FINANCIAL STRUCTURE, FIRM SIZE AND FINANCIAL GROWTH OF NON-FINANCIAL FIRMS LISTED AT NAIROBI SECURITIES EXCHANGE

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DOCTOR OF PHILOSOPHY

(Finance)

JOMO KENYATTA UNIVERSITY

OF

AGRICULTURE AND TECHNOLOGY

2022

Financial Structure, Firm Size and Financial Growth of Non-Financial Firms Listed at Nairobi Securities Exchange

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A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Finance of the Jomo Kenyatta University of Agriculture and Technology

2022

DECLARATION

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

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ACKNOWLEDGEMENT

DEDICATION

I wish to dedicate this Thesis to my dear parents, the late Mr. Henry Shikumo and Mrs. Alice Khatolwa for their dedicated parental support and enduring responsibility of bringing me up to be what I am today.

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ACRONYMS AND ABBREVIATION

CAPM-   Capital Asset pricing Model

CD-   Cross-Sectional Dependence

CLRM-   Classical Linear Regression Model

CMA-   Capital Market Authority

CSE-   Colombo Stock Exchange

DE-   Debt Equity

EASE-   East Africa Securities Exchanges

EPS-   Earnings Per Share

FGLS-   Feasible Generalized Least Squares

GDP-   Gross Domestic Product

GP-   Gross Profit

KSE-   Karachi Stock Exchange

LM test-   Lagrange Multiplier test

LTD-   Long Term Debt

MMT-   Modigliani-Miller Theorem

NP-   Net Profit

NSE-   Nairobi Securities Exchange

OLS-	Ordinary Least Squares
POLS-	Pooled Ordinary Least Square
POT-	Pecking Order Theory
RE-	Return Earnings
ROA-	Return on Assets
ROCE-	Return on Capital Employed
ROE-	Return on Equity
SC-	Share Capital
SEM-	Stock Exchange of Mauritius
SMES-	Small and Medium Enterprises
SSA-	Sub Saharan Africa
STD-	Short Term Debt
SUR-	Seemingly Unrelated Regression
TA-	Total Assets
TD-	Total Debt
TSE-	Tehran Stock Exchange
US-	United States

DEFINITION OF KEY TERMS

Capital structure   Capital structure focuses mainly on long term stability of the firm and includes long term debt and shareholders' equity and ignores short term liabilities (Buvanendra, Sridharan & Thiyagarajan, 2017).

Earnings Per Share   refer to the portion of a firm's profit allocated to each outstanding share of common stock (Azeez, 2015).

Financial Growth   is the increase in a firm value, sales, total assets, earnings per share and/or market capitalization (Mac an Bhaird & Lucey, 2011). Financial growth is a general measure of the overall financial health of a firm over a given period (Onaolapo & Kajola, 2010). Financial growth is measured in terms of growth in earning per share and growth in earning yield (Fosberg, 2013).

Financial Structure   refers to the ways in which the firm's assets are financed. It is the entire left-hand side (liabilities plus equity) of the balance sheet which represents all the long-term and short-term sources of capital (Ghazouani, 2013).

Firm Size   refers to the levels of assets held by a firm. It can be computed as the natural logarithm of total assets and acts as a proxy for the size of non-financial firms listed at the NSE (Nawaiseh, 2015). Tita (2016) measured firm size in terms of market value, sales, asset, and market capitalization.

Listed Firms   refers to firms quoted or trading in a stock market (NSE, 2016).

Long-Term Debt   refers to the portion of debt capital that is payable after twelve months of the balance sheet date. It's also referred as non-current debt (Ebaid, 2009).

Market Capitalization   refers to the total dollar market value of a company's outstanding shares. Commonly referred to as "market cap", it is calculated by multiplying a company's shares outstanding by the current market price of one share (Buvanendra *et al.,* 2017).

Non-Financial Firms   refers to the firms quoted at stock market other than those in the banking, insurance, some investment firms and some commercial and service firms (NSE, 2016).

Retained Earnings   are the net earnings after dividends that are available for reinvestment in the firm's core business or to pay down its debt (Przychodzen & Przychodzen, 2015).

Return on Equity   refers to an indicator of efficient management of investment made by shareholders. It is a measure of financial performance and is a proxy for shareholders' value (Njanja, 2011).

Share Capital   refers to the amount of capital raised by the company by issuing shares (Colombo, 2007).

Short Term Debt   refers to the portion of debt capital that becomes payable within twelve months of the reporting date (Fosberg, 2013).

ABSTRACT

A significant number of the non-financial firms listed at the Nairobi Securities Exchange (NSE) have been experiencing declining financial performance and financial growth, which deter investors from investing in such firms. It is not clear whether an optimal financial structure can lead to the financial growth of the firm. In addition, there exists a great dilemma for scholars, business managers, investors, among other stakeholders, as to whether there exists an optimal financial structure that maximizes the financial growth of the firm. This study aimed at establishing the effect of financial structure on the financial growth of non-financial firms listed at the Nairobi Securities Exchange. The study was guided by the Modigliani-Miller theory, Agency Theory, Pecking Order Theory, Trade-off Theory, Market Timing Theory and Theory of Growth of the Firm. An explanatory research design was adopted. The target population of the study comprised of 45 non-financial firms listed at the NSE for a period of ten years, from 2008 to 2017. The panel model revealed that short term debt, long term debt, retained earnings and share capital explain 61.36% of variations in financial growth as measured by growth in earnings per share and 65.57% of variations in financial growth as measured by growth in market capitalization. Short term debt has a positive and significant effect on financial growth as measured by growth in earnings per share ($\beta=0.024095$, $p=0.013$) and growth in market capitalization ($\beta=0.028529$, $p=0.006$). Long term debt has a positive and significant effect on financial growth as measured by growth in earnings per share ($\beta=0.864088$, $p=0.000$) and growth in market capitalization ($\beta=0.958656$, $p=0.000$). Retained earnings have a positive and significant effect on financial growth as measured by growth in earnings per share ($\beta=0.951749$, $p=0.015$) and growth in market capitalization ($\beta=0.043784$, $p=0.004$). Further, share capital has a positive and significant effect on financial growth as measured by growth in earnings per share ($\beta=0.007016$, $p=0.000$) and growth in market capitalization ($\beta=0.09635$, $p=0.001$). Firm size significantly intervenes in the effect of financial structure on the financial growth of non-financial firms listed at the Nairobi Securities Exchange measured using growth in earnings per share. However, Firm size does not intervene in the effect of financial structure on the financial growth of non-financial firms listed at the Nairobi Securities Exchange measured using growth in market capitalization. The study concludes that short term debt, long term debt, retained earnings and share capital positively influence financial growth as measured by both growths in earnings per share and growth in market capitalization. The study recommends that the management of non-financial firms listed at the NSE to balance financing a firm using debt and equity. The study also recommends that the management of non-financial firms listed at NSE encourage its shareholders to re-invest back their earnings rather than consuming them as dividends. The study further recommends reviewing equity issuance policies by the Capital Market Authority (CMA). The policies regarding equity issuance need to be reviewed to focus on how to improve earnings per share, market capitalization and enhancement of the value of non-financial firms listed at NSE for the benefit of its stakeholders. Financial structure varies significantly depending on the sector in which a firm operates. There is a need to conduct a comparison study to establish the effect of financial structure on the financial growth of non-financial firms versus financial firms listed at the Nairobi Securities Exchange. The comparison study will tell which form of financing is appropriate for non-financial firms and which one is appropriate for financial firms.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Financial structure is the balance between all the firm's liabilities and its equities (García-Teruel & Martínez-Solano, 2008). The financial structure is the result of some decisions that managers take in order to support long-term investments, identifying appropriate sources of financing to contribute to the optimal development of the company (Pouraghajan, Malekian, Emamgholipour, Lotfollahpour & Bagheri, 2012). During the financial crisis, firms which are vulnerable to the shocks in the financial markets absorb the negative impact earlier than other firms. Hence, financial difficulties can lead to bankruptcy and can be the result of wrong decisions in choosing the financial structure (Fosberg, 2013). The study of the financial structure has been for a long time, the central theme of concern in corporate firms since the theorem Modigliani and Miller (1958) came to rule in finance literature discussing all the inapplicability of the financial structure for real decisions (Bokhari & Khan, 2013)

Financial structure of a firm is basically the way a firm finance its assets through some combination of debt and equity that a firm deems as appropriate to enhance its operations (Opungu, 2016). The determination of a firm's optimal financial structure is vital in deciding how much money should be borrowed and the best mixture of debt and equity to fund business operations (Shubita & Alsawalhah, 2012). Therefore, the choice among ideal proportion of debt and equity can affect the value of the firm, as well as financial performance.

The financial structure of a firm is the way the assets and operations are financed. A firm employs various modes of financing to acquire assets and support its operations. The financial structure includes components such as short-term liabilities, long term debt and shareholders' equity (Mohammadzadeh, Rahimi, Rahimi, Aarabi & Salamzadeh, 2013).

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Financial structure is different from capital structure as the capital structure only includes long term debt and shareholders' equity and ignores short term liabilities (Ater, 2017). More successful firms focus more on financial structure rather than capital structure as the analysis of financial structure reveals both the short term and long-term aspects of the firm in terms of profitability and stability, whereas capital structures focus mainly on long term stability of the firm.

Financing decision acts as a basis of investment decision and a company's financial performance is extensively influenced by the proposition of mix financing. The choice of the appropriate mix of different sources of short-term and long-term funds is one of the critical decision needs that have to be taken by central body of an organization (Liaqat, Saddique, Bagh, Khan, Naseer & Khan, 2017). Debt financing has been used as an instrument of filling the budget deficits both in the private and public sector. Debt financing is a key source of capital in many growing firms since their retained earnings may not be sufficient enough or may be unavailable (Fosberg, 2013). By generating incomes that may not have been gained with no extra financing, external sourcing inform of equity or debt fund allows firms to improve the firm's value which is traditionally considered the vital goal of many businesses (Davydov, 2014).

Debt financing is a financing option that is structured to improve the owners' rate of return on investments by producing a rate of return that is higher than the overall cost of the borrowed funds (Gill, Biger & Mathur, 2011). Leverage financing entails the purchase of interest-bearing instruments that are protected by the asset-based security and they have term structures (Davydov, 2014). Debt financing comprises of the main sources of external funding for most business firms. It provides a mechanism of filling financing deficits for firms that have insufficient financial resources. Debt financing offers a means of satisfying financing deficits of businesses that have insufficient internal resources to finance their operational activities and investments. Though debt financing is less costly because of the tax exemption, it subjects firms to some constraints as well as default risk of repaying the principal and interest amount (Liaqat *et al*., 2017).

In general, 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, 2014). 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, 2010). 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 financial growth (Ishaya & Abduljeleel, 2014).

In support of trade off theory, Cekrezi (2013) 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 (Serrasqueiro & Nunes, 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 (2011), 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 trade-off between tax benefits and bankruptcy costs where long-term debt is affected by collateralisable assets but short-term debt is not (Githaigo & Kabiru, 2015).

Retained earnings refer to the portion of a firm's profits that is kept for reinvestment into the business or for debt payments, instead of being paid out rather as dividends to shareholders (Chasan, 2012). Since, only few options are available for raising capital, most executives generally prefer cash from operations as a major source of capital for

re-investment and firms' growth (Kopyakova, 2017). Consequently, some firms prefer to retain more earnings and plow it back into operations especially when they have viable investment opportunities (Richardson, 2006). The financial structure of a firm is linked to the financial growth of a firm.

Financial growth is a measure of efficient utilization of assets by a firm from principal business mode to generate revenues (Aburub, 2012). Financial growth is a general measure of the overall financial health of a firm over a given period (Onaolapo & Kajola, 2010). According to Buvanendra *et al*. (2017), the financial growth of a firm is measured as the growth of market capitalization. Market capitalization refers to the total dollar market value of a company's outstanding shares (San & Heng, 2011). Market capitalization is calculated by multiplying a company's shares outstanding by the current market price of one share (Buvanendra, Sridharan & Thiyagarajan, 2017). The return on investment, return on assets, market value, and accounting profitability reflect financial growth of firms (Ongore & Kusa, 2013).

The theories underpinning the study are Modigliani-Miller theory (1958), Agency theory coined by Jensen and Meckling (1976) and Pecking Order Theory by Myers and Majluf (1984). The study was also be guided by Trade-Off theory of Myers (1984), Market Timing Theory by Baker and Wurgler (2002) and Theory of Growth of the Firm by Penrose (1959). Each theory is stated and related to the study.

1.1.1 Global Overview of Financial Structure and Financial Growth

Financial structure adopted by various firms all over the world differs considerably (Gambacorta, Yang & Tsatsaronis, 2014). The relative importance of financial structure as indicated by Succurro and Mannarino (2014) 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, 2014). In Iran, Mohammadzadeh *et al*., (2013) revealed that both short term and long-

term debt had significant but negative effects on profitability and growth of the pharmaceutical firms. 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 preferred using debt rather than issuing stock.

In China, Chen (2014) revealed there exists a relationship between retained earnings and stock returns. In the European listed firms, El-Chaarani (2014) revealed that 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. The choice of internal or external financing is also one of the serious concerns of firms in UK (UKdiss report, 2019). Yapa Abeywardhana (2016) noted that financial structure proxies short term debt, long term debt and total debt show mean of 39.6, 16.4 and 56.1 respectively for the manufacturing sector firms which implying that manufacturing SMEs in UK more rely on short term funds and do not incorporate higher level of long-term debt capital in the capital structure. Many manufacturing firms financed their operations, 56% of total assets finance through debt, of which 39.6% is short term debt (Vuong & Mitra, 2017). Manufacturing sector SMEs in UK are largely depending on the short-term debt to finance their operations due to the difficulty in accessing long term finance or young firms are resistance to use external finance and rely on internally generated funds.

In Bangladesh, financial and non-financial firms are keenly focused on the capital market. Financial structure of the firms in Bangladesh has been developing at an exponential rate and dedicated research in this field is required (Chowdhury & Chowdhury, 2010). 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 to a high profitability and low risk of the firm, thus increasing the value of the firm (Chau, Deesomsak & Koutmos, 2016). Regarding this, financial structure decision is one of the most important issues in corporate finance among financial and non-financial firms in Bangladesh (Siddiqui, 2012). It has been established

that lack of proper efficiency in taking financing decisions in Bangladeshi financial and nonfinancial firms which cause trouble in financial sectors. As a result, many firms in Bangladesh are positively encouraged to ensure sound knowledge over financial structure decisions. It will ultimately lead to better earnings of the firms (Sayeed, 2011).

In Pakistan, both financial and non-financial firms are constantly on the run to reduce the cost of financing assets when capital structure decision are considered, so as maximize the value maximizations (Sheikh & Wang, 2011). According to Saeed, Gull and Rasheed (2013) short term debt to capital ratio, long term debt to capital ratio and total debt to capital ratio are major determinants of capital structure. Firms in Pakistan keep balance in composition of capital 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, it will result in disturbance of cash flows of the firms (Younus, Ishfaq, Usman & Azeem, 2014). Further, capital structure of firms in Pakistan is highly depended on firm size, ownership, profitability, various costs, earning growth and liquidity of company's assets (Hossain & Ali, 2012). The optimum benefits of the debt and equity depend upon the managers that are involved in management of the financial issues of financial firms in Pakistan (Gambacorta, Yang & Tsatsaronis, 2014).

Baum, Schafer and Talavera (2006) reports that German firms rely more heavily on short-term liabilities that are likely to be more profitable and hence financial growth of the firm. 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. In Spain, García-Teruel and Martínez-Solano (2008) established that short-term debt is positively related to firm's profitability and hence financial growth. In Pakistan, Habib, Khan and Wazir (2016) indicated a significant negative relationship between short term debt, long term debt, total debt, and return on assets.

1.1.2 Regional Overview of Financial Structure and Financial Growth

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 Nigeria, Salawu and Agboola (2008) revealed that profitability, tangibility and company size are positively related to total debt and long-term debt. The empirical results indicated that financing decisions of large firms in Nigeria can be explained by the determinants suggested by trade-off theory. Oladele, Omotosho and Adeniyi (2017) revealed that capital structure has a significant effect on return of assets, earnings per share and sales growth of listed manufacturing firms in Nigeria impacting aggregate financial growth of the firm over time. In Egypt, Ebaid (2009) revealed that share capital and long-term debt has a significant relationship with return on assets but insignificant relationship with return on equity. The capital structure changes do affect the performance and hence the aggregate financial growth of the firm over time.

In Nigeria, Onaolapo and Kajola (2010) 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 (2008) 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. Firms are majorly financed either by equity capital or a mix of equity capital and short-term financing (Olokoyo, 2013).

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

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and equity the firm uses in its operation. Brealey and Myers (2003) 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 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, 2011). 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). An appropriate financial structure is very crucial in decision making for many listed non-financial Firms. The common problem that the firms face in Mauritius concerns more with financing, for instance, whether to raise debt or equity capital (Omrawoo, Jaunky & Ramesh, 2017). Thus, it is necessary for non-financial firms in Mauritius to be able to finance their business operations (Aviral & Raveesh, 2015).

1.1.3 Local Overview of Financial Structure and Financial Growth

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, 2015). Opungu (2016) indicated that short term debt equity ratio significantly affects return on assets (ROA), return on equity (ROE) and return on capital employed (ROCE). Equity has a positive and significant relationship with ROE and ROCE. Ater (2017) indicated there is a statistically significant relationship between the capital structure and value of non-financial firms listed at NSE. Githire and Muturi (2015) showed that equity and long-term debt have a positive and significant effect on financial performance. Muchiri, Muturi and Ngumi (2016) established that financial structure has a significant positive effect on return on equity.

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, 2013). Nairobi Securities Exchange (2015) showed that there were reduced earnings per share (EPS) for non-financial listed firms. The non-financial firms are those companies that are not involved in the provision of financial intermediary services (Banafa, 2016). The non-financial firms listed at NSE include agriculture allied firms, automobiles and accessories, commercial and services, construction and allied, energy and petroleum, manufacturing and allied, investment, telecommunication and technology and real estate investment trust (NSE, 2016). The non-financial firms listed at NSE formed the focus of the study.

1.2 Statement of the Problem

Financial structure decision is very critical decision with great implications for the firm's financial growth (Amjed, 2011). In order to maximize firm's financial growth, the management must carefully consider the financial structure decision (Fosberg, 2013). However, financing decisions are complex and varies between the firms. For instance, if financing is made using a wrong combination of debt and equity, the performance and financial growth of the firm will be negatively affected (Wafa, 2017). In addition, despite of the substantial theoretical developments over the past several decades, the gap between financial structure theories and practices still exist (Vătavu, 2015). For instance, the Modigliani and Miller (1958) theory demonstrated the irrelevance of capital structure in firm's value while the pecking order, the agency and trade-off theories demonstrate that financial structure affects firm's value as well as financial growth (Nassar, 2016). These theories have always been a subject of considerable debate due to inherent controversies. The extensive debate from diverse perspective has made this issue more complex.

The financial growth of a significant number of non-financial firms listed at the Nairobi Securities Exchange has been declining (Muchiri, Muturi & Ngumi, 2016). For instance, the financial growth of non-financial firms listed at NSE dropped from 4.2% in 2016 to

3.7% in 2017 (NSE, 2017). In addition, more than 56% of non-financial firms quoted at NSE recorded a deteriorating market capitalization trend between 2011 and 2015 (Wesa & Otinga, 2018). The decline in financial growth deters lenders from lending to such firms (Njuguna, Kwasira & Orwa, 2018). It is not clear whether an optimal financial structure can lead to the financial growth of the firm. In addition, there exists a great dilemma for scholars, business managers and investors among other stakeholders as to whether there exists an optimal financial structure that maximizes the financial growth of the firm.

Based on the reviewed studies, the effect of financial structure on the financial growth of non-financial firms listed at the Nairobi Securities Exchange is under-researched. For instance, Pouraghajan, Malekian, Emamgholipour, Lotfollahpour and Bagheri (2012) conducted a study on the relationship between capital structure and performance of firms listed at the Tehran Stock Exchange. Bokhari and Khan (2013) determined the impact of capital structure on firm's performance of non-financial firms in Pakistan. Opungu (2016) conducted a study to investigate the effect of capital structure on the profitability and growth of non-financial firms listed at the Nairobi Stock Exchange (NSE). Mohammadzadeh *et al*., (2013) conducted a study on how capital structure affects the profitability and growth of pharmaceutical firms in Iran.

Moreover, Salawu and Agboola (2008) examined the determinants of capital structure of large non-financial firms in Nigeria using a panel of thirty-three (33) large firms. Ater (2017) conducted a study on capital structure and the value of non-financial firms listed at the Nairobi Securities Exchange. In addition, Githire and Muturi (2015) conducted a study to examine the effect of capital structure on the performance of firms listed at NSE. El-Chaarani (2014) conducted a study on the impact of financial structure on the performance of European listed firms. Oladele, Omotosho and Adeniyi (2017) conducted a study on the effect of capital structure on the performance of Nigerian listed manufacturing firms from 2004-2013. Tsoy and Heshmati (2017) conducted a study on the impact of financial crises on the dynamics of the capital structure of listed non-financial firms in Korea.

Thus, a review of the literature indicates that the majority of past empirical studies (Omai, Memba & Njeru, 2018; Akbarpour & Aghabeygzadeh, 2011; Younus et al., 2014; Oladele, Omotosho and Adeniyi 2017; Isola & Akanni, 2015; Baum, Schafer &Talavera, 2006; Ebaid, 2009; García-Teruel and Martínez-Solano, 2008; Pouraghajan, Malekian, Emamgholipour, Lotfollahpour & Bagheri, 2012; Habib, Khan &Wazir, 2016; Bokhari & Khan, 2013; Aziz &Abbas, 2019; Chen, 2014; Opungu, 2016; Ater, 2017; Githire & Muturi, 2015; Muchiri, Muturi & Ngumi, 2016) have analyzed the effect of financial structure on the financial performance of the firms. The preceding scholars have only illustrated the theoretical understanding of the effect of financial structure on performance. None of the reviewed studies precisely examined the effect of short-term debt, long-term debt, retained earnings and share capital on the financial growth of non-financial firms listed at the Nairobi Securities Exchange with an intervening effect of the firm size. The study intended to fill this knowledge gap by focusing on the effect of financial structure on the financial growth of non-financial firms listed at the 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 non-financial firms listed at Nairobi Securities Exchange

1.3.2 Specific Objectives

1. To establish the effect of short-term debt on financial growth of non-financial firms listed at Nairobi Securities Exchange.
2. To assess the effect of long-term debt on financial growth of non-financial firms listed at Nairobi Securities Exchange.

3. To determine the effect of retained earnings on financial growth of non-financial firms listed at Nairobi Securities Exchange.

4. To examine the effect of share capital on financial growth of non-financial firms listed at Nairobi Securities Exchange.

5. To explore the intervening effect of firm size on the effect of financial structure on financial growth of non-financial firms listed at Nairobi Securities Exchange.

1.4 Statistical Hypotheses

1. **H_{o1}**: There is no significant effect of short-term debt on financial growth of non-financial firms listed at Nairobi Securities Exchange (NSE).

2. **H_{o2}:** There is no significant effect of long-term debt on financial growth of non-financial firms listed at Nairobi Securities Exchange.

3. **H_{o3}:** There is no significant effect of retained earnings on financial growth of non-financial firms listed at Nairobi Securities Exchange.

4. **H_{04}:** There is no significant effect of share capital on financial growth of non-financial firms listed at Nairobi Securities Exchange.

5. **H_{05}:** Firm size does not significantly intervene the effect of financial structure on financial growth of non-financial firms listed at Nairobi Securities Exchange.

1.5 Significance of the Study

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

1.5.1 Management

The findings of this study will help managers of firms on the empirical relationship between earnings retention on stock returns of listed non-financial firms. Firm

executives can therefore make informed choices in relation to retention of earnings. The management will be able to choose between financing firm's operations using debt or equity. There is need for a balance between financing firm's operations via debt or equity. Non-financial firms may be able to choose the best mode of financing that suit their structure.

1.5.2 Investors

The results of this study will assist or guide investors in making equity share investment decisions in listed non-financial firms in NSE. The results will also be immensely helpful to investors and financial analysts/advisers in identifying the specific accounting information variable(s) that significantly affect the financial structure. Furthermore, the findings are expected to guide foreign investors who may want to invest in non-financial firms listed in NSE to make a comprehensive decision that will earn more returns.

1.5.3 Shareholders

The findings of this study will be of value to shareholders. It will enable them to have adequate knowledge on the level of investment to be held at any time. Shareholders mostly invest in profitable firms to maximize their wealth. Financial structure of a firm is important for shareholders as it defines the various modes of financing the firm uses to support its operations. When it comes to financing using share capital, the role of shareholders becomes very important.

1.5.4 Capital Market Authority (CMA)

The CMA will be able to use this research to institute sound policies and guidance/advice on the best mode of financing the non-financial firms listed at NSE. Many of non-financial firms may fail to identify the best mode of financing their operations but through collaboration with regulators like Capital Market Authority, listed non-financial firms may seek expert advice from them on which mode of financing is appropriate for their firms.

1.5.5 Academicians and Scholars

Students and other scholars at large will be able to recognize the effect of financial structure on financial growth of non-financial firms listed at NSE. This will form a basis for further research especially on non-financial firms listed at NSE. Future scholars may refer to the conclusions of this study on how financial structure influence financial growth of non-financial firms. The modes of financing firms differ based on the nature of a firm; the financial structure of financial and non-financial firms differ hence contextual significance of the results. The study will also contribute to the theoretical significance particularly; Modigliani-Miller Theory, Agency Theory, Pecking Order Theory, Trade-off Theory, Market Timing Theory and Theory of Growth. The results may confirm or deny the postulation of these theories thus adding to the theoretical significance of the study.

1.6 Scope of the Study

The study focused on financial structure and financial growth of non-financial firms listed at NSE presenting both conceptual and contextual scope. The reason as to why listed firms at the NSE are chosen is mainly because of availability and dependability of their financial statements in that they are subjected to thorough auditing by internationally recognized audit firms. Financial firms were excluded because of their specific sector characteristics and stringent regulatory framework. The study considered forty-five (45) non-financial firms listed at NSE for the period 2008-2017 presenting population scope and time scope respectively. The choice of 2008 to 2017 was informed by the fact that during this period, majority of non-financial firms listed at NSE were experiencing a decline in financial performance as well as financial growth. Since there is time factor alongside the population, panel methodology was adopted to determine the effect of financial structure on financial growth of non-financial firms presenting methodological scope.

1.7 Limitations of the Study

The results of this study largely depend on secondary data analysis. Therefore, the results of this study are subjected to limitations of the non-financial firm's financial statements and NSE handbooks as reported to the general public. Some of the non-financial firms were suspended/delisted during the study period 2008-2017. As such, the study had the limitation of not having access to data as targeted. However, this was mitigated by adopting an unbalanced panel data model. In addition, the study had limitations related to organizing huge data set for analysis. The mitigation for organizing huge data set for analysis was achieved by hiring two data experts.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

A review of both theoretical and empirical literature on financial structure and financial growth of non-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 (Takač 2008). 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, Agency theory, Pecking Order Theory, Trade-off Theory and Market Timing Theory. Each theory is stated, explained, and related to the study.

2.2.1 The Modigliani-Miller Theorem (MM Theory)

Modigliani and Miller (1958) advanced the capital structure irrelevance theory. The Modigliani-Miller theorem on the irrelevancy of capital structure implicitly assumes that the market possesses full information about the activities of firms and that the information asymmetry influences financial growth (Miller, 1988). Modigliani and Miller (1958) asserts when the market conditions are perfect, the value of firm's stocks

is not determined by capital structure decisions. The MM capital structure irrelevance theory presupposes that the capital mix is unrelated to the value of the firm (Frank & Goyal, 2007). The theory assumes that both the investors and the individual companies have the same information regarding the market conditions. The assumption made in the model is there exists perfect information concerning the performance of the firm, hence firm growth (Liaqat *et al*., 2017).

Two capital irrelevance propositions were advanced by Modigliani and Miller (1958). The first proposition was the arbitrage-based irrelevance proposition which indicated that investors would engage in arbitrage to ensure that financial 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 which posited that, when a firm chooses a given investment policy, the capital structure it will select would not influence its value. The Modigliani-Miller theorem states that a company's capital structure is not a factor in its value. Market value is determined by the present value of future earnings, the theorem states.

The Modigliani and Miller (1958) approach to capital theory, advocates the capital structure irrelevancy theory. Modigliani and Miller advocate capital structure irrelevancy theory, which suggests that the valuation of a firm is irrelevant to the capital structure of a company (Ahmeti & Prenaj, 2015). This suggests that the valuation of a firm is irrelevant to the capital structure of a company. Whether a firm is highly leveraged or has a lower debt component has no bearing on its market value (Alifani & Nugroho, 2013). Rather, the market value of a firm is solely dependent on the operating profits of the company. Whether a firm is highly leveraged or has a lower debt

component in the financing mix has no bearing on the value of a firm (Abeywardhana, 2017).

The Modigliani and Miller (1963) Approach further states that the market value of a firm is affected by its operating income, apart from the risk involved in the investment (Abeywardhana, 2017). The theory stated that the value of the firm is not dependent on the choice of capital structure or financing decisions of the firm (Hovakimian, 2006). This however assumed perfect markets. According to Modigliani-Miller theorem Theory, there is perfect information flow among various players in the market. However, this is not always the case in the stock market. Some markets are more informed than others. Past studies revealed that, there is a strong positive relation between information asymmetry and stock mispricing (Abdeldayem, 2015).

Moreover, the Modigliani - Miller proposition is based on the assumptions of a perfect capital market in which there are no transaction costs, no information asymmetry (investors have the same information as management about the firm's future investment opportunities), no bankruptcy costs (debt is risk-free regardless of the amount used), so no firm goes bankrupt, no taxes (no taxes exist either on individuals or companies) and investors can borrow at the same rate as corporations (Zurigat, 2009). Further, management acts on the exclusive behalf of shareholders. These assumptions can be criticized on the grounds that imperfections in capital markets do exist, suggesting that different sources of financing may be relevant to the investment decision of the firm (Ahmeti & Prenaj, 2015). One of these assumptions is broken down by Modigliani and Miller themselves. In reality MM Theory is not valid because the perfect market does not exist, and taxation is present. After the criticisms received regarding the first theory, a few years later, Modigliani and Miller (1963) considered the possibility of revising the first hypotheses, introducing taxation, and developing the first theory. MM acknowledged that taxation has an effect on debt and capital and has some advantages since interest is deductible.

In their seminal paper, Modigliani-Miller (1963) who again ignore the bankruptcy and agency costs of debt, argue that debt provides a tax benefit shield and hence, the value of the firm is maximized by using as much debt as possible. According to Stiglitz (1969), the practice has shown that indeed there are, or at least can appear, limitations toward the market rates for individuals when borrowing, compared to firm borrowing. Furthermore, bankruptcy is much more violent and can cause a problem to firms, much more as it was assumed by M&M proposition. This study tested whether non-financial firms listed at NSE follow the capital structure irrelevance theory. It tested whether the mix of long-term debt and Short-term debt that non-financial firms apply in their financial structure influence their financial performance as well as financial growth.

2.2.2 Agency Theory

Jensen and Meckling (1976) advanced the agency theory which states that, a firm has an optimal financial structure that stimulates optimum financial growth. The 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 financial structure (Leland, 1998). The lowering of agency conflicts would lead to reduction in agency costs which would lead to improved financial growth. The use of debt in the firm as observed by Jensen and Meckling (1976) can help to control and monitor managers in the firm to ensure that they follow objectives that are beneficial to the firm.

Agent theory captures the idea of agency costs that arise as a result of conflicts between managers, shareholders, and creditors. These conflicts are supposed to arise due to the inconsistency of interests (Jensen & Meckling, 1976). Managers tend to use the firm's resources in projects that bring more personal benefits than maximizing the value of the firm. Shareholders can discourage such a behavior through monitoring and control activities (Hawkins, Lake, Nielson & Tierney, 2006). However, these actions also involve costs, called agency costs. Debt can reduce agency costs and affect the performance of the firm at the same time, by determining the managers to act in the

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interest of the firm rather than in their own interest (Kraaijenbrink & Spender, 2011). Thus, the option of a firm to be financed through debt, reduces the cash flow available at the discretion of managers, reducing agency costs.

Buferna, Bangassa and Hodgkinson (2005) supported this theory by indicating that inclusion of debt in the capital structure provides a motivation for managers to stimulate the growth of a firm 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 financial growth (Rashid, 2015).

Agency theory assumes that actors are self-interested and indivisible; and that the market is in no way influenced by social relations. In addition, it assumes that behavior is motivated solely by personal financial interests and that cooperation indicates a contract between the parties (Boatright, 2010). However, the action of the manager, like all social actions, is rooted in the social structures in progress and is not entirely determined by economic incentives and information asymmetries (Zogning, 2017). Thus, it seems unrealistic that the agency theory adopts a vision in which individuals and organizations are being primarily motivated by financial gain (Eisenhardt, 1989). It is known from behavioral research that individuals are motivated by status, their community, and their need for self-fulfillment (Dawar, 2014). Even if we accept the principle that individuals are rational, selfish and opportunistic, this does not undermine the role of non-monetary incentives such as prestigious awards as effective mechanisms for the reduction of agency problems (Erturk, Froud, Johal, Leaver & Williams, 2007).

