model. The hypothesis was that the data was normally distributed. The results are as shown in Table 4.4.

Table 4.4: Normality Test

. jb residuals		
Jarque-Bera	normality test: 17.98 Chi(2)	0.120
Jarque-Bera	test for Ho: normality:	

Source (Research Data)

The results in Table 4.4 indicated that the Chi-square value was 17.98 and the P-value was 0.120 which was larger than the 0.05. We thus concluded that the data was normal since the p-value was larger than the critical 0.05.

4.3.5 Heteroscedasticity Test

In regression models, the error term difference or variance is assumed to be constant across observations. If this assumption is violated, the random variable is called heteroscedastic. If the control model is heteroscedasticity, then the analysis is not correct. This study used Breusch-Pagan test to check for existence of heteroscedasticity in the data collected with the hypothesis that the data was homoscedastic.

Table 4.5: Heteroscedasticity Test Results

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity
Ho: Constant variance
Variables: fitted values of EPS
chi2(28) = 320.85
Prob > chi2 = 0.080

Source (Research Data)

The hypothesis was therefore not rejected at a critical p value of 0.05 since the reported value for the chi2 (28) was 320.85 with a p-value of 0.080 which was larger than the critical 0.05. Thus, the data did not suffer from statistically significant heteroscedasticity."

4.3.6 Test for Autocorrelation

Autocorrelation Test was conducted to determine if the data contravenes the attributes of the Ordinary Least Square (OLS), which culminates to wrong outcomes in hypothesis testing. The study used Wooldridge Test for Serial Correlation to ascertain whether the data collected has a serial autocorrelation.

Table 4.6: Serial Correlation Tests

Wooldridge test for autocorrelation in panel data
H_0: no first-order autocorrelation
F(1, 19) = 1.626
Prob > F = 0.2176

Source (Research Data)

The results for the Wooldridge test for autocorrelation indicated that the F-test value was 1.626 and the P-value was 0.2176 indicating that the F-test is not statistically significant at 5% level. Hence, the null hypothesis of no autocorrelation was supported and the study concluded that residuals are not auto correlated.

4.3.7 Hausman Specifications Test

The Hausman specification test, was carried out to check for consistency of the estimator when compared to an alternative and less efficient estimator. Green (2008) opines that for one to decide between random effects and fixed effects, it was important to run a Hausman specification test

whereby the null hypothesis is the random effects. Durbin – Wu –Hausman Test, was conducted to test on the data to determine the most appropriate estimation model between the random effects and the fixed effects models. The hypothesis was that random effect is preferred to fixed effect and the results are as shown in Table 4.7.

Table 4.7: Hausman Test

	(b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
Short Term Debt	1.9223	1.7744	0.1480	0.2237
Long Term Debt	-1.3402	-0.8946	-0.4456	0.1532
Retained Earnings	2.3878	3.5993	-1.2115	0.3754
Share capital	0.4094	0.4608	-0.0514	0.0326
chi2(3)	14.37			
Prob>chi2	0.062			

Source (Research Data)

The Hausman test revealed a chi-square of 14.37 with a p-value of 0.062 indicating that at 5 percent level, the chi-square value obtained is statistically insignificant. Thus, the researcher did not reject the hypothesis that random effects model is preferred to fixed effect model and random model was adopted.

4.3.8 Panel Unit Root Tests

Unit root tests was conducted using the LLC test to establish whether the variables were stationary or non-stationary. The purpose of this was to avoid spurious regression results being obtained by using non-stationary series. Results in Table 4.7 indicated that all variables are stationary (i.e. absence of unit roots) at 5% level of significance.

Table 4.8: Unit root

Financial Sector			
Variable name	**Statistic(adjusted)**	**P-value**	**Comment**
Short term debt	2.232	0.006	Stationary
Long term debt	2.278	0.020	Stationary
Retained earnings	4.035	0.004	Stationary
Share capital	9.145	0.000	Stationary
Firm size	2.824	0.003	Stationary
Financial growth	3.001	0.000	Stationary

Source (Research Data)

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

4.4 Regression Results

The study sought to carry out regression analysis to establish the statistical significance relationship between financial structures on financial growth of financial firms listed at Nairobi Securities Exchange. The variables were short term debt, long term debt, retained earnings, share capital on financial growth of financial firms listed at Nairobi Securities Exchange. The regression includes techniques for modeling and analyzing variables, when the focus is on the relationship between a dependent and one or more independent variables. The results are presented in Table 4.9.

Table 4.9: Regression Analysis

Financial Growth	Coef.	Std. Err.	z	P>|z|
Short-term Debt	1.7744	0.8500	2.0900	0.0370
Long-term Debt	-0.8946	0.5777	-1.5500	0.1220
Retained Earnings	3.5993	1.0009	3.6000	0.0000
Share capital	0.4608	0.1023	4.5000	0.0000
_cons	1.6733	0.4074	4.1100	0.0000
Wald chi2(4)	303.16			
Prob>chi2	0.000			
R squared Overall	0.6559			

Source (Research Data)

The regression equation was as shown below;

$Y_{it} = 1.6733 + 1.7744X_{1it} - 0.8946X_{2it} + 3.5993X_{3it} + 0.4608X_{4it}$

X_{1it} = Short-term Debt of Firm *i* at time *t*

X_{2it} = Long-term Debt of Firm *i* at time *t*

X_{3it} = Retained Earnings of Firm *i* at time *t*

X_{4it} = Share capital of Firm *i* at time *t*

The overall R squared of 0.6559 implied that the four variables namely Short-term Debt, Long-term Debt, Retained Earnings and Share capital explained 65.59% on the variations on financial growth of the financial firms listed at Nairobi Securities Exchange. The overall model was significant as indicated by the Prob>chi2 of 0.000 with a Wald chi2 (4) of 303.16. In addition, the constant of 1.6733 showed that when Short-term Debt, Long-term Debt, Retained Earnings Structure and Share capital are held constant, financial growth of the financial firms listed at Nairobi Securities Exchange will remain at 1.6733 units.

The results further portrayed a positive and significant relationship between Short-term Debt and financial growth of the financial firms listed at Nairobi Securities Exchange (β= 1.7744, p=0.037). There was a negative and insignificant relationship between Long-term Debt and financial growth of the financial firms listed at Nairobi Securities Exchange (β= -0.8946, p=0.1220). Retained Earnings had a positive and significant relationship with financial growth of the financial firms listed at Nairobi Securities Exchange (β= 3.5993, p=0.000). Lastly, Share capital revealed a positive and significant relationship with financial growth of the financial firms listed at Nairobi Securities Exchange (β= 0.4608, p=0.000). The findings agree with Teruel and Solane (2018) who established that total and short-term debt is positively related to firm's profitability, which might be the most important factor in accessing outside financing in countries with weak collateral laws. Pouraghajan, Malekian, Emamgholipour, Lotfollahpour and Bagheri (2017) results indicated a significant relationship between short term debt, long term debt, total debt, and return on assets. Opungu (2016) study established that long term debt equity ratio has a negative effect on return on assets and return on equity but has an insignificant effect on ROCE. The findings concur with Isola and Akanni (2015) who established that firms tends toward internal financing through retained earnings, equity and other short term funds, against long term financing majorly through debts and other long term loans. The findings are in line with Akbarpour (2019) who found that that there was a significant relationship between financial structure and ROA and that financial structure plays an important role in the profitability of enterprises.

4.5 Moderation Effect of Firm Size

The fifth was to establish explore the moderating effect of Firm size on the relationship between financial structure and financial growth of financial firms listed at Nairobi Securities Exchange.

Each of the independent variables was moderated by the variable firm size. Results are presented in Table 4.10.

Table 4.10: Moderation Results

Financial growth	Coef.	Std. Err.	z	P>|z|
Short-term Debt*M	0.337	0.117	2.880	0.004
Long-term Debt *M	-0.477	0.107	-4.440	0.000
Retained Earnings *M	0.252	0.112	2.250	0.024
Share capital*M	0.104	0.111	2.940	0.048
_cons	0.980	0.199	4.930	0.000
Wald chi2(4)	258.96			
Prob>chi2	0.000			
R squared Overall	0.7181			

Source (Research Data)

The fitted model for the moderating effect was as shown below;

$Y_{it} = 0.980 + 0.337X_{1it} - 0.477X_{2it} + 0.252X_{3it} + 0.104X_{4it}$

X_{1it} = Short-term Debt of Firm *i* at time *t*

X_{2it} = Long-term Debt of Firm *i* at time *t*

X_{3it} = Retained Earnings of Firm *i* at time *t*

X_{4it} = Share capital of Firm *i* at time *t*

M= Moderating effect (Firm Size)

The regression coefficients presented in Table 4.9 shows that after moderation with firm size(M), Short-term Debt (β=0.337, p=0.004), Long-term Debt (β=-0.477, p=0.000), Retained Earnings

(β=0.252, p=0.024), and Share capital (β=0.104, p=0.048), had a positive and statistically significantly effect on financial growth of financial firms listed at Nairobi Securities Exchange.

Since the P values of the interaction term for the financial structure factors were statistically significant 0.000< 0.05 and the R^2 increased from 65.59% to 71.81% after the interaction term, we conclude that firm significantly moderates the relationship between the financial structure and financial growth of financial firms listed at Nairobi Securities Exchange. The findings are in line with Ater, Sifunjo, Kisaka, Iraya, Mwangi (2017) who pointed that firm growth has a significant mediating effect and is thus a critical tool that can be used by management when doing capital structures adjustments to ensure efficiency and optimality as firms grow. Abbasi and Malik (2015) also demonstrated that firm size has a moderating inspiration between firm growth and firm performance.

4.6 Discussion of Findings

The first objective of the study was to establish the effect of Short-term debt structure on financial growth of financial firms listed at Nairobi Securities Exchange. Correlation results showed that short term debt (r=0.693, p=0.000) had a positive and significance relationship on financial growth for the financial and investments companies in the Nairobi Securities Exchange. Further, regression analysis indicated a positive and significant relationship between Short-term Debt and financial growth of the financial firms listed at Nairobi Securities Exchange (β= 1.7744, p=0.037). This implies that a unitary increase in Short-term debt would lead to an increase in the financial growth of financial firms listed at Nairobi Securities Exchange by 0.693 units holding other factors constant.

The null hypothesis was therefore rejected that there is no significant effect of Short term debt on financial growth of financial firms listed at Nairobi Securities Exchange. The findings agree with Baum, Schafer and Talavera (2016) conducted a study on the effects of short-term liabilities on profitability, a comparison of German and US firms who found that firms rely more heavily on short-term liabilities are likely to be more profitable. The link between liability maturity structure and profitability does not appear in the results from the US sample, which reflects the importance of institutional factors. Teruel and Solane (2018) established that total and short-term debt is positively related to firm's profitability, which might be the most important factor in accessing outside financing in countries with weak collateral laws. Pouraghajan, Malekian, Emamgholipour, Lotfollahpour and Bagheri (2017) results indicate a significant relationship between short term debt, long term debt, total debt, and return on assets.

The second objective of the study was to assess the effect of Long-term debt structure on financial growth of financial firms listed at Nairobi Securities Exchange. Correlation results showed that Long Term Debt ($r= -0.645$, $p=0.000$) had a negative and a significance relationship with financial growth for the financial and investments companies in the Nairobi Securities Exchange. Further, regression analysis indicated a negative and insignificant relationship between Long-term Debt and financial growth of the financial firms listed at Nairobi Securities Exchange ($\beta= -0.8946$, $p=0.1220$). This implies that a unitary increase in long-term Debt would lead to a decrease in the financial growth of financial firms listed at Nairobi Securities Exchange by 0.645 units holding other factors constant.

The null hypothesis was therefore not rejected that there is no significant effect of long term debt on financial growth of financial firms listed at Nairobi Securities Exchange. The findings are consistent with Mohammadzadeh (2019) whose study revealed that long term debt had negative

effects on profitability of the pharmaceutical companies. Opungu (2016) study established that long term debt equity ratio has a negative effect on return on assets and return on equity but has an insignificant effect on ROCE. Chen (2014) results revealed that there exists a very weak and insignificant relationship between retained earnings and stock returns and the relationship is inverse since the coefficient corresponding to retained earnings in the model was always negative

The third objective of the study was to determine the effect of Retained earnings on financial growth of financial firms listed at Nairobi Securities Exchange. Correlation results showed that Retained Earnings ($r= 0.740$, $p= 0.000$) had a positive and significance relationship with financial growth for the financial and investments companies in the Nairobi Securities Exchange. Further, regression analysis indicated Retained Earnings had a positive and significant relationship with financial growth of the financial firms listed at Nairobi Securities Exchange ($\beta= 3.5993$, $p=0.000$). This implies that a unitary increase in Retained earnings would lead to an increase in the financial growth of financial firms listed at Nairobi Securities Exchange by 0.740 units holding other factors constant.