The agency theory further assumes that behaviors and consequences are relatively homogeneous and easily controlled, which is not true in the real world (Dawar, 2014). In a complex network of dyadic relations for example, the simplicity of the dichotomous choice between the monitoring and the proposal of incentives to regulate the conduct or outcome is not effective (Shapiro, 2005). Also, to stay guarded against opportunistic

behavior can lead to stifled initiatives, creativity, entrepreneurship and innovation in companies, a cost that is often ignored by agency theorists (Lan & Heracleous, 2010). Theories of power and conflict would likely favour the possibility that owners can control or provide incentives to orient the behavior of the agent. Yet, conflict theories argue that workers can be co-opted and unconsciously work to serve the interests of the organization (Yusof, 2016). A comparable reasoning can be extended to managers-owners' relationship. Similarly, the objectives of managers and owners can be aligned, either because the manager is of the same caste or social class as the owner, or because managers have been socialized in their current positions because of their education and professional experience (Eisenhardt, 1989).

The agency theory 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 firms are overvalued.

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 streams 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.

Firms are said to have used pecking order when they have a partial of inner financing to obtaining outside financing and where leverage is utilized, leverage to equity. This preference was driven with regards to the advanced assortment by Myers and Majluf (1984). Company's financial results are one of the significant items influencing the choice of a company's capital structure. Firstly, Myers and Majluf (1984) contend that, organizations with higher profitability can majorly fund cash flow needs from held back profits, this would lessen the need to acquire outside financing. This consequently predicts a reverse relationship between firm's performance and use of debt.

Wamiori, Sakwa and Namusonge (2016) claimed 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 financial 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, 2010).

It is worth noting that the pecking order theory is criticized on the grounds of its underlying arguments and suggestions. Adedeji (1998) concludes that the suggestion of pecking order theory, that it is only the internal funds shortage that motivates firms to raise funds externally is questioned. This is because it ignores other theories and the effects of institutional factors that might affect the firm's choice of financing instruments such as the level of interest rate, borrower-lender relations and finally, the government intervention. Cull and Xu (2005) argued that sometimes reinvestment of firm's profits in the large-scale projects is conditional by its ability to generate funds

externally. He concludes that investment is lumpy, since internal and external funds are needed to finance the available profitable projects. Moreover, he argued that the government intervention through the monetary policy during the financial crisis may make the cost of borrowing lower than the cost of internal funds. Consequently, firms use debt before internal funds.

The underlying argument of Myers and Majulf (1984) that information cost or the adverse selection problem induces firms to follow the pecking order behaviour, has been contradicted by Baskin (1989), Allen (1993) and Adedeji (1998). They argue that transaction and information costs are not the only factors that might discourage the use of external financing, in general and for equity in particular. They conclude that control consideration may make firms reluctant to issue equities because of their effects on the existing balance of control, or even to issue debt which might impose the discipline of the capital market on them (Zurigat, 2009). Consistent with this, Myers (1984) has contended that firms' reliance on internally generated funds is interpreted by others (Jensen & Meckling, 1976), as the result of the separation of ownerships and control, where managers will be reluctant to raise funds externally to avoid the capital market discipline. Fazzari, Hubbard and Petersen (1988) who tested the sensitivity of investment to the availability of cash flow, provide empirical evidence supporting the above arguments. They list the main sources of costs hierarchy which induce firms to follow the pecking order theory such as transaction costs, agency costs and asymmetric information costs.

Moreover, Fama and French (2005) argue that firms can avoid the information costs or the adverse selection by issuing the equities which are less subject to asymmetric information such as equity issues to employees in their compensation plan or to existing stockholders. They argue that this kind of issues does not change the ownership structure and then the existing balance of control (Zuriga, 2009). Furthermore, it does not involve high costs of asymmetric information. If so, the grip of the information asymmetries approach is broken down because firms can issue equity at a low information cost. Hence, the need for issuing debt to finance new investment projects is reduced.

This theory also presupposes that external stakeholders attempt to establish the firm's value or financial performance, which they are not able to fully monitor from the financing decisions made by the firm (Zurigat, 2009). Consequently, a company's capital structure decision will act as flagging factor, whereby the decision makers employ more leverage as a pointer of company's high quality. This is a dependable pointer since well performing firms can secure more leverage, since they are viewed as less prone to default risk on leverage overhauling expenses that grow after leverage issuance (Myers & Majluf, 1984).

The pecking order theory is applied in this study to establish whether high profitable firms in the non-financial sector select to have retained earnings as their preferred mode of financing its operations. If this theory applies to non-financial firms listed at NSE, it is expected that non-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 financial growth.

2.2.4 Trade-off Theory

Trade-off theory postulated by Myers (1984) emphasizes a balance between tax saving arising from debt, decrease in agent cost and financial distress (Shahar, Shahar, Bahari, Ahmad, Fisal & Rafdi, 2015). Trade-Off Theory claims that firms have an incentive to turn to debt as the generation of annual profits allows benefiting from the debt tax shields. 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 financial growth.

Sheikh and Wang (2010) argue that, trade-off theory is expected to choose a target financial structure that maximizes the financial 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, 2014).

It is worth noting that the critical assumption in the trade-off theory is that all market participants had homogeneous expectations and had the same information about the firm's value and profitability (Zurigat, 2009). This assumption has been violated by Myers and Majulf (1984) and Myers (1984) on their pecking order theory of capital structure. There is no well-defined optimal leverage ratio (Sarkar & Zapatero, 2003). The earnings leverage relationship is not valid when earnings are mean reverting.

An important purpose of the theory is to explain 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 will focus on this trade-off when choosing how much debt and equity to use for financing.

2.2.5 Market Timing Theory

The market timing theory was proposed by Baker and Wurgler (2002). The theory postulates that financial structure is the cumulative outcome of past attempts to time the equity market (Baker & Wurgler, 2002). The market timing theory, developed by Baker and Wurgler (2002), starts from the idea that raising capital by issuing shares depends on market performance. In corporate finance, market timing involves in practice, issuing

high-priced shares and repurchasing them at a lower price, in order to benefit from fluctuations in the ratio between the cost of equity and other forms of capital. The market timing theory assumes that firms time their equity issues whereby they will issue new stock when the stock price is perceived to be overvalued (high price) and repurchase their shares when there is undervaluation (low price) (Luigi & Sorin, 2009; Mostafa & Boregowda, 2014). This implies that firm's intent to take advantage of fluctuations in equity market valuations. As a result, fluctuations in stock prices will affect the firm's financial decision as well as its financial growth.

The management of the firm is presumed to only issue equity when they perceive the firm's shares to be overvalued, while in case of undervaluation, the management of the firm repurchases equity and/or issues debt (Baker & Wurgler, 2002; de Bie & de Haan, 2007). The overvaluation of a firm's share results from either information asymmetry or irrational investors' behavior (Danso & Adomako, 2014). Information asymmetry between management of the firm and investors reduces when the management releases information on the firm's forecasts. In case of positive forecasts, the share price rises, and overvaluation is likely to occur (Huang & Ritter, 2005). The study of Baker and Wurgler (2002) was the first to provide evidence that equity market valuation fluctuations have a long- term effect on firm capital structure. Subsequent studies of Leary and Roberts (2005) and Kayhan and Titman (2007), however, found only short-term effects since deviation from the target leverage ratio reversed on the long-term. As such, these authors argue that market timing is only a short-term determinant that behaves in line with the dynamic trade-off theory (Baker & Gerald, 2011).

Two broad criticisms have been leveled at market timing theory. The first criticism, voiced by Alti (2006) and Flannery and Rangan (2006), questions the longevity and overall economic significance of market timing. However, Huang and Ritter (2005), using aggregate measures of market valuation, find evidence of a long-lasting market timing effect on capital structure and Leary and Roberts (2005) find that shocks to equity valuation can persist for varying lengths of time. The second criticism, as proposed by Hovakimian (2006) contends that the negative relationship between market-

to-book and leverage is not indicative of market timing. Instead the relationship is argued to be due to growth opportunities, which when high (low), lead firms to use more (less) equity financing. Hovakimian (2006) also contends that the cross-sectional relationship between market-to-book and leverage dominates the temporal relationship. Market timing theory was relevant to the study by enabling firms decide whether to finance their investments via debt or equity. The firms either chooses to finance through equity or debt based on the market situation.

2.2.6 Theory of Growth of the Firm

The theory was propagated by Penrose (1959). Penrose argued that firms had no determinant to long run or optimum size, but only a constraint on current period growth rates. According to the theory, financial means for expansion could be found through retained earnings, borrowing, and new issues of stock shares (Penrose, 1959). Retained earnings are one of the most important sources to finance new projects in emerging economies where capital markets are not well developed. However, firms in the start-up period, when initial investment has not matured yet or whose investment projects are substantially larger than their current earnings, will not have enough financial means from retained earnings and will face a constraint in their growth project (Penrose & Penrose, 2009). Firms in this situation may seek external sources of financing; however, the extent of borrowing could be limited by internal factors like high debt-equity ratios that would expose both borrower and lender to increased risk. In other cases, financing of growth projects may be limited by shallow financial markets. Rajan and Zingales (1998) found that industrial sectors with a great need for external finance grow substantially less in countries without well-developed financial markets.

However, the theoretical focus of growth of the firm theory prevents the development of a richer, more complex, contingency-based model of firm growth (Penrose & Pitelis, 2002). Growth of the firm theory does not consider the professionalization of management, evolution of technology, and institutions that influence firms' growth. Penrose (1959) preempts such criticisms by clearly emphasizing the central focus of the

growth of the firm theory. Another critique of the book is the testability of the growth of the firm theory. Unlike theoretical work today, which emphasizes constructs and relationships, Penrose mostly used case histories to develop some theoretical principles and logics, and Penrose (1959) acknowledged that testing them remained problematic. This theory is relevant to this study since it informs the dependent variable which is financial growth. The current studies which have used this theory of firm's growth are; Diaz Hermelo (2007) who conducted a study on the determinants of firm's growth: an empirical examination and Pervan and Višić (2012) who conducted a study on the Influence of firm size on its business success.

2.3 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). Figure 2.1 shows the conceptual framework.

Short Term Debt

- Bank Overdrafts
- Short Term Loans

Long Term Debt

- Long Term Loans
- Bonds

Retained Earning

- Revenue Reserves
- General Reserves

Share Capital

- Ordinary Share Capital
- Preference Share Capital

Independent Variables

Financial Growth

- Growth in Earnings Per Share
- Growth in Market capitalization

Dependent Variable

Firm Size

- Total Assets

Intervening Variable

Figure 2.1: Conceptual Framework

The study had independent variables, dependent variable and intervening variable to enable the establishment of the effect of financial structure on financial growth of non-financial firms listed at Nairobi Securities Exchange, Kenya. The independent variables were short-term debt, long term debt, retained earnings and share capital. It is hypothesized that short-term debt, long term debt, retained earnings and share capital significantly influences the financial growth of listed non-financial firms. It is also hypothesized that firm size significantly mediates the effect of financial structure on financial growth of listed non-financial firms. The overall influence of the independent variables (short-term debt, long term debt, retained earnings and share capital) on the

dependent variable (financial growth) is intervened by the firm size measured as natural log of total assets.

2.3.1 Short Term Debt

Short-term assets and liabilities are generally defined as those items that will be used, liquidated, mature or paid off within one year (Krishnamurthy & Vissing-Jorgensen, 2013). Short-term assets are usually financed by short-term liabilities while long-term assets are financed by long-term liabilities (Guin, 2011). Short term debt is measured as short-term liabilities divided by total assets. According to García-Terul and Martinez-Solano (2007) short-term debt is positively correlated with firm's growth opportunities. The anecdotal evidence suggests that, there is a positive relationship between short term debt financing and financial performance of the firm (Yazdanfar & Öhman, 2015).

Short term debt financing has a maturity period of one year or less, they must be repaid quickly within 90 – 120 days. Term loans with short maturities help to meet immediate need for financing without long term commitment (Peavler, 2014). The cost of servicing short term debt is less taxing on the firm. Short term loans usually offer lower interest charges, and most lenders do not charge interest until all credit allowance period is breached (Kahl, Shivdasani & Wang, 2015).

Short term debt has been observed by various scholars and researchers to influence profitability. Baum, Schaafer and Talavera (2006) established that firms can make use of short-term financing which may influence the profitability of the firm depending on the cost of the source of financing to that particular firm. Baum *et al.* (2006) observed that firms may have a certain ration of short-term liabilities in their financing structure which they feel is optimum in enhancing their financial performance as well as profitability. In the case of Germany, Diamond and He (2014) observed that, firms which had high short-term debt levels when compared to their long-term debt performed better than their peers.

According to Tailab (2014) the use of short-term liabilities such as trade payables and accruals can have a positive effect on a firm's profitability since such sources of financing may be less costly to the firm than the longer-term sources of funds. Further, short term sources of funds may have a positive influence on profitability due to the reduced contractual engagements that are involved (Krishnamurthy & Vissing-Jorgensen, 2013). Short term credit may have a positive influence on profitability. However, García-Teruel and Martínez-Solano (2007) refutes by saying that short maturity of short-term debt may prove expensive to the firm hence increasing its cost of capital.

Short term debt was measured using bank over drafts and short term, loans. Bank over drafts are loans granted to a borrower at a fee when the current account holder reaches zero. Short term, loans are loan advances to borrowers and must be repaid within a very short time often less than a year. Short term debt equity ratio indicates the value of short-term liabilities that the firm has applied in the business as a ratio of the total equity of the firm.

2.3.2 Long Term Debt

Long term debt involves strict contractual covenants between the firm and issuers of debt which is usually associated with high agency and financial distress costs (Tailab, 2014). Long term debt is measured as long-term liabilities divide by total assets. Equally, Shubita and alsawalhah (2012) observed that high long-term debt levels in the firm are not conducive for the effective operations of the firm since they increase the risk of bankruptcy. This is because a high debt level increases the amount of interest payment that is expected to be paid regularly which may incapacitate liquidity level of the firm (Vermoesen, Deloof & Laveren, 2013).

Long term debt is money that is owed to lenders for a period of more than one year from the date of current balance sheet. The study by EBaid (2009) found that, there was no significant relationship between long term debt and return on assets. Long term debt is

the most preferred source of debt financing among well-established corporate institution, mostly by virtue of their asset base and collateral is a requirement for many deposits-taking financial institutions (Foyeke, Olusola & Aderemi, 2016). Pelham (2000) argued that, long term debts provide small firms with more competitive advantages when compared to large firms. According to the results, it was found out that, there is a direct positive and significant relationship between long term loans and financial performance of the small firms. Pelham (2000) reported that long term debt was positively related to the growth/share/sales effectiveness, and gross profit in small and medium-size manufacturing firms.

Long term debt was measured using bonds and long-term loans. Bonds are fixed income instrument that represents a loan made by an investor to a borrower to finance firm operations and the agreement must be honored when time come (Pelham, 2000). Long term loans are loan advances to borrowers and the interest plus principal amount is paid over a longer period of time spread over years often over three years. Long term debt-equity ratio is a ratio that indicates the level of long-term liabilities that a firm has in the financial structure stated as a ratio of the total shareholders' capital (EBaid, 2009).

2.3.3 Retained Earnings

Retained earnings refer to the part of trading profits which is not distributed in the form of dividends to shareholders but is retained by directors for future expansion of the firm (Dinayak, 2014). Retained earnings are profits not paid out as dividends but retained to financial future investment needs. According to Chasan (2012) retained earnings refer to the portion of a firm's profits that is kept for reinvestment into the business or for debt payments, instead of being paid out rather as dividends to shareholders. Chasan (2012) noted that the prime idea behind earnings retention is that, the more the firm retains the faster it has chances for growth. Retained earnings are usually recorded under shareholders' equity on the balance sheet. Also related with periodically retained earnings is the accumulated retained earnings, which are computed by adding net

income to (or subtracting any net losses from) beginning retained earnings and subtracting any dividends paid to shareholders (M'ng, Rahman & Sannacy, 2017).

Since, only few options are available for raising capital, most executives generally prefer cash from operations as a major source of capital for re-investment and firms' growth (Wolters, 2017). Consequently, some firms prefer to retain more earnings and flow it back into operations especially when they have viable investment opportunities (Richardson, 2006). Also, retained earnings can be expressed as a ratio, commonly known as retention ratio. According to Chasan (2012), there is always a conflict in determining the retention ratio or earning to be retained. While the managers of the firm want a higher earnings retention ratio, the shareholders would think otherwise, as the higher the plowback ratio, the more uncertain their control over their shares and finances are.

Notably, earnings retentions are a sacrifice made by equity shareholders. According to Orwel (2010), retained earnings are internal sources of finance available to a firm and has got many advantages. As an internal source, retained earnings are readily available for use. Also, retentions are cheaper than external equity, do not cause ownership dilution, and has got a positive connotation as the stakeholders perceive that the firm has potential investment opportunities (Kopyakova, 2017). However, the drawbacks of retained earnings is that, it's a limited source of financing (Brooks, 2015).

The use of retained earnings as an internal source of finance is preferred because it does not involve any floatation costs and does not dilute ownership and control of the firm, since no new shares are issued (Fama & French, 2005). Retained earnings are an internal source of finance thus, when they are high there is low gearing, lower financial risk, and thus highest market price share. It assumes that retained earnings is the best source of long-term capital since it is readily available and cheap (Whittington, 1972). This is because no floatation cost is involved in the use of retained earnings to finance new investments (Samuel, 2016).

Retained Earnings was measured using revenue reserves, general reserves. Revenue reserve is the reserve that is created out of the profits of the company generated from its operating activities during a period of time and retained for the purpose of expanding its business or to meet out contingencies in the future (Brooks, 2015). General reserves are the retained earnings of a company which are kept aside out of company's profits to meet future (known or unknown) obligations. Retained earnings was measured as retained earnings for the period divided by net profit for the period.

2.3.4 Share Capital

Share capital is the total capital of a firm divided into shares. A joint stock company should have capital in order to finance its activities. Funds raised by issuing shares in return for cash or other considerations. A company usually raises its capital in the form of shares (called share capital) and debentures (debt capital) (Colombo, 2007). These funds breathe life into the business entity enabling it to commence operations thereby achieving the objectives for which it was set up. The Memorandum of Association must state the amount of capital with which the company is desired to be registered and the number of shares into which it is to be divided (Armour, 2010). It constitutes the basis of the financial structure of a company. In other words, the capital collected by a joint stock company for its business operation is known as share capital (Younus *et al.,* 2014). Share capital is an indication of value contributed to a firm by its shareholders at some time in the past.

Several provisions of the Companies Act of 2006 regulate the dealings with corporate share capital. A common rationalization of the share capital provisions is that they protect corporate creditors from the abuse of limited liability by shareholders (Akbarpour & Aghabeygzadeh, 2011). The idea that creditors need such protection is of course used to explain a wide range of company insolvency law doctrines (Chowdhury & Chowdhury, 2010). A company may increase its share capital either through a fresh issue of shares, or by capitalizing retained earnings with a bonus issue (Arulvel & Ajanthan, 2013). Capital may be decreased, in response to a long-term drop in the firm's

net assets, by reducing the nominal value of shares through a reduction of capital pursuant to Companies Act of 2006. This requires the court's approval, but because it does not involve any direct transfer of assets to the shareholders, the creditors do not usually have any right to object.

Ordinary share capital and preference share capital were used to operationalize share capital. Ordinary share capital is the sum of money raised by a corporate from private and public sources through the issue of its common shares. It is the capital that is received by the owners of the company in exchange for shares. The ordinary share capital has equity ownership in the company in proportion to their holdings. Preference shares are issued primarily by banks and other financial institutions and are intended to raise capital without diluting value for their ordinary shareholders. Share capital is measured as total capital divided by price per share.

2.3.5 Firm Size

Firm size refers to how small or large a firm is, as measured by its market value, sales, assets, profit or market capitalization that give information about its risk and opportunity to obtain external financing (Tita, 2016). The size of the firm affects both the profitability and liquidity of the firm (Niresh & Thirunavukkarasu, 2014). Larger firms usually acquire a broader market share which makes them more profitable, hence possessing more competitive power in contrast to small firms (Zariyawati, Annuar & Pui-San, 2016). Moreover, larger firms have better opportunities to work in the fields that seek high capital requirements as they have huge resources. This scenario provides the chance for them to work in higher profit environments with less competition (Nawaiseh, 2015).

Smaller firms have high liquid assets and are thought to be more profitable than larger firms in the short term (Muigai, 2016). Equally, bigger firms are more profitable especially those with illiquid assets than smaller firms assumed longer durations (Al-Tally, 2014). Larger firms are more profitable since they are more diversified as

compared to smaller firms. Thus, larger firms take up more debt due to a lower level of bankruptcy costs (Azeem & Marsap, 2015). Bigger firms can minimize information asymmetry in the market and acquire financial resources efficiently. They can also access debt easily when good risk profiles are maintained as opposed to small firms due to their stability (Bongoye, Banafa & Kingi, 2016).

According to Niresh and Velnampy (2014), firm size is a primary factor in determining the profitability of a firm due to the concept of economies of scale in the neo-classical view of the firm. Oladele and Olagunju (2013) showed that in today's world, firm size is very critical to performance due to the phenomenon of economies of scale. Essentially, it means larger manufacturing firms can obtain cost leadership relative to smaller firms. Firm's size is seen by manufacturing firms as a resource in obtaining sustainable competitive advantage in terms of profit and market share (Abbasi & Malik, 2015).

Ramasamy, Ong and Yeung (2005), observed that the association between firm performance and firm size was ambiguous and cautioned the need for industry specific consideration while, advising researchers to proceed on a case-by-case basis of analysis and avoid the tendency to generalize. Babalola (2013) concluded that firm size, both in terms of total assets and in terms of total sales, had a positive impact on the profitability of manufacturing firms in Nigeria. Ammar, Hanna, Nordheim and Russell (2003) and Oladele *et al.* (2013) observed that the nature of the relationship that exists between firm size and profitability is an essential matter that may shed some light on the factors that enhance profits in firms.

Firm size can either be measured by the level of assets or magnitude of sales. Firm size is measured by natural logarithm of total assets as used by Onaolapo and Kajola (2010). The trade-off theory suggest that larger firms should operate at high debt levels due to their ability to diversify the risk and to take the benefit of tax shields on interest payments. Large firms usually are more diversified and have lower variance in earnings and hence can accommodate high debt ratios. Smaller firms on the other hand may find

it relatively costlier to incorporate debt in their operation. Thus, larger firms will have a higher debt level as compared to small firms.

Empirical evidence on the relationship between firm size and financial growth of a firm supports a positive relationship. Kimathi, Galo, and Melissa (2015) suggested that smaller firms are likely to use equity finance while larger firms are likely to use debt. Firm size is measured as a natural logarithm of total Assets (Onaolapo & Kajola, 2010). It's a total of fixed assets and current assets. In this study firm size, was measured using the natural logarithm of total assets.

2.3.6 Financial Growth

Financial growth is the change in the firm's financial performance across periods. The growth rate is measured in terms of the growth in total assets or the growth in sales and determined by the percentage change between two periods. It is the increase in a firm's value of sales, total assets or market capitalization (Mac an Bhaird & Lucey, 2011). According to Buvanendra *et al*. (2017), the financial growth of a firm is measured as the growth in market capitalization. Market capitalization refers to the total dollar market value of a company's outstanding shares (Buvanendra *et al*., 2017). Commonly referred to as "market cap", it is calculated by multiplying a company's shares outstanding by the current market price of one share (Dang, Pham & Vu, 2018). Common equity is the amount that all common shareholders have invested in a company. Most importantly, this includes the value of the common shares themselves. However, it also includes retained earnings and additional paid in capital (Buvanendra, Sridharan & Thiyagarajan, 2017).

According to Serrasqueiro *et al.* (2007) as cited by Bhutta and Hasan (2013), the growth opportunities are measured in terms of the fraction of a firm's value represented for by assets-in-place; the smaller the proportion of firm's value narrated by assets-in-place, the larger the firm's growth opportunities. The firms with growth opportunities have moderately more development projects, new product lines, acquisitions of other firms

and repair and replacement of existing assets. Moreover, growth opportunities and firm size are positively related to profitability. Those firms with low growth opportunities lean towards high profitability and firms in the middle of the growth opportunities incline to confirm small profitability (Bhutta and Hasan 2013).

Dadashi, Mansourinia, Emamgholipour, Maryam, Bagheri and Arabi (2013) investigated the influence of growth and financial strength variables on the financial leverage for some listed firms in the Tehran Stock Exchange. For this purpose, a sample of 700 firms among listed firms in the Tehran Stock Exchange over the period 2006-2010 was examined. In the study, the growth variables, including asset growth, profit growth and sales growth; and financial strength calculated by the Altman Z-bankruptcy model were considered as independent variables. In addition, the ratios of long-term debt to total assets, long-term debt to fixed assets, total long-term debt and short-term receivable facilities to equity capital and total long-term debt and short-term receivable facilities to total assets were used as measures of financial leverage and dependent variables. The results indicated that, there is a negative and significant relationship between assets growth and some indices of financial leverage. There is also a positive and significant relationship between the variables of growth in profit, growth in sales and financial strength with financial leverage measures.

Financial growth of the firm is measured using growth in earnings per share and growth in market capitalization. Growth in earnings per share describes firm's profit divided by the outstanding shares of its common stock over time whereas market capitalization refers to the total dollar market value of a company's outstanding shares of stock calculated by multiplying the total number of a company's outstanding shares by the current market price of one share over time (Buvanendra et al., 2017).

2.4 Empirical Literature Review

This section discusses past studies according to the context of this study. The section reviews literature on the effect of financial structure on financial growth of non-financial

firms listed at Nairobi Securities Exchange, Kenya. According to Kothari (2004), the review of similar studies is used along with empirical data collected. The review of empirical literature plays a key role in establishing research gaps upon which a study can aim to build on.

2.4.1 Short Term Debt and Financial Growth

Baum, Schafer and Talavera (2006) 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 that are likely to be more profitable and hence financial growth of the firm. 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.

García-Teruel and Martínez-Solano (2008) analyzed the determinants of cash holding in Spanish SMEs 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 of 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. The study established that, short-term debt is positively related to firm's profitability and hence financial growth, which might be the most important factor in accessing outside financing in countries with weak collateral laws.

Fosberg (2013) conducted a study on short-term debt-financing during the financial crisis. The financial crisis of the late 2000s had a large effect on the capital and lending markets in the United States and overseas. The data presented 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 2008. This increase in short-term debt financing was completely reversed by the end of 2009 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 sale of assets also contributed to the need for more short-term debt financing. A regression analysis indicated that, the increase in short-term debt financing was caused by the financial crisis and not the simultaneous recession.

Pouraghajan, Malekian, Emamgholipour, Lotfollahpour and Bagheri (2012) conducted a study on the relationship between capital structure and performance of firms listed at Tehran Stock Exchange. Descriptive research design was applied. A panel data model was used to data collected. The results showed that short term debt and long-term debt asset ratio do not have a significant effect on firms' profitability and hence financial growth. Financial structure adopted by various firms all over the world differs considerably (Gambacorta, Yang & Tsatsaronis, 2014). The relative importance of financial structure as indicated by Succurro and Mannarino (2014) 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, 2014).

Habib, Khan and Wazir (2016) conducted a study on the impact of debt on profitability of firms, evidence from non-financial sector of Pakistan. The entire non-financial sector of Pakistan was selected for the study, but some companies were eliminated due to unavailability of data. After eliminating such companies, the data consist of 340 firms listed at Karachi Stock Exchange (KSE) for the period 2003–2012 was used for the analysis. Panel research design was employed. Return on Assets is used as a measure of profitability and is the dependent variable, whereas; short term debt to assets, long term debt to assets, total debt to assets are used as independent variables, while firm size,

sales growth, and growth opportunity are used as control variables. Random effect regression analysis is used to find out the impact of debt on profitability and hence financial growth of the firm. The results indicated a significant but negative relationship between short term debt, long term debt, total debt, and return on assets.

Bokhari and Khan (2013) determined the impact of capital structure on firm's performance of non-financial firms in Pakistan. The total firms were 441, due to incomplete data it came down to 380 firms. Ordinary Least Square method is used to analyze the performance, data is taken from 2005 to 2011 that is 7 years. Short term debt, long term debt and leverage of the firm have a negatively affected return on assets and hence financial growth. Return on equity has a negative relation with all the capital structure variables but with long term debt and leverage of the firm it was insignificant. In case of net profit margin, the impact was positive but was insignificant for all the variables that is long-term debt, short term debt and leverage of the firm. All the capital structure variables negatively affected earning per share and were significant.

2.4.2 Long Term Debt and Financial Growth

Aziz and Abbas (2019) investigated the effect of debt financing on performance and financial growth of firms: a study on non-financial sector of Pakistan. Secondary data is collected about 14 different sectors in Pakistan Stock Exchange, for the time period of 9 years (2006 to 2014). The results of the study indicated that debt financing have negative but also significant impact on and financial growth of the firm in Pakistan. The results of the study are showing that performance and financial growth of firms is negatively related to the short term and long-term debt. The impact of short-term debt and long-term debt is also significant and negative. That increase in debt cause the decrease in performance and financial growth of the firms because debt is the expensive source of finance. This study findings recommends that firms should more rely on their internal source of finance because it is the cheap and reliable source of finance in Pakistani context.

Opungu (2016) conducted a study to investigate the effect of capital structure on profitability and growth of non-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 and growth of non-financial firms listed at NSE. The theoretical basis of the study was on agency theory, static trade-off theory, pecking order theory and MM capital structure irrelevance theorem. Descriptive research design was adopted. The study findings indicated that short term debt equity ratio negatively and significantly affects return on assets (ROA), return on equity (ROE) and return on capital employed (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.

Mohammadzadeh *et al*., (2013) conducted a study on how capital structure affects the profitability and growth of pharmaceutical firms in Iran. The study focused on firms that were quoted in the Tehran Stock Exchange (TSE) for the period of 2001-2010. The study established the effect of short-term debt and long-term debt on profitability and growth of the pharmaceutical firms. 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 but negative effects on profitability and growth of the pharmaceutical firms. 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 preferred using debt rather than issuing stock.

Salawu and Agboola (2008) examined the determinants of capital structure of large non-financial firms in Nigeria using a panel of thirty-three (33) large firms. Statistical tests are performed for the period 1990-2004. This study covers only non-financial listed firms 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 was obtained from the annual reports of the sampled firms and publications of 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 choice of internal or external financing is also one of the serious concerns of firms in UK (UKdiss report, 2019). Yapa Abeywardhana (2016) noted that financial structure proxies short term debt, long term debt and total debt show mean of 39.6, 16.4 and 56.1 respectively for the manufacturing sector firms which implying that manufacturing SMEs in UK more rely on short term funds and do not incorporate higher level of long-term debt capital in the capital structure. Many manufacturing firms financed their operations, 56% of total assets finance through debt, of which 39.6% is short term debt (Vuong & Mitra, 2017). Manufacturing sector SMEs in UK are largely depending on the short-term debt to finance their operations due to the difficulty in accessing long term finance or young firms are resistance to use external finance and rely on internally generated funds.

Ater (2017) conducted a study on capital structure and the value of non-financial firms listed at the Nairobi Securities Exchange. The results indicated that, there was a statistically significant relationship between the capital structure and value of non-financial firms listed at NSE impacting the aggregate financial growth of the firm. Long-term debt impacts positively on firm's value and hence financial growth. The study recommended 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 whether to use debt on financing their operations.

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, 2011). 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). An appropriate financial structure is very crucial in decision making for many listed non-financial Firms. The common problem that the firms face in Mauritius concerns more with financing, for instance, whether to raise debt or equity capital (Omrawoo, Jaunky & Ramesh, 2017)). Thus, it is necessary for non-financial firms in Mauritius to be able to finance their business operations (Aviral & Raveesh, 2015).

Githire and Muturi (2015) conducted a study to examine the effect of capital structure on the performance of firms listed at NSE. The population of interest was the firms listed at NSE and a census of all firms listed at NSE from year 2008-2013 was the sample. The study adopted an explanatory research design. 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 impacting aggregate financial growth of the firm over time. Thus, this study concludes that equity and short debt financing enhances financial performance, while short term debts reduce financial performance as well as financial growth.

2.4.3 Retained Earnings and Financial Growth

Muchiri, Muturi and Ngumi (2016) conducted a study on the relationship between financial structure and financial performance of firms listed at the East Africa Securities Exchange (EASE). The specific objectives were to establish the influence of short-term debt, long term debt, retained earnings and share capital on the financial performance of firms listed at EASE. The study also evaluated the moderating effect of the Gross Domestic Product (GDP) growth rate on the relationship between financial structure and financial performance of firms listed at EASE. The study employed an explanatory research design with secondary panel data from the financial statements of 61 firms for the period 2006 - 2014. The study found that retained earnings had an insignificant

negative relationship with return on assets (ROA) but an insignificant positive relationship with return on equity (ROE).

Chen (2014) conducted a study on the determinants of capital structure of Chinese-listed companies. This study used 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 and thus affecting financial growth of the company.

Isola and Akanni (2015) conducted a study on corporate financial structure of non-financial listed firms in Nigeria. To achieve this, 63 non-financial firms listed at the Nigerian stock exchange were selected based on data availability for the period 2001 - 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 lean towards 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 accessibility of firms to long term finances from the existing sources that is marred with high interest rates and huge collaterals.

Oladele, Omotosho 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 listed 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 listed manufacturing firms in Nigeria using the four widely used proxies (that is return on equity, return on assets, sales growth, and earnings per share) for measuring performance of firm. Multiple regression was 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 impacting aggregate financial growth of the firm over time.

2.4.4 Share Capital and Financial Growth

A study was conducted by Omai, Memba and Njeru (2018) to examine the effect of share capital finance on profitability of petroleum marketing firms in Kenya. A positivist philosophy was adopted to enable testing of the study hypothesis. The study adopted cross-sectional survey design with criterion sampling being used to arrive at 35 firms between 2007-2016. Primary data was collected by the use of questionnaires along with secondary data. Descriptive statistics and Univariate tests (t-test and Pearson correlation) were carried out. The results indicated that share capital has a negative but insignificant effect on profitability. The study recommended the need to institute appropriate regulatory mechanisms meant to cushion investors by initiating corporate finance practices in the industry.

Akbarpour and Aghabeygzadeh (2011) investigated the relationship between financial structure and accounting measurement for evaluating performance (ROA, ROE) for the period 2005-2010 of listed firms at Tehran Security Exchange (TSE). The aim of this paper is to examine important theories of financial management in the field, which in fact was carried out by evaluating the relationship between financial structures and profitability measures of listed firms at Tehran Security Exchange. The study adopted panel design. The results indicated that, there was a significant relationship between financial structure (share capital) and ROA, but there isn't such a significant relationship between financial structure and ROE. It was established that financial structure such as

share capital plays an important role in the profitability and hence financial growth of enterprises.

Younus *et al.,* (2014) identified the impact between share capital and financial performance of Sugar companies listed at 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; share capital and financial performance have the negative relationship, there is a significance impact of share capital on financial performance and that share capital and financial performance have a positive relationship which impact the aggregate financial growth of the firm over time. 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 a weak positive correlation between share capital and financial performance.

Tsoy and Heshmati (2017) conducted a study on the impact of financial crises on dynamics of capital structure of listed non-financial firms in Korea. Using a data set covering 1,159 Korean listed non-financial firms from 10 industrial sectors over the period 1985-2015, the pattern of firms' capital structure before and after the crises is investigated and the speed of adjustment towards the optimal leverage identified. The empirical analysis revealed that listed non-financial firms in Korea on average decreased their debt ratios over the entire period of study, 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 impacting aggregate financial growth of the firm over time.

Ebaid (2009) conducted a study on the impact of capital-structure choice on firm performance: empirical evidence from Egypt. Return on Asset (ROA) and Return on Equity (ROE) were used as the measures of performance of the firm, while short term

debt, long-term debt and total debt represented indicators of capital structure. Descriptive research design was adopted. The study found that share capital has a significant relationship with return on assets but insignificant relationship with return on equity. It was concluded that capital structure changes do affect the performance and hence the aggregate financial growth of the firm over time.

2.4.5 Firm Size and Financial Growth

Tapang, Uklala, Bassey, Ezuwore-Obodoekwe, Onyeanu, Ozoji and Obo (2021) examined the mediating effect of firm size on the relationship between corporate social responsibility cost and financial performance of listed non-financial companies in Nigeria. The content analysis approach was adopted and data collected from secondary sources. The collected data were analyzed using the ordinary least square techniques. The results revealed there is significant mediating effect of firm size on the relationship between corporate social responsibility cost and financial performance of listed non-financial companies in Nigeria. The study concludes that large companies are investing more on thus are more competitive.

Moreover, Muigai (2016) investigated the intervening 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 firms for the ten - year period covering 2004 – 2013 (both years inclusive). The study established that firm size and the listing sector have significant intervening effect on the relationship between capital structure and financial distress.

Ater, Sifunjo, Kisaka, Iraya and Mwangi (2017) conducted a study on the mediating effect of firm size on the relationship between capital structure and firm value among non-financial firms listed at Nairobi Securities Exchange (NSE). A target population of 36 non-financial firms at the NSE was selected. The study used a stepwise multiple regression analysis and in testing of the hypothesized variables. The findings of the

study indicated that firm size has a significant mediating effect and is thus a critical tool that can be used by the management of the firm when doing capital structure adjustments to ensure efficiency and optimality as a firm grows.

Kijkasiwat and Phuensane (2020) conducted a study to examine the mediating effect of firm size on the relationship between innovation and firm performance of small and medium enterprises in 29 countries in Eastern European and Central Asia. The study adopted the descriptive research design. The collection of the data was done using questionnaires. The study findings showed that firm size mediates the relationship between innovation and firm performance. The findings have implications for decision makers by highlighting the significance of firm size and financial sources when planning to introduce innovations to enhance firm performance

Ali, Mukulu, Kihoro and Nzulwa (2016) conducted a study on the intervening 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 the surrounding areas. The study concluded that firm size does not intervene 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. Abbasi and Malik (2015) conducted a study on firm's size moderating financial performance of growing firms in Pakistan. The data was collected from the financial statements of 50 non-financial firms listed at Karachi stock Exchange, for year 2012. The results of the regression analysis demonstrated that firm's size has a moderating inspiration between firm growth and financial performance of the firm.

2.5 Critique of existing Literature

A review of the literature indicates that the majority of past empirical studies (Omai, Memba & Njeru, 2018; Akbarpour & Aghabeygzadeh, 2011; Younus et al., 2014;

Oladele, Omotosho and Adeniyi 2017; Isola & Akanni, 2015; Baum, Schafer &Talavera, 2006; Ebaid, 2009; García-Teruel and Martínez-Solano, 2008; Pouraghajan, Malekian, Emamgholipour, Lotfollahpour & Bagheri, 2012; Habib, Khan &Wazir, 2016; Bokhari & Khan, 2013; Aziz &Abbas, 2019; Chen, 2014; Opungu, 2016; Ater, 2017; Githire & Muturi, 2015; Muchiri, Muturi & Ngumi, 2016) have analyzed the effect of financial structure on the financial performance of the firms. Conceptual, contextual and methodological have been pinpointed. Most of the studies were carried out in developed markets compared to developing countries like Kenya.

Moreover, the contextual gap also emerges from the fact that some of the studies were not conducted within non-financial firms listed on the Nairobi Securities Exchange. On the other hand, the reviewed studies have revealed a conceptual gap as none of those studies particularly examined the effect of short-term debt, long-term debt, retained earnings and share capital on the financial growth of non-financial firms listed at the Nairobi Securities Exchange with an intervening effect of firm size. Furthermore, the methodological gap exists in the form of the type of data, research design and sampling techniques, among others. Thus, the studies cannot be relied upon to make inferences for policy formulations and inferences making.

2.6 Research Gaps

Under the empirical review section, a number of local and international studies were reviewed and various gaps where observed. Based on the reviewed studies, the effect of financial structure on the financial growth of non-financial firms listed at the Nairobi Securities Exchange is under-researched. For instance, Pouraghajan, Malekian, Emamgholipour, Lotfollahpour and Bagheri (2012) conducted a study on the relationship between capital structure and performance of firms listed at the Tehran Stock Exchange. Bokhari and Khan (2013) determined the impact of capital structure on firm's performance of non-financial firms in Pakistan. Opungu (2016) conducted a study to investigate the effect of capital structure on the profitability and growth of non-financial firms listed at the Nairobi Stock Exchange (NSE). Mohammadzadeh *et al.*,

(2013) conducted a study on how capital structure affects the profitability and growth of pharmaceutical firms in Iran.

Moreover, Salawu and Agboola (2008) examined the determinants of capital structure of large non-financial firms in Nigeria using a panel of thirty-three (33) large firms. Ater (2017) conducted a study on capital structure and the value of non-financial firms listed at the Nairobi Securities Exchange. In addition, Githire and Muturi (2015) conducted a study to examine the effect of capital structure on the performance of firms listed at NSE. El-Chaarani (2014) conducted a study on the impact of financial structure on the performance of European listed firms. Oladele, Omotosho and Adeniyi (2017) conducted a study on the effect of capital structure on the performance of Nigerian listed manufacturing firms from 2004-2013. Tsoy and Heshmati (2017) conducted a study on the impact of financial crises on the dynamics of the capital structure of listed non-financial firms in Korea.

It is evident that the majority of the studies focused on capital structure while basing their argument on accounting concepts. The preceding scholars have only illustrated the theoretical understanding of the effect of financial structure on performance. None of the reviewed studies precisely examined the effect of short-term debt, long-term debt, retained earnings and share capital on the financial growth of non-financial firms listed at the Nairobi Securities Exchange with an intervening effect of firm size. In addition, financial growth as an indicator of a firm's performance has generally been given scarce attention. The study intended to fill this knowledge gap by focusing on the effect of financial structure on the financial growth of non-financial firms listed at the Nairobi Securities Exchange.

2.7 Summary

The above chapter reviewed the various theories that explain the independent and dependent variables. This study is guided by the Modigliani-Miller Theory, Agency Theory, Pecking Order Theory, Trade-off Theory, Market Timing Theory and Theory of

Growth of the Firm. The conceptual framework is drawn up from the reviewed literature in line with the following criteria, title, scope, methodology forming the basis for the critique of literature. It is from these critiques that the research gaps both conceptual and contextual were identified. Majority of the studies conducted focused on capital structure while basing their argument on accounting concept. Unlike financial structure, short term liabilities do not contribute to capital structure. The next chapter outlines the methodology adopted by the study in order to achieve the stated objectives.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

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

3.2 Research Philosophy

The study adopted positivism research philosophy. Research philosophy relates to the foundation of knowledge upon which important assumptions and predispositions of a study are based (Cooper & Schindler, 2006). Positivism philosophy premises that, knowledge is based on facts and that no abstractions or subjective status of individuals is considered (Bryman, 2016). Positivism thus derives a quantitative perspective which holds that, there is an objective reality that can be expressed numerically, with explanatory and predictive power (Antwi & Hamza, 2015; Furrer, Thomas & Goussevkaia, 2008). This study was guided by the positivism philosophy because the study depends on quantifiable observations that lead to statistical analysis. The study has a structured methodology which enables generalization of quantifiable observations and evaluates 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. Furthermore, appropriate hypotheses are formulated and tested through statistical analysis leading to accepting or rejecting hypotheses.

3.3 Research Design

Research design is a framework that is employed to create answers to examiners' concerns (Patten, & Newhart, 2017). This study adopted the cross-sectional research design. The cross-sectional research design was the most suitable as it focuses on finding relationships between variables. The advantage of a cross-sectional study design is that it allows researchers to compare the relationship of the different variables at the same time. According to Rahi (2017), the cross-sectional research design is suitable when the researcher wants to understand an issue better and come up with new ideas on what should be done to improve the current situation. The cross-sectional research design was considered the most relevant design and helped to examine the effect of financial structure on the financial growth of non-financial firms listed on the Nairobi Securities Exchange. The study included various sectors in the study (Agriculture, Automobiles and Accessories, Commercial and Services, Construction and Allied, Energy and Petroleum, Manufacturing and Allied, Investment, Telecommunication and Technology and Real Estate Investment Trust) and thus cross-sectional research design was considered the most efficacious to be embraced.

3.4 Target Population

Population is the total collection of elements about which inference is made to all possible cases that are of interest in the study (Sekaran & Bougie, 2016). The target population of the study comprised of 45 non-financial firms listed at the NSE for a period of ten years from 2008 to 31st December 2017 (NSE, 2017). The study excluded banking and insurance whose operations are purely financial related services and mode of operations differs from those of non-financial firms (NSE, 2017). The financial structure of purely finance based firms may differ from financial structure of non-financial based firms and so studying them separately is crucial. In case of delisted non-financial firms during the period 2008-2017, the study employed unbalanced data analysis technique. Table 3.1 showed the target population of the study.

Table: 3.1: Target Population

Sector	Listed Non-financial Firms
Agriculture	6
Automobiles and Accessories	3
Commercial and Services	11
Construction and Allied	5
Energy and Petroleum	4
Manufacturing and Allied	9
Investment	5
Telecommunication and Technology	1
Real Estate Investment Trust	1
Total	**45**

(Source: NSE, 2017)

3.5 Sample and Sampling Technique

Sampling is the process of selecting units (people, organizations) from accessible population so as to fairly generalize the 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 non-financial firms listed at NSE were considered. Census approach is the total inclusion of all observation in the study (Bryman, 2016). According to Sekaran and Bougie (2016) a census approach improves legitimacy of the collected data by embracing certain cases with rich information.

3.6 Data Collection Instruments

The data collection instruments are defined as tools that the researcher will use to collect the data such as questionnaires, secondary data collection templates, interviews guides among others (Thomas, Oenning & Goulart, 2018). The study used a secondary data collection template to collect the data. The secondary data includes the one that is already existing in an organization. Secondary data refers to data that is collected by someone other than the primary user (Tripathy, 2013). Secondary data was extracted from published audited financial statements and NSE handbooks. Secondary data

obtained covered a period of 10 years beginning from 2008 and ending in 2017. This is the period where majority of non-financial firms listed at the Nairobi Securities Exchange were experiencing a decline in financial growth. Firms with incomplete data resulting from the firm being suspended, delisted or being listed after 2008 were excluded from the analysis. The secondary data collected from financial reports are attached in Appendix II.

3.7 Data Collection Procedure

The data collection procedure is defined as the precise and systematic way of gathering information that is relevant to the research for the analysis (Saunders, Lewis & Thornhill, 2013). Before collecting the data, the researchers got a permit from the supervisors in charge of the projects, National Commission for Science, Technology and Innovation, the management of the firms and the Nairobi Securities Exchange. The study used secondary data collected from financial records of the listed non-financial firms. The data for the study was collected from non-financial firms listed on Nairobi Securities Exchange. Data for ten years (2008 - 2017) was collected from the published audited financial statements and Nairobi Securities Exchange handbooks. The data collected included short-term debt, long term debt, retained earnings, share capital, firm size, earnings per share and market capitalization.

3.8 Measurement of Variables

The measurement of variables is defined as a way or process that the study variables are operationalized or specified (Rahi, 2017). The measurement of the variables indicates precisely how the study variables are going to be defined for easy analysis and presentation of the inferences. The dependent variable of the study was financial growth of non-financial firms listed at the Nairobi Securities Exchange. Short term debt, long term debt, retained earnings and share capital formed the independent variables for the study. The intervening variable was the firm size. This section provided details of how each of the study variables was measured/operationalized.

Table 3.2: Operationalization of Variables

Definition of Variable(s)	Measurement of Variable(s)	Expected Results
Short Term Debt	Current liabilities / Total Assets	Positive
		Negative
Long Term Debt	Long Term liabilities / Total Assets	Positive
		Negative
Retained Earning	Retained Earnings / Total Assets	Positive
		Negative
Share Capital	Share Capital / Total Assets	Positive
		Negative
Firm Size	Natural logarithm of Total Assets	Positive
Financial Growth	• **Change in Market Capitalization** (Mkt Cap = Market Price Per Share or Stock x Number of Ordinary Shares) • **Change in Earnings Per Share (EPS)** (EPS = Profit after Interest, Tax and Preferred Dividend / Number of Ordinary Shares Issued)	

3.9 Data Analysis and Presentation

Ott and Longnecker (2015), define data analysis as a mechanism for reducing and organizing data to produce findings that require interpretation. According to Hadi and Chatterjee (2015), data processing involves collection and manipulation of raw data to produce a meaningful information. The data was analyzed using STATA 14 software.

3.9.1 Model Specification

The study employed multiple regression under the panel data framework. Panel data contain observations of multiple phenomena obtained over multiple time periods for the

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same firms or individuals (Hsiao, 2007). The data is preferred because it reveals changes at the individual firms' level, establishes time order of variables and shows how relationships emerge (Frees, 2004). Panel data regression was chosen for a number of reasons. First, panel data allowed for the control of individual heterogeneity, making it possible to exclude biases deriving from the existence of individual effects. Secondly, panel data yielded more informative data, more variability and less collinearity among variables, more degree of freedom and more efficiency than cross-section data or time-series data. Thirdly, panel data was used to obtain consistent estimators in the presence of omitted variables. The panel model was;

$$(Y)_{i,t} = \beta_0 + \sum_{t=1}^{\infty} \beta_i X_{i,t}$$
$$+ \varepsilon_{i,t} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 3.1$$

Where;

$(Y)_{i,t}$ = Financial growth of firm i at time t,

$X_{i,t}$ = the value for independent variables of firm i at time t,

β_i = is the beta coefficient to be determined,

β_0 = the alpha coefficient representing the constant term,

ε = refers to the error term.

3.9.2 Variable Measurement

Panel data sets can recognize and estimate the effects that cannot be merely detected in pure cross-sections or pure time-series data (Baltagi, 2005). Since the study focused on 45 non-financial firms listed at NSE, using cross-section data alone gave a small sample

but incorporating the time series of 10 years, the number of observations expanded to 450 observations. The resultant large sample made it possible for the study to satisfy asymptotic requirements (Gujarati, 2009).

3.9.3 Panel Data Model before Including the Intervening Variable

The specific model that was used for this study is as presented below: -

$$FG_{i,t} = \beta_0 + \beta_1 STD_{i,t} + \beta_2 LTD_{i,t} + \beta_3 RE_{i,t} + \beta_4 SC_{i,t} + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 3.2$$

Where;

$FG_{i,t}$ = Financial growth measured as growth (change) in market capitalization and growth in earning per share of firm i at time t. The change in market capitalization and earning per share were based on the changes

$STD_{i,t}$ = Short Term Debt of firm i at time t

$LTD_{i,t}$ = Long Term Debt of firm i at time t

$RE_{i,t}$ = Retained Earning of firm i at time t

$SC_{i,t}$ = Share Capital of firm i at time t

i = Firms listed from 2008 to 2017

t = Time period (2008-2017)

ε = Error term

3.9.4 Testing for the Intervening Effect of Firm Size

In order to analyze the intervening effect of firm size on the relationship between financial structure and financial growth of non-financial firms listed at Nairobi securities

exchange. The study modified the dynamic panel data model by Baños-Caballero, García-Teruel, and Martínez-Solano (2014) as depicted in equation 3.2. The Baron and Kenny (1986) approach in testing for mediation was employed for the purpose of this study. For intervening effect to be considered positive, four conditions should be fulfilled: One, the independent variable is significantly related to the dependent variable in the absence of the intervening variable. The intervening variable (firm size) was interacted with each measure of financial growth.

Step 1

The independent variable was significantly related to the dependent variable in the absence of the intervening variable.

$$Y_{i,t} = \beta_0 + \beta_1 X_{i,t} + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{Equation 3.3}$$

 Step 2

The independent variable was significantly related to the intervening variable.

$$Z_{i,t} = \beta_0 + \beta_1 X_{i,t} + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\text{Equation 3.4}$$

Step 3

Intervening variable was significantly related to the dependent variable.

$$Y_{i,t} = \beta_0 + \beta_1 Z_{i,t} + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots. \text{Equation 3.5}$$

Step 4

By controlling the effect of the intervening variable on the dependent variable, the effect of the independent variable on the dependent variable was insignificant in the presence of the intervening variable.

$Y_{it} = \beta_0 + \beta_1 X_{i,t} + \beta_1 Z_{i,t} + \varepsilon$………………………………….…………. Equation 3.6

Where;

$Y_{i,t}$ = Financial growth

$X_{i,t}$ = Financial structure/Total finance (Composite function)

$Z_{i,t}$ = Firm size (Intervening variable)

i = Firms listed from 2008 to 2017

t = Time period (2008-2017)

3.10 Diagnostic Tests

3.10.1 Panel Unit Root Test

Since panel data have both cross-sections and time series dimensions, there was need to test for stationarity of the time series because the estimation of the time series assumes that the variables are stationary. Estimating models without considering the non-stationary nature of the data would lead to unauthentic results (Gujarati, 2009). In this study, the researcher employed Fisher-type test of unit root in panel data. xtfisher combines the p-values from N independent unit root tests, as developed by Maddala and Wu (1999). Based on the p-values of individual unit root tests, Fisher's test assumes that all series are non-stationary under the null hypothesis against the alternative that at least one series in the panel is stationary. The advantage of this test is that it allows for

unbalanced panels with gaps, performs either Dickey-Fuller or Philip-Perron test for each panel, and reports four different tests. The null hypothesis of this test is 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, 2006). If any of the variables had unit root, the researcher would differentiate it and run the equations using the differentiated variable.

3.10.2 Hausman Test

When performing panel data analysis, one must determine whether to run a fixed effects model or a random effects model. Whereas the fixed effect model assumes firm specific intercepts and captures effects of those variables which are specific to each firm and constant over time, the random effect model assumes that there is a single common intercept and it varies from firm to firm in a random manner (Baltagi, 2005). Thus, for estimating the models, first it is important to determine whether there exists a correlation between the independent variables. If correlation exists, then a fixed effect model will give consistent results otherwise random effect model will be an efficient estimator and it is estimated by generalized least square. To determine which of these two models is appropriate, coefficients are estimated by both fixed and random effects. Hausman's specification test (1978) was used to determine whether fixed or random effect should be used. If the study fails to reject the null hypothesis, then random effect will be an efficient estimator otherwise in case of rejection of null hypothesis, fixed effect estimation will give better or efficient estimation of betas. If Hausman test rejects the null hypothesis, therefore a decision is taken to use fixed effect model.

If, the Hausman test identifies the fixed effects model as appropriate, then the researcher tests for inclusion of time-fixed effects in the study estimation. The time fixed effects tests if the dummies for all years are equal to zero and if they are, then there is no need for time fixed effects in the specification of the model to be estimated. To test whether the dummies for all years are equal to zero, F-test was used as proposed by Greene (2008). On the other hand, if the Hausman test selects the random effects model as the

more suitable one, then there would be a need to test the panel effects so as to determine whether to run a simple Ordinary Least Square (OLS) regression or the random effects model. Breusch-Pagan multiplier test proposed by Breusch and Pagan (1980) was used to select between the simple Ordinary Least Square (OLS) regression and the random effects model. The null hypothesis of this test was that variance across the entities is zero, that is, there are no panel effects.

3.10.3 Normality Tests

The normality assumption was required to conduct single or joint hypothesis tests about the model parameters (Brooks, 2008). The normality was tested using the Skewness and Kurtosis test. If the p-value is greater than 0.05, the null of normality at the 5% level is rejected. If the data is not normally distributed, a non-parametric test was the most appropriate. The study tested the null hypothesis that the disturbances are not normally distributed.

3.10.4 Multicollinearity

The study employed Variance Inflation Factor (VIF) to measure multicollinearity (Gujarati, 2009; 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 ≥ 10 presence of multicollinearity.

3.10.5 Autocorrelation

Since the data involved 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 (Drukker, 2003). To

cater for serial correlation, the Wooldridge test for autocorrelation was employed. Serial correlation is a common problem experienced in panel data analysis and must 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. If the serial correlation is detected in the panel data, then the Feasible Generalized Least Squares (FGLS) estimation was adopted. The p-value of > 0.05 indicates absence of serial correlation.

3.10.6 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 (Breusch & Pagan 1979). 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 was present in the panel data, then this would be accounted for by running a Feasible Generalized Least Squares (FGLS) model. When p-value is <0.05, there is Heteroscedasticity; when p-value is >0.05, there is no Heteroscedasticity.

3.11 Descriptive Statistics

During data analysis, descriptive statistics was conducted. Descriptive statistics included mean, minimum, maximum, range standard deviations, coefficient of variation and trend analysis.

3.12 Test for Hypotheses

Hypothesis testing was done using p-value. P-value provides information on the significance of the relationship of the variables. The study rejects the null hypothesis if the p-value calculated is less than the significance level of 0.05 thus accepting the alternative hypothesis. If the p-value calculated is greater than the significance level of 0.05 the study fails to reject null hypothesis.

3.13 Finding Presentation

The results of the study were presented in form of tables, figures, and graphs.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

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

4.2 Descriptive Statistics

Table 4.1 shows the descriptive statistics for short term debt, long term debt, retained earnings share capital, firm size, earnings per share and market capitalization.

Table 4.1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max	CV
Short Term Debt	360	0.29146	0.255896	0.007901	2.535623	0.87798
Long Term Debt	360	0.200195	0.186595	0.000000	1.126967	0.932066
Retained Earnings	360	0.276984	0.327572	-1.60575	1.05154	1.182639
Share Capital	360	0.100219	0.156585	0.001601	1.139994	1.562428
Firm Size in million KES	360	28400.00	56200.00	40.1960	377000.00	1.978873
Earnings Per Share	360	6.468265	15.03232	-46.744	100.0483	2.324011
Market Capitalization in million KES	360	24600.00	77300.00	116.000	721000.00	3.142276

The descriptive results show that, the mean value for short term debt was 0.29146 with a minimum of 0.007901 and a maximum of 2.535623. The variation in Standard Deviation was 0.255896. Further, long term debt had a mean of 0.200195 with a minimum of 0.000000 and a maximum of 1.126967. The standard deviation for long term debt was 0.186595. Average short-term debt, long term debt was less than 0.5 implying that the

non-financial firms listed at NSE were financing their operations using equity. The short-term ratio indicates that the listed non-financial firms are able to deliver payments on its outstanding short-term liabilities. Non-financial firms which are reliant on short term funding are more vulnerable to liquidity shocks than those with longer-term debt finance as debt facilities can be withdrawn immediately. While non-financial firms with short term financing are likely to have a lower cost of debt than those with longer-term financing, should interest rates rise, those with short term financing will see rates rise faster.

The study results concur with Baum, Schafer and Talavera (2006) who showed that German firms rely more heavily on short-term liabilities that are likely to be more profitable and hence financial growth of the firm. García-Teruel and Martínez-Solano (2008) established that short-term debt is positively related to a firm's profitability and hence financial growth. According to García-Terul and Martinez-Solano (2007), short-term debt is positively correlated with a firm's growth opportunities. The anecdotal evidence suggests that there is a positive relationship between short term debt financing and the financial performance of the firm (Yazdanfar & Öhman, 2015).

Diamond and He (2014) observed that firms that had high short-term debt levels when compared to their long-term debt performed better than their peers. According to Tailab (2014), the use of short-term liabilities such as trade payables and accruals can have a positive effect on a firm's profitability since such sources of financing may be less costly to the firm than the longer-term sources of funds. Pelham (2000) argued that long term debts provide small firms with more competitive advantages when compared to large firms. Long term loans are loan advances to borrowers and the interest plus principal amount is paid over a longer period of time spread over years often over three years (EBaid, 2009).

Retained Earnings had a mean of 0.276984 with a minimum of -1.60575 and a maximum of 1.05154. The standard deviation for retained earnings was 0.327572. On average 27.6984% of retained earnings were used to finance operations of the non-

financial firms listed at NSE. The retention ratio is the proportion of earnings kept back in the business as retained earnings. The retention ratio refers to the percentage of net income that is retained to grow the business, rather than being paid out as dividends. The ideal ratio for retained earnings to total assets is 1:1 or 100 percent. However, this ratio is virtually impossible for most businesses to achieve. Thus, a more realistic objective is to have a ratio as close to 100 percent as possible, that is above average within your industry and improving. The retention ratio helps investors in determining how much money the firm is keeping to re-invest in the firm's operations. If a firm pays all of its retained earnings out as dividends or does not reinvest back into the business, earnings growth might suffer. Also, a firm that is not using its retained earnings effectively has an increased likelihood of taking on additional debt or issuing new equity shares to finance growth.

The study by Chasan (2012) showed that retained earnings includes the portion of a firm's profits that is kept for reinvestment into the business or for debt payments, instead of being paid out rather as dividends to shareholders. Chasan (2012) noted that the prime idea behind earnings retention is that, the more the firm retains the faster it has chances for growth. Retained earnings are usually recorded under shareholders' equity on the balance sheet. According to Chasan (2012) earnings retentions are a sacrifice made by equity shareholders. The use of retained earnings as an internal source of finance is preferred because it does not involve any floatation costs and does not dilute ownership and control of the firm, since no new shares are issued (Fama & French, 2005).

Share capital had a mean of 0.100219 with a minimum of 0.001601, a maximum of 1.139994 and standard deviation of 0.156585. The results imply that 10.0219% of aggregate financing needs of the non-financial firms listed at NSE was through sale of shares. The shareholder capital ratio shows how much of a firm's assets are funded by issuing stock rather than borrowing money. The closer a firm's ratio result is to 100%, the more assets it has financed with stock rather than debt. The ratio is an indicator of how financially stable the firm may be in the long run. Share capital is the total capital of a firm divided into shares. A joint stock company should have capital in order to

finance its activities. Funds raised by issuing shares in return for cash or other considerations.

The study by Akbarpour and Aghabeygzadeh (2011) established that financial structure plays an important role in the profitability and hence financial growth of enterprises. Ebaid (2009) found out that share capital has a significant relationship with return on assets. Capital structure changes do affect the performance and hence the aggregate financial growth of the firm over time. The ordinary share capital has equity ownership in the company in proportion to their holdings while preference shares are intended to raise capital without diluting value for their ordinary shareholders (Tsoy & Heshmati, 2017). Share capital is the total capital of a firm divided into shares. A joint stock company should have capital in order to finance its activities. Funds raised by issuing shares in return for cash or other considerations.

Firm size had a mean of Kshs. 28400 million with a minimum of Kshs. 40.196 million and a maximum of Kshs. 377000 million values of assets and standard deviation of Kshs. 56200 million. Larger firms have better opportunities to work in the fields that seek high capital requirements as they have huge resources. This scenario provides the chance for them to work in higher profit environments with less competition. Smaller firms have high liquid assets and are thought to be more profitable than larger firms in the short term. Equally, bigger firms are more profitable especially those with illiquid assets than smaller firms assumed longer durations. Larger firms are more profitable since they are more diversified as compared to smaller firms. Thus, larger firms take up more debt due to a lower level of bankruptcy costs. Bigger firms can minimize information asymmetry in the market and acquire financial resources efficiently. They can also access debt easily when good risk profiles are maintained as opposed to small firms due to their stability.

Tita (2016) notes that firm size refers to how small or large a firm is, as measured by its market value, sales, assets, profit, or market capitalization. Niresh and Thirunavukkarasu (2014) report that firm size of the firm affects both its profitability and liquidity of the

firm. Larger firms usually acquire a broader market share which makes them more profitable, hence possessing more competitive power in contrast to small firms (Zariyawati, Annuar & Pui-San, 2016). Moreover, larger firms have better opportunities to work in the fields that seek high capital requirements as they have huge resources. Smaller firms have high liquid assets and are thought to be more profitable than larger firms in the short term (Muigai, 2016). Bigger firms are more profitable, especially those with illiquid assets than smaller firms that assumed longer durations (Al-Tally, 2014). According to Niresh and Velnampy (2014), firm size is a primary factor in determining the profitability of a firm due to the concept of economies of scale in the neo-classical view of the firm. Firm size can either be measured by the level of assets or the magnitude of sales. Firm size is measured by the natural logarithm of total assets as used by Onaolapo and Kajola (2010).

The mean value for earnings per share was 6.468265 with a minimum of -46.744, a maximum of 100.0483 and standard deviation of 15.03232. The higher the earnings per share, implies that the firm earned more profit which was shared by shareholders. Smaller earnings per share implies that the profit earned by the firm was very small. Negative earnings per share indicates that the firm made a loss and the firm went ahead to share the earnings among the shareholders. Good earnings per share, or EPS, in the stock market depend largely on expectations. Investors generally cheer a stock that meets or exceeds those estimates, but they might sell shares to punish a firm that misses its target.

The study by Oladele, Omotosho and Adeniyi (2017) revealed that, capital structure has significant effect on return of assets, earnings per share and sales growth. Good earnings can also be relative, based on market and economic conditions for corporate profits. Using EPS as a guide for determining a firm's value has a certain logic since earnings and stock prices often move in tandem (El-Chaarani, 2014). If a firm post higher earnings, then its per-share price should increase accordingly. But EPS ratios can sometimes be molded to make a firm appear financially healthier than it really is.

The mean value for market capitalization as another measure of financial growth was Kshs. 24600 million with a minimum of Kshs. 116 million and a maximum of Kshs. 721000 million. Market capitalization is the aggregate valuation of the firm based on its current share price and the total number of outstanding stocks. It is calculated by multiplying the current market price of the firm's share with the total outstanding shares of the company. Large value of market capitalization implies the firm has more value in the market while smaller value of market capitalization implies that, the firm has small value in the market.

Market capitalization helps the investor determine the returns and the risk in the share and also helps the investors choose the stock that can meet their risk and diversification criteria (Vuong & Mitra, 2017; Sheikh & Wang, 2011; Safiuddin, Islam & Anisuzzaman, 2015). According to Buvanendra *et al*. (2017), the financial growth of a firm is measured as the growth in market capitalization. Market capitalization refers to the total dollar market value of a company's outstanding shares (Buvanendra *et al*., 2017). Market capitalization includes the total dollar market value of a company's outstanding shares of the stock calculated by multiplying the total number of a company's outstanding shares by the current market price of one share over time.

The coefficient of variation results indicates that, the variation was higher. The coefficient of variation shows the extent of variability of data in a sample in relation to the mean of the population. In finance, the coefficient of variation allows investors to determine how much volatility, or risk, is assumed in comparison to the amount of return expected from investments. Ideally, if the coefficient of variation formula should result in a lower ratio of the standard deviation to mean return, then the better the risk-return trade-off. The coefficient of variation is helpful when using the risk/reward ratio to select investments. For example, an investor who is risk-averse may want to consider assets with a historically low degree of volatility relative to the return, in relation to the overall market or its industry. Conversely, risk-seeking investors may look to invest in assets with a historically high degree of volatility.

4.3 Trend Analysis

This section presents the analysis of the trends of the variables. The study conducted a trend analysis to establish the movement of the variables overtime. Trend analysis for short term debt, long term debt, retained earnings, share capital, firm size, growth in earnings per share and market capitalization.

4.3.1 Short Term Debt Trend Line

Figure 4.1 shows the growth of short-term debt of the listed non-financial firms at the Nairobi securities Exchange. Annual average of short-term debt for all the firms under study was generated and data used to draw the line graph.