The null hypothesis was therefore rejected that there is no significant effect of Retained earnings on financial growth of financial firms listed at Nairobi Securities Exchange. The findings concur with Isola and Akanni (2015) who established that firms tends toward internal financing through retained earnings, equity and other short term funds, against long term financing majorly through debts and other long term loans. One factor that could be said to account for this decision is the ill developed bond market in the country as well as the accessibility of firms to long term finances from the existing sources that is marred with high interest rates and huge collaterals. Muchiri, Muturi and Ngumi (2016) found that retained earnings and external equity had significant relationship with return on assets but insignificant positive relationship with return on equity.

The fourth objective of the study was to examine the effect of Share capital on financial growth of financial firms listed at Nairobi Securities Exchange. Correlation results showed that Share capital (r=0.753, p=0.000) had a positive and a significance relationship with financial growth for the financial and investments companies in the Nairobi Securities Exchange. Further, regression analysis indicated that Share capital had a positive and significant relationship with financial growth of the financial firms listed at Nairobi Securities Exchange (β= 0.4608, p=0.000). This implies that a unitary increase in Share capital would lead to an increase in the financial growth of financial firms listed at Nairobi Securities Exchange by 0.753 units holding other factors constant.

The null hypothesis was therefore rejected that there is no significant effect of Share capital on financial growth of financial firms listed at Nairobi Securities Exchange. The findings are in line with Akbarpour (2019) who found that that there was a significant relationship between financial structure and ROA and that financial structure plays an important role in the profitability of enterprises. El-Sayed and Ebaid (2019) study found that share capital and long term debt has significant relationship with return on assets but not with return on equity. It was concluded that capital structure changes do affect firm's performance.

The fifth objective of the study was to explore the moderating effect of Firm size on the relationship between financial structure and financial growth of financial firms listed at Nairobi Securities Exchange. The regression coefficients presented in Table 4.9 shows that after moderation with firm size(M), Short-term Debt (β=0.337, p=0.004), Long-term Debt (β=-0.477, p=0.000), Retained Earnings (β=0.252, p=0.024), and Share capital (β=0.104, p=0.048), had a positive and statistically significantly effect on financial growth of financial firms listed at Nairobi Securities Exchange. Since the P values of the interaction term for the capital structure factors were statistically significant 0.000< 0.05 and the R^2 increased from 65.59% to 71.81% after the

interaction term, we conclude that firm significantly moderates the relationship between the financial structure and financial growth of financial firms listed at Nairobi Securities Exchange.

The null hypothesis was therefore rejected that firm size does not significantly moderate the relationship between financial structure and financial growth of financial firms listed at Nairobi Securities Exchange. The findings concur with Muigai (2016) who established that the firm size and the listing sector have significant moderating effect on the relationship between financial structure and financial distress. Ater, Sifunjo, Kisaka, Iraya, Mwangi (2017) pointed that firm growth has a significant mediating effect and is thus a critical tool that can be used by management when doing capital structures adjustments to ensure efficiency and optimality as firms grow. Abbasi and Malik (2015) also demonstrated that firm size has a moderating inspiration between firm growth and firm performance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of findings, conclusion and recommendations. The summary provides the purpose of the study, specific objectives, methodology and major findings of the study. Major conclusions drawn from the research findings are then presented.

5.2 Summary of the Study

The objective of this study was to establish the effect of financial structure on financial growth of financial firms listed at Nairobi Securities Exchange. The variables were short term debt, long term debt, retained earnings, share capital on earnings per share of financial firms listed at Nairobi Securities Exchange. The hypotheses were stated in the null hypotheses.

The first objective of the study was to establish the effect of Short-term debt structure on financial growth of financial firms listed at Nairobi Securities Exchange. Regression analysis indicated a positive and significant relationship between Short-term Debt and financial growth of the financial firms listed at Nairobi Securities Exchange (β= 1.7744, p=0.037). This implies that a unitary increase in Short-term Debt would lead to an increase in the financial growth of financial firms listed at Nairobi Securities Exchange by 0.693 units holding other factors constant. The null hypothesis was therefore rejected that there is no significant effect of Short term debt on financial growth of financial firms listed at Nairobi Securities Exchange.

The second objective of the study was to assess the effect of Long-term debt structure on financial growth of financial firms listed at Nairobi Securities Exchange. Regression analysis indicated a negative and insignificant relationship between Long-term Debt and financial growth of the

financial firms listed at Nairobi Securities Exchange (β= -0.8946, p=0.1220). This implies that a unitary increase in long-term Debt would lead to a decrease in the financial growth of financial firms listed at Nairobi Securities Exchange by 0.645 units holding other factors constant. The null hypothesis was therefore not rejected that there is no significant effect of long term debt on financial growth of financial firms listed at Nairobi Securities Exchange.

The third objective of the study was to determine the effect of Retained earnings on financial growth of financial firms listed at Nairobi Securities Exchange. Regression analysis indicated Retained Earnings had a positive and significant relationship with financial growth of the financial firms listed at Nairobi Securities Exchange (β= 3.5993, p=0.000). This implies that a unitary increase in Retained earnings would lead to an increase in the financial growth of financial firms listed at Nairobi Securities Exchange by 0.740 units holding other factors constant. The null hypothesis was therefore rejected that there is no significant effect of Retained earnings on financial growth of financial firms listed at Nairobi Securities Exchange.

The fourth objective of the study was to examine the effect of Share capital on financial growth of financial firms listed at Nairobi Securities Exchange. Regression analysis indicated that Share capital had a positive and significant relationship with financial growth of the financial firms listed at Nairobi Securities Exchange (β= 0.4608, p=0.000). This implies that a unitary increase in Share capital would lead to an increase in the financial growth of financial firms listed at Nairobi Securities Exchange by 0.753 units holding other factors constant. The null hypothesis was therefore rejected that there is no significant effect of Share capital on financial growth of financial firms listed at Nairobi Securities Exchange

The fifth objective of the study was to explore the moderating effect of Firm size on the relationship between financial structure and financial growth of financial firms listed at Nairobi

Securities Exchange. The P values of the interaction term for the financial structure factors were statistically significant 0.000< 0.05 and the R^2 increased from 65.59% to 71.81% after the interaction term, we conclude that firm significantly moderates the relationship between the financial structure and financial growth of financial firms listed at Nairobi Securities Exchange. The null hypothesis was therefore rejected that firm size does not significantly moderate the relationship between financial structure and financial growth of financial firms listed at Nairobi Securities Exchange.