Short Term Debt

Figure 4.1: Short Term Debt Trend Line

Short term debt was lowest in 2010 before rising to reach highest value in 2015. This could imply that short-term debt financing was easily available compared to the long-term debt which is usually associated with high value collateral and at times restrictive covenants to make it unattractive. The huge proportion of asset financing through short term debt could imply that short-term debt financing was less costly and therefore available compared to the long-term debt which is usually associated with high value

collateral and at times restrictive covenants making it unattractive. Short term debt is made up of any debt incurred by a firm that is due within the current fiscal year. The value of short-term debt is very important when determining a firm's financial performance. According to Muchugia (2013) there was significant positive effect of short-term debt financing on profitability because short-term debt tends to be less expensive and increasing it with a relatively low interest rate will lead to an increase in profit levels and therefore performance. Likewise, Mohammadzadeh *et al*., (2013) who conducted a study on how capital structure affects the profitability of pharmaceutical firms in Iran revealed that both short term and long-term debt had significant negative effects on profitability of the pharmaceutical firms. However, these findings contradict Mwangi, Muathe and Kosimbei (2014) who concluded that majority of firms at NSE use long term debt to finance their assets.

4.3.2 Long Term Debt Trend Line

Figure 4.2 shows the growth of long-term debt of the listed non-financial firms at the Nairobi securities Exchange.
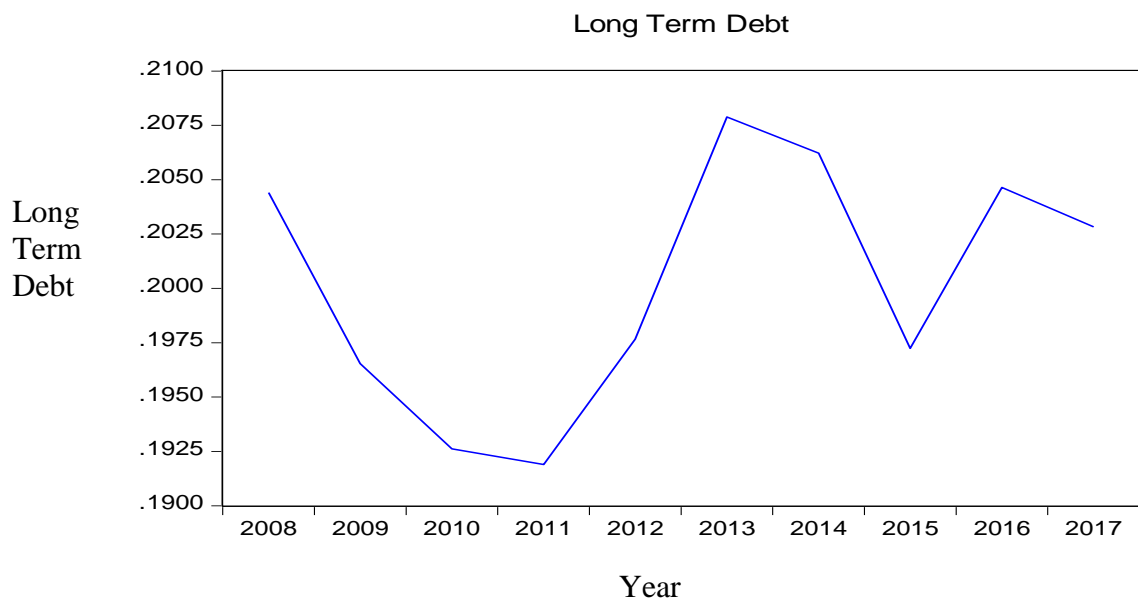
Figure 4.2: Long Term Debt Trend Line

Financing using long term debt dropped from 2008 to lowest in 2010. However, long term debt rose again from 2011 to highest in 2013. Long term debt is money that is owed to lenders for a period of more than one year from the date of current balance sheet. The study by Ebaid (2009) found that, there was no significant relationship between long term debt and return on assets. Long term debts are most preferable sources of debt financing among well-established corporate institution mostly by virtue of their asset base and collateral is a requirement many deposits taking financial institutions. Scarcity of long-term finance is one of the key impediments to greater investment and financial growth of the firm. Access to appropriate instruments of long-term financing is one of the critical financial sector policy challenges facing firms.

The long-term debt, preferred stock and common stock together would contribute as the total capital of the company. This is a useful ratio as it allows the investors to figure out the total risk of investing in a particular business, which can be easily determined by the long-term debt to capitalization ratio. It also shows how financially the firm is. Companies should rely on internal source of finance which is most reliable and cheapest source of finance. The results agree with Salawu and Agboola (2008) who examined the determinants of capital structure of non-financial firms in Nigeria using a panel of thirty-three large firms revealed that profitability, tangibility and firm size are positively related to total debt and long-term debt, and growth opportunities are negatively associated with total debt. According to Githire and Muturi (2015) long term debt have a positive and significant effect on financial performance of the firm.

4.3.3 Share Capital Trend Line

Figure 4.3 shows the growth of share capital of the listed non-financial firms at the Nairobi securities Exchange.
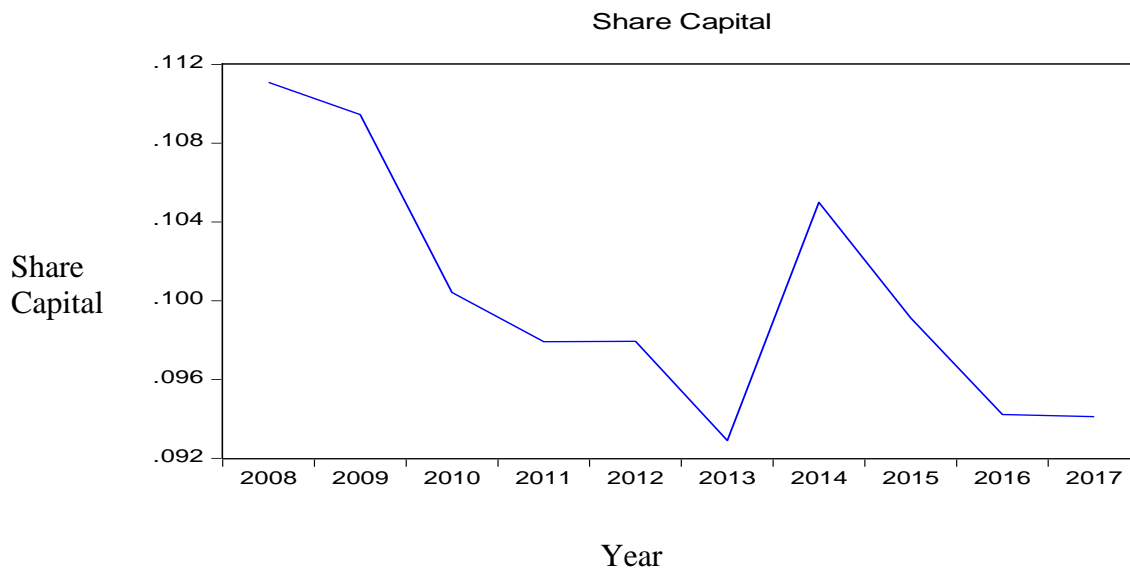
Figure 4.3: Share Capital Trend Line

Share capital was highest in 2008 and gradually declined to lowest in 2013. Share capital rose gradually in 2014 before fluctuating in subsequent years. Share capital is the total capital of a firm divided into shares. A joint stock company should have capital in order to finance its activities. Funds are raised by issuing shares in return for cash or other considerations. In a study on impact between capital structure and financial performance of Sugar companies listed at Karachi Stock Exchange Pakistan, Younus *et al.,* (2014) showed that there was weak positive correlation between share capital firm performances. According to Oma and Memba (2018) share capital has a negative but insignificant effect on profitability of the firm.

4.3.4 Retained Earnings Trend Line

Figure 4.4 shows trend line for the growth of retained earnings of the listed non-financial firms at the Nairobi securities Exchange.
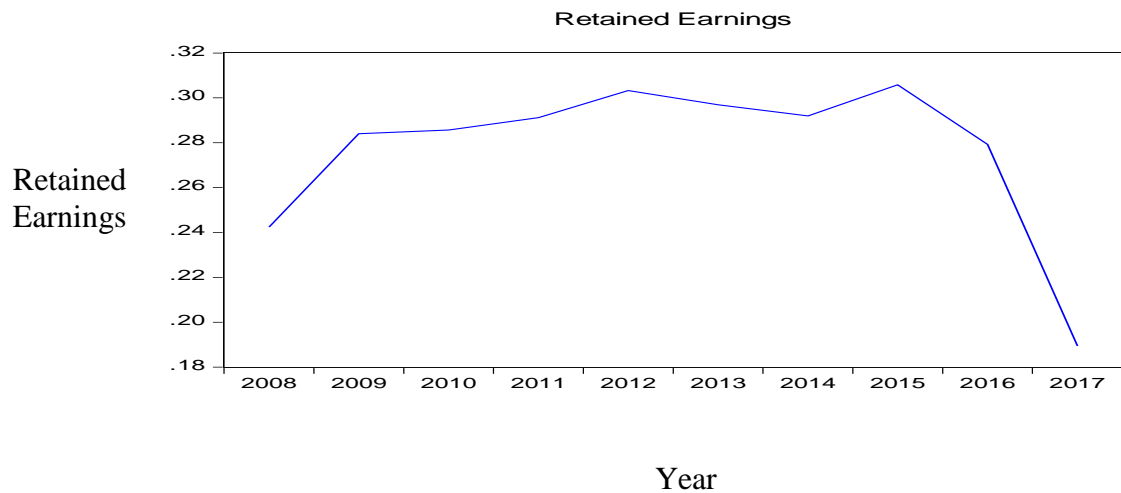
Figure 4.4: Retained Earnings Trend Line

Retained earnings were lowest in 2017 and highest in 2015. Retained earnings or retained surplus refer to the portion of a firm's profits that is kept for reinvestment into the business or for debt payments, instead of being paid out as dividends to shareholders. Notably, retained earnings are a sacrifice made by equity shareholders. According to Orwel (2010) they are internal sources of finance available to the firm and have got many advantages. As an internal source, retained earnings are readily available for use. Also, retentions are cheaper than external equity, do not cause ownership dilution, and have got a positive connotation as the stakeholders perceive that, the firm has potential investment opportunities (Dinayak, 2014). However, they have demerits in that, retained earnings is a limited source of financing, and the fact that they have a high opportunity cost since they are a foregone dividend by equity holders.

4.3.5 Firm Size Trend Line

Figure 4.5 shows trend line for the growth of firm size (total assets) of the listed non-financial firms at the Nairobi securities Exchange.

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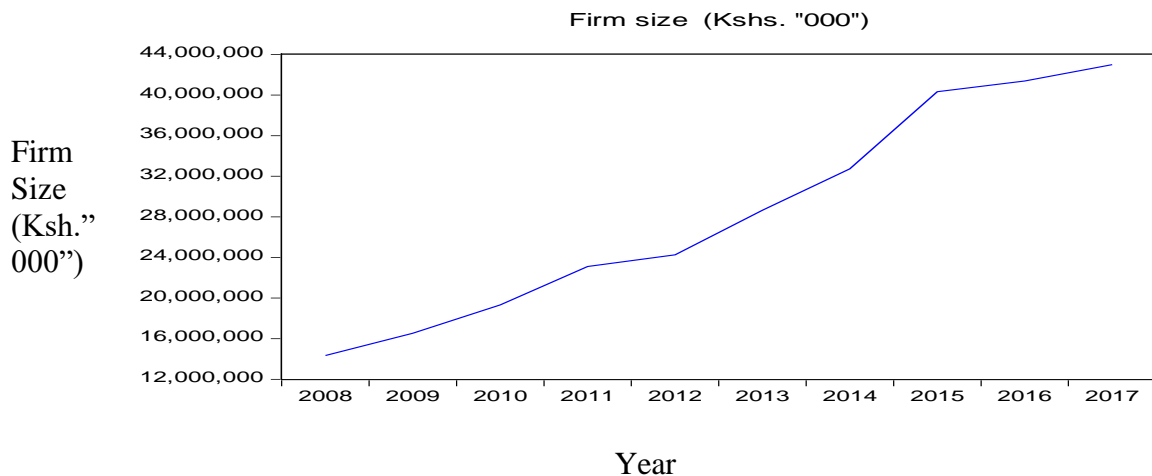
Figure 4.5: Firm Size Trend Line

Firm size has been rising steadily over the years. Firm size is an important characteristic to gain performance. Large firms have more resources and capacity to undertake more product lines and higher production capacity together with organizational resources. This enables the firm to improve their financial performance since they can mitigate risks (Alvarez & Barney, 2001). Although smaller firms may be more flexible, it can be argued that larger firms have better prerequisites for behavior compared to their smaller counterparts. This is because larger firms may be better equipped to engage in inter-firm networking. In a study by Abbasi and Malik (2015) on firm's size moderating financial performance of growing firms in Pakistan firm size has a moderating inspiration between firm growth and financial performance of the firm. Likewise, Bongoye, Banafa and Kingi (2016) who conducted a study on the effect of firm specific factors on financial performance of non-financial firms listed at Nairobi Securities Exchange revealed that, firm size, has a positive relationship with financial performance of non-financial firms listed at NSE as measured by ROA.

4.3.6 Financial Growth of Listed Non-Financial Firms

Financial growth of the listed non-financial firms was measured using growth in earning per share and growth in market capitalization. The trend line in figure 4.6a shows

financial growth of non-financial firms listed at the NSE measured using earning per share.
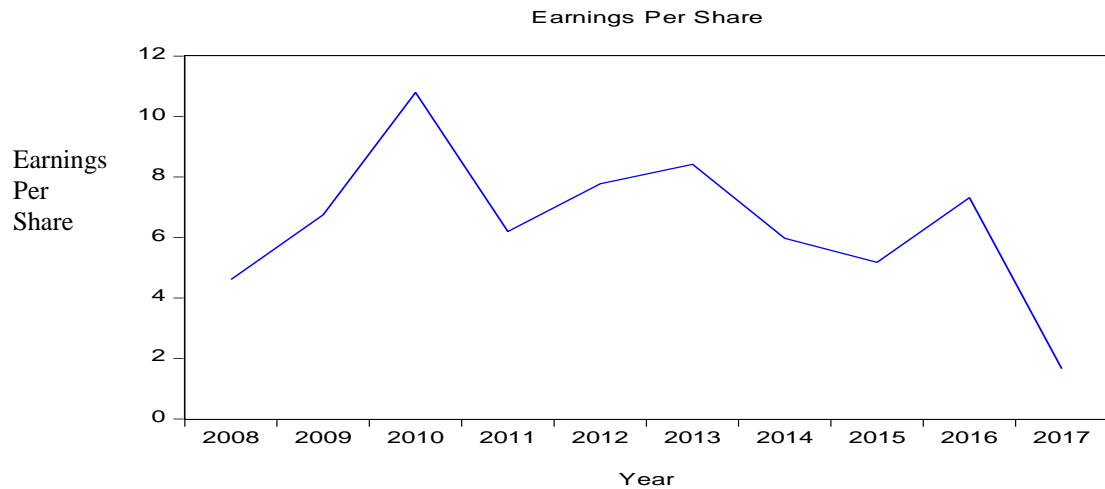
Figure 4.6a: Growth in Earnings Per Share

The trend line shows that earnings per share (EPS) rose steadily from 2008 to reach highest in 2010. However, earning per share dropped further in 2011 to 2012 before rising again in 2013. Earnings per share further dropped drastically to reach lowest in 2017. Earnings per share is calculated as a company's profit divided by the outstanding shares of its common stock. Earnings per share is considered as an important accounting indicator of risk, entity performance and corporate success. It is used to forecast potential growth in future share prices, because changes in EPS are often reflected in share price behavior. Smart and Graham (2012) concur by suggesting that an entity's growth rate is determined by performance indicators such as EPS which is disclosed in the financial statements of firms according to the specifications of the specific accounting standards applied in the respective country. Furthermore, authors have argued that EPS has become a useful investment decision tool for investors, because it indicates future prospects and growth (Mlonzi, Kruger & Ntoesane, 2011). According to Robbetze, de Villiers and Harmse (2017) EPS correlated best with the changing

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behavior of share prices. Further, figure 4.6b shows financial growth of non-financial firms listed at the NSE measured using market capitalization.

Figure 4.6b: Growth in Market Capitalization

Growth in market capitalization as another measure of financial growth was lowest in 2009 and sharply rose to highest in 2015. Market capitalization is important in projecting the size of the firm because it shows the firm's value. Market capitalization is a measure of the value of firm and computed by multiplying the number of outstanding shares held by the shareholders with the current market price per share at a given time. The calculation of the market capitalization is a critical part of any stock valuation formula as it represents the total market value of all the firm's outstanding shares. This represents the value which the market has placed on the value of the firm's equity. As the outstanding stocks are bought and sold in public markets, capitalization could be used as a proxy for the public opinion of a firm's net worth and a determining factor in some form of stock valuation. Market capitalization represents the public consensus on the value of a firm's equity. According to Koila, Kiru and Koima (2018) using random effects model also revealed that market capitalization cannot be used to predict the outcome of return on equity within the listed firms at the Nairobi Securities Exchange.

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4.4 Correlation Analysis

In order to get an overview of the association between the dependent and independent variables, the researcher conducted pairwise correlation analysis. The analysis aims at testing for existence of multicollinearity and it is ideal for eliminating variables which are highly correlated (Dănăcică, 2017). The study conducted correlation analysis between financial structure and financial growth measured using growth in earnings per share and growth in market capitalization. Table 4.2a shows the correlation matrix of short-term debt, long term debt, retained earnings and share capital and growth in earnings per share.

Table 4.2a: Correlation between Financial Structure and Growth in Earnings Per Share

	Growth in EPS	Short Term Debt	Long Term Debt	Retained Earnings	Share Capital
Growth in EPS	1.000				
Short Term Debt	0.7108	1.000			
	0.0001				
Long Term Debt	0.6399	0.4185	1.000		
	0.000	0.0245			
Retained Earnings	0.8288	0.4929	0.2259	1.000	
	0.000	0.000	0.000		
Share Capital	0.7495	0.3933	0.1104	0.2072	1.000
	0.0045	0.000	0.0362	0.0001	

The correlation results found that short term debt and growth in earnings per share have high positive and significant association ($\beta=0.7108$, $r=0.001$). The studies by indicates Rahi (2017), Senthilnathan (2019) and Nielsen and Raswant (2018) report that the correlation between variables is considered to be high if the correlation coefficient is above 0.5. Short-term assets and liabilities are generally defined to be those items that will be used, liquidated, mature or paid off within one year. Short-term assets should be financed with short-term liabilities and long-term assets should be financed with long-term liabilities (Guin, 2011). Short-term term is primarily concerned with the analysis of

decisions that affect current assets and current liabilities. The results agree with Baum, Schafer and Talavera (2006) who conducted a study on the effects of short-term liabilities on profitability, a comparison of German and US firms and found that, the firms who rely more on short-term liabilities are likely to be more profitable. According to Bokhari and Khan (2013) short Term Debt, has a negatively affected Return on Assets. Likewise, Opungu (2016) while investigating the effect of capital structure on profitability of non-financial firms listed at Nairobi Stock Exchange indicated that short term debt equity ratio negatively and significantly affects return on assets, return on equity and return on capital employed.

The results found that long term debt has high positive and significant association with growth in earnings per share (β=0.6399, r=0.000). Long term debt involves strict contractual covenants between the firm and issuers of debt which is usually associated with high agency and financial distress costs. A high long-term debt levels in the firm are not conducive for the effective operations of the firm since they increase the risk of bankruptcy. Long term debts are most preferable sources of debt financing among well-established corporate institution, mostly by virtue of their asset base and collateral is a requirement by many deposits taking financial institutions. Long term debt involves strict contractual covenants between the firm and issuers of debt which is usually associated with high agency and financial distress costs. A high long-term debt level is not conducive for the effective operations of the firm since it increases the risk of bankruptcy. According to Opungu (2016) long term debt equity ratio has a negative effect on return on assets (ROA) and return on equity (ROE) but has an insignificant effect on return on capital employed (ROCE). The results do not agree with Aziz and Abbas (2019) who investigated the effect of debt financing on firm performance: a study on non-financial sector of Pakistan and found that the impact of long-term debt on firm performance is also significant and negative. That increase in debt cause the decrease in performance of the companies because debt is the expensive source of finance.

The results found that, retained earnings have high positive and significant correlation with growth in earnings per share (β=0.8288, r=0.000). Retained earnings constitute a

major source of finance for firms. Retained earnings are the most important source of financing growth of the firm. The level of internal funds conveys information about growth prospects of the firms. Growing firms pay lower dividends, reinvest more of their earnings, and provide a greater percentage of their total returns in the form of capital gains. The results agree with Thirumalaisamy (2013) that firms with low investment opportunities for growth and expansion prefer to distribute much of their earnings as dividend. Thus, the level of retained earnings is very much influenced by the growth rate of the firms.

It was also established that share capital has moderately high positive correlation with growth in earnings per share (β=0.7495, r=0.0045). Share capital is an indication of value contributed to a firm by its shareholders at some time in the past. A joint stock company should have capital in order to finance its activities. Funds raised by issuing shares in return for cash or other considerations. A firm usually raises its capital in the form of shares. The results agree with Ebaid (2009) who conducted a study on the impact of capital-structure choice on firm performance: empirical evidence from Egypt and found out that, share capital and long-term debt has a significant relationship with return on assets but insignificant relationship with return on equity. It was concluded that, capital structure changes do affect the performance of the firm. However, the results contrast with Oma and Memba (2018) that share capital has a negative and insignificant effect on profitability of the firm. Likewise, the results contradict Younus *et al.* (2014) who investigated the impact between capital structure and financial performance of Sugar companies listed at Karachi Stock Exchange Pakistan and showed that there was weak positive correlation between share capital firm performances. Table 4.2b shows the correlation matrix of short-term debt, long term debt, retained earnings and share capital and growth in market capitalization.

Table 4.2b: Correlation between Financial Structure and Growth in Market Capitalization

	Growth in Market Capitalization	Short Term Debt	Long Term Debt	Retained Earnings	Share Capital
Growth in Market Capitalization	1.000				
Short Term Debt	0.7212	1.000			
	0.000				
Long Term Debt	0.8325	0.1185	1.000		
	0.000	0.0245			
Retained Earnings	0.623	0.2229	0.2259	1.000	
	0.0195	0.000	0.000		
Share Capital	0.755	0.3933	0.1104	0.2072	1.000
	0.0032	0.000	0.0362	0.0001	

The correlation results found that, short term debt has high positive correlation with growth in market capitalization (β=0.7212, r=0.000). The studies undertaken by Zhao, Deng, Chen, Wang, Song, Zhang and Zeng (2019); Kithinji and Simiyu (2021); Kijkasiwat and Phuensane (2020); and Purwanto, Bernarto, Asbari, Wijayanti and Hyun (2020) establishes that the correlation between variables is deemed to be high if the correlation coefficient is above 0.5. Short-term debt could be used as permanent source of financing if the debt is continually refinanced as it matures. One reason to use short-term debt as a permanent source of financing is to take advantage of an upward sloping yield curve that help in reducing the firm's interest expense. The results agree with Fosberg (2013) that the amount of short-term debt financing is shown to be inversely related to the amount of the firm's non-debt tax shields and growth opportunities.

There was a high positive correlation between long term debt and growth in market capitalization (β=0.8325, r=0.000). Scarcity of long-term finance is a key impediment to greater investment and growth. Access to appropriate instruments of long-term financing is one of the critical financial sector policy challenges facing firms. The long-term debt, preferred stock and common stock together would contribute as the total capital of the

firm. This is a useful ratio as it allows the investors to figure out the total risk of investing in a particular business, which can be easily determined by the long-term debt to capitalization ratio. It also shows how financially the firm is. The results contrast with Lixin and Lin (2008) in a study on the relationship between debt financing and market value of listed real estate firms in China that, the long-term borrowing and commercial credit financing have positive correlation with the firm's market value.

There was a high positive correlation between retained earnings and growth in market capitalization (β=0.623, r=0.0195). The results of Lixin and Lin (2008) found that retained earnings have moderately high positive and significant association with growth in market capitalization. The amount of retained earnings is an important issue to investors and other stakeholders because it is another way to evaluate the effectiveness of management to bring improvement in market value of their firms. Retained earnings is important because it has a significant effect on firms' stock prices. In making their decisions, investors should look for firms with high return on retained earnings that is reinvested regularly. The results are in line with Yemi and Seriki (2018) that there is a positive and significant relationship between retained earnings and value of firms.

The study showed there was a high positive correlation between share capital and growth in market capitalization (β=0.755, r=0.0032). It was also established by Akbarpour and Aghabeygzadeh (2011) that, share capital and growth in market capitalization have moderately high positive correlation. Share capital is an indication of value contributed to a firm by its shareholders at some time in the past. A joint stock company should have capital in order to finance its activities. A firm usually raises its capital in the form of shares. According to Ebaid (2009), share capital has significant relationship with return on assets but not with return on equity.

4.5 Diagnostic Tests

Before conducting regression modeling, some important assumptions must be fulfilled. If these assumptions are not met by the data, statistical results may yield inappropriate

results. Use of data which does not conform to these assumptions may lead to type I or type II errors or may lead to over or underestimation of statistical significance (Osborne & Waters, 2002). The assumption tests include unit root test, Hausman test, normality test, multicollinearity, serial autocorrelation, and heteroscedasticity. These assumption tests are presented in the subsequent sections.

4.5.1 Fisher-Type Test of Unit Root

Since panel data have both cross-sections and time series dimensions, there is need to test for stationarity of the time series because the estimation of the times series assumes that the variables are stationary. Estimating models without considering the non-stationary nature of the data would lead to unauthentic results (Gujarati, 2009). The study employed Fisher-type test in testing the stationarity of the data. Stationarity results are presented in Table 4.3. The hypotheses to be tested were: -

H_o: All panels contain unit roots

H_a: At least one panel is stationary

Table 4.3: Fisher-type Test of Unit Root

		Inverse chi-squared (70)	Inverse normal	Inverse logit t (179)	Modified inv. chi-squared
Variable		P	Z	L*	Pm
Short Term Debt	test statistic	99.4495	-1.8098	-1.8875	2.2875
	p-value	0.0178	0.0352	0.0303	0.0111
d. Long Term Debt	test statistic	262.0531	-9.6049	-11.3366	15.8378
	p-value	0.000	0.000	0.000	0.000
d. Retained Earnings	test statistic	357.6492	-11.9497	-15.5291	23.8041
	p-value	0.000	0.000	0.000	0.000
Share Capital	test statistic	198.3579	-3.9093	-6.8028	10.5298
	p-value	0.000	0.000	0.000	0.000
Firm Size	test statistic	165.2019	-2.5214	-4.5122	7.7668
	p-value	0.000	0.006	0.000	0.000
EPS	test statistic	221.4198	-8.991	-9.5401	12.4516
	p-value	0.000	0.000	0.000	0.000
Market Capitalization	test statistic	324.5335	-12.1493	-14.545	21.0445
	p-value	0.000	0.000	0.000	0.000

The stationarity results test for unit root revealed that, at level short-term debt, share capital, firm size, EPS and market capitalization were stationary since p-value<0.05 at P, Z, L* and Pm. Long term debt and retained earnings were non-stationary at level since p-value>0.05. This phenomenon called for the need to conduct differencing to make these variables stationary. When first level differencing was conducted, long term debt and retained earnings became stationary. This means that the results obtained are now not spurious (Gujarati, 2009) and so panel regression models could be generated.

4.5.2 Hausman Test

When performing panel data analysis, one must determine whether to run a random effects model or a fixed effects model (Baltagi, 2005). In order to decide on the most suitable model to use, both random and fixed effects estimate coefficients. The study

used Hausman's specification test (1978) to choose between fixed effects and random effects models. Table 4.4 shows the results of Hausman test.

H_0: Random effect is appropriate

H_a: Fixed effect is appropriate

Table 4.4: Hausman Random Test for Random and Fixed Effects

Growth in Earnings Per Share (EPS)				
Column1	**(b)**	**(B)**	**(b-B)**	**sqrt(diag(V_b-V_B))**
	fixed	random	Difference	S.E.
Short Term Debt	6.154319	2.368167	3.786152	4.642177
d. Long Term Debt	-9.42823	-15.33	5.901754	5.092194
d. Retained Earnings	-4.61644	-2.01704	-2.599398	1.847248
Share Capital	-33.2721	-17.7489	-15.52319	22.66803
chi2(4)	5.60			
Prob>chi2	0.2312			
Growth in Market Capitalization				
Short Term Debt	-0.01427	-0.1109	0.0966291	0.391638
d. Long Term Debt	-0.34685	0.196526	-0.543377	0.420859
d. Retained Earnings	0.038426	0.121786	-0.08336	0.15099
Share Capital	0.595694	-0.46094	1.056638	1.915763
chi2(4	2.75			
Prob>chi2	0.6006			

The null hypothesis of Hausman test is that, the random effects model is preferred to the fixed effects model. To predict the panel model using growth in Earnings Per Share model, Hausman test revealed a chi-square of 5.60 with a p-value of 0.2312 indicating that at 5 percent level of significance, the chi-square value obtained is statistically insignificant. Thus, the researcher does not reject the null hypothesis that random effects model is preferred to fixed effect model for growth in earnings per share. The Hausman results conclude that random effect is appropriate model when financial growth is measured using growth in earning per share. When financial growth was measured using growth in market capitalization, Hausman test revealed a chi-square of 2.75 with a p-value of 0.6006 indicating that at 5 percent level of significance, the chi-square value obtained is statistically insignificant. Since 0.6006>0.05, the study does not reject the null hypothesis that random effect is appropriate. The Hausman results conclude that

random effect is appropriate model when financial growth is measured using growth in market capitalization.

4.5.3 Normality Test

The normality assumption (ut ~ N (0, σ2) was required to conduct single or joint hypothesis tests about the model parameters (Brooks, 2008). Table 4.5 shows the normality results using the Skewness and Kurtosis test. If the p-value is greater than 0.05, the null of normality at the 5% level is rejected. If the data is not normally distributed, a non-parametric test was the most appropriate. The study tested the null hypothesis that the disturbances are not normally distributed.

H_0: The data is not normally distributed

H_1: The data is normally distributed

Table 4.5: Normality Test

Variable	Observation	Skewness	Kurtosis	p-value
Earnings Per Share	360	1.0670	0.7324	.166
Market Capitalization	360	3.3921	0.9205	.453
Short Term Debt	360	2.0211	0.6413	.825
Long Term Debt	360	4.8153	0.5104	.967
Retained Earnings	360	3.0634	0.5679	.084
Share Capital	360	1.2035	0.8241	.487
Firm Size	360	5.0481	0.7204	.063

Table 4.5 shows the normality results using the Skewness and Kurtosis test. The P-values were higher than the critical 0.05. The null hypothesis (H0) was rejected and alternative hypothesis was embraced. Thus, the data is normally distributed.

4.5.4 Multicollinearity Test

According to William (2013), multicollinearity refers to the presence of correlations between the predictor variables. In severe cases of perfect correlations between predictor

variables, multicollinearity can imply that a unique least squares solution to a regression analysis cannot be computed (Alin, 2010). Multicollinearity inflates the standard errors and confidence intervals leading to unstable estimates of the coefficients for individual predictors (Daoud, 2017). Multicollinearity was assessed in this study using the variance inflation factors (VIF). According to Alin (2010), VIF values in excess of 10 is an indication of the presence of Multicollinearity. Collinearity statistics (Table 4.6) indicated a Variance Inflation Factor (VIF) <10 for all the variables thus an indication that the variables were not highly correlated, hence no existence of Multicollinearity. This is an indication of the suitability of the variables for further modeling using panel regression analysis.

Table 4.6: Multicollinearity Test

Variable	Growth in Earnings Per Share		Growth in Market Capitalization	
	1/VIF	VIF	1/VIF	VIF
d. Retained Earnings	1.16	0.865498	2.11	0.474861
d. Long Term Debt	1.14	0.874819	1.52	0.658248
Short Term Debt	1.03	0.967385	1.25	0.800058
Share Capital	1.02	0.977179	1.54	0.650159
Mean VIF	1.09		1.6	

The results in Table 4.6 indicated absence of statistical significance multicollinearity since the VIF of all the variables were less than 10. When multicollinearity was tested with growth in earning per share as a measure of financial growth, the VIF values for long term debt, retained earnings, share capital and short-term debt were less than 10. Likewise, when multicollinearity was tested with growth in market capitalization as a measure of financial growth, the VIF values for long term debt, retained earnings, share capital and short-term debt were less than 10 indicating absence of multicollinearity. Thus, the variables are not linearly correlated and thus panel regression modeling could be conducted to determine the effect of long-term debt, retained earnings, share capital and short-term debt on firm growth of the listed non-financial firms identified in the study.

4.5.5 Autocorrelation Test

Serial correlation test was conducted to check for correlation of error terms across time periods. This study used the Wooldridge test for serial correlation to test for the presence of autocorrelation in the linear panel data. Serial autocorrelation is a common problem experienced in panel data analysis and must be accounted for, in order to achieve the correct model specification. The following hypotheses were tested. The results are presented in Table 4.7.