5.3 Conclusion

Based on the study findings, the study concluded financial structure strongly affects financial growth of financial firms listed at Nairobi Securities Exchange in diverse ways. The study confirmed that Short term debt has a positive and significant effect on financial growth of financial firms listed at Nairobi Securities Exchange. The null hypothesis was therefore rejected that there is no significant effect of Short term debt on financial growth of financial firms listed at Nairobi Securities Exchange.

The study concluded that the Long term debt has a negative but insignificant effect on financial growth of financial firms listed at Nairobi Securities Exchange. The null hypothesis was therefore not rejected that there is no significant effect of long term debt on financial growth of financial firms listed at Nairobi Securities Exchange.

The study concluded that Retained earnings have a positive and significant effect on financial growth of financial firms listed at Nairobi Securities Exchange. The study also concluded that Share capital have a positive and significant effect on financial growth of financial firms listed at Nairobi Securities Exchange. The null hypothesis was therefore rejected that there is no significant

effect of Retained earnings on financial growth of financial firms listed at Nairobi Securities Exchange.

Lastly, firm size was confirmed to significantly moderate the relationship between financial structure and financial growth of financial firms listed at Nairobi Securities Exchange. The null hypothesis was therefore rejected that firm size does not significantly moderate the relationship between financial structure and financial growth of financial firms listed at Nairobi Securities Exchange. The size influences a firm performance because large firm can increase their current size very fast by accumulating earnings from past performance and this enhances their value. The accumulation of funds assists in putting up effective management structures.

5.4 Recommendations

Based on the conclusion, the study made several conclusions;

Recommendations for Knowledge

The study found out that the financial structures have a significant effect on financial growth of financial firms listed at Nairobi Securities Exchange. The firm size is crucial in a finance company due to their market power larger firms are able to charge higher prices and hence earn higher profits. Additionally, higher profits could also be result of economies of scale and stronger negotiating power that provides larger firms more favorable financing conditions.

Recommendations for Policy and Practice

The study recommends that the policy makers in the financial sector to embrace indicators on short term debts, long term debts, retained earnings, the share capital and firm size on their strategic decision-making. These indicators will further guide in expanding the interpretation of the financial structures in the listed firms at the Nairobi securities exchange and other related firms.

The study recommends that the Central Bank of Kenya to formulate and enact a policy which makes commercial debt cheaper hence reduce cost of operations of financial firms, management of commercial banks listed at the NSE to reduce interest rates so as to attract investors who will inject more funds into these financial firms. The Nairobi Securities Exchange and Capital markets authority supervisory framework guidelines should be adhered to foster credibility and performance of the listed companies. The government policy makers will also find the findings beneficial in interpreting of performance of the listed companies based on the financial structures.

5.5 Suggestions for further Research

This study sought to determine the financial structure on financial growth of financial firms listed at Nairobi Securities Exchange only, thus area for further studies could consider other companies in Kenya for purpose of making a comparison of the findings with those of the current study. This study used only five variables that is short term debt, long term debt, retained earnings, share capital on financial growth of financial firms listed at Nairobi Securities Exchange. Future studies can incorporate other concepts like exchange rates, economic growth and inflation rates since they can influence financial growth. This study used firm size as a moderating variable. There are other factors that can affect by mediating or intervening that could be researched further for example marker regulations. Therefore, future studies can introduce other methodologies such as an intervening variable in their models.

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APPENDICES

Appendix I: Secondary Data Collection Template

Company	Year	Short Term Debt	Long Term Debt	Retained Earnings Structure	Share capital	Firm Size
A	2010					
A	2011					
A	2012					
A	2013					
A	2014					
A	2015					
A	2016					
A	2017					

Appendix II: Secondary Data

Company nse	Year	Short Term Debt	Long Term Debt	Retained Earning Structure	Share Capital Structure	Firm Size	STD FS	LTD FS	REFS	SCS FS	Earnings Per Share		resid	_est_ random	_est_ fixed
Absa Kenya	2010	0.067	0.007	0.112	0.254	8.237	0.564	0.475	0.357	1.554	1.632		2.306103	1	1
Absa Kenya	2011	0.07	0.009	0.115	0.518	8.224	0.701	0.955	1.178	1.399	1.597		2.44208	1	1
Absa Kenya	2012	0.094	0.009	0.118	0.672	8.267	1.641	1.878	1.187	1.418	1.61		2.566422	1	1
Absa Kenya	2013	0.066	0.011	0.128	1.183	8.315	0.725	1.64	1.645	1.589	1.4		2.7864	1	1
Absa Kenya	2014	0.098	0.68	0.132	0.381	8.354	1.018	0.962	1.95	0.411	1.54		1.88956	1	1
Absa Kenya	2015	0.025	0.683	0.123	0.796	8.414	0.416	1.177	0.128	1.815	1.55		1.916175	1	1
Absa Kenya	2016	0.026	0.564	0.134	0.452	8.414	0.476	1.769	1.57	1.49	1.36		1.90549	1	1
Absa Kenya	2017	0.039	0.313	0.139	0.75	8.428	1.766	0.349	1.963	1.961	1.97		2.308404	1	1
Centum Investment Co	2010	0.068	0.417	0.194	1.249	7.998	0.549	1.814	1.343	1.506	2.26		2.694714	1	1
Centum Investment Co	2011	0.105	0.184	0.41	4.13	8.609	4.747	2.364	2.239	3.154	6.21		5.073749	1	1
Centum Investment Co	2012	0.242	0.15	0.245	3.926	8.588	4.247	2.34	4.178	4.32	5.15		4.65937	1	1
Centum Investment Co	2013	0.409	0.191	0.21	4.777	8.582	3.388	4.827	2.906	3.572	5.87		5.185157	1	1
Centum Investment Co	2014	0.173	0.196	0.229	2.782	8.095	2.401	4.392	2.568	4.867	6.18		3.911071	1	1
Centum Investment Co	2015	0.179	0.115	0.314	4.057	8.996	2.066	2.852	3.222	2.699	5.02		4.887608	1	1
Centum Investment Co	2016	0.043	0.738	0.133	1.911	7.569	0.388	0.852	1.057	0.923	3.55		2.448669	1	1
Centum Investment Co	2017	0.032	0.577	0.14	1.228	7.27	1.853	0.976	1.158	1.862	3.45		2.283664	1	1
British-American Investments Co. Ltd	2010	0.3	0.22	0.443	4.352	8.797	3.778	4.019	2.078	2.289	6.52		5.608617	1	1
British-American Investments Co. Ltd	2011	0.124	0.265	0.481	2.248	8.311	4.813	2.687	3.14	4.444	4.42		4.423373	1	1
British-American Investments Co. Ltd	2012	0.324	0.04	0.304	3.784	8.721	2.33	3.332	3.863	3.653	3.6		5.050202	1	1
British-American Investments Co. Ltd	2013	0.056	0.632	0.158	1.521	7.163	0.494	1.514	0.584	1.082	3.37		2.476842	1	1
British-American Investments Co. Ltd	2014	0.319	0.274	0.412	4.155	8.344	2.546	3.18	4.264	3.036	4.06		5.391672	1	1
British-American Investments Co. Ltd	2015	0.532	0.1	0.476	2.299	8.301	3.339	4.369	3.314	4.855	3.84		5.300429	1	1
British-American Investments Co. Ltd	2016	0.436	0.16	0.457	2.106	8.891	4.129	4.608	4.114	2.553	4.68		4.919097	1	1