H_0: Residuals of this regression model does not have serial correlation

H_1: Residuals of this regression model have serial correlation

Table 4.7: Serial Correlation Tests

Growth in EPS
Wooldridge test for autocorrelation in panel data
H_0: no first-order autocorrelation
F (1, 35) = 0.419
Prob > F = 0.5215

Growth in Market Capitalization
Wooldridge test for autocorrelation in panel data
H_0: no first-order autocorrelation
F (1, 35) = 0.000
Prob > F = 0.9877

The null hypothesis of this test was that, there is no first order serial/autocorrelation existed in the data. When Serial Correlation was conducted with growth in EPS as measure of financial growth, the test statistic reported F-test of 0.419 and a p-value of 0.5215>0.05. For growth in market capitalization as measure of financial growth, the F-test was 0.000 with a p-value of 0.9877>0.05. The null hypothesis that no first order serial /auto correlation exists is not rejected in both cases. The Serial Correlation results conclude that, serial correlation does not exist. If serial correlation is detected in the

panel data, then the Feasible Generalized Least Squares (FGLS) estimation is adopted. Standard panel regression model could thus be run to determine the effect of short-term debt, long-term debt, retained earnings and share capital on financial growth of the non-financial firms listed at the NSE.

4.5.6 Heteroscedasticity

Breusch-Pagan test was used to test for heteroskedasticity. The null hypothesis tested is that, error terms have a constant variance (that is should be Homoskedastic). The results in Table 4.8 indicate that, the error terms are heteroskedastic given that, the p-value (growth in EPS = 0.7003>0.05 and growth in market capitalization = 0.6429>0.05) confirmed that the null hypothesis of constant variance was accepted therefore, justifying the absence of heteroskedasticity in the data as indicated by Poi and Wiggins (2001). Further panel regression analysis could thus be conducted to determine the effect of short-term debt, long-term debt, retained earnings and share capital on financial growth of the non-financial firms listed at the NSE.

Table 4.8: Heteroskedasticity Test Results

Breusch-Pagan / Cook-Weisberg test for Heteroscedasticity			
Ho: Constant variance			
Variable: fitted values		Growth in EPS	Growth in Market Capitalization
chi2(1)	=	0.7003	0.5503
Prob > chi2	=	0.6429	0.7019

4.6 Panel Regression Analysis

Regression analysis helps one to understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed (Baltagi, 2005). On the same note, Freund, Wilson and Sa (2006) contends that regression analysis helps in generating an equation that describes the statistical relationship between one or more predictor variables and the response variable.

4.6.1 Effect of Short-Term Debt on Financial Growth

Random effect model was estimated between short term debt and measures of financial growth (growth in earnings per share and growth in market capitalization). Panel model was conducted to determine whether there was a significant relationship between short term debt and growth in earning per share. Table 4.9a presents the panel regression model on short term debt with growth in earning per share as measure of financial growth.

Table 4.9a: Effect of Short-Term Debt on Growth in Earning Per Share (EPS)

Growth in EPS	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Short Term Debt	0.038201	0.009365	4.08	0.000	0.019847	0.056555
β_0	2.731963	1.198171	2.28	0.023	0.383591	5.080334
R-squared:	0.2599					
Wald chi2(1)	16.64					
Prob	0.0000					

The fitted model from the result is

Growth in EPS = 2.731963 + 0.038201STD

Where: EPS = Earnings Per Share

STD = Short Term Debt

As presented in the Table 4.9a, the coefficient of determination R-square is 0.2599. The model indicates that short term debt explains 25.99% of variation in the growth in earnings per share. This means that 25.99% of variation in the growth in EPS is influenced by short term debt. The findings further confirm that short term debt has a positive and significant effect on growth in earnings per share (β=0.038201, p=0.000). The effect of short-term debt on growth in earnings per share is statistically significant since the calculated p-value of 0.000<0.05. This means that a unitary increase in short term debt leads to an increase in the growth in earnings per share by 0.038201 units holding other elements of financial structure constant. The results agree with García-

Teruel, Martínez-Solano (2008) who analyzed the determinants of cash holding in Spanish SMEs. It was found that firms with a higher amount of short-term debt will hold higher levels of cash, because it might lower the risks of non-renewal of the short-term debt and the short-term debt is positively related to firm's profitability measured using earnings per share. Short-term assets and liabilities are generally defined to be those items that will be used, liquidated, mature or paid off within one year. A firm's current assets (including cash, inventories, accounts receivable, etc.) are generally considered short-term assets while plant and equipment are generally considered long-term assets. The results, however, do not agree with Tifow and Sayilir (2015) that short term debt has a negative but significant relationship with earnings per share. The results are also inconsistent with Salim and Yadav (2012) who investigated the relationship between capital structure and firm performance and established that short term debt has a negative relationship with earnings per share. Table 4.9b presents the regression model on short term debt versus growth in market capitalization.

Table 4.9b: Effect of Short-Term Debt on Growth in Market Capitalization

Growth in Market Capitalization	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Short Term Debt	0.042264	0.009848	4.29	0.000	0.022962	0.061566
β_0	6.508236	1.260041	5.17	0.000	4.038602	8.977871
R-squared:	0.2560					
Wald chi2(1)	18.42					
Prob	0.0000					

The fitted model from the result is

Growth in Market Capitalization = 6.508236 + 0.042264STD

Where: STD = Short Term Debt

As presented in Table 4.9b, the coefficient of determination R-square is 0.2560. The model indicates that, short term debt explains 25.6% of variations in the growth in market capitalization. This means that 25.6% of variation in the growth in market capitalization is influenced by short term debt. The findings further confirm that short

term debt has a positive and significant effect on growth in market capitalization (β=0.042264, p=0.000). The effect of short-term debt on growth in market capitalization is statistically significant since the calculated p-value of 0.000<0.05. This means that a unitary increase in short term debt leads to an increase in the growth in market capitalization by 0.042264 units holding other elements of financial structure constant. Short-term debt is less expensive than long-term debt but is riskier because they need to be renewed periodically. A firm may find itself in a crisis if its unable to renew its debt because of some negative news, real or otherwise. Most failures of large corporations are precipitated by the unavailability of short-term funding. The results are consistent with García-Terul and Martinez-Solano (2007) that short-term debt is positively correlated with firm's growth opportunities. According to Fosberg (2013) a significant decrease in asset sales contributes to the need for more short-term debt financing.

4.6.2 Effect of Long-Term Debt on Financial Growth

Panel regression analysis was conducted on growth in earnings per share and growth in market capitalization. Random model was estimated to determine whether there was a significant relationship between long term debt and variation in the growth in earnings per share. Table 4.10a presents the panel regression model on long term debt versus growth in earnings per share.

Table 4.10a: Effect of Long-Term Debt on Growth in Earning Per Share (EPS)

Growth in EPS	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
d. Long Term Debt	0.500407	0.110795	4.52	0.000	0.283253	0.717561
β_0	-1.08621	0.926236	-1.17	0.241	-2.9016	0.729182
R-squared:	0.216					
Wald chi2(1)	20.40					
Prob > chi2	0.0000					

The fitted model from the result is

Growth in EPS = -1.08621 + 0.500407LTD

Where: EPS = Earnings Per Share

       LTD = Long Term Debt

As presented in Table 4.10a, the coefficient of determination R-square is 0.216. The model indicates that, long term debt explains 21.6% of variation in growth in earnings per share. This means 21.6% of variation in the growth in earnings per share is influenced by long term debt. The findings further confirm that long term debt has positive and significant effect on growth in earnings per share ($\beta=0.500407$, p=0.000). The effect of short-term debt on growth in market capitalization is statistically significant since the calculated p-value of 0.000<0.05. This means that, a unitary increase in long term debt leads to an increase in earnings per share by 0.500407 units holding other elements of financial structure constant. Long term debts are most preferable sources of debt financing among well-established corporate institution mostly by virtue of their asset base and collateral is a requirement for many deposits taking financial institutions. The results do not agree with Salim and Yadav (2012), that long term debt has a negative relationship with earnings per share. Further, Tifow and Sayilir (2015) noted that long-term debt has significant negative relationship earnings per share. Fatoki and Olweny (2017) describe earnings per share as one of the most important financial statistics that is noteworthy for investors and financial analysts. It shows the earnings that a firm has achieved in a fiscal period for an ordinary share and often is used to evaluate the profitability and risk associated with earning and judgments about stock prices. Table 4.10b presents the regression model on long term debt versus growth in market capitalization.

Table 4.10b: Effect of Long-Term Debt on Growth in Market Capitalization

Growth in Market Capitalization	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
d. Long Term Debt	0.498664	0.113902	4.38	0.000	0.27542	0.721909
β_0	2.583273	1.284767	2.01	0.044	0.065175	5.101371
R-squared:	0.2516					
Wald chi2(1)	19.17					
Prob > chi2	0.000					

The fitted model from the result is

Growth in Market Capitalization = 2.583273 + 0.498664LTD

Where: LTD = Long Term Debt

As presented in the table 4.10b, the coefficient of determination R-square is 0.2516. The model indicates that short term debt explains 25.16% of variations in the growth in market capitalization. This means 25.16% of variation in the growth in market capitalization is influenced by long term debt. Long term debt has a positive and significant effect on growth in market capitalization (β=0.498664, p<0.000). The effect of short-term debt on growth in market capitalization is statistically significant since the calculated p-value of 0.000<0.05. This means that, a unitary increase in long term debt leads to an increase in the growth in market capitalization by 0.498664 units holding other elements of financial structure constant. Scarcity of long-term finance is a key impediment to greater investment and financial growth of the firms. Access to appropriate instruments of long-term financing is one of the critical financial sector policy challenges facing firms. The results agree with Lixin and Lin (2008) in a study on the relationship between debt financing and market value of company of listed real estate company of China that that long-term borrowing and commercial credit financing have positive correlation with the company's market value.

4.6.3 Effect of Retained Earnings on Financial Growth

Random effect model was estimated between retained earnings and measures of financial growth (growth in earnings per share and growth in market capitalization). Panel model was conducted to determine whether there was a significant relationship between retained earnings and growth in earnings per share. Table 4.11a presents the panel regression model on retained earnings with growth in earning per share as measure of financial growth.

Table 4.11a: Effect of Retained Earnings on Growth in Earning Per Share (EPS)

Growth in EPS	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
d. Retained Earnings	1.421105	0.373815	3.8	0.000	0.688441	2.15377
β_0	1.27142	0.925728	1.37	0.17	3.08582	0.542971
R-squared:	0.2127					
Wald chi2(1)	14.45					
Prob > chi2	0.0001					

The fitted model from the result is

Growth in EPS = 1.27142 + 1.421105RE

Where: EPS = Earnings Per Share

RE = Retained Earnings

As presented in the Table 4.11a, the coefficient of determination R-square is 0.2127. The model indicates that, retained earnings explain 21.27% of variation in the growth in earnings per share. This means 21.27% of variations in the growth in earnings per share is influenced by retained earnings. Panel results revealed that retained earnings has positive and significant effect on growth in earnings per share (β=1.421105, p=0.0001). The effect of short-term debt on growth in market capitalization is statistically significant since the calculated p-value of 0.0001<0.05. This means that, a unitary increase in retained earnings leads to an increase in earnings per share by 1.421105 units holding other elements of financial structure constant. External decision makers often

consider earnings per share to be the best single measure for summarizing a corporation's performance. Earnings per share is useful in evaluating the return on investment and the risk of a firm. Earnings per share can be used to predict future cash flows per share, to compare intercompany performance using the price/earnings ratio, and to indicate the potential impact of the issuance of common stock options, convertible debt, or convertible preferred stock on future earnings per share. The results are in line with Yemi and Seriki (2018) in a study on retained earnings and firms' market value. The results indicated a positive and significant relationship between retained earnings and growth in earnings per share. Table 4.11b presents the regression model on retained earnings versus growth in market capitalization.

Table 4.11b: Effect of Retained Earnings on Growth in Market Capitalization

Growth in Market Capitalization	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Retained Earnings	0.9307	0.413617	2.25	0.024	0.120025	1.741375
β_0	2.904959	1.145811	2.54	0.011	0.659212	5.150707
R-squared:	0.1958					
Wald chi2(1)	5.06					
Prob > chi2	0.0244					

The fitted model from the result is

Growth in Market Capitalization = 2.904959 + 0.9307RE

Where: RE = Retained Earnings

As presented in the Table 4.11b, the coefficient of determination R-square is 0.1958. The model indicates that, retained earnings explain 19.58% of variations in the growth in market capitalization. This means 19.58% of variation in the growth in market capitalization is influenced by retained earnings. Retained earnings has positive and significant effect on growth in market as indicated by panel model results ($\beta=0.9307$, $p=0.0244$). The effect of short-term debt on growth in market capitalization is statistically significant since the calculated p-value of 0.0244<0.05. This means that, a unitary increase in retained earnings leads to an increase in the growth in market

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capitalization by 0.9307 units holding other factors constant. Retained earnings are a sacrifice made by equity shareholders. As an internal source, retained earnings are readily available for use. Also, retentions are cheaper than external equity, do not cause ownership dilution, and have got a positive connotation as the stakeholders perceive that the firm has potential investment opportunities. However, they have demerits in that, retained earnings is a limited source of financing, and the fact that they have a high opportunity cost since they are a foregone dividend by equity holders. The results are in line with Ball, Gerakos, Linnainmaa and Nikolaev (2019) that retained earnings to market and, by extension; book-to-market predicts returns because it is a good proxy for earnings yield.

4.6.4 Effect of Share Capital on Financial Growth

Panel regression analysis was conducted on share capital and financial growth measured using growth in earnings per share and growth in market capitalization. Random model was estimated to determine whether there was a significant relationship between share capital and growth in earnings per share. Table 4.12a presents the panel regression model on share capital and growth in earnings per share.

Table 4.12a: Effect of Share Capital on Growth in Earning Per Share

Growth in EPS	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Share Capital	0.026871	0.009395	2.86	0.004	0.008456	0.045285
β_0	1.547499	1.169374	1.32	0.186	-0.74443	3.83943
R-squared:	0.2273					
Wald chi2(1)	8.18					
Prob > chi2	0.0042					

The fitted model from the result is

Growth in EPS = 1.547499 + 0.026871LTD

Where: EPS = Earnings Per Share

SC = Share Capital

As presented in Table 4.12a, the coefficient of determination R-square is 0.2273. The model indicates that, share capital explains 22.73% of variation in the growth in earnings per share. This means 22.73% of variation in the growth in earnings per share is influenced by share capital. Share capital has positive and significant effect on growth in earnings per share ($\beta=0.026871$, $p=0.004$). The effect of short-term debt on growth in market capitalization is statistically significant since the calculated p-value of $0.000<0.05$. This means that, a unitary increase in share capital leads to an increase in the growth in earnings per share by 0.026871 units holding other factors constant. An entity that trades equity instruments on public markets is required to disclose earnings per share as part of its financial statements. Earnings per share is a calculation that allocates a firm's profits to each of its ordinary shares. It serves as an indication of profitability by measuring the entity's performance in relation to share capital that is employed to generate such returns. As an internal source, retained earnings are readily available for use. Also, retentions are cheaper than external equity, do not cause ownership dilution, and have got a positive connotation as the stakeholders perceive that, the firm has potential investment opportunities. Retained earnings are the most important sources of financing growth of a firm. The level of internal funds conveys information about growth prospects of the firm. Growing firms pay lower dividends, re-invest more of their earnings, and provide a greater percentage of their total returns in the form of capital gains. According to Robbetze, de Villiers and Harmse (2017), earnings per share correlates best with the changing behavior of share prices. Table 4.12b presents the panel regression model on share capital and growth in market capitalization.

Table 4.12b: Effect of Share Capital and Growth in Market Capitalization

Growth in Market Capitalization	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Share Capital	0.027239	0.009855	2.76	0.006	0.007922	0.046555
β_0	4.985739	1.386054	3.6	0.000	2.269124	7.702355
R-squared:	0.2162					
Wald chi2(1)	7.64					
Prob > chi2	0.0057					

The fitted model from the result is

Growth in Market Capitalization = 4.985739 + 0.027239SC

Where: SC = Share Capital

As presented in the Table 4.12b, the coefficient of determination R-square is 0.2162. The model indicates that, share capital explains 21.62% of variations in the growth in market capitalization. This means 21.62% of variation in the growth in market capitalization is influenced by share capital. Panel results also revealed that share capital has positive and significant effect on growth in market capitalization (β=0.027239, p=0.0057). The effect of short-term debt on growth in market capitalization is statistically significant since the calculated p-value of 0.0057<0.05. This means that, a unitary increase in share capital leads to an increase in growth in market capitalization by 0.027239 units holding other elements of financial structure constant. Share capital is considered a more accurate estimate of a firm's actual net worth. It is all funds raised by the firm in exchange for shares of either a common or preferred stock. Share capital is also referred to as equity financing. A firm can increase its share capital by obtaining authorization to issue and sell additional shares. Share capital consists of all funds raised by a firm in exchange for shares of either common or preferred shares of stock. The amount of share capital or equity financing a firm has can change over time. A firm that wishes to raise more equity can obtain authorization to issue and sell additional shares, thereby increasing its share capital. The results are in line with Ebaid (2009) that share capital has a positive and significant relationship with market capitalization. Ebaid

(2009) also concluded that, capital structure changes do affect the performance of the firm. However, the results contrast with Oma and Memba (2018) that share capital has a negative and insignificant effect on profitability of the firm. Likewise, the results contradict Younus *et al.* (2014) who investigated the impact between capital structure and financial performance of Sugar companies listed at Karachi Stock Exchange Pakistan and showed that there was weak positive correlation between share capital firm performances. Table 4.2b shows the correlation matrix of short-term debt, long term debt, retained earnings and share capital and growth in market capitalization.

4.6.5 Panel Regression of the Effect of Financial Structure on Growth in EPS

An overall panel regression analysis was conducted between financial structure, that included short term debt, long term debt, retained earnings and share capital on financial growth measured using both growth in earning per share and growth in market capitalization. According to Rencher and Schaalje (2008), panel regression analysis is a statistical process of estimating the relationship among variables. It includes many techniques for modeling and analyzing several variables when the focus is on the relationship between a dependent and one or more independent variables. More specifically, regression analysis helps one to understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed. In addition, Freund, Wilson, and Sa (2006) contends that, regression analysis helps in generating an equation that describes the statistical relationship between one or more predictor variables and the response variable. The panel regression on financial structure on growth in earning per share is shown in Table 4.13a.

Table 4.13a: Panel Regression of the Effect of Financial Structure on Growth in EPS

Growth in EPS	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Short Term Debt	0.024095	0.009714	2.48	0.013	0.005056	0.043133
Long Term Debt	0.864088	0.148380	5.82	0.000	0.573269	1.154906
Retained Earnings	0.951749	0.389939	2.44	0.015	0.187482	1.716016
Share Capital	0.007016	0.000958	7.31	0.000	0.0118	0.025828
β_0	2.254497	1.233595	1.83	0.068	0.1633	4.672299
R-squared:	0.6136					
Wald chi2(4)	68.43					
Prob > chi2	0.0000					

The optimal regression model is;

Growth in EPS $= 2.254497 + 0.024095STD_1 + 0.864088LTD_2 + 0.951749RE_3 + 0.007016SC_4$

Where: EPS = Earnings Per Share

   STD_1 = Short Term Debt

   LTD_2 = Long Term Debt

   RE_3 = Retained Earnings

   SC_4 = Share Capital

The R-squared was used to check how well the model fitted the data. The study was supported by coefficient of determination R-square of 0.6136. This means that short term debt, long term debt, retained earnings and share capital explain 61.36% of variations in financial growth as measured by the growth in earnings per share. The determination of a firm's optimal financial structure is vital in deciding how much money should be borrowed and the best mixture of debt and equity to fund business operations. Identifying an optimal financial structure is relevant to reduce risk and increase performance. An imbalance in loans and their ability to generate financial

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efficiency can lead to bankruptcy. A significant decrease in asset sales also contributed to the need for more short-term debt financing. Therefore, it is vital to have a balanced report on the use of equity and borrowed capital as sources of financing, but also to know the factors and their influence in order to make a precise delimitation of the proportions (Shubita & Alsawalhah, 2012). Therefore, the choice among ideal proportion of debt and equity can affect the value of the firm, as well as financial growth. The results are in line with Akintoye (2008) that the sensitivity of performance to financial structure shows that, performance indicators to turnover (retained earnings, earnings per share and dividend per share) are significantly sensitive.

The results revealed that short term debt has a positive and significant effect on financial growth as measured by growth in earnings per share (β=0.024095, p=0.013). This was supported by a calculated t-statistic of 2.48 that is larger than the critical t-statistic of 1.96. This implies that, a unit increase in short term debt results to an increase in the growth in earning per share by 0.024095 units. This could imply that short-term debt financing was easily available compared to the long-term debt which is usually associated with high value collateral and at times restrictive covenants to make it unattractive. Big share price movements in response to earnings surprises reinforce the perception that short term earnings rather than long term cash flow expectations drive share price changes. It is argued that short-term holding period leads to a greater reliance on the beliefs of others and momentum-motivated trading, rather than long term fundamentals, in investment decisions. The result does not agree with Batchimeg (2017) that short-term have negative impact on earnings per share. This finding contradicts Mwangi *et al*. (2014) who concluded that majority of firms listed at NSE use long term debt to finance their assets. According to Aziz and Abbas (2016), firms rely on their internal source of finance because it is the cheap and reliable source of finance.

Further, short term sources of funds may have a positive influence on profitability due to the reduced contractual engagements that are involved. The results of the study do not agree Pouraghajan, Malekian, Emamgholipour, Lotfollahpour and Bagheri (2012) who conducted a study on the relationship between capital structure and firm performance

evaluation measures: Evidence from the Tehran Stock Exchange and showed that short term debt and long-term debt asset ratio do not have a significant effect on firms' profitability. According to Fosberg (2013) 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 and a significant decrease in sale of assets also contributed to the need for more short-term debt financing.

Long term debt has a positive and significant effect on financial growth as measured by growth in earning per share (β=0.864088, p=0.000). This was supported by a calculated t-statistic of 5.82 that is larger than the critical t-statistic of 1.96. This implies that, a unit increase in long term debt results to an increase in the growth in earning per share by 0.864088 units. Capital is required for the purpose of meeting long term financial requirements of a business unit. This could be raised through long term sources, namely equity shares, debentures, preference shares and public deposits. This is explained by the fact that debts are relatively more expensive than equity and therefore employing higher proportion of debt could lead to lower profitability in terms of earning per share (EPS). This result contradicts the theoretical foundation of leverage theory that says, the more the debt, the more will be the EPS up to a certain level. 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. However, the results do not concur with Anafo, Amponteng and Yin (2015) that long term debt has a negative and insignificant relationship with EPS. The results also do not agree with Sarkar (2016) who indicated that, long term debt has a positive association with earnings per share.

Further, the results revealed that retained earnings has a positive and significant effect on financial growth as measured by growth in earnings per share (β=0.951749, p=0.015). This was supported by a calculated t-statistic of 2.44 that is larger than the critical t-statistic of 1.96. The results imply that, a unit increase in retained earnings results to an increase in the growth in earning per share by 00.951749 units. Earnings per share is considered as an important accounting indicator of risk, entity performance and

corporate success. It is used to forecast potential growth in future share prices, because changes in EPS are often reflected in share price behavior. Retained earnings is always considered important since it has a significant effect on firms' stock prices. Retained earnings refer to the portion of a firm's profits that is kept for reinvestment into the business or for debt payments, instead of being paid out as dividends to shareholders. Since, only few financing options are available for firms, firms do prefer to retain more earnings and plow it back into operations especially when they have viable investment opportunities. As an internal source, retained earnings is readily available for use. Also, retentions are cheaper than external equity, do not cause ownership dilution, and have got a positive connotation as the stakeholders perceive that, the firm has potential investment opportunities. However, they have demerits in that, retained earnings is a limited source of financing, and the fact that they have a high opportunity cost since they are a foregone dividend by equity holders. The results agree with Yemi and Seriki (2018) that there is a positive and significant relationship between retained earnings and earnings per share. According to Wet (2014) retained income is one of the major factors that determines EPS growth.

Lastly, share capital has a positive and significant effect on financial growth as measured by earnings per share (β=0.007016, p=0.000). The calculated t-statistic of 7.31 that is greater than the critical t-statistic of 1.96. Share capital is an indication of value contributed to a firm by its shareholders at some time in the past. A joint stock company should have capital in order to finance its activities. Funds raised by issuing shares in return for cash or other considerations. A firm usually raises its capital in the form of shares. The results contrast with Oma and Memba (2018) that share capital has a negative and insignificant effect on profitability of the firm. These findings contradict Mwangi, Muathe and Kosimbei (2014) who concluded that majority of firms at NSE use long term debt to finance their assets. Further, the panel regression on financial structure on growth in market capitalization is shown in Table 4.13b.

Table 4.13b: Panel Regression of the Effect of Financial Structure on Growth in Market Capitalization

Growth in Market Capitalization	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Short Term Debt	0.028529	0.0103	2.77	0.006	0.008342	0.048717
Long Term Debt	0.958656	0.156627	6.12	0.000	0.651673	1.265639
Retained Earnings	0.43784	0.094103	4.65	0.004	0.76053	0.848102
Share Capital	0.09635	0.010197	9.45	0.001	0.01035	0.029621
β_0	6.050879	1.404257	4.31	0.000	3.298586	8.803173
R-squared:	0.6557					
Wald chi2(4)	59.57					
Prob > chi2	0.0000					

The optimal regression model is;

Growth in Market Capitalization = 6.050879 + 0.028529STD$_1$ + 0.958656LTD$_2$ +0.43784RE$_3$ + 0.09635SC$_4$

Where: STD$_1$ = Short Term Debt

LTD$_2$ = Long Term Debt

RE$_3$ = Retained Earnings

Sc$_4$ = Share Capital

The R-squared was used to check how well the model fitted the data. The study was supported by coefficient of determination R-square of 0.6557. This means that short term debt, long term debt, retained earnings and share capital explain 65.57% of variations in financial growth as measured by growth in market capitalization. The results revealed that, short term debt has a positive and significant effect on financial growth as measured by growth in market capitalization (β=0.028529, p=0.006). This was supported by a calculated t-statistic of 2.77 that is larger than the critical t-statistic of 1.96. The results imply that a unit increase of short-term debt leads to growth in market capitalization by 0.028529 units Short-term debt could be used as a permanent source of financing if the debt is continually renewed as it matures. One reason to use

short-term debt as a permanent source of financing is to take advantage of an upward sloping yield curve to reduce the firm's interest expense. However, the results do not agree with Fosberg (2013) that, the amount of short-term debt financing is shown to be inversely related to the amount of the firm's non-debt tax shields and growth opportunities.

Long term debt has a positive and significant effect on financial growth as measured by growth in market capitalization ($\beta=0.958656$, p=0.000). This was supported by a calculated t-statistic of 6.12 that is larger than the critical t-statistic of 1.96. The results imply that a unit increase of long-term debt leads to growth in market capitalization by 0.958656 units. Scarcity of long-term finance is a key impediment to greater investment and growth. Access to appropriate instruments of long-term financing is one of the critical financial sector policy challenges facing firms. The long-term debt, preferred stock and common stock together would contribute as the total capital of the firm. This is a useful ratio as it allows the investors to figure out the total risk of investing in a particular business, which can be easily determined by the long-term debt to capitalization ratio. It also shows how financially the firm is. The results agree with Lixin and Lin (2008) in a study on the relationship between debt financing and market value of listed real estate firms in China that, the long-term borrowing and commercial credit financing have positive correlation with the firm's market value.

Retained earnings had a positive and significant effect on financial growth as measured by growth in market capitalization ($\beta=0.43784$, p=0.004). Further, the calculated t-statistic was 4.65, greater than the critical t-statistic of 1.96. The amount of retained earnings is vital to investors and other stakeholders because, it is one of the ways in evaluating the effectiveness of the management in improving the market value of the firm. Retained earnings is important because it has a significant effect on firms' stock prices. In making their decisions, investors should look for firms with high return on retained earnings that is reinvested regularly. The results are in line with Yemi and Seriki (2018) that, there is a positive and significant relationship between retained earnings and value of the firms.

Lastly, share capital has a positive and significant effect on financial growth as measured by growth in market capitalization ($\beta=0.09635$, $p=0.001$). Further, the calculated t-statistic was 9.45, greater than the critical t-statistic of 1.96. Share capital is an indication of the value contributed to a firm by its shareholders at some time in the past. A joint stock company should have capital in order to finance its activities. A firm usually raises its capital in the form of shares. According to Ebaid (2009), share capital has significant relationship with return on assets but not with return on equity.

4.6.6 Intervening Effect of Firm Size on Financial Structure and Growth in EPS

Step 1

In the first step, growth in earnings per share was regressed on composite of financial structure (total finance). The results in Table 4.14a show that, in step one, the influence of composite of financial structure on growth in earnings per share is significant ($\beta=1.229971$, $R^2=0.6009$, $p<0.05$), implying that 20.09% of change in the growth in earnings per share is attributable to one unit change in composite of financial structure. The first mediation condition which states that, independent variable is significantly related to the dependent variable in the absence of the intervening variable is thus satisfied.

Table 4.14a: Composite of Financial Structure and Growth in EPS

Growth in EPS	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Composite of financial structure (Total finance)	1.229971	0.401002	3.07	0.013	-0.53596	2.995902
β_0	-20.3387	20.47558	-0.99	0.321	-60.4701	19.79267
R-squared:	0.6009					
Wald chi2(2)	5.6800					
Prob > chi2	0.0363					

Growth in EPS = -20.3387 + 1.229971TF

Where: Growth in EPS = Growth in Earnings Per Share

TF = Total Finance

Step 2

The independent variable is significantly related to the intervening variable. The second step involved regression of composite of financial structure/total finance on the firm size. The results presented in Table 4.14b shows that, the influence of composite of financial structure/total finance on the firm size is significant (β=0.178965, R^2=0.6034, p<0.05), thus satisfying the second condition which states that, the independent variable should be significantly related to the intervening variable, for the process to continue to step 3.

Table 4.14b: Composite of Financial Structure and Firm Size

Firm Size	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Composite of Financial structure (Total finance)	0.178965	0.020343	8.8	0.000	0.139094	0.218836
β_0	5.854919	0.478521	12.24	0.000	4.917035	6.792802
R-squared:	0.6034					
Wald chi2(2)	77.40					
Prob > chi2	0.000					

FS = 5.854919 + 0.178965TF

Where: FS = Firm Size

TF = Total Finance

Step 3

The third step was intended to test for the influence of the firm size on growth in earnings per share as shown in Table 4.14c. As shown in the Table 4.14c, the influence of the firm size on growth in earning per share was significant ($\beta=1.13874$, $R^2=0.6128$, $p<0.05$), thus satisfying the third condition that, the intervening variable should be significantly related to the dependent variable, for the process of testing for mediation to continue to the final step. The firm size is significantly related to the growth in earnings per share.

Table 4.14c: Firm Size and Growth in EPS

Growth in EPS	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Firm size	1.13874	0.408491	2.79	0.036	-5.2713	2.993828
β_0	-.79045	.96736	0.82	0.37	-22.3048	59.88572
R-squared:	0.6128					
Wald chi2(2)	4.2900					
Prob > chi2	0.002					

Growth in EPS= -.79045 + 1.13874FS

Where: EPS = Earnings Per Share

FS = Firm Size

Step 4

The fourth step was to test if firm size and composite of financial structure/total finance is insignificantly related to growth in earnings per share. Here, the firm size and financial structure was tested to see if it predicts financial growth as measured by growth in earnings per share as shown in Table 4.14d.

Table 4.14d: Intervening Effect of Firm Size on Financial Structure and Growth in EPS

Growth in EPS	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Composite of financial structure (Total finance)	1.35455	0.920631	1.47	0.141	-0.44985	3.158953
Firm size	1.6834	2.106397	0.8	0.424	-5.81186	2.445061
β_0	-6.48209	26.83708	-0.24	0.809	-59.0818	46.11761
R-squared:	0. 6305					
Wald chi2(2)	2.47					
Prob > chi2	0.2914					

Growth in EPS = -6.48209 + 1.35455TF + 1.6834FS

Where: TF = Total Finance/Composite of financial structure

FS = Firm Size

Table 4.14d shows that, the influence of the total finance/composite of financial structure on growth in earnings per share was insignificant in the presence of the firm size (β=1.35455, R^2=0.6305, p>0.141), and thus satisfying the fourth condition which states that, the effect of the total finance/composite of financial structure on growth in earning per share is insignificant in the presence of the firm size. This implies that, the firm size accounts for growth in earnings per share. Large firms have more resources and capacity to undertake more product lines and higher production capacity together with organizational resources. This enables the large firms to improve their financial performance since they can easily mitigate risks as compared to small firms. The results agree with Anafo, Amponteng and Yin (2015) that firm size has an intervening effect on the relationship between financial structure and earnings per share. Firm size has the potential to influence financial structure (Yinusa, Russell, Somoye, Alimi & Ilo, 2016). The results also agree with Yuliza (2018) that firm size intervene the relationship between earnings per share and stock prices. The results of this study gave evidence that, profit and firm size can provide important information to investors in making investment decisions. Moreover, Pouraghajan, Mansourinia, Bagheri, Emamgholipour and

Emamgholipour (2013) noted that, there is a positive and significant relationship between financial ratios and firm size with earnings per share.

4.6.7 Intervening Effect of Firm Size on Financial Structure and Growth in Market Capitalization

Step 1

In the first step, growth in market capitalization was regressed on composite of financial structure (total finance). The results in Table 4.15a show that, in step one the influence of composite of financial structure/total finance on growth in market capitalization is insignificant (β= -0.16209, R^2=0.615, p>0.05), implying that 15% of growth in market capitalization is attributable to one unit change in composite of financial structure (total finance). The first mediation condition which states that, independent variable is significantly related to the dependent variable in the absence of the intervening variable is thus not satisfied.

Table 4.15a: Composite of Financial Structure and Growth in Market Capitalization

Growth in Market Capitalization	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Composite of financial structure (Total Finance)	-0.16209	1.607261	-0.1	0.92	-3.31227	2.98808
β_0	4.5177	36.49576	0.12	0.901	-67.0127	76.04807
R-squared:	0.615					
Wald chi2(2)	0.0100					
Prob > chi2	0.9197					

Growth in Market Capitalization = 4.5177 - 0.16209TF

Where: TF = Total Finance/ Composite of financial structure

Step 2

The second step involved regression of total finance/composite of financial structure on the firm size. The results presented in Table 4.15b shows that, the influence of total finance/composite of financial structure on the firm size is insignificant (β=0.178965, R^2=0.6134, p>0.05), thus not satisfying the second condition which states that total finance is significantly related to the firm size, for the process to continue to step 3.

Table 4.15b: Composite of Financial Structure and Firm Size

Firm Size	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Composite of Financial structure (Total Finance)	0.178965	0.120343	1.48	0.547	0.139094	0.218836
β_0	5.854919	0.478521	12.24	0.000	4.917035	6.792802
R-squared:	0.6134					
Wald chi2(2)	1.40					
Prob > chi2	0.9198					

FS = 5.854919 + 0.178965TF

Where: FS = Firm Size

TF = Total Finance/Composite of financial structure

Step 3

The third step was intended to test for the influence of the firm size on growth in market capitalization as shown in Table 4.15c.

Table 4.15c: Firm Size and Growth in Market Capitalization

Growth in Market Capitalization	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Firm Size	2.57561	3.629761	0.71	0.478	-9.68981	4.538586
β_0	26.364	36.06635	0.73	0.465	-44.3247	97.05274
R-squared:	0.614					
Wald chi2(2)	0.4780					
Prob > chi2	0.0500					

Growth in Market Capitalization = 26.364 + 2.57561FS

Where: FS = Firm Size

As shown in the Table 4.15c, the influence of firm size on growth in market capitalization was insignificant (β=2.57561, R^2=0.614, p>0.05), thus not satisfying the third condition that, the intervening variable is significantly related to the dependent variable for the process of testing for mediation to continue to the final step. The Firm size is insignificantly related to the growth in market capitalization.

Step 4

The fourth step was to test if firm size and composite of financial structure is significantly related to the growth in market capitalization. Here, the firm size and total finance/composite of financial structure was tested to see if it predicts financial growth as measured by growth in market capitalization as shown in Table 4.15d.

Table 4.15d: Intervening Effect of Firm Size on Financial Structure and Growth in Market Capitalization

Growth in Market Capitalization	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Composite of financial structure (Total Finance)	0.04852	0.016549	2.93	0.044	-3.2169	3.119856
Firm Size	2.56464	3.653324	0.70	0.483	-9.72502	4.595743
β_0	27.35388	48.90901	0.56	0.576	-68.506	123.2138
R-squared:	0.6469					
Wald chi2(2)	19.22					
Prob > chi2	0.0319					

Growth in Market Capitalization = 27.35388 + 0.04852TF + 2.56464FS

Where: TF = Total Finance/Composite of financial structure

      FS = Firm Size

Table 4.15d shows that, the influence of the total finance/composite of financial structure on growth in market capitalization was significant in the presence of the firm size (β=0.04852, R^2=0.6469, $p<0.05$), and thus not satisfying the fourth condition which states that, the effect of total finance/composite of financial structure on growth in market capitalization is insignificant in the presence of the firm size. This implies that, the firm size does not account for growth in market capitalization.

4.7 Hypotheses Testing

Hypotheses were tested using multiple (overall) panel regression analysis. The hypothesis was tested using p-value method. The acceptance/rejection criterion was that, if the p-value is greater than the significance level of 0.05, we fail to reject the Ho but if it's less than 0.05 level of significance, the Ho is rejected.

4.7.1 Hypothesis One

The first hypothesis to be tested was: -

H_{01}: *There is no significant effect of Short-term debt on financial growth of non-financial firms listed at Nairobi Securities Exchange.*

The null hypothesis was that, there is no significant effect of Short-term debt on financial growth of non-financial firms listed at Nairobi Securities Exchange. The hypothesis was tested using p-value method. The acceptance/rejection criterion was that, if the p-value is greater than the significance level of 0.05, we fail to reject the Ho_1 but if it's less than 0.05 level of significance, the Ho_1 is rejected. Results in Table 4.13a shows that, short term debt has positive and significant effect on growth in earning per share as calculated p-value of $0.013<0.05$. Further, the results in Table 4.13b shows that, short term debt has positive and significant (p-value=$0.006<0.05$) effect on growth in market capitalization. The null hypothesis was therefore rejected and concluded that, there is a significant effect of Short-term debt and financial growth of non-financial firms listed at Nairobi Securities Exchange.

Short-term assets and liabilities are generally defined as those items that will be used, liquidated, mature or paid off within one year. Short-term assets are usually financed by short-term liabilities while long-term assets are financed by long-term liabilities. Short term debt financing has a maturity period of one year or less, they must be repaid quickly within 90 – 120 days. The use of short-term liabilities such as trade payables and accruals can have a positive effect on a firm's profitability since such sources of financing may be less costly to the firm than the longer-term sources of funds. Further, short term sources of funds may have a positive influence on profitability due to the reduced contractual engagements that are involved. The results of the study do not agree with Pouraghajan, Malekian, Emamgholipour, Lotfollahpour and Bagheri (2012) who conducted a study on the relationship between capital structure and firm performance evaluation measures: Evidence from the Tehran Stock Exchange and showed that short term debt and long-term debt asset ratio do not have a significant effect on firms' profitability. According to Fosberg (2013) 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 and a significant decrease in sale of assets also contributed to the need for more short-term debt financing.

4.7.2 Hypothesis Two

The second hypothesis to be tested was: -

H_{02}: *There is no significant effect of Long-term debt on financial growth of non-financial firms listed at Nairobi Securities Exchange.*

The null hypothesis was that, there is no significant effect of Long-term debt on financial growth of non-financial firms listed at Nairobi Securities Exchange. The hypothesis was tested using p-value method. The acceptance/rejection criterion was that, if the p-value is greater than the significance level of 0.05, we fail to reject the H_{O2} but if it's less than 0.05 level of significance, the H_{O2} is rejected. Results in Table 4.13a shows that, long term debt has positive and significant effect on growth in earning per share

since calculated p-value of 0.000<0.05. Further, the results in Table 4.13b reveals that long-term debt has positive and significant effect on growth in market capitalization (p-value=0.000<0.05). The null hypothesis was therefore rejected and concluded that, there is a significant effect of Long-term debt and financial growth of non-financial firms listed at Nairobi Securities Exchange. Long term debt is money that is owed to lenders for a period of more than one year from the date of current balance sheet. Long term debts are most preferable sources of debt financing among well-established corporate institution, mostly by virtue of their asset base and collateral is a requirement by many deposits taking financial institutions. Long term debt involves strict contractual covenants between the firm and issuers of debt which is usually associated with high agency and financial distress costs. A high long-term debt level is not conducive for the effective operations of the firm since it increases the risk of bankruptcy. The study by EBaid (2009) found that, there was no significant relationship between long term debt and return on assets. Long term debt is the most preferred source of debt financing among well-established corporate institution, mostly by virtue of their asset base and collateral is a requirement for many deposits-taking financial institutions.

4.7.3 Hypothesis Three

The third hypothesis to be tested was: -

H_{03}: *There is no significant effect of retained earnings on financial growth of non-financial firms listed at Nairobi Securities Exchange.*

The null hypothesis was that, there is no significant effect of Retained earnings on financial growth of non-financial firms listed at Nairobi Securities Exchange. The hypothesis was tested using p-value method. The acceptance/rejection criterion was that, if the p-value is greater than the significance level of 0.05, we fail to reject the H_{O3} but if it's less than 0.05 level of significance, the H_{O3} is rejected. Results in Table 4.13a shows that, retained earnings has positive and significant effect on growth in earning per share since the calculated p-value =0.015<0.05. The null hypothesis was therefore rejected and

concluded that, there is a significant effect of Retained earnings and financial growth of non-financial firms listed at Nairobi Securities Exchange using growth in earnings per share. Further, the results in Table 4.13b indicated that retained earnings has positive and significant effect on growth in market capitalization (p-value=0.004<0.05). The null hypothesis was therefore rejected, hence, there is a significant effect of retained earnings on financial growth of non-financial firms listed at Nairobi Securities Exchange measured using growth in market capitalization.

Retained earnings refer to the part of trading profits which is not distributed in the form of dividends to shareholders but is retained by directors for future expansion of the firm (Dinayak, 2014). Retained earnings are profits not paid out as dividends but retained to financial future investment needs. According to Chasan (2012) retained earnings refer to the portion of a firm's profits that is kept for reinvestment into the business or for debt payments, instead of being paid out rather as dividends to shareholders. Chasan (2012) noted that the prime idea behind earnings retention is that, the more the firm retains the faster it has chances for growth. Retained earnings are usually recorded under shareholders' equity on the balance sheet. Also related with periodically retained earnings is the accumulated retained earnings, which are computed by adding net income to (or subtracting any net losses from) beginning retained earnings and subtracting any dividends paid to shareholders (M'ng, Rahman & Sannacy, 2017).

Since, only few options are available for raising capital, most executives generally prefer cash from operations as a major source of capital for re-investment and firms' growth (Wolters, 2017). Consequently, some firms prefer to retain more earnings and flow it back into operations especially when they have viable investment opportunities (Richardson, 2006). Also, retained earnings can be expressed as a ratio, commonly known as retention ratio. According to Chasan (2012), there is always a conflict in determining the retention ratio or earning to be retained. While the managers of the firm want a higher earnings retention ratio, the shareholders of the firm would think otherwise, as the higher the plowback ratio, the more uncertain their control over their shares and finances are.

Notably, earnings retentions are a sacrifice made by equity shareholders. According to Orwel (2010), retained earnings are internal sources of finance available to a firm and has got many advantages. As an internal source, retained earnings are readily available for use. Also, retentions are cheaper than external equity, do not cause ownership dilution, and has got a positive connotation as the stakeholders perceive that the firm has potential investment opportunities (Kopyakova, 2017). However, the drawbacks of retained earnings is that, it's a limited source of financing (Brooks, 2015).

The use of retained earnings as an internal source of finance is preferred because it does not involve any floatation costs and does not dilute ownership and control of the firm, since no new shares are issued (Fama & French, 2005). Retained earnings are an internal source of finance thus, when they are high there is low gearing, lower financial risk and thus highest market price share. It assumes that retained earnings is the best source of long-term capital since it is readily available and cheap (Whittington, 1972). This is because no floatation cost is involved in the use of retained earnings to finance new investments (Samuel, 2016).

4.7.4 Hypothesis Four

The fourth hypothesis to be tested was:

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

The null hypothesis was that, there is no significant effect of Share capital on financial growth of non-financial firms listed at Nairobi Securities Exchange. The hypothesis was tested using p-value method. The acceptance/rejection criterion was that, if the p-value is greater than the significance level of 0.05, we fail to reject the H_{04} but if it's less than 0.05 level of significance, the H_{04} is rejected. Results in Table 4.13a shows that share capital has a positive and significant effect on growth in earning per share as indicated by calculated p-value of 0.000<0.05. Further, the results in Table 4.13b shows share

capital has a positive and significant effect on growth in market capitalization (p-value=0.001<0.05). The study failed to reject the null hypothesis and concluded that share capital has a significant effect on financial growth of non-financial firms listed at Nairobi Securities Exchange measured using both growth in earnings per share and growth in market capitalization. An entity that trades equity instruments on public markets is required to disclose earnings per share as part of its financial statements. Earnings per share is a calculation that allocates a firm's profits to each of its ordinary shares. It serves as an indication of profitability by measuring the entity's performance in relation to share capital that is employed to generate such returns.

Share capital is the total capital of a company divided into shares. A joint stock company should have capital in order to finance its activities. Share capital is an indication of value contributed to a firm by its shareholders at some time in the past. According to Robbetze, de Villiers and Harmse (2017), earnings per share correlate best with the changing behavior of share prices. The results also agree with Tsoy and Heshmati (2017) who conducted a study on the impact of financial crises on dynamics of capital structure of listed non-financial firms in Korea and revealed that listed non-financial firms in Korea on average decreased their debt ratios over the entire period of study, with leverage being highest before the Asian crisis and lowest after the Global financial crisis.

4.7.5 Hypothesis Five

The fifth hypothesis to be tested was:

H_{05}: *Firm size does not significantly mediate the effect of financial structure on financial growth of non-financial firms listed at Nairobi Securities Exchange.*

The null hypothesis was that, the firm size does not significantly meditate the effect of financial structure on financial growth of non-financial firms listed at Nairobi Securities Exchange. The hypothesis was tested using p-value method. The acceptance/rejection

criterion was that, if the p-value is greater than the significance level of 0.05, we fail to reject the Ho$_5$ but if it's less than 0.05 level of significance, the Ho$_5$ is rejected. Results in Table 4.14a - 4.14d shows that the four steps in testing intervening of firm size on the relationship between financial structure and financial growth measured using growth in earnings per share of non-financial firms listed at Nairobi Securities Exchange are fulfilled. The null hypothesis was therefore rejected and concluded that, firm size significantly intervenes the effect of financial structure on financial growth of non-financial firms listed at Nairobi Securities Exchange as measured using growth in earnings per share as a measure of financial growth.

Further, the results in Table 4.15a - 4.15d shows that, the four steps in testing intervening of firm size on the relationship between financial structure and financial growth measured using growth in market capitalization of non-financial firms listed at Nairobi Securities Exchange are not fulfilled. The null hypothesis was therefore not rejected and concluded that firm size does not significantly intervene the effect of financial structure on financial growth of non-financial firms listed at Nairobi Securities Exchange as measured using growth in market capitalization as a measure of financial growth.

Firm size is an important characteristic to gain performance. Large firms have more resources and capacity to undertake more product lines and higher production capacity together with organizational resources. This enables the firm to improve their financial performance since they can mitigate risks (Alvarez & Barney, 2001). Although smaller firms may be more flexible, it can be argued that larger firms have better prerequisites for behavior compared to their smaller counterparts. This is because larger firms may be better equipped to engage in inter-firm networking. The results agree with Ater, Sifunjo, Kisaka, Iraya and Mwangi (2017) who conducted a study on the mediating effect of firm growth on the relationship between capital structure and firm value among non-financial firms listed at Nairobi Securities Exchange and indicated that, firm growth has a significant mediating effect and is thus a critical tool that can be used by the management of the firm when doing capital structure adjustments to ensure efficiency

and optimality as a firm grows. According to Lopez-Valeiras, Gomez-Conde and Fernandez-Rodriguez (2016) in a study on firm size and financial performance of the firm, indebtedness can enhance the realization of the potential benefits of a larger firm size. Contrary to expectations, these results reveal that, the relationship between firm size and financial performance of the firm is negatively mediated by indebtedness.

4.8 Summary of Hypotheses

The summary results of the hypotheses are presented in Table 4.16.

Table 4.16: Summary of Hypotheses

Objective No.	Objective	Hypothesis	Rule	P-value	Comment
Objective 1	To establish the effect of Short-term debt on financial growth of non-financial firms listed at NSE.	H_{o1}: There is no significant effect of Short-term debt on financial growth of non-financial firms listed at NSE.	Reject Ho if p-value <0.05	$p<0.05$	The results reject the hypothesis; therefore, there is a significant effect of Short-term debt on financial growth of non-financial firms listed at NSE measured using both growth in EPS and growth in market capitalization.
Objective 2	To assess the effect of Long-term debt on financial growth of non-financial firms listed at NSE.	H_{o2}: There is no significant effect of Long-term debt on financial growth of non-financial firms listed at NSE.	Reject Ho if p-value <0.05	$p<0.05$	The results reject the hypothesis; therefore, there is a significant effect of Long-term debt on financial growth of non-financial firms listed at NSE measured using both growth in EPS and growth in market capitalization.
Objective 3	To determine the effect of Retained earnings on financial growth of non-financial firms listed at NSE.	H_{o3}: There is no significant effect of Retained earnings on financial growth of non-financial firms listed at NSE.	Reject Ho if p-value <0.05	$p<0.05$	The results reject the hypothesis; therefore, there is a significant effect of retained earnings on financial growth of non-financial firms listed at NSE measured using both growth in EPS and growth in market capitalization.
Objective 4	To examine the effect of share capital on financial growth of non-financial firms listed at NSE.	H_{o4}: There is no significant effect of share capital on financial growth of non-financial firms listed at NSE.	Reject Ho if p-value <0.05	$p<0.05$	The results reject the hypothesis; therefore, there is a significant effect of share capital on financial growth of non-financial firms listed at NSE measured using both growth in EPS and growth in market capitalization.

Objective No.	Objective	Hypothesis	Rule	P-value	Comment
Objective 5	To explore the intervening effect of firm size on the effect of financial structure on financial growth of non-financial firms listed at NSE.	H_{o5}: Firm size does not significantly intervene the effect of financial structure on financial growth of non-financial firms listed at NSE.	Four steps of testing intervening effect must be fulfilled	The four steps are fulfilled with growth in EPS as a measure of financial growth. However, the four steps were not fulfilled with growth in market capitalization as a measure of financial growth.	Firm size significantly intervenes the effect of financial structure on financial growth of non-financial firms listed at NSE measured using growth in earnings per share. Firm size does not significantly intervene the effect of financial structure on financial growth of non-financial firms listed at NSE measured using growth in market capitalization.

4.9 Model Optimization and Revised Conceptual Framework

Based on the results in Table 4.9a - 4.15d, a model optimization was conducted. The aim of model optimization was to guide in derivation of the final model (revised conceptual framework) where only the significant variables are included for objectivity. Results were arrived at through running simple regressions and explanatory power (R-square) of each of the independent variable used to derive the final model. Results of the new conceptual framework are presented in Figure 4.7a - 4.7b. Results of the new conceptual framework are presented in Figure 4.7a - 4.7b.

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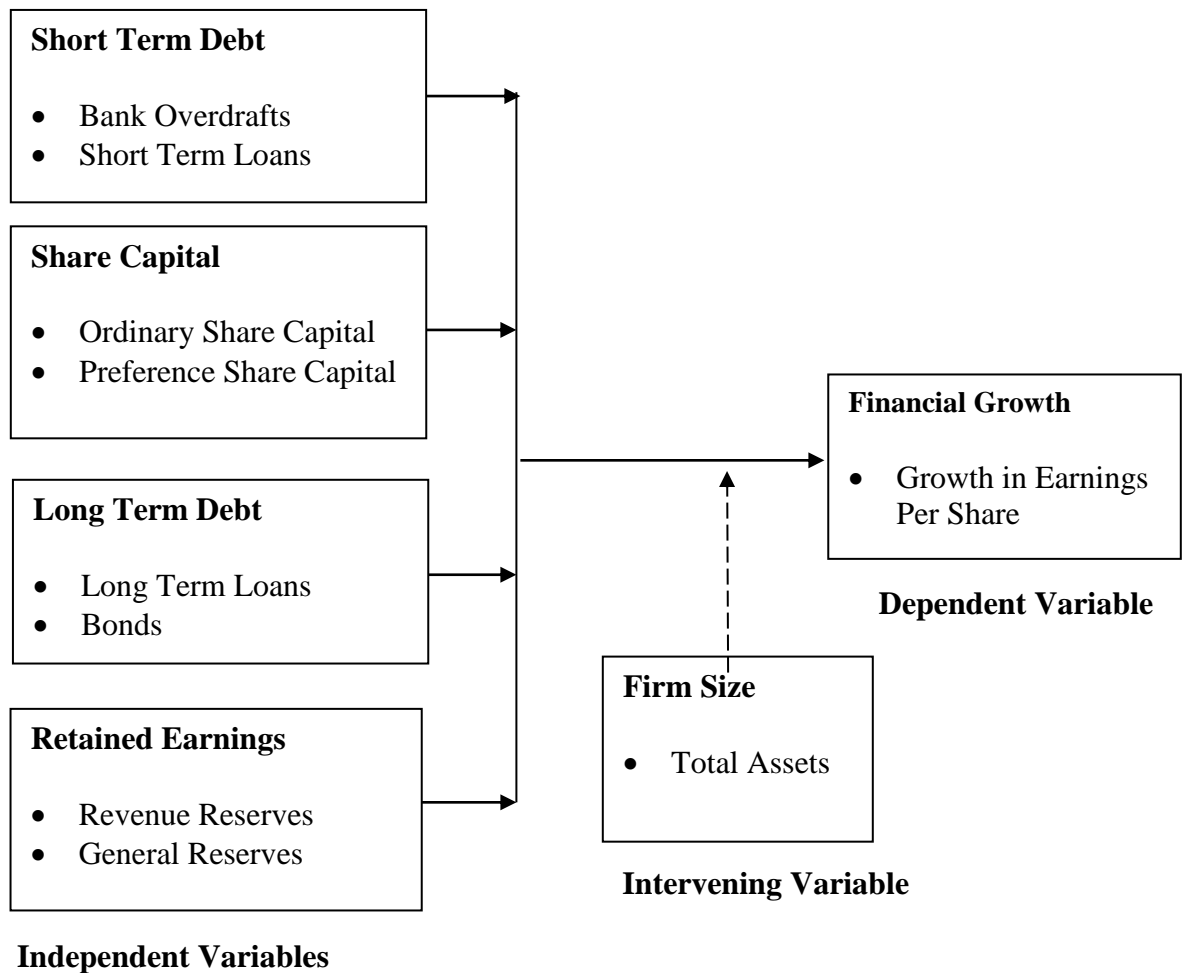
Figure 4.7a: Revised Conceptual Framework on Financial Growth as Measured by Growth in Earnings Per Share

In figure 4.7a, short term debt had the greatest effect on financial growth measured by growth in earnings per share. Short term debt explains 25.99% of variation in financial growth as measured by growth in earnings per share. Share capital has 22.73% which is the second strongest explanatory power on financial growth while long term debt has 21.6% and retained earnings explaining 21.27% of financial growth as measured by growth in earnings per share. The firm size has a significant intervening effect on the relationship between the financial structure and financial growth as measured by growth in earnings per share.

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┌─────────────────────────────┐
│ Short Term Debt             │
│                             │
│  • Bank Overdrafts          │─────┐
│  • Short Term Loans         │     │
└─────────────────────────────┘     │
                                     │
┌─────────────────────────────┐     │
│ Long Term Debt              │     │
│                             │     │
│  • Long Term Loans          │─────┤
│  • Bonds                    │     │          ┌──────────────────────────┐
└─────────────────────────────┘     │          │ Financial Growth         │
                                     ├─────────▶│                          │
┌─────────────────────────────┐     │          │  • Growth in Market      │
│ Share Capital               │     │          │    Capitalization        │
│                             │     │          └──────────────────────────┘
│  • Ordinary Share Capital   │─────┤
│  • Preference Share Capital │     │            Dependent Variable
└─────────────────────────────┘     │
                                     │
┌─────────────────────────────┐     │
│ Retained Earnings           │     │
│                             │     │
│  • Revenue Reserves         │─────┘
│  • General Reserves         │
└─────────────────────────────┘