British-American Investments Co. Ltd	2017	0.362	0.043	0.347	3.335	8.883	2.243	4.809	3.506	4.881	3.77		5.062827	1	1
CFC Stanbic of Kenya	2010	0.059	0.343	0.02	1.433	8.146	1.773	1.13	1.396	1.072	1.5		2.203446	1	1
CFC Stanbic of Kenya	2011	0.084	0.702	0.018	1.087	8.177	0.998	0.328	1.808	1.23	1.7		1.760024	1	1
CFC Stanbic of Kenya	2012	0.03	0.421	0.019	1.372	8.156	1.323	0.528	1.619	1.595	3.01		2.050505	1	1
CFC Stanbic of Kenya	2013	0.502	0.142	0.014	4.434	8.257	2.668	3.885	4.993	3.777	3.88		4.530498	1	1
CFC Stanbic of Kenya	2014	0.041	0.356	0.015	0.546	8.261	1.811	1.953	1.472	1.867	2.34		1.733173	1	1
CFC Stanbic of Kenya	2015	0.251	0.101	0.015	3.271	8.262	2.841	3.017	4.217	4.407	4.36		3.589524	1	1
CFC Stanbic of Kenya	2016	0.012	0.464	0.159	1.469	8.275	1.037	0.505	0.979	0.251	1.97		2.528698	1	1
CFC Stanbic of Kenya	2017	0.068	0.584	0.157	0.367	7.719	0.873	0.481	0.664	0.192	1.4		2.005741	1	1
CIC Insurance Group Ltd	2010	0.368	0.231	0.395	3.159	8.723	4.876	4.487	4.613	2.031	4.17		4.996963	1	1
CIC Insurance Group Ltd	2011	0.084	0.566	0.17	0.611	7.137	1.582	0.724	0.952	1.649	2.95		2.209453	1	1
CIC Insurance Group Ltd	2012	0.124	0.119	0.301	3.488	8.193	4.137	4.287	2.113	4.733	7.19		4.477467	1	1
CIC Insurance Group Ltd	2013	0.218	0.265	0.432	2.02	8.044	4.03	4.148	2.157	2.39	6.35		4.308742	1	1
CIC Insurance Group Ltd	2014	0.103	0.3	0.283	4.341	8.207	2.293	2.116	2.273	2.349	6.77		4.606539	1	1
CIC Insurance Group Ltd	2015	0.017	0.626	0.075	1.843	7.649	0.533	0.714	0.869	0.978	2.06		2.262636	1	1
CIC Insurance Group Ltd	2016	0.062	0.514	0.067	1.103	7.044	0.271	1.427	0.515	1.055	3.48		2.072908	1	1
CIC Insurance Group Ltd	2017	0.145	0.235	0.331	3.936	8.149	2.62	2.081	4.747	2.491	4.85		4.725364	1	1
Diamond Trust Bank	2010	0.05	0.407	0.135	0.135	7.16	1.794	0.427	1.842	0.657	1.3		1.946058	1	1
Diamond Trust Bank	2011	0.079	0.626	0.042	1.346	7.084	1.781	1.913	0.925	1.966	1.28		2.024865	1	1
Diamond Trust Bank	2012	0.079	0.674	0.101	1.096	7.703	1.121	1.122	1.053	0.841	3.01		2.07909	1	1
Diamond Trust Bank	2013	0.182	0.169	0.348	2.578	8.33	4.19	3.006	3.165	4.759	3.88		4.285514	1	1
Diamond Trust Bank	2014	0.029	0.664	0.193	1.957	7.96	1.08	0.827	1.408	0.47	2.34		2.727181	1	1
Diamond Trust Bank	2015	0.239	0.183	0.452	4.201	8.209	2.427	4.718	2.057	3.029	4.36		5.496296	1	1
Diamond Trust Bank	2016	0.011	0.61	0.032	1.338	7.779	0.173	1.932	0.689	0.127	1.97		1.878841	1	1
Diamond Trust Bank	2017	0.083	0.768	0.01	1.608	7.174	0.72	0.895	0.334	1.405	1.2		1.910477	1	1
Equity Bank Ltd	2010	0.067	0.777	0.026	0.598	7.531	0.88	0.491	0.239	0.567	1.7		1.466241	1	1
Equity Bank Ltd	2011	0.031	0.339	0.182	0.289	7.571	0.129	1.834	1.944	0.145	1.34		2.213303	1	1
Equity Bank Ltd	2012	0.515	0.178	0.223	3.018	8.776	2.926	2.298	3.26	2.036	3.88		4.621159	1	1
Equity Bank Ltd	2013	0.199	0.085	0.433	4.291	8.427	2.87	3.505	3.905	3.431	7.28		5.486073	1	1
Equity Bank Ltd	2014	0.062	0.533	0.099	0.461	7.469	0.644	1.697	0.515	1.756	1.68		1.875271	1	1