        Independent Variables
```
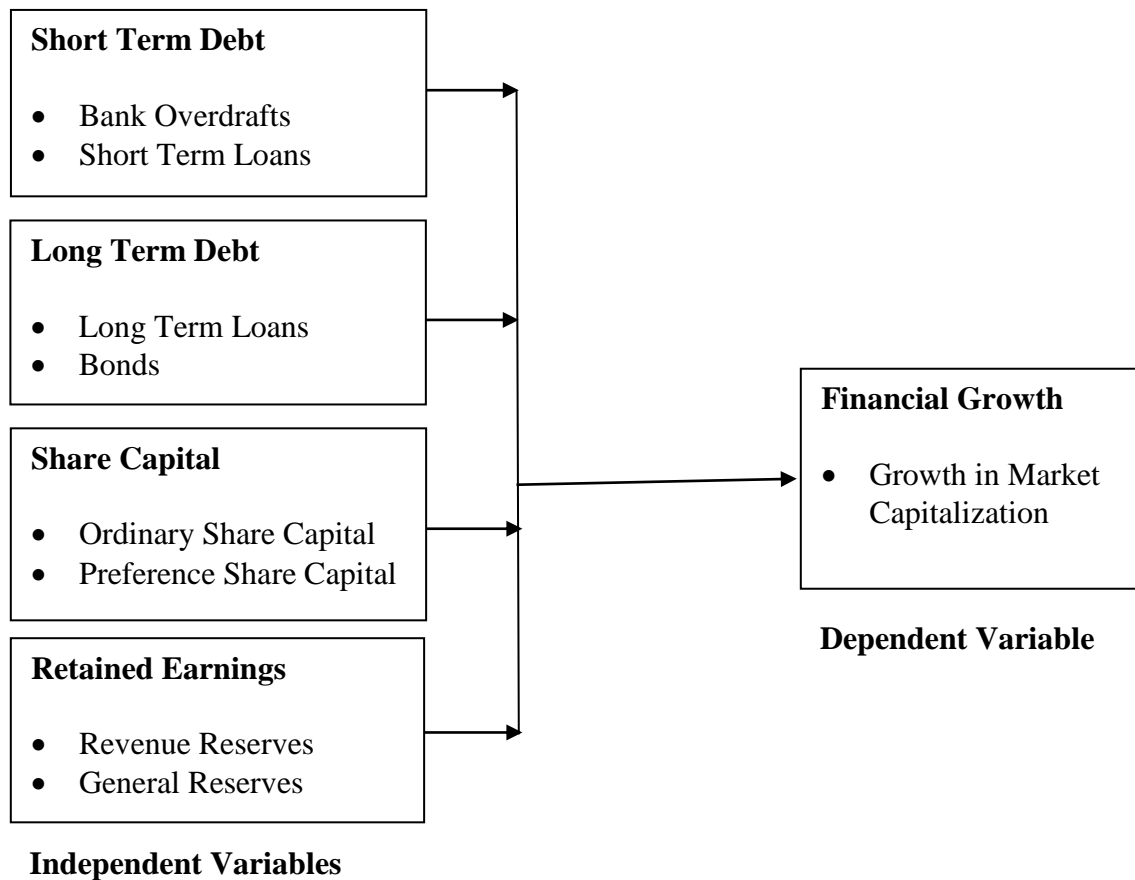
Figure 4.7b: Revised Conceptual Framework on Financial Growth as Measured by Growth in Market Capitalization

In figure 4.7b, short term debt had the greatest effect on financial growth measured by growth in market capitalization. Short term debt explains 25.60% of the variation in financial growth as measured by growth in market capitalization. Long term debt has 25.16% which is the second strongest explanatory power on financial growth while Share capital has 21.62% and Retained earnings explained 19.58% of financial growth as measured by growth in market capitalization. The firm size has no significant intervening effect on the relationship between the financial structure and financial growth measured using market capitalization and it is not included in the revised model as depicted above.

4.10 Summary of the Chapter

This chapter has presented the analysis of the data collected and discussion of the findings. The study utilized descriptive statistics, correlation analysis and regression analysis. Descriptive results for short term debt, long term debt, retained earnings share capital, firm size, growth in earnings per share and growth in market capitalization were described using means, standard deviations, minimum and maximum, and coefficient of variation. Trend analysis in form of simple line graphs for short term debt, long term debt, retained earnings, share capital, firm size, growth in earnings per share and growth in market capitalization were also drawn. Simple panel regression analysis results revealed that, short term debt, long-term debt, retained earnings and share capital had a positive and significant relationship with financial growth of non-financial firms listed at NSE measured using both growth in earnings per share and growth in market capitalization. In the overall panel model, short term debt, long term debt, retained earnings and share capital are positive and significantly related to financial growth as measured by growth in earnings per share or growth in market capitalization.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of major findings of this study, sets out the relevant conclusions and makes recommendations for practice and suggestions for further research based on the findings of this study. The study sought to establish the effect of financial structure on financial growth of non-financial firms listed at Nairobi Securities Exchange. It established the relationship between short term debt, long term debt, retained earnings and share capital, intervened by firm size on financial growth of non-financial firms listed at Nairobi Securities Exchange.

5.2 Summary of Major Findings

This section contained the summary of the findings.

5.2.1 Effect of Short-Term Debt on Financial Growth

The first objective of the study was to establish the effect of Short-term debt on financial growth of non-financial firms listed at Nairobi Securities Exchange. Correlation analysis revealed that, short term debt was positive and significantly correlated to financial growth measured using growth in earnings per share and further a positive association with growth in market capitalization. Short term debt was found to be satisfactory in explaining financial growth. Further, results showed that, short term debt is a good predictor of financial growth. Panel regression of coefficient results showed that, short term debt has a positive and significant effect on financial growth measured by growth in earning per share. The results also revealed that short term debt has a positive and significant effect on financial growth measured by growth in market capitalization.

5.2.2 Effect of Long-Term Debt on Financial Growth

The second objective of the study was to assess the effect of long-term debt on financial growth of non-financial firms listed at Nairobi Securities Exchange. Correlation analysis revealed that, long term debt was positive and significantly associated to financial growth measured using both growth in earnings per share and growth in market capitalization. Long term debt was found to be satisfactory in explaining financial growth. Further, results showed that, long term debt is a good predictor of financial growth. Panel regression coefficient results indicated that long term debt has a positive and significant effect on financial growth measured by growth in earning per share. It was also established that long term debt has a positive and significant effect on financial growth measured by growth in market capitalization.

5.2.3 Effect of Retained Earnings on Financial Growth

The third objective of the study was to determine the effect of retained earnings on financial growth of non-financial firms listed at Nairobi Securities Exchange. Correlation analysis revealed that, retained earnings was positive and significantly associated to financial growth measured using both growth in earnings per share and growth in market capitalization. Retained earnings was found to be satisfactory in explaining financial growth. Further, the results showed that, retained earnings is a good predictor of financial growth. Panel regression of coefficient results revealed that retained earnings has a positive and significant effect on financial growth measured by growth in earning per share. The results also revealed that retained earnings has a positive and significant effect on financial growth measured by growth in market capitalization.

5.2.4 Effect of Share Capital on Financial Growth

The fourth objective of the study was to examine the effect of share capital on financial growth of non-financial firms listed at Nairobi Securities Exchange. Correlation analysis

revealed that, share capital was positive and significantly associated to financial growth measured using both growth in earnings per share and growth in market capitalization. Share capital was found to be satisfactory in explaining financial growth. Further, the results showed that, share capital is a good predictor of financial growth. Panel regression of coefficient results showed that share capital has a positive significant effect on financial growth measured by growth in earning per share. Model results also revealed that share capital has a positive and significant effect on financial growth measured by growth in market capitalization.

5.2.5 Effect of Firm Size on Financial Structure and Financial Growth

The fifth objective of the study was to explore the intervening effect of firm size on financial structure and financial growth of non-financial firms listed at Nairobi Securities Exchange. The results of the study showed that, firm size fulfilled the four condition of testing intervening effect of a variable. In the first step, the influence of total finance/composite of financial structure on growth in earnings per share was statistically significant in the absence of intervening variable satisfying the first condition.

In the second step, the influence of total finance/composite of financial structure on firm size is statistically significant, thus satisfying the second condition which states that, the independent variable should be significantly related to the mediator variable. Further, the influence of firm size on growth in earning per share was statistically significant, thus satisfying the third condition that, the intervening variable should be significantly related to the dependent variable.

Finally, in step four, the influence of total finance/composite of financial structure on growth in earnings per share was statistically insignificant in the presence of the firm size, and thus satisfying the fourth condition which states that, the effect of total finance/composite of financial structure on growth in earning per share is insignificant in the presence of the firm size. Firm size has an intervening effect on the relationship

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between financial structure and financial growth as measured by growth in earnings per share. However, firm size was observed to have no intervening effect on the relationship between financial structure and financial growth as measured by growth in market capitalization.

5.3 Conclusion

5.3.1 Short Term Debt

Based on the findings, the study concluded that, short term debt has a positive and significant relationship with financial growth measured using growth in earning per share. Earnings per share is considered as an important accounting indicator of risk, entity performance and corporate success. It is used to forecast potential growth in future share prices, because changes in EPS are often reflected in share price behavior. EPS is a useful investment decision tool for investors, because it indicates future prospects and growth. Short-term assets should be financed with short-term liabilities and long-term assets should be financed with long-term liabilities. Short-term financing is primarily concerned with the analysis of decisions that affect current assets and current liabilities.

It was also concluded that, short term debt has a positive and significant relationship with financial growth measured using growth in market capitalization. Growth in market capitalization is important in projecting the size of the firm because it shows the firm's value. Market capitalization is a measure of the value of the firm and stock market, which is an on-going market valuation of a public firm whose shares are publicly traded on a stock exchange computed by multiplying the number of outstanding shares held by the shareholders with the current per share market price at a given time. Short-term debt could be used as permanent source of financing if the debt is continually renewed as it matures. One reason to use short-term debt as a permanent source of financing is to take advantage of an upward sloping yield curve to reduce the firm's interest expense.

5.3.2 Long Term Debt

It was further concluded that, long term debt has a positive and significant relationship with financial growth measured using growth in earning per share. Long term debts are most preferable sources of debt financing among well-established corporate institution, mostly by virtue of their asset base and collateral is a requirement by many deposits taking financial institutions. Long term debt involves strict contractual covenants between the firm and issuers of debt which is usually associated with high agency and financial distress costs. A high long-term debt level is not conducive for the effective operations of the firm since it increases the risk of bankruptcy.

The study concluded that, long term debt has a positive and significant relationship with financial growth measured using growth in market capitalization. Scarcity of long-term finance is one of the key impediments to greater investment and financial growth of the firm. Access to appropriate instruments of long-term financing is one of the critical financial sector policy challenges facing firms. The long-term debt, preferred stock and common stock together would contribute as the total capital of the company.

5.3.3 Retained Earnings

The study concluded that retained earnings has a positive and significant relationship with financial growth measured using growth in earning per share. As an internal source, retained earnings are readily available for use. Also, retentions are cheaper than external equity, do not cause ownership dilution, and have got a positive connotation as the stakeholders perceive that, the firm has potential investment opportunities. Retained earnings are the most important sources of financing growth of a firm. The level of internal funds conveys information about growth prospects of the firm. Growing firms pay lower dividends, re-invest more of their earnings, and provide a greater percentage of their total returns in the form of capital gains.

It was also concluded that, retained earnings has a positive and significant relationship with financial growth measured using growth in market capitalization. The amount of retained earnings is an important issue to investors and other stakeholders because it is another way to evaluate the effectiveness of management to bring improvement in market value of the firm. Retained earnings is important because it has a significant effect on firm' stock prices. In making their decisions, investors mostly look for firms with high return on retained earnings that is reinvested regularly.

5.3.4 Share Capital

The study concluded that, share capital has a positive and significant relationship with financial growth measured using growth in earnings per share. Share capital is the total capital of a company divided into shares. A joint stock company should have capital in order to finance its activities. Share capital is an indication of value contributed to a firm by its shareholders at some time in the past. It was further concluded that share capital has a positive and significant relationship with financial growth measured using growth in market capitalization.

5.3.4 Firm Size

The study further concluded that, firm size has an intervening effect on financial structure and financial growth measured using growth in earnings per share. However, firm size was observed to have no intervening effect on the relationship between financial structure and financial growth measured using growth in market capitalization. Large firms have more resources and capacity to undertake more product lines and higher production capacity together with organizational resources. This enables the large firms to improve their financial performance since they can easily mitigate risks as compared to small firms.

5.4 Recommendations

Based on the findings, the study recommends that management of non-financial firms listed at the Nairobi Securities Exchange need to balance between financing options. The choice to depend upon which source of funding is most accessible for the firm. The short-term debt should be used to keep business running during times when the revenue stream temporarily is insufficient to meet operational needs. In addition, short-term financing should be aligned with a company's operational needs. For short-term financing requirements such as working capital, listed firms can borrow funds in the form of bank loans, factor receivables and commercial paper. A firm may find itself in a crisis if they are unable to renew their debt usually because of some negative news, real or otherwise. Most failures of institutions can be due to the unavailability of short-term funding.

In addition, the study recommends that firms looking for long-term financing can go for equity or preference shares and debentures. Long-term debt is not conducive to financing activities in the process of generating profits. High levels of long-term debt increase the number of interest payments that are expected to be paid regularly, thus lowering the profitability of the companies. The companies should only use long-term debts if other financing options are not available such as short-term debts. The long-term debts are the most preferable sources of debt financing among well-established corporate institutions mostly by virtue of their asset base.

The study recommends that the management of non-financial firms listed at NSE need to encourage its shareholders to re-invest back their earnings rather than consuming them as dividends. It was noted that, retained earnings significantly influences financial growth measured by growth in earning per share. Notably, retained earnings are a sacrifice made by equity shareholders. As an internal source, retained earnings are readily available for use. Also, retentions are cheaper than external equity, do not cause ownership dilution, and have got a positive connotation as the stakeholders perceive that the firm has potential investment opportunities. Since, only few firm financing options

are available, firms prefer to retain more earnings and plow it back into operations especially when they have viable investment opportunities.

The study recommends that share capital should be used as a last resort. Even though share capita has a positive effect on financial growth, it should only be preferred only when the financing option through short-term debts has reached optimal and the company lacks an alternative method to finance its activities. Equity financing should be important to any firm if the proceeds are used as a way of raising capital for major expansions, asset growth, or acquisitions which may require heavy funding. A joint stock company should have capital in order to finance its activities. Increasing a company's share capital can lead to the shares of existing shareholders becoming diluted.

Moreover, the study recommends that the firms need to increase their firm size and this can be achieved by increasing the number of branches. There is a need to increase the size by increasing various aspects of customer base, net assets, deposit liabilities and market share. Lenders and other potential investors are much more confident to lend out funds to companies that have a larger market share. Larger firms obtain benefits from their size and diversification because they can borrow with lower costs and survive economic disasters with more resilience than smaller firms and thus generate more profit. Large firms have more resources and capacity to undertake more product lines and higher production capacity together with organizational resources. This enables large firms to improve their financial growth since they can easily mitigate risks as compared to small firms.

5.5 Contribution of the Study to Theories

The study established that, the right mix of short-term debt and long-term debt significantly influences financial growth of a firm. The results contribute to the Modigliani-Miller Theorem first proposition on arbitrage-based irrelevance that, investors would engage in arbitrage to ensure that financial growth would not be affected by its leverage. The study also informs the Agency Theory which states that, a

firm has an optimal financial structure that stimulates optimum financial growth. This optimum financial structure is obtained by ensuring that, agency costs that arise from the conflict between the managers and owners of the business are reduced by having a certain proportion of debt in the financial structure. This lowering of agency conflict would lead to reduction in agency costs which would lead to improved financial growth. The use of debt in the firm can be used to control and monitor managers in the firm to ensure that, they follow objectives that are beneficial to the firm. The agency theory plays a crucial role in financing decisions because of the problems that arise between the debt holders and the shareholders.

It was also noted that, retained earnings is a significant source of financing of a firm. The results confirm the proposition by the Pecking Order Theory. The Pecking Order Theory states that, firms prioritize their sources of financing from internal financing to equity. Therefore, internal financing is used first and when it depletes, debt is issued and when it is no longer sensible to issue any more debt, equity is issued. Likewise, the study informs the Market Timing Theory proposition that, financial structure is the cumulative outcome of past attempts to time the equity market. It is important for firms to decide on whether to finance their investments on debt or equity. The firms either chooses to finance through equity or debt based on the market situation.

5.6 Areas for further Research

It is evident that, financial structure varies significantly depending on the sector in which a firm operates in. The financial structure of non-financial firms versus financial firms may differ significantly in terms of how firms' operations are financed. The financing mechanism of manufacturing firms may be significantly different from the financing mechanism of agricultural related firms. As a result of sector wise effects, there is a need to conduct a comparison study to establish the effect of financial structure on financial growth of non-financial firms versus financial firms listed at Nairobi Securities Exchange. The comparison study will tell which form of financing is appropriate for non-financial firms and which one is appropriate for financial firms.

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APPENDICES

Appendix I: List of Non-Financial Firms Listed at NSE

Agricultural

1. Eaagads Limited
2. Kakuzi Limited
3. Kapchorua Tea Co. Limited
4. The Limuru Tea Co. Limited
5. Sasini Limited
6. Williamson Tea Kenya Limited
7. Rea Vipingo Plantations Limited

Automobiles & Accessories

8. Car & General (K) Limited
9. Sameer Africa Limited

Commercial and Services

10. Atlas African Industries Limited
11. Deacons (East Africa) Plc
12. Express Kenya Limited
13. Kenya Airways Limited
14. Longhorn Publishers Limited
15. Nairobi Business Ventures Limited
16. Nation Media Group Limited
17. Standard Group Limited
18. TPS Eastern Africa Plc
19. Uchumi Supermarket Limited
20. WPP Scangroup Limited

Construction & Allied

21. ARM Cement Limited
22. Bamburi Cement Limited
23. Crown Paints Kenya Limited
24. E.A. Cables Limited
25. E.A. Portland Cement Co. Limited

Energy & Petroleum

26. KenGen Co. Limited
27. KenolKobil Limited
28. Kenya Power & Lighting Limited
29. Total Kenya Limited
30. Umeme Limited

Investment

31. Centum Investment Co. Limited
32. Home Afrika Limited
33. Kurwitu Ventures Limited
34. Olympia Capital Holdings Limited
35. Trans-Century Limited

Manufacturing & Allied

36. B.O.C Kenya Limited
37. British American Tobacco Kenya Limited
38. Carbacid Investments Limited
39. East African Breweries Limited
40. Flame Tree Group Holdings Limited
41. Kenya Orchards Limited
42. Mumias Sugar Co. Limited
43. Unga Group Limited

Telecommunication & Technology

44. Safaricom Limited

Real Estate Investment Trust

45. Stanlib Fahari I-Reit

(Source: NSE, 2017)

Appendix II: Data Collection Form

Year	Firm	Market Capitalization (Kshs. "000")	Change in Market Capitalization	EPS	Change in EPS	Short Term Debt	Long Term Debt	Retained Earning	Share Capital	Total Finance (Kshs. "000")	Total Assets (Kshs. "000")
2008	Eaagads Ltd	293,424		3.69		0.09	0.21	0.66	0.04	204,397	276,789
2009	Eaagads Ltd	289,404	(0.01)	1.47	(0.60)	0.02	0.23	0.67	0.08	258,512	260,061
2010	Eaagads Ltd	305,482	0.06	2.51	0.70	0.03	0.24	0.65	0.07	275,608	271,865
2011	Eaagads Ltd	558,711	0.83	8.92	2.56	0.04	0.21	0.50	0.06	286,762	354,922
2012	Eaagads Ltd	546,652	(0.02)	1.36	(0.85)	0.01	0.15	0.32	0.04	292,671	573,356
2013	Eaagads Ltd	820,004	0.50	(1.84)	(2.36)	0.07	0.12	0.17	0.08	220,167	40,196
2014	Eaagads Ltd	932,553	0.14	(1.30)	(0.30)	0.09	0.11	0.09	0.09	167,391	40,196
2015	Eaagads Ltd	1,037,063	0.11	0.66	(1.51)	0.11	0.03	0.11	0.09	152,524	429,934
2016	Eaagads Ltd	820,004	(0.21)	0.01	(0.98)	0.03	0.06	0.23	0.05	283,161	761,165
2017	Eaagads Ltd	707,454	(0.14)	0.56	36.96	0.01	0.07	0.22	0.04	314,148	922,802
2008	Kakuzi Ltd	450,800		10.54		0.15	0.26	0.51	0.04	2,562,576	2,662,519
2009	Kakuzi Ltd	622,300	0.38	17.34	0.65	0.11	0.21	0.58	0.03	2,667,233	2,873,255
2010	Kakuzi Ltd	1,597,400	1.57	15.99	(0.08)	0.12	0.19	0.57	0.03	2,954,807	3,218,590
2011	Kakuzi Ltd	1,362,200	(0.15)	28.06	0.75	0.09	0.19	0.61	0.03	3,483,712	3,817,320
2012	Kakuzi Ltd	1,862,000	0.37	19.35	(0.31)	0.04	0.17	0.74	0.03	3,499,489	3,571,700
2013	Kakuzi Ltd	2,450,000	0.32	8.42	(0.56)	0.04	0.18	0.73	0.03	3,634,057	3,717,543
2014	Kakuzi Ltd	2,685,200	0.10	8.17	(0.03)	0.05	0.18	0.73	0.03	3,779,973	3,857,454
2015	Kakuzi Ltd	6,213,200	1.31	23.45	1.87	0.08	0.16	0.71	0.02	4,448,243	4,555,179
2016	Kakuzi Ltd	6,056,400	(0.03)	28.70	0.22	0.08	0.16	0.71	0.02	4,931,942	5,064,414
2017	Kakuzi Ltd	6,448,400	0.06	30.19	0.05	0.11	0.14	0.71	0.02	5,592,319	5,746,126
2008	Kapchorua Tea Co. Ltd	293,400		(17.84)		0.12	0.25	0.50	0.02	874,888	982,058
2009	Kapchorua Tea Co. Ltd	266,016	(0.09)	17.87	(2.00)	0.18	0.23	0.49	0.02	1,069,201	1,167,797

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Year	Firm	Market Capitalization (Kshs. "000")	Change in Market Capitalization	EPS	Change in EPS	Short Term Debt	Long Term Debt	Retained Earning	Share Capital	Total Finance (Kshs. "000")	Total Assets (Kshs. "000")
2010	Kapchorua Tea Co. Ltd	571,152	1.15	35.60	0.99	0.28	0.18	0.47	0.01	1,407,998	1,498,931
2011	Kapchorua Tea Co. Ltd	449,880	(0.21)	47.80	0.34	0.17	0.20	0.55	0.01	1,484,251	1,570,203
2012	Kapchorua Tea Co. Ltd	473,352	0.05	19.93	(0.58)	0.23	0.19	0.47	0.01	1,774,540	1,962,897
2013	Kapchorua Tea Co. Ltd	567,240	0.20	32.21	0.62	0.19	0.20	0.53	0.01	1,910,032	2,078,475
2014	Kapchorua Tea Co. Ltd	535,944	(0.06)	(5.82)	(1.18)	0.06	0.22	0.63	0.01	1,778,258	1,929,161
2015	Kapchorua Tea Co. Ltd	508,560	(0.05)	(5.82)	-	0.06	0.22	0.60	0.01	1,758,294	1,983,239
2016	Kapchorua Tea Co. Ltd	735,456	0.45	29.95	(6.14)	0.10	0.20	0.60	0.02	1,950,399	2,144,587
2017	Kapchorua Tea Co. Ltd	618,096	(0.16)	(6.62)	(1.22)	0.11	0.19	0.59	0.02	1,850,511	2,030,309
2008	The Limuru Tea Co. Ltd	183,000		14.11		0.18	0.20	0.31	0.21	51,775	57,775
2009	The Limuru Tea Co. Ltd	366,000	1.00	22.47	0.59	0.20	0.14	0.27	0.28	75,794	84,794
2010	The Limuru Tea Co. Ltd	360,000	(0.02)	62.37	1.78	0.07	0.09	0.55	0.15	135,844	158,305
2011	The Limuru Tea Co. Ltd	402,000	0.12	33.74	(0.46)	0.03	0.08	0.61	0.13	162,047	191,242
2012	The Limuru Tea Co. Ltd	3,456,770	7.60	12.67	(0.62)	0.03	0.21	0.65	0.07	311,023	320,023
2013	The Limuru Tea Co. Ltd	8,039,000	1.33	1.77	(0.86)	0.02	0.22	0.67	0.07	330,715	339,715
2014	The Limuru Tea Co. Ltd	12,396,138	0.54	(0.02)	(1.01)	0.05	0.21	0.67	0.07	337,400	338,600
2015	The Limuru Tea Co. Ltd	17,444,630	0.41	0.45	(22.78)	0.09	0.18	0.65	0.08	311,368	313,768
2016	The Limuru Tea Co. Ltd	8,521,340	(0.51)	(1.19)	(3.65)	0.10	0.17	0.64	0.09	282,193	282,193
2017	The Limuru Tea Co. Ltd	1,200,000	(0.86)	(9.22)	6.77	0.15	0.13	0.63	0.09	262,009	262,009
2008	Sasini Ltd	1,767,426		2.31		0.05	0.25	0.57	0.03	6,194,765	6,796,306
2009	Sasini Ltd	1,379,733	(0.22)	3.84	0.66	0.05	0.24	0.58	0.03	7,238,249	8,000,268
2010	Sasini Ltd	3,033,132	1.20	4.30	0.12	0.06	0.23	0.57	0.03	7,939,818	9,060,061
2011	Sasini Ltd	2,748,063	(0.09)	1.97	(0.54)	0.06	0.22	0.54	0.02	8,045,045	9,462,027
2012	Sasini Ltd	2,497,202	(0.09)	(0.54)	(1.28)	0.07	0.21	0.54	0.03	7,550,026	8,922,980
2013	Sasini Ltd	3,033,132	0.21	0.40	(1.74)	0.08	0.21	0.52	0.03	7,645,326	9,054,366

Year	Firm	Market Capitalization (Kshs. "000")	Change in Market Capitalization	EPS	Change in EPS	Short Term Debt	Long Term Debt	Retained Earning	Share Capital	Total Finance (Kshs. "000")	Total Assets (Kshs. "000")
2014	Sasini Ltd	3,204,173	0.06	0.20	(0.50)	0.04	0.15	0.68	0.02	13,260,113	14,929,577
2015	Sasini Ltd	3,728,699	0.16	4.83	23.24	0.03	0.13	0.67	0.01	13,453,182	16,044,527
2016	Sasini Ltd	4,116,393	0.10	2.53	(0.48)	0.04	0.09	0.60	0.02	9,853,822	13,106,139
2017	Sasini Ltd	6,043,458	0.47	1.49	(0.41)	0.05	0.09	0.60	0.02	10,020,137	13,196,025
2008	Williamson Tea Kenya Ltd	503,488		(11.14)		0.08	0.22	0.58	0.01	3,174,187	3,580,325
2009	Williamson Tea Kenya Ltd	411,547	(0.18)	12.55	(2.13)	0.12	0.20	0.56	0.01	3,546,208	3,921,165
2010	Williamson Tea Kenya Ltd	1,935,147	3.70	100.05	6.97	0.03	0.17	0.57	0.01	4,148,019	5,328,706
2011	Williamson Tea Kenya Ltd	1,619,919	(0.16)	(46.74)	(1.47)	0.11	0.18	0.64	0.01	5,658,628	6,032,743
2012	Williamson Tea Kenya Ltd	2,013,954	0.24	97.61	(3.09)	0.14	0.18	0.57	0.01	6,490,874	7,243,227
2013	Williamson Tea Kenya Ltd	1,996,441	(0.01)	97.72	0.00	0.09	0.18	0.62	0.01	7,195,846	8,023,834
2014	Williamson Tea Kenya Ltd	2,539,333	0.27	84.59	(0.13)	0.04	0.19	0.67	0.01	7,684,274	8,539,200
2015	Williamson Tea Kenya Ltd	2,513,064	(0.01)	(26.00)	(1.31)	0.04	0.19	0.64	0.01	7,537,857	8,558,558
2016	Williamson Tea Kenya Ltd	3,222,326	0.28	42.15	(2.62)	0.08	0.17	0.63	0.01	7,927,362	8,931,395
2017	Williamson Tea Kenya Ltd	3,204,813	(0.01)	(13.73)	(1.33)	0.10	0.17	0.61	0.01	7,467,514	8,364,127
2008	Rea Vipingo Plantations Ltd	1,020,000		2.80		0.34	0.12	0.33	0.18	1,601,617	1,631,964
2009	Rea Vipingo Plantations Ltd	666,000	(0.35)	2.48	(0.11)	0.16	0.15	0.48	0.21	1,420,402	1,414,084
2010	Rea Vipingo Plantations Ltd	1,074,000	0.61	1.12	(0.55)	0.26	0.16	0.42	0.18	1,737,040	1,707,016
2011	Rea Vipingo Plantations Ltd	885,000	(0.18)	7.79	5.94	0.19	0.13	0.50	0.13	2,158,199	2,288,740
2012	Rea Vipingo Plantations Ltd	1,020,000	0.15	6.34	(0.19)	0.11	0.17	0.61	0.13	2,407,225	2,376,618
2013	Rea Vipingo Plantations Ltd	960,000	(0.06)	7.37	0.16	0.08	0.17	0.65	0.11	2,830,778	2,797,430
2014	Rea Vipingo Plantations Ltd	840,000	(0.13)	5.85	(0.21)	0.06	0.16	0.69	0.09	3,244,010	3,203,131
2015	Rea Vipingo Plantations Ltd	840,000	-	24.44	3.18	0.07	0.15	0.74	0.06	5,009,131	4,881,218
2016	Rea Vipingo Plantations Ltd	780,000	(0.07)	28.06	0.15	0.04	0.14	0.79	0.06	4,954,183	4,782,097
2017	Rea Vipingo Plantations Ltd	840,000	0.08	15.60	(0.44)	0.04	0.17	0.76	0.07	4,793,856	4,609,500

Year	Firm	Market Capitalization (Kshs. "000")	Change in Market Capitalization	EPS	Change in EPS	Short Term Debt	Long Term Debt	Retained Earning	Share Capital	Total Finance (Kshs. "000")	Total Assets (Kshs. "000")
2008	Car & General (K) Ltd	969,163		9.50		0.51	0.08	0.30	0.04	2,563,142	2,750,520
2009	Car & General (K) Ltd	779,787	(0.20)	8.85	(0.07)	0.52	0.07	0.32	0.03	3,028,737	3,210,498
2010	Car & General (K) Ltd	1,047,142	0.34	10.68	0.21	0.53	0.07	0.32	0.03	3,676,022	3,880,055
2011	Car & General (K) Ltd	760,292	(0.27)	7.79	(0.27)	0.56	0.10	0.26	0.03	5,239,638	5,562,239
2012	Car & General (K) Ltd	802,066	0.05	7.48	(0.04)	0.51	0.11	0.29	0.03	5,395,749	5,705,400
2013	Car & General (K) Ltd	1,002,583	0.25	8.83	0.18	0.55	0.09	0.28	0.02	6,513,014	6,901,430
2014	Car & General (K) Ltd	2,165,579	1.16	6.57	(0.26)	0.51	0.14	0.26	0.02	7,680,153	8,152,812
2015	Car & General (K) Ltd	1,604,132	(0.26)	0.76	(0.88)	0.56	0.11	0.24	0.02	8,341,482	8,988,047
2016	Car & General (K) Ltd	1,162,996	(0.28)	2.22	1.91	0.58	0.09	0.23	0.02	8,938,421	9,705,198
2017	Car & General (K) Ltd	862,221	(0.26)	1.71	(0.23)	0.51	0.13	0.25	0.02	8,591,849	9,400,007
2008	Sameer Africa Ltd	1,419,546		0.54		0.26	0.04	0.25	0.45	3,110,158	3,076,148
2009	Sameer Africa Ltd	2,073,651	0.46	0.57	0.05	0.20	0.04	0.26	0.46	2,909,982	3,005,374
2010	Sameer Africa Ltd	1,141,204	(0.45)	0.21	(0.64)	0.19	0.04	0.30	0.49	2,922,485	2,845,307
2011	Sameer Africa Ltd	1224707	0.07	0.35	0.69	0.24	0.04	0.29	0.45	3,161,852	3,125,040
2012	Sameer Africa Ltd	1,182,955	(0.03)	0.68	0.96	0.28	0.04	0.30	0.41	3,479,697	3,399,651
2013	Sameer Africa Ltd	1,433,463	0.21	1.44	1.11	0.23	0.04	0.36	0.38	3,705,469	3,668,487
2014	Sameer Africa Ltd	1,670,054	0.17	(0.32)	(1.22)	0.30	0.05	0.32	0.36	3,965,367	3,857,392
2015	Sameer Africa Ltd	1,043,784	(0.38)	(0.06)	(0.82)	0.33	0.00	0.33	0.37	3,898,942	3,751,225
2016	Sameer Africa Ltd	779,359	(0.25)	(2.34)	40.66	0.44	0.00	0.18	0.42	3,445,407	3,290,867
2017	Sameer Africa Ltd	779,359	-	0.05	(1.02)	0.37	0.01	0.21	0.47	3,134,777	2,969,868
2008	Express Kenya Ltd	460,252		(1.22)		0.39	0.29	0.08	0.13	1,166,643	1,320,624
2009	Express Kenya Ltd	285,002	(0.38)	0.43	(1.35)	0.38	0.30	0.08	0.14	1,177,221	1,304,116
2010	Express Kenya Ltd	276,151	(0.03)	(0.79)	(2.86)	0.42	0.30	0.07	0.13	1,228,149	1,341,699
2011	Express Kenya Ltd	138,076	(0.50)	(6.38)	7.04	0.53	0.26	(0.02)	0.23	771,579	766,798

Year	Firm	Market Capitalization (Kshs. "000")	Change in Market Capitalization	EPS	Change in EPS	Short Term Debt	Long Term Debt	Retained Earning	Share Capital	Total Finance (Kshs. "000")	Total Assets (Kshs. "000")
2012	Express Kenya Ltd	123,914	(0.10)	0.37	(1.06)	0.33	0.27	0.02	0.36	485,108	495,609
2013	Express Kenya Ltd	138,076	0.11	0.01	(0.98)	0.34	0.25	0.02	0.37	470,024	480,525
2014	Express Kenya Ltd	230,126	0.67	(2.32)	(275.77)	0.26	0.36	(0.02)	0.37	467,421	477,922
2015	Express Kenya Ltd	159,318	(0.31)	(1.70)	(0.27)	0.22	0.51	0.45	0.40	698,723	441,898
2016	Express Kenya Ltd	159,318	-	(2.74)	0.61	0.30	0.64	0.76	0.47	820,410	379,576
2017	Express Kenya Ltd	132,765	(0.17)	(2.55)	(0.07)	0.45	0.74	(1.02)	0.49	236,644	358,932
2008	Kenya Airways Ltd	24,003,980		8.38		0.18	0.48	0.27	0.03	74,524,075	77,838,000
2009	Kenya Airways Ltd	9,116,896	(0.62)	(8.85)	(2.06)	0.28	0.49	0.21	0.03	76,132,075	74,931,000
2010	Kenya Airways Ltd	27,696,900	2.04	4.41	(1.50)	0.28	0.45	0.23	0.03	72,751,075	73,263,000
2011	Kenya Airways Ltd	14,887,084	(0.46)	7.66	0.74	0.28	0.42	0.26	0.03	77,997,075	78,743,000
2012	Kenya Airways Ltd	6,439,529	(0.57)	3.60	(0.53)	0.31	0.40	0.26	0.03	76,997,075	77,432,000
2013	Kenya Airways Ltd	18,705,863	1.90	(5.26)	(2.46)	0.41	0.33	0.24	0.06	127,790,345	122,670,000
2014	Kenya Airways Ltd	21,549,154	0.15	(2.26)	(0.57)	0.43	0.38	(0.07)	0.05	117,840,345	148,657,000
2015	Kenya Airways Ltd	12,271,046	(0.43)	(17.20)	6.61	0.45	0.58	(0.09)	0.04	179,832,345	182,063,000
2016	Kenya Airways Ltd	6,734,111	(0.45)	(17.52)	0.02	0.47	0.76	(0.27)	0.05	156,331,345	155,685,000
2017	Kenya Airways Ltd	8,978,814	0.33	(6.82)	(0.61)	0.49	0.82	(0.35)	0.05	146,670,345	146,144,000
2008	Nation Media Group Ltd	10,267,920		18.18		0.32	0.03	0.49	0.05	6,080,500	6,722,600
2009	Nation Media Group Ltd	16,826,800	0.64	7.85	(0.57)	0.27	0.01	0.55	0.05	5,852,500	6,572,400
2010	Nation Media Group Ltd	26,239,040	0.56	9.79	0.25	0.32	-	0.49	0.05	6,862,300	7,975,200
2011	Nation Media Group Ltd	21,996,800	(0.16)	7.66	(0.22)	0.29	0.02	0.53	0.04	7,716,900	8,816,300
2012	Nation Media Group Ltd	41,322,560	0.88	15.98	1.09	0.30	0.01	0.52	0.04	9,309,800	10,677,400
2013	Nation Media Group Ltd	49,335,680	0.19	16.09	0.01	0.27	0.01	0.54	0.04	9,835,900	11,444,200
2014	Nation Media Group Ltd	49,591,280	0.01	13.07	(0.19)	0.26	0.00	0.57	0.04	10,413,000	11,944,300
2015	Nation Media Group Ltd	36,014,960	(0.27)	11.79	(0.10)	0.28	0.01	0.56	0.04	11,290,600	12,696,700

Year	Firm	Market Capitalization (Kshs. "000")	Change in Market Capitalization	EPS	Change in EPS	Short Term Debt	Long Term Debt	Retained Earning	Share Capital	Total Finance (Kshs. "000")	Total Assets (Kshs. "000")
2016	Nation Media Group Ltd	17,536,080	(0.51)	8.94	(0.24)	0.28	0.00	0.57	0.04	10,825,500	12,174,100
2017	Nation Media Group Ltd	21,872,960	0.25	6.92	(0.23)	0.28	0.00	0.56	0.04	9,927,700	11,320,300
2008	Standard Group Ltd	36,63,750		3.91		0.32	0.31	0.14	0.14	2,418,294	2,686,213
2009	Standard Group Ltd	2,784,450	(0.24)	3.59	(0.08)	0.28	0.30	0.20	0.12	2,710,573	3,003,966
2010	Standard Group Ltd	3,369,685	0.21	3.78	0.05	0.31	0.22	0.25	0.11	2,954,779	3,306,000
2011	Standard Group Ltd	1,855,613	(0.45)	1.99	(0.47)	0.34	0.19	0.28	0.11	3,225,660	3,512,257
2012	Standard Group Ltd	1,781,733	(0.04)	2.24	0.13	0.32	0.16	0.33	0.12	3,239,375	3,501,548
2013	Standard Group Ltd	2,125,002	0.19	2.32	0.03	0.34	0.17	0.33	0.10	3,882,508	4,136,762
2014	Standard Group Ltd	2,840,147	0.34	2.70	0.16	0.32	0.19	0.36	0.11	3,535,928	3,575,410
2015	Standard Group Ltd	2,288,464	(0.19)	(3.54)	(2.31)	0.43	0.18	0.27	0.11	3,833,010	3,872,492
2016	Standard Group Ltd	1,348,559	(0.41)	2.43	(1.69)	0.39	0.14	0.32	0.09	4,165,505	4,404,931
2017	Standard Group Ltd	3,024,042	1.24	(2.58)	(2.06)	0.50	0.09	0.26	0.09	4,160,957	4,459,637
2008	TPS Eastern Africa Plc	5,557,913		2.10		0.16	0.27	0.17	0.02	3,961,078	6,506,996
2009	TPS Eastern Africa Plc	4,763,925	(0.14)	3.60	0.71	0.14	0.28	0.20	0.02	4,410,480	6,996,196
2010	TPS Eastern Africa Plc	10,152,454	1.13	3.48	(0.03)	0.14	0.23	0.14	0.01	6,292,742	11,923,137
2011	TPS Eastern Africa Plc	8,151,605	(0.20)	4.16	0.19	0.12	0.26	0.17	0.01	7,495,978	13,131,840
2012	TPS Eastern Africa Plc	5,928,440	(0.27)	3.33	(0.20)	0.15	0.24	0.20	0.01	8,089,014	13,484,076
2013	TPS Eastern Africa Plc	8,288,917	0.40	2.48	(0.26)	0.16	0.18	0.16	0.01	8,337,260	16,136,097
2014	TPS Eastern Africa Plc	6,558,264	(0.21)	0.91	(0.63)	0.17	0.17	0.16	0.01	8,312,817	15,939,177
2015	TPS Eastern Africa Plc	4,554,350	(0.31)	(1.54)	(2.69)	0.14	0.25	0.15	0.01	8,622,057	15,815,800
2016	TPS Eastern Africa Plc	3,734,567	(0.18)	0.65	(1.42)	0.12	0.32	0.14	0.01	9,965,790	16,983,115
2017	TPS Eastern Africa Plc	5,920,655	0.59	0.66	0.00	0.14	0.34	0.13	0.01	10,819,619	17,486,823
2008	Uchumi Supermarket Ltd	2,610,000		0.53		0.90	0.73	(1.20)	0.56	1,608,031	1,608,031
2009	Uchumi Supermarket Ltd	2,610,000	-	2.34	3.42	0.74	0.34	(0.44)	0.37	2,440,418	2,440,418

Year	Firm	Market Capitalization (Kshs. "000")	Change in Market Capitalization	EPS	Change in EPS	Short Term Debt	Long Term Debt	Retained Earning	Share Capital	Total Finance (Kshs. "000")	Total Assets (Kshs. "000")
2010	Uchumi Supermarket Ltd	2,610,000	-	4.81	1.06	0.41	0.10	0.20	0.29	3,153,511	3,153,511
2011	Uchumi Supermarket Ltd	3,025,863	0.16	1.47	(0.69)	0.39	0.05	0.24	0.33	4,004,720	4,004,720
2012	Uchumi Supermarket Ltd	4,788,296	0.58	1.03	(0.30)	0.45	0.02	0.27	0.27	4,941,888	4,941,888
2013	Uchumi Supermarket Ltd	4,759,099	(0.01)	1.35	0.30	0.44	0.04	0.29	0.24	5,573,533	5,573,533
2014	Uchumi Supermarket Ltd	3,384,189	(0.29)	1.45	0.08	0.49	0.03	0.29	0.19	6,884,853	6,884,853
2015	Uchumi Supermarket Ltd	3,266,406	(0.03)	(9.37)	(7.47)	0.81	0.08	(0.17)	0.28	6,412,996	6,412,996
2016	Uchumi Supermarket Ltd	1,058,389	(0.68)	(7.77)	(0.17)	1.29	0.13	(0.78)	0.36	5,002,216	5,002,216
2017	Uchumi Supermarket Ltd	437,954	(0.59)	(4.61)	(0.41)	1.55	0.23	(1.20)	0.42	4,327,281	4,327,281
2008	WPP Scangroup Ltd	5,903,458		1.43		0.45	0.00	0.14	0.06	2,432,981	3,773,957
2009	WPP Scangroup Ltd	5,627,595	(0.05)	1.82	0.27	0.40	0.00	0.20	0.06	2,568,135	3,933,148
2010	WPP Scangroup Ltd	14,426,055	1.56	2.47	0.36	0.53	0.02	0.16	0.03	5,914,957	8,009,431
2011	WPP Scangroup Ltd	11,818,744	(0.18)	2.55	0.03	0.45	0.04	0.21	0.03	6,227,417	8,489,938
2012	WPP Scangroup Ltd	19,508,047	0.65	2.21	(0.13)	0.38	0.04	0.27	0.03	5,983,430	8,361,646
2013	WPP Scangroup Ltd	18,280,236	(0.06)	2.09	(0.05)	0.34	0.03	(0.04)	0.03	4,596,868	12,949,665
2014	WPP Scangroup Ltd	17,333,074	(0.05)	1.50	(0.28)	0.33	0.02	(0.01)	0.03	4,972,793	13,284,104
2015	WPP Scangroup Ltd	11,365,950	(0.34)	1.12	(0.25)	0.30	0.01	0.01	0.03	4,329,682	12,468,479
2016	WPP Scangroup Ltd	6,876,400	(0.40)	1.12	(0.00)	0.35	0.00	0.02	0.03	5,376,774	13,486,398
2017	WPP Scangroup Ltd	7,198,435	0.05	1.20	0.07	0.35	0.00	0.04	0.03	5,680,749	13,758,912
2008	ARM Cement Ltd	8,964,478		5.08		0.29	0.37	0.21	0.08	6,083,185	6,352,478
2009	ARM Cement Ltd	10,995,105	0.23	6.52	0.28	0.28	0.38	0.28	0.04	11,925,895	12,141,091
2010	ARM Cement Ltd	18,127,065	0.65	10.86	0.67	0.19	0.51	0.25	0.03	16,281,438	16,564,894
2011	ARM Cement Ltd	15,650,690	(0.14)	11.61	0.07	0.22	0.49	0.25	0.02	20,110,044	20,515,940
2012	ARM Cement Ltd	22,039,738	0.41	2.52	(0.78)	0.24	0.49	0.23	0.02	26,544,324	26,953,100
2013	ARM Cement Ltd	44,574,750	1.02	2.72	0.08	0.24	0.48	0.25	0.02	29,303,535	29,705,254

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Year	Firm	Market Capitalization (Kshs. "000")	Change in Market Capitalization	EPS	Change in EPS	Short Term Debt	Long Term Debt	Retained Earning	Share Capital	Total Finance (Kshs. "000")	Total Assets (Kshs. "000")
2014	ARM Cement Ltd	40,860,188	(0.08)	3.02	0.11	0.20	0.27	0.23	0.01	26,608,058	36,912,580
2015	ARM Cement Ltd	20,677,731	(0.49)	(5.84)	(2.94)	0.39	0.29	0.31	0.01	51,682,958	51,936,664
2016	ARM Cement Ltd	21,647,970	0.05	(3.30)	(0.43)	0.28	0.18	0.25	0.02	36,942,947	51,058,802
2017	ARM Cement Ltd	12,479,220	(0.42)	(6.83)	1.07	0.40	0.11	0.14	0.02	28,890,297	42,699,067
2008	Bamburi Cement Ltd	59,888,235		8.78		0.20	0.23	0.36	0.07	22,744,000	26,396,000
2009	Bamburi Cement Ltd	56,621,604	(0.05)	18.32	1.09	0.19	0.24	0.57	0.07	27,662,000	25,686,000
2010	Bamburi Cement Ltd	67,873,333	0.20	14.02	(0.23)	0.22	0.13	0.48	0.05	29,426,000	33,306,000
2011	Bamburi Cement Ltd	45,369,875	(0.33)	14.45	0.03	0.15	0.13	0.54	0.05	29,126,000	33,502,000
2012	Bamburi Cement Ltd	67,147,415	0.48	12.17	(0.16)	0.16	0.12	0.44	0.04	32,867,000	43,038,000
2013	Bamburi Cement Ltd	70,414,046	0.05	9.55	(0.21)	0.14	0.13	0.44	0.04	32,195,000	43,016,000
2014	Bamburi Cement Ltd	50,451,301	(0.28)	8.52	(0.11)	0.17	0.12	0.42	0.04	30,907,000	40,991,000
2015	Bamburi Cement Ltd	63,517,825	0.26	11.98	0.41	0.18	0.11	0.44	0.04	32,487,000	42,030,000
2016	Bamburi Cement Ltd	58,073,440	(0.09)	16.23	0.35	0.21	0.12	0.57	0.05	31,949,000	33,839,000
2017	Bamburi Cement Ltd	65,332,620	0.13	5.44	(0.67)	0.15	0.13	0.41	0.04	32,325,000	43,713,000
2008	Crown Paints Kenya Ltd	587,243		1.19		0.54	0.05	0.24	0.06	1,853,748	2,100,571
2009	Crown Paints Kenya Ltd	593,175	0.01	3.64	2.05	0.45	0.05	0.26	0.06	1,620,138	1,985,184
2010	Crown Paints Kenya Ltd	854,172	0.44	3.85	0.06	0.50	0.04	0.26	0.06	1,703,616	1,972,337
2011	Crown Paints Kenya Ltd	486,404	(0.43)	5.44	0.41	0.48	0.04	0.24	0.05	1,802,419	2,215,352
2012	Crown Paints Kenya Ltd	1,008,398	1.07	5.63	0.04	0.46	0.02	0.37	0.05	2,040,347	2,258,263
2013	Crown Paints Kenya Ltd	1,779,525	0.76	9.01	0.60	0.53	0.01	0.35	0.04	2,739,200	2,945,434
2014	Crown Paints Kenya Ltd	2,633,697	0.48	0.83	(0.91)	2.54	0.00	1.05	0.12	3,661,116	986,171
2015	Crown Paints Kenya Ltd	4,342,041	0.65	0.43	(0.48)	2.39	0.17	0.65	0.29	4,357,846	1,245,641
2016	Crown Paints Kenya Ltd	2,989,602	(0.31)	1.85	3.29	0.64	0.05	0.18	0.07	4,759,688	5,059,029
2017	Crown Paints Kenya Ltd	5,694,480	0.90	3.14	0.69	0.65	0.05	0.19	0.06	5,594,374	5,871,607

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2008	E.A. Cables Ltd	5,315,625		2.29		0.39	0.16	0.31	0.03	2,736,581	3,043,593
2009	E.A. Cables Ltd	4,100,625	(0.23)	1.46	(0.36)	0.35	0.18	0.27	0.03	2,946,744	3,543,383
2010	E.A. Cables Ltd	3,290,625	(0.20)	0.91	(0.38)	0.31	0.19	0.21	0.02	3,336,277	4,518,445
2011	E.A. Cables Ltd	2,670,479	(0.19)	1.24	0.37	0.42	0.13	0.35	0.03	4,617,346	4,993,032
2012	E.A. Cables Ltd	2,961,574	0.11	2.08	0.67	0.41	0.13	0.21	0.02	4,738,760	6,248,642
2013	E.A. Cables Ltd	4,239,861	0.43	1.57	(0.24)	0.40	0.15	0.20	0.02	5,251,164	6,809,265
2014	E.A. Cables Ltd	4,100,641	(0.03)	2.66	0.69	0.42	0.19	0.18	0.02	6,322,189	7,889,496
2015	E.A. Cables Ltd	2,683,136	(0.35)	(2.93)	(2.10)	0.38	0.25	0.08	0.02	6,072,143	8,384,143
2016	E.A. Cables Ltd	1,414,974	(0.47)	(2.30)	(0.21)	0.44	0.22	0.03	0.02	5,375,259	7,548,406
2017	E.A. Cables Ltd	1,379,537	(0.03)	(2.62)	0.14	0.56	0.17	(0.04)	0.02	4,976,543	7,038,421
2008	E.A. Portland Cement Co. Ltd	7,155,000		5.96		0.13	0.43	0.20	0.05	7,332,052	9,073,345
2009	E.A. Portland Cement Co. Ltd	7,200,000	0.01	20.38	2.42	0.13	0.37	0.30	0.04	9,995,120	12,053,977
2010	E.A. Portland Cement Co. Ltd	7,200,000	-	(3.25)	(1.16)	0.15	0.37	0.28	0.04	10,127,805	12,037,565
2011	E.A. Portland Cement Co. Ltd	7,200,000	-	6.24	(2.92)	0.16	0.42	0.25	0.03	11,640,824	13,530,871
2012	E.A. Portland Cement Co. Ltd	5,400,000	(0.25)	(10.81)	(2.73)	0.16	0.50	0.18	0.03	12,229,764	14,091,006
2013	E.A. Portland Cement Co. Ltd	5,175,000	(0.04)	19.73	(2.83)	0.21	0.79	0.25	0.03	20,675,061	16,133,703
2014	E.A. Portland Cement Co. Ltd	7,200,000	0.39	(4.30)	(1.22)	0.22	0.78	0.24	0.03	19,889,210	15,717,257
2015	E.A. Portland Cement Co. Ltd	5,175,000	(0.28)	79.52	(19.51)	0.16	0.24	0.48	0.02	20,777,091	23,112,582
2016	E.A. Portland Cement Co. Ltd	3,217,500	(0.38)	50.63	(0.36)	0.18	0.18	0.55	0.02	25,716,119	27,842,120
2017	E.A. Portland Cement Co. Ltd	2,880,000	(0.10)	(16.35)	(1.32)	0.07	0.16	0.52	0.02	20,761,905	27,357,388
2008	KenGen Co. Ltd	53,859,856		2.68		0.07	0.29	0.21	0.05	67,285,230	106,993,551
2009	KenGen Co. Ltd	31,986,159	(0.41)	0.94	(0.65)	0.05	0.36	0.23	0.05	75,422,389	108,603,879
2010	KenGen Co. Ltd	37,591,981	0.18	1.49	0.59	0.05	0.51	0.19	0.04	112,862,195	143,611,431
2011	KenGen Co. Ltd	29,787,798	(0.21)	0.95	(0.37)	0.07	0.50	0.19	0.03	127,583,780	160,993,290

Year	Firm	Market Capitalization (Kshs. "000")	Change in Market Capitalization	EPS	Change in EPS	Short Term Debt	Long Term Debt	Retained Earning	Share Capital	Total Finance (Kshs. "000")	Total Assets (Kshs. "000")
2012	KenGen Co. Ltd	18,905,909	(0.37)	1.28	0.36	0.09	0.48	0.20	0.03	131,780,869	163,144,873
2013	KenGen Co. Ltd	33,305,176	0.76	2.38	0.85	0.09	0.51	0.20	0.03	157,939,396	188,673,282
2014	KenGen Co. Ltd	23,962,140	(0.28)	1.29	(0.46)	0.10	0.59	0.16	0.02	220,062,994	250,205,524
2015	KenGen Co. Ltd	20,334,843	(0.15)	5.24	3.08	0.07	0.52	0.15	0.02	257,567,422	342,519,995
2016	KenGen Co. Ltd	14,399,268	(0.29)	3.07	(0.41)	0.05	0.48	0.16	0.01	258,538,072	367,248,796
2017	KenGen Co. Ltd	14,399,268	-	4.12	0.34	0.05	0.46	0.18	0.01	269,254,429	377,196,543
2008	KenolKobil Ltd	9,713,616		5.99		0.77	0.02	0.22	0.00	21,445,588	21,111,000
2009	KenolKobil Ltd	7,358,800	(0.24)	8.80	0.47	0.77	0.02	0.22	0.00	25,327,588	25,171,000
2010	KenolKobil Ltd	14,717,610	1.00	1.30	(0.85)	0.62	0.01	0.18	0.00	24,579,366	30,372,909
2011	KenolKobil Ltd	14,644,022	(0.01)	2.22	0.71	0.71	0.03	0.16	0.00	41,541,574	45,974,304
2012	KenolKobil Ltd	19,942,362	0.36	(4.27)	(2.92)	0.78	0.03	0.03	0.00	27,171,597	32,684,166
2013	KenolKobil Ltd	13,908,141	(0.30)	0.38	(1.09)	0.74	0.03	0.05	0.00	22,799,778	28,121,673
2014	KenolKobil Ltd	12,951,497	(0.07)	0.97	1.55	0.68	0.01	0.09	0.00	18,726,001	23,915,166
2015	KenolKobil Ltd	14,128,906	0.09	1.68	0.74	0.50	0.01	0.21	0.00	12,462,662	17,377,103
2016	KenolKobil Ltd	21,929,239	0.55	1.64	(0.03)	0.58	0.01	0.22	0.00	19,728,666	24,201,705
2017	KenolKobil Ltd	20,604,654	(0.06)	1.67	0.02	0.52	0.01	0.29	0.00	19,857,954	24,099,030
2008	Kenya Power & Lighting Ltd	1,582,560		22.30		0.31	0.29	0.06	0.03	41,279,187	59,812,122
2009	Kenya Power & Lighting Ltd	1,582,560	-	40.76	0.83	0.33	0.29	0.08	0.02	50,948,954	70,648,425
2010	Kenya Power & Lighting Ltd	1,582,560	-	46.97	0.15	0.22	0.44	0.09	0.02	65,724,486	85,025,890
2011	Kenya Power & Lighting Ltd	37,294,704	22.57	2.43	(0.95)	0.25	0.42	0.10	0.04	96,224,041	119,878,993
2012	Kenya Power & Lighting Ltd	29,662,299	(0.20)	2.37	(0.03)	0.23	0.35	0.12	0.04	99,875,834	134,131,983
2013	Kenya Power & Lighting Ltd	28,296,272	(0.05)	2.23	(0.06)	0.22	0.42	0.12	0.03	139,048,789	177,157,755
2014	Kenya Power & Lighting Ltd	26,052,085	(0.08)	3.58	0.61	0.22	0.45	0.13	0.02	180,224,581	220,926,514
2015	Kenya Power & Lighting Ltd	35,809,420	0.37	3.87	0.08	0.15	0.55	0.13	0.02	231,458,351	275,493,150

Year	Firm	Market Capitalization (Kshs. "000")	Change in Market Capitalization	EPS	Change in EPS	Short Term Debt	Long Term Debt	Retained Earning	Share Capital	Total Finance (Kshs. "000")	Total Assets (Kshs. "000")
2016	Kenya Power & Lighting Ltd	19,221,950	(0.46)	3.69	(0.05)	0.17	0.61	0.12	0.02	275,520,961	297,542,180
2017	Kenya Power & Lighting Ltd	15,514,163	(0.19)	3.72	0.01	0.22	0.57	0.13	0.01	319,632,008	341,653,227
2008	Total Kenya Ltd	5,602,080		4.02		0.65	-	0.15	0.06	12,559,264	14,526,784
2009	Total Kenya Ltd	5,208,184	(0.07)	2.76	(0.31)	0.57	0.15	0.07	0.15	25,661,229	31,528,196
2010	Total Kenya Ltd	5,076,885	(0.03)	5.23	0.90	0.56	0.12	0.09	0.16	24,508,710	30,375,677
2011	Total Kenya Ltd	2,582,209	(0.49)	(0.41)	(1.08)	0.65	0.09	0.07	0.14	29,331,199	35,198,166
2012	Total Kenya Ltd	2,415,897	(0.06)	(1.15)	1.83	0.54	0.03	0.07	0.30	21,913,637	32,980,604
2013	Total Kenya Ltd	4,266,334	0.77	7.50	(7.49)	0.59	0.03	0.09	0.25	28,917,198	39,984,165
2014	Total Kenya Ltd	4,201,560	(0.02)	8.13	0.09	0.46	0.04	0.14	0.31	21,474,833	32,541,800
2015	Total Kenya Ltd	3,194,936	(0.24)	9.23	0.13	0.45	0.04	0.17	0.29	23,158,068	34,225,035
2016	Total Kenya Ltd	3,194,936	-	12.76	0.38	0.43	0.04	0.20	0.28	25,118,405	36,185,372
2017	Total Kenya Ltd	4,114,028	0.29	15.64	0.23	0.40	0.04	0.25	0.26	26,945,148	38,012,115
2008	Centum Investment Co. Ltd	13,748,796		1.58		0.01	-	0.43	0.03	3,856,358	8,145,850
2009	Centum Investment Co. Ltd	5,637,006	(0.59)	0.57	(0.64)	0.04	-	0.54	0.04	4,108,245	6,569,939
2010	Centum Investment Co. Ltd	8,579,249	0.52	1.99	2.49	0.08	-	0.28	0.03	3,302,633	8,255,971
2011	Centum Investment Co. Ltd	7,894,558	(0.08)	3.79	0.91	0.12	0.08	0.29	0.02	6,307,813	12,301,576
2012	Centum Investment Co. Ltd	8,717,290	0.10	1.79	(0.53)	0.05	0.09	0.64	0.03	9,241,750	11,567,701
2013	Centum Investment Co. Ltd	13,142,480	0.51	1.55	(0.13)	0.06	0.22	0.52	0.02	15,543,498	18,961,552
2014	Centum Investment Co. Ltd	13,308,840	0.01	4.59	1.95	0.17	0.14	0.44	0.01	22,569,272	29,597,220
2015	Centum Investment Co. Ltd	42,255,567	2.18	11.94	1.60	0.16	0.31	0.26	0.00	52,565,566	72,231,387
2016	Centum Investment Co. Ltd	42,255,567	-	2.81	(0.76)	0.08	0.36	0.36	0.00	63,373,921	78,053,536
2017	Centum Investment Co. Ltd	22,957,749	(0.46)	2.36	(0.16)	0.09	0.35	0.37	0.00	72,015,918	88,385,608
2008	Olympia Capital Holdings Ltd	400,000		0.51		0.31	0.07	0.09	0.18	709,039	1,089,380

Year	Firm	Market Capitalization (Kshs. "000")	Change in Market Capitalization	EPS	Change in EPS	Short Term Debt	Long Term Debt	Retained Earning	Share Capital	Total Finance (Kshs. "000")	Total Assets (Kshs. "000")
2009	Olympia Capital Holdings Ltd	260,000	(0.35)	(1.42)	(3.77)	0.25	0.05	0.02	0.25	444,509	787,577
2010	Olympia Capital Holdings Ltd	238,000	(0.08)	0.16	(1.11)	0.26	0.09	0.03	0.18	619,736	1,107,853
2011	Olympia Capital Holdings Ltd	202,000	(0.15)	0.88	4.42	0.32	0.17	0.03	0.17	822,634	1,200,876
2012	Olympia Capital Holdings Ltd	156,000	(0.23)	0.16	(0.82)	0.16	0.27	0.02	0.11	1,036,249	1,866,902
2013	Olympia Capital Holdings Ltd	146,000	(0.06)	0.20	0.22	0.14	0.30	0.02	0.11	1,068,041	1,897,407
2014	Olympia Capital Holdings Ltd	208,000	0.42	1.13	4.71	0.19	0.07	0.04	0.13	666,812	1,576,337
2015	Olympia Capital Holdings Ltd	250,000	0.20	(0.35)	(1.31)	0.18	0.06	0.13	0.13	761,820	1,531,409
2016	Olympia Capital Holdings Ltd	172,000	(0.31)	0.37	(2.06)	0.11	0.13	0.13	0.12	789,565	1,606,659
2017	Olympia Capital Holdings Ltd	116,000	(0.33)	0.97	1.62	0.13	0.09	0.15	0.12	783,135	1,613,368
2008	Trans-Century Ltd	4,716,432		1.31		0.27	0.35	0.25	0.02	7,150,325	8,089,074
2009	Trans-Century Ltd	5,764,528	0.22	0.35	(0.73)	0.23	0.36	0.24	0.02	7,465,892	8,733,331
2010	Trans-Century Ltd	6,675,950	0.16	1.29	2.67	0.23	0.30	0.21	0.01	8,484,185	11,236,478
2011	Trans-Century Ltd	7,465,138	0.12	1.30	0.01	0.31	0.17	0.13	0.01	13,164,121	21,742,258
2012	Trans-Century Ltd	6,437,825	(0.14)	1.66	0.28	0.27	0.18	0.14	0.01	13,016,965	21,845,754
2013	Trans-Century Ltd	7,876,063	0.22	1.06	(0.36)	0.25	0.20	0.14	0.01	14,044,875	23,840,273
2014	Trans-Century Ltd	5,409,481	(0.31)	(8.43)	(8.93)	0.27	0.14	0.07	0.01	9,400,448	19,463,658
2015	Trans-Century Ltd	2,320,752	(0.57)	(7.09)	(0.16)	0.63	0.20	(0.05)	0.01	17,396,756	21,817,981
2016	Trans-Century Ltd	7,668,859	2.30	(1.56)	(0.78)	0.60	0.20	(0.08)	0.01	13,723,196	18,911,552
2017	Trans-Century Ltd	2,251,212	(0.71)	(9.59)	5.13	0.77	0.24	(0.27)	0.01	13,907,937	18,740,964
2008	B.O.C Kenya Ltd	3,124,071		10.26		0.27	0.03	0.56	0.05	1,843,634	2,057,227
2009	B.O.C Kenya Ltd	2,928,817	(0.06)	7.98	(0.22)	0.18	0.04	0.55	0.05	1,652,087	1,988,401
2010	B.O.C Kenya Ltd	2,577,359	(0.12)	4.06	(0.49)	0.20	0.05	0.48	0.05	1,569,146	2,019,810
2011	B.O.C Kenya Ltd	1,952,545	(0.24)	7.71	0.90	0.25	0.02	0.54	0.05	1,566,198	1,816,803
2012	B.O.C Kenya Ltd	1,942,782	(0.01)	10.11	0.31	0.26	0.01	0.58	0.05	1,785,099	1,994,865

Year	Firm	Market Capitalization (Kshs. "000")	Change in Market Capitalization	EPS	Change in EPS	Short Term Debt	Long Term Debt	Retained Earning	Share Capital	Total Finance (Kshs. "000")	Total Assets (Kshs. "000")
2013	B.O.C Kenya Ltd	2,440,681	0.26	10.38	0.03	0.21	0.00	0.47	0.04	1,894,395	2,633,093
2014	B.O.C Kenya Ltd	2,440,681	-	11.76	0.13	0.24	-	0.60	0.04	2,026,397	2,300,320
2015	B.O.C Kenya Ltd	1,991,595	(0.18)	7.61	(0.35)	0.26	-	0.61	0.04	2,127,183	2,320,956
2016	B.O.C Kenya Ltd	1,601,087	(0.20)	6.47	(0.15)	0.24	-	0.65	0.04	2,079,513	2,223,838
2017	B.O.C Kenya Ltd	2,089,223	0.30	2.02	(0.69)	0.28	0.00	0.62	0.04	2,100,558	2,228,669
2008	British American Tobacco Kenya Ltd	13,100,000		17.00		0.43	0.10	0.14	0.10	7,869,771	10,307,602
2009	British American Tobacco Kenya Ltd	17,800,000	0.36	14.78	(0.13)	0.44	0.12	0.24	0.09	9,391,109	10,543,998
2010	British American Tobacco Kenya Ltd	27,000,000	0.52	17.67	0.20	0.37	0.17	0.14	0.09	8,563,116	11,121,561
2011	British American Tobacco Kenya Ltd	24,600,000	(0.09)	30.98	0.75	0.39	0.15	0.12	0.07	9,986,544	13,750,545
2012	British American Tobacco Kenya Ltd	49,300,000	1.00	32.71	0.06	0.40	0.13	0.11	0.07	10,747,496	15,176,495
2013	British American Tobacco Kenya Ltd	59,500,000	0.21	37.24	0.14	0.40	0.16	0.10	0.06	12,147,497	16,985,923
2014	British American Tobacco Kenya Ltd	90,000,000	0.51	42.55	0.14	0.39	0.16	0.10	0.05	12,907,054	18,253,510
2015	British American Tobacco Kenya Ltd	78,500,000	(0.13)	49.76	0.17	0.35	0.17	0.10	0.05	12,664,942	18,681,184
2016	British American Tobacco Kenya Ltd	90,900,000	0.16	42.34	(0.15)	0.34	0.18	0.11	0.05	12,647,647	18,499,800
2017	British American Tobacco Kenya Ltd	76,000,000	(0.16)	33.36	(0.21)	0.37	0.19	0.15	0.06	13,686,702	17,805,588
2008	Carbacid Investments Ltd	1,551,799		14.72		0.03	0.12	0.58	0.05	939,863	1,209,543
2009	Carbacid Investments Ltd	3,499,940	1.26	7.54	(0.49)	0.05	0.10	0.62	0.04	1,119,692	1,376,380
2010	Carbacid Investments Ltd	5,300,880	0.51	9.05	0.20	0.04	0.10	0.59	0.11	1,284,103	1,512,166
2011	Carbacid Investments Ltd	3,109,170	(0.41)	8.89	(0.02)	0.03	0.13	0.60	0.10	1,484,303	1,739,985
2012	Carbacid Investments Ltd	4,247,500	0.37	11.46	0.29	0.07	0.10	0.62	0.08	1,775,404	2,012,816
2013	Carbacid Investments Ltd	4,757,200	0.12	13.99	0.22	0.04	0.09	0.70	0.08	1,994,905	2,204,399

Year	Firm	Market Capitalization (Kshs. "000")	Change in Market Capitalization	EPS	Change in EPS	Short Term Debt	Long Term Debt	Retained Earning	Share Capital	Total Finance (Kshs. "000")	Total Assets (Kshs. "000")
2014	Carbacid Investments Ltd	5,063,020	0.06	14.44	0.03	0.06	0.09	0.70	0.10	2,415,378	2,533,163
2015	Carbacid Investments Ltd	4,523,623	(0.11)	1.79	(0.88)	0.08	0.08	0.71	0.09	2,865,061	2,968,727
2016	Carbacid Investments Ltd	3,771,810	(0.17)	1.02	(0.43)	0.05	0.08	0.75	0.08	2,989,123	3,081,768
2017	Carbacid Investments Ltd	3,096,452	(0.18)	1.38	0.35	0.04	0.07	0.76	0.08	3,146,899	3,306,974
2008	East African Breweries Ltd	157,364,026		9.55		0.27	0.07	0.33	0.05	23,528,863	33,254,248
2009	East African Breweries Ltd	119,406,874	(0.24)	8.71	(0.09)	0.26	0.08	0.32	0.04	25,378,395	35,832,389
2010	East African Breweries Ltd	127,314,614	0.07	9.08	0.04	0.30	0.07	0.28	0.04	26,818,269	38,420,691
2011	East African Breweries Ltd	154,200,930	0.21	11.41	0.26	0.31	0.15	0.23	0.03	35,608,121	49,712,130
2012	East African Breweries Ltd	176,342,602	0.14	14.15	0.24	0.41	0.43	0.37	0.03	67,378,003	54,584,316
2013	East African Breweries Ltd	253,047,680	0.43	8.25	(0.42)	0.45	0.40	0.35	0.03	72,482,035	58,556,053
2014	East African Breweries Ltd	228,533,686	(0.10)	8.67	0.05	0.44	0.42	0.36	0.03	77,848,582	62,865,943
2015	East African Breweries Ltd	240,395,296	0.05	12.06	0.39	0.37	0.43	0.40	0.02	82,273,175	66,939,778
2016	East African Breweries Ltd	219,835,172	(0.09)	10.14	(0.16)	0.43	0.41	0.09	0.02	61,986,385	65,683,608
2017	East African Breweries Ltd	204,810,466	(0.07)	10.77	0.06	0.33	0.49	0.11	0.02	63,594,390	66,666,312
2008	Kenya Orchards Ltd	1,286,800		0.07		0.30	0.76	(0.80)	0.77	75,984	74,020
2009	Kenya Orchards Ltd	1,351,140	0.05	(0.22)	(4.38)	0.30	0.71	(0.76)	0.73	77,595	78,704
2010	Kenya Orchards Ltd	1,338,272	(0.01)	0.04	(1.20)	0.25	0.76	(0.79)	0.77	73,514	74,491
2011	Kenya Orchards Ltd	1,428,348	0.07	0.06	0.27	0.20	0.80	(0.83)	0.81	69,519	70,372
2012	Kenya Orchards Ltd	1,312,536	(0.08)	0.02	(0.66)	0.18	0.82	(0.84)	0.83	68,191	68,936
2013	Kenya Orchards Ltd	1,261,064	(0.04)	(1.96)	(104.11)	0.17	0.80	(0.78)	0.81	69,981	70,597
2014	Kenya Orchards Ltd	1,415,480	0.12	0.19	(1.10)	0.33	1.13	(1.61)	1.14	49,655	50,202
2015	Kenya Orchards Ltd	1,286,800	(0.09)	2.25	10.97	0.21	0.71	(0.66)	0.73	78,263	78,731
2016	Kenya Orchards Ltd	1,222,460	(0.05)	0.29	(0.87)	0.26	0.63	(0.54)	0.64	88,825	89,242
2017	Kenya Orchards Ltd	1,248,196	0.02	0.45	0.52	0.34	0.52	(0.39)	0.53	107,907	108,278

Year	Firm	Market Capitalization (Kshs. "000")	Change in Market Capitalization	EPS	Change in EPS	Short Term Debt	Long Term Debt	Retained Earning	Share Capital	Total Finance (Kshs. "000")	Total Assets (Kshs. "000")
2008	Mumias Sugar Co. Ltd	19,431,000		0.79		0.24	0.12	0.29	0.22	12,325,233	14,152,576
2009	Mumias Sugar Co. Ltd	9,180,000	(0.53)	1.05	0.33	0.22	0.21	0.30	0.18	15,788,464	17,475,715
2010	Mumias Sugar Co. Ltd	19,660,500	1.14	1.03	(0.02)	0.18	0.22	0.35	0.17	16,798,264	18,334,110
2011	Mumias Sugar Co. Ltd	10,939,500	(0.44)	1.26	0.23	0.13	0.25	0.34	0.13	19,625,000	23,177,000
2012	Mumias Sugar Co. Ltd	9,333,000	(0.15)	1.32	0.04	0.21	0.22	0.34	0.11	24,049,000	27,400,000
2013	Mumias Sugar Co. Ltd	6,426,000	(0.31)	(1.09)	(1.82)	0.31	0.20	0.26	0.11	24,108,561	27,281,993
2014	Mumias Sugar Co. Ltd	4,360,500	(0.32)	(1.77)	0.63	0.45	0.10	0.19	0.13	20,491,644	23,563,086
2015	Mumias Sugar Co. Ltd	3,595,500	(0.18)	(3.04)	0.72	0.67	0.04	0.04	0.15	18,477,400	20,432,980
2016	Mumias Sugar Co. Ltd	1,912,500	(0.47)	(3.11)	0.02	0.40	0.31	(0.09)	0.11	19,955,823	26,801,136
2017	Mumias Sugar Co. Ltd	1,683,000	(0.12)	(4.43)	0.42	0.71	0.26	(0.36)	0.13	17,626,107	24,091,095
2008	Unga Group Ltd	867,501		3.67		0.32	0.05	0.19	0.07	3,005,786	4,761,528
2009	Unga Group Ltd	757,070	(0.13)	1.55	(0.58)	0.37	0.06	0.17	0.07	3,762,868	5,565,541
2010	Unga Group Ltd	927,411	0.23	1.81	0.17	0.27	0.07	0.22	0.07	3,204,105	5,064,420
2011	Unga Group Ltd	757,070	(0.18)	3.57	0.97	0.28	0.06	0.24	0.07	3,726,673	5,708,897
2012	Unga Group Ltd	953,908	0.26	2.81	(0.21)	0.31	0.07	0.24	0.06	4,357,981	6,410,259
2013	Unga Group Ltd	2,574,038	1.70	2.59	(0.08)	0.39	0.08	0.39	0.05	7,358,125	8,108,379
2014	Unga Group Ltd	3,009,353	0.17	3.65	0.41	0.27	0.12	0.44	0.05	7,086,765	8,026,578
2015	Unga Group Ltd	3,009,353	-	5.27	0.45	0.27	0.12	0.48	0.04	7,869,234	8,635,129
2016	Unga Group Ltd	3,539,302	0.18	4.32	(0.18)	0.28	0.11	0.49	0.04	8,427,787	9,199,783
2017	Unga Group Ltd	2,271,210	(0.36)	1.14	(0.73)	0.39	0.07	0.25	0.04	7,770,695	10,267,471
2008	Safaricom Ltd	144,000,000		0.35		0.41	0.11	0.60	0.03	70,516,313	61,491,762
2009	Safaricom Ltd	120,000,000	(0.17)	0.26	(0.24)	0.39	0.05	0.47	0.02	85,938,594	91,682,324
2010	Safaricom Ltd	222,000,000	0.85	0.38	0.44	0.32	0.08	0.49	0.02	94,516,892	104,120,850
2011	Safaricom Ltd	152,000,000	(0.32)	0.33	(0.13)	0.30	0.11	0.49	0.02	104,403,418	113,854,762

Year	Firm	Market Capitalization (Kshs. "000")	Change in Market Capitalization	EPS	Change in EPS	Short Term Debt	Long Term Debt	Retained Earning	Share Capital	Total Finance (Kshs. "000")	Total Assets (Kshs. "000")
2012	Safaricom Ltd	128,000,000	(0.16)	0.32	(0.04)	0.31	0.10	0.49	0.02	111,758,563	121,899,677
2013	Safaricom Ltd	240,000,000	0.88	0.44	0.39	0.28	0.09	0.50	0.02	114,606,157	128,856,157
2014	Safaricom Ltd	494,808,036	1.06	0.57	0.31	0.28	0.04	0.51	0.01	113,570,155	134,600,946
2015	Safaricom Ltd	683,115,547	0.38	0.80	0.38	0.33	0.00	0.47	0.01	129,115,712	156,957,626
2016	Safaricom Ltd	677,105,733	(0.01)	0.95	0.20	0.27	-	0.52	0.01	126,499,107	159,182,579
2017	Safaricom Ltd	721,177,704	0.07	1.21	0.27	0.34	-	0.40	0.01	120,623,491	161,686,996