Equity Bank Ltd	2015	0.347	0.12	0.344	4.964	8.62	2.564	3.181	2.2	3.149	7.12		5.707134	1	1
Equity Bank Ltd	2016	0.024	0.764	0.161	0.955	7.2	0.329	0.81	1.401	1.341	1.85		2.051976	1	1
Equity Bank Ltd	2017	0.262	0.181	0.263	4.095	8.025	4.953	2.586	3.55	2.744	5.68		4.809784	1	1
Home Afrika Ltd Ord	2010	0.061	0.519	0.053	1.668	7.019	0.934	0.945	1.579	1.257	1.04		2.276608	1	1
Home Afrika Ltd Ord	2011	0.06	0.614	0.117	0.315	7.344	1.139	1.288	0.789	0.11	2.29		1.796775	1	1
Home Afrika Ltd Ord	2012	0.308	0.13	0.489	2.343	8.716	4.668	4.774	4.499	4.941	5.25		4.943195	1	1
Home Afrika Ltd Ord	2013	0.534	0.257	0.309	2.982	8.937	4.479	2.526	4.333	3.186	5.27		4.877153	1	1
Home Afrika Ltd Ord	2014	0.061	0.346	0.125	0.144	7.357	0.517	1.896	1.717	1.21	1.12		1.988299	1	1
Home Afrika Ltd Ord	2015	0.344	0.212	0.281	3.462	8.289	2.708	4.228	2.202	2.463	3.58		4.700668	1	1
Home Afrika Ltd Ord	2016	0.445	0.018	0.38	4.122	8.184	3.522	2.942	3.133	3.378	4.86		5.713873	1	1
Home Afrika Ltd Ord	2017	0.013	0.418	0.167	1.564	7.514	0.921	0.11	0.539	1.911	1.35		2.644191	1	1
Housing Finance Co.	2010	0.413	0.26	0.378	4.938	8.624	4.672	4.561	4.115	4.212	7.29		5.809398	1	1
Housing Finance Co.	2011	0.042	0.336	0.056	0.255	7.698	1.888	0.185	1.175	1.804	1.31		1.766326	1	1
Housing Finance Co.	2012	0.087	0.534	0.097	1.537	7.296	0.265	1.541	1.04	0.635	1.89		2.407331	1	1
Housing Finance Co.	2013	0.033	0.403	0.137	0.589	7.323	1.248	0.869	0.259	0.66	1.59		2.135862	1	1
Housing Finance Co.	2014	0.308	0.051	0.286	3.319	8.287	2.44	3.145	2.599	3.493	4.33		4.732924	1	1
Housing Finance Co.	2015	0.265	0.162	0.431	4.843	8.508	3.078	4.941	2.361	2.203	4.53		5.781448	1	1
Housing Finance Co.	2016	0.031	0.615	0.141	1.863	7.548	1.716	1.127	0.583	0.225	3.36		2.544087	1	1
Housing Finance Co.	2017	0.055	0.569	0.077	1.666	7.473	0.754	1.936	1.755	0.404	3.37		2.306695	1	1
I&M Holdings Ltd	2010	0.252	0.22	0.384	3.897	8.104	2.741	4.058	3.299	4.071	4.97		5.101435	1	1
I&M Holdings Ltd	2011	0.06	0.562	0.064	1.444	7.851	0.147	0.401	0.416	0.254	2.57		2.172745	1	1
I&M Holdings Ltd	2012	0.084	0.316	0.185	1.975	7.024	0.461	0.189	0.794	1.614	3.02		3.115586	1	1
I&M Holdings Ltd	2013	0.027	0.482	0.029	1.481	7.915	1.696	1.002	0.596	1.356	1.84		2.07683	1	1
I&M Holdings Ltd	2014	0.217	0.011	0.408	4.505	8.322	2.287	3.401	2.869	2.08	4.04		5.592834	1	1
I&M Holdings Ltd	2015	0.108	0.206	0.277	4.062	8.781	3.379	4.134	3.147	3.102	4.41		4.54935	1	1
I&M Holdings Ltd	2016	0.049	0.518	0.098	1.703	7.705	1.189	0.234	1.59	1.68	2.1		2.434306	1	1
I&M Holdings Ltd	2017	0.065	0.725	0.109	0.604	7.954	0.874	1.365	0.174	1.584	2.65		1.810718	1	1
Jubilee Holdings Ltd	2010	0.043	0.35	0.182	0.699	7.826	1.593	1.011	0.187	1.144	2.21		2.413673	1	1
Jubilee Holdings Ltd	2011	0.548	0.207	0.412	4.787	8.202	2.615	3.216	4.029	3.691	6.2		6.149152	1	1
Jubilee Holdings Ltd	2012	0.12	0.233	0.307	2.442	8.772	4.011	3.008	3.679	3.729	7.12		3.908012	1	1
Jubilee Holdings Ltd	2013	0.086	0.732	0.172	0.212	7.362	1.656	1.183	0.46	0.617	1.25		1.887851	1	1

Jubilee Holdings Ltd	2014	0.414	0.099	0.498	4.121	8.702	4.49	3.725	4.876	4.123	4.27		6.010664	1	1
Jubilee Holdings Ltd	2015	0.033	0.505	0.161	0.443	7.895	0.941	0.693	0.136	0.217	1.93		2.063725	1	1
Jubilee Holdings Ltd	2016	0.048	0.679	0.155	1.431	7.758	0.873	0.848	1.929	1.698	2.16		2.368334	1	1
Jubilee Holdings Ltd	2017	0.353	0.124	0.213	3.565	8.932	4.714	4.505	2.42	3.908	5.7		4.598067	1	1
Kenya Commercial Bank	2010	0.09	0.633	0.178	1.341	7.83	0.644	1.358	0.679	1.347	3.12		2.525323	1	1
Kenya Commercial Bank	2011	0.302	0.238	0.25	2.833	8.54	3.202	4.374	4.306	4.386	6.96		4.201478	1	1
Kenya Commercial Bank	2012	0.021	0.392	0.19	0.181	7.566	1.565	0.481	0.192	1.194	3.29		2.127177	1	1
Kenya Commercial Bank	2013	0.227	0.225	0.224	4.044	8.563	3.404	2.645	4.198	3.126	5.69		4.544446	1	1
Kenya Commercial Bank	2014	0.064	0.732	0.177	0.213	7.388	0.292	1.279	1.549	1.402	3.48		1.867272	1	1
Kenya Commercial Bank	2015	0.309	0.231	0.34	2.811	8.572	3.041	2.01	3.842	3.605	5		4.533962	1	1
Kenya Commercial Bank	2016	0.179	0.207	0.478	4.981	8.764	4.771	4.693	4.451	3.341	4.16		5.82135	1	1
Kenya Commercial Bank	2017	0.089	0.544	0.139	1.697	7.894	0.46	0.435	1.084	1.769	2.5		2.626829	1	1
Kenya Re Insurance	2010	0.046	0.422	0.104	0.459	7.855	0.74	0.488	0.974	1.972	2.45		1.963254	1	1
Kenya Re Insurance	2011	0.097	0.406	0.185	0.947	7.8	1.086	1.544	0.984	0.125	3.2		2.584464	1	1
Kenya Re Insurance	2012	0.048	0.725	0.013	1.512	7.996	1.33	1.334	1.718	1.423	2.75		1.853404	1	1
Kenya Re Insurance	2013	0.516	0.216	0.4	2.637	8.746	2.387	2.479	2.183	3.313	4.98		5.050462	1	1
Kenya Re Insurance	2014	0.339	0.192	0.251	2.352	8.332	2.08	2.85	4.103	3.508	6.95		4.090248	1	1
Kenya Re Insurance	2015	0.029	0.359	0.17	1.308	7.015	0.538	1.669	1.842	0.386	3.25		2.618201	1	1
Kenya Re Insurance	2016	0.042	0.524	0.035	1.953	7.827	1.683	0.866	1.542	1.816	2.55		2.304955	1	1
Kenya Re Insurance	2017	0.582	0.047	0.5	4.248	8.948	4.557	3.273	3.646	3.918	4.57		6.420995	1	1
Kurwitu Ventures	2010	0.34	0.093	0.299	2.445	8.19	3.411	3.6	2.653	2.314	4.36		4.396205	1	1
Kurwitu Ventures	2011	0.035	0.405	0.166	1.606	7.152	0.816	1.785	0.953	0.441	1.45		2.710611	1	1
Kurwitu Ventures	2012	0.045	0.514	0.184	0.257	7.899	1.202	0.298	1.028	1.452	1.42		2.074047	1	1
Kurwitu Ventures	2013	0.491	0.257	0.326	4.616	8.331	2.379	2.566	3.98	3.944	4.61		5.61495	1	1
Kurwitu Ventures	2014	0.097	0.408	0.031	1.077	7.537	0.795	0.748	1.709	1.247	1.87		2.088281	1	1
Kurwitu Ventures	2015	0.436	0.212	0.455	3.609	8.009	3.831	4.601	4.326	2.662	4.3		5.557925	1	1
Kurwitu Ventures	2016	0.077	0.665	0.02	1.486	7.216	1.721	1.729	1.426	0.838	2.1		1.971751	1	1
Kurwitu Ventures	2017	0.436	0.159	0.385	4.376	8.841	3.402	3.714	3.52	4.335	3.88		5.706801	1	1
Liberty Kenya Holdings	2010	0.255	0.258	0.485	4.257	8.525	2.49	4.445	2.737	3.643	6.19		5.602173	1	1
Liberty Kenya Holdings	2011	0.441	0.282	0.438	2.442	8.409	4.591	4.263	2.275	3.878	3.64		4.905263	1	1
Liberty Kenya Holdings	2012	0.362	0.178	0.354	3.126	8.179	3.687	4.444	3.219	2.332	6.19		4.870952	1	1

Liberty Kenya Holdings	2013	0.454	0.187	0.402	3.501	8.428	4.652	4.846	4.58	4.232	3.97		5.371701	1	1
Liberty Kenya Holdings	2014	0.074	0.493	0.014	0.714	7.029	1.609	1.855	0.202	0.503	1.91		1.742981	1	1
Liberty Kenya Holdings	2015	0.57	0.026	0.372	3.781	8.788	3.442	2.861	4.052	3.066	6.86		5.742595	1	1
Liberty Kenya Holdings	2016	0.073	0.755	0.055	0.36	7.105	1.841	1.043	1.614	0.546	3.22		1.491284	1	1
Liberty Kenya Holdings	2017	0.054	0.68	0.099	0.596	7.57	1.526	1.851	0.211	0.501	2.68		1.791777	1	1
NIC Bank Ltd	2010	0.058	0.527	0.195	1.259	7.64	0.821	1.914	0.786	0.5	3.13		2.586773	1	1
NIC Bank Ltd	2011	0.099	0.324	0.024	1.654	7.288	1.209	1.806	0.843	1.984	2.06		2.407647	1	1
NIC Bank Ltd	2012	0.056	0.602	0.176	1.239	7.796	1.558	0.426	0.623	1.807	2.2		2.438529	1	1
NIC Bank Ltd	2013	0.05	0.773	0.113	1.362	7.839	1.153	0.256	1.838	1.248	1.44		2.104828	1	1
NIC Bank Ltd	2014	0.139	0.095	0.304	3.126	8.929	2.997	4.043	3.165	2.021	6.78		4.36955	1	1
NIC Bank Ltd	2015	0.41	0.209	0.427	4.594	8.861	2.231	3.466	3.013	2.739	5.61		5.867558	1	1
NIC Bank Ltd	2016	0.475	0.239	0.408	4.169	8.19	2.244	4.751	4.294	2.179	6.76		5.691839	1	1
NIC Bank Ltd	2017	0.027	0.744	0.02	0.313	7.594	1.401	1.546	0.75	0.47	1.91		1.27187	1	1
National Bank of Kenya	2010	0.079	0.624	0.141	1.797	7.529	1.499	1.239	0.932	1.417	0.73		2.590795	1	1
National Bank of Kenya	2011	0.036	0.397	0.108	1.578	7.283	0.293	1.817	1.668	1.948	0.37		2.49788	1	1
National Bank of Kenya	2012	0.083	0.488	0.186	1.916	7.266	1.605	1.326	0.202	0.969	0.241		2.936357	1	1
National Bank of Kenya	2013	0.036	0.5	0.012	1.257	7.072	1.323	0.581	0.528	0.576	0.42		1.912295	1	1
National Bank of Kenya	2014	0.095	0.651	0.014	1.108	7.948	1.335	1.862	0.203	0.185	0.43		1.820445	1	1
National Bank of Kenya	2015	0.061	0.687	0.03	1.45	7.69	1.971	1.965	1.106	1.828	1.09		1.943085	1	1
National Bank of Kenya	2016	0.025	0.586	0.102	0.475	7.814	0.711	1.052	1.044	0.112	0.73		1.779455	1	1
National Bank of Kenya	2017	0.019	0.554	0.1	0.972	7.759	1.47	0.244	0.338	1.511	0.37		2.019242	1	1
Sanlam Holdings Ltd	2010	0.096	0.546	0.14	1.337	7.53	1.739	1.9	0.109	0.66	2.79		2.475181	1	1
Sanlam Holdings Ltd	2011	0.376	0.036	0.487	4.398	8.198	4.503	2.398	3.104	2.187	5.17		6.087638	1	1
Sanlam Holdings Ltd	2012	0.491	0.154	0.218	2.358	8.309	2.607	4.657	3.748	3.836	3.94		4.277935	1	1
Sanlam Holdings Ltd	2013	0.509	0.083	0.489	4.858	8.913	2.808	2.85	3.981	4.344	3.69		6.500741	1	1
Sanlam Holdings Ltd	2014	0.079	0.545	0.055	1.165	7.994	0.395	0.618	1.816	1.039	1.32		2.060716	1	1
Sanlam Holdings Ltd	2015	0.361	0.061	0.459	3.932	8.169	3.52	3.839	2.308	2.037	7.52		5.723156	1	1
Sanlam Holdings Ltd	2016	0.308	0.243	0.362	2.244	8.416	4.887	3.934	3.304	3.025	4.56		4.339378	1	1
Sanlam Holdings Ltd	2017	0.506	0.054	0.463	3.426	8.241	4.045	3.51	4.406	2.029	6.81		5.767948	1	1
Standard Chartered	2010	0.555	0.271	0.345	2.512	8.903	3.176	3.423	2.545	3.445	6.88		4.814901	1	1
Standard Chartered	2011	0.533	0.137	0.411	4.947	8.505	2.212	3.257	4.662	2.136	5.86		6.255281	1	1

Standard Chartered	2012	0.182	0.144	0.318	3.525	8.503	2.767	2.63	3.179	4.402	4.39		4.636253	1	1
Standard Chartered	2013	0.068	0.68	0.184	1.203	7.843	1.415	1.429	1.079	0.414	1.93		2.402251	1	1
Standard Chartered	2014	0.312	0.204	0.469	2.188	8.505	4.497	2.973	4.737	4.113	4.01		4.740687	1	1
Standard Chartered	2015	0.4	0.076	0.487	4.765	8.623	2.641	3.715	3.406	4.813	4.41		6.263545	1	1
Standard Chartered	2016	0.222	0.105	0.428	3.454	8.186	3.814	2.481	4.872	3.906	6.96		5.105327	1	1
Standard Chartered	2017	0.178	0.072	0.23	2.974	8.951	2.942	4.598	4.335	4.672	6.64		4.122939	1	1
The Co-operative Bank	2010	0.085	0.64	0.188	1.508	7.368	1.385	1.284	1.013	1.201	2.94		2.623132	1	1
The Co-operative Bank	2011	0.181	0.22	0.388	4.645	8.215	3.559	3.609	4.541	4.065	4.61		5.334511	1	1
The Co-operative Bank	2012	0.393	0.217	0.397	2.927	8.324	2.794	2.422	2.451	2.076	6.44		4.954145	1	1
The Co-operative Bank	2013	0.062	0.513	0.138	1.32	7.181	0.375	1.709	0.749	0.674	3.22		2.429342	1	1
The Co-operative Bank	2014	0.227	0.065	0.375	3.459	8.301	2.853	2.338	4.721	2.007	4.39		4.961522	1	1
The Co-operative Bank	2015	0.362	0.275	0.402	3.594	8.751	2.97	2.502	2.528	3.58	6.23		5.172587	1	1
The Co-operative Bank	2016	0.519	0.253	0.479	2.139	8.685	3.396	3.323	3.272	3.665	7.36		5.077565	1	1
The Co-operative Bank	2017	0.301	0.162	0.278	2.891	8.7	2.351	2.21	3.427	4.598	3.88		4.395198	1	1
Trans-Century Ltd	2010	0.144	0.071	0.464	3.007	8.706	4.011	3.026	2.45	4.91	4.54		4.920949	1	1
Trans-Century Ltd	2011	0.55	0.241	0.477	4.916	8.646	3.53	3.58	2.488	2.123	7.28		6.41568	1	1
Trans-Century Ltd	2012	0.518	0.093	0.332	3.143	8.825	2.54	4.425	4.14	2.777	5.95		5.152443	1	1
Trans-Century Ltd	2013	0.092	0.682	0.189	1.649	7.488	1.429	0.559	1.946	1.32	2.36		2.666549	1	1
Trans-Century Ltd	2014	0.011	0.772	0.094	1.935	7.938	1.047	1.984	1.382	0.31	1.55		2.232159	1	1
Trans-Century Ltd	2015	0.016	0.406	0.053	0.56	7.851	1.529	0.635	0.644	1.191	1.48		1.78731	1	1
Trans-Century Ltd	2016	0.029	0.786	0.161	1.594	7.002	1.487	1.246	1.537	0.203	1.8		2.335603	1	1
Trans-Century Ltd	2017	0.062	0.672	0.036	1.958	7.447	0.966	0.602	0.549	0.35	1.38		2.213948	1	1

Appendix III: List of Financial Firms at NSE

No	Banking Firms
1	Barclays Bank of Kenya Ltd
2	CFC Stanbic of Kenya Holdings Ltd
3	Diamond Trust Bank Kenya Ltd
4	Equity Bank Ltd
5	Housing Finance Co. Kenya Ltd
6	I&M Holdings Ltd
7	Kenya Commercial Bank Ltd
8	National Bank of Kenya Ltd
9	NIC Bank Ltd
10	Standard Chartered Bank Kenya Ltd
11	The Co-operative Bank of Kenya Ltd
	Insurance Firms
12	British-American Investments Co. Ltd
13	CIC Insurance Group Ltd
14	Jubilee Holdings Ltd
15	Kenya Re Insurance Corporation Ltd
16	Liberty Kenya Holdings Ltd
17	Sanlam Holdings Ltd
	Investment Firms
18	Centum Investment Co Ltd
19	Trans-Century Ltd
20	Home Afrika Ltd Ord 1.00
21	Kurwitu Ventures

Source (NSE, 2019)

Appendix IV: NACOSTI Research Permit

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