

**RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND FINANCIAL  
RESERVES OF LISTED FIRMS IN KENYA**

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## DECLARATION

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



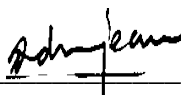
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This project has been submitted for examination with my approval as the university supervisor.



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## **DEDICATION**

First, I dedicate this thesis to God without his mercies and favours this would not have been possible.

A special thanks to my Dad, Joseph Litunya who has always been my hero and mentor since the day I started my life and my education specifically, my mother Catherine Okumu and my siblings thank you for always being there for me.

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## **LIST OF ABBREVIATIONS**

CMA	Capital Market Authority
DPR	Dividend Payout Ratio
EVA	Economic Value Added
FCF	Free Cashflows
GSL	Generalized Least Squares
NPM	Net Profit Margin
NPV	Net Present Value
NSE	Nairobi Securities Exchange
RR	Retention ratio
SPSS	Statistical package For Social Sciences

## ABSTRACT

Most companies trading on the NSE do not have sufficient cash on hand to meet their immediate liquidity needs. Furthermore, more than 60% of the capital for listed companies comes from equity. The purpose of this research was to determine whether and how capital structure affects the financial security of Kenya's publicly traded companies. Three theories of capital structure served as the basis for this study. Some of the topics were philosophies of agency, hierarchy, and compromise. This investigation adopted a correlational survey design targeting 42 listed firms in Kenya between 2017 and 2021. This study utilized secondary data collected in annual reports mined from NSE website using a data collection schedule. This study adopted use of descriptive and inferential statistics (regression and correlation) using SPSS 17. For the purpose of this investigation, diagnostic tests such as the normalcy test, the homoscedasticity test, and the multicollinearity test were carried out. This study used F-statistics for significance of the analytical model. Capital structure showed a negative significant effect on financial reserves. Capital structure showed a positive but insignificant relation with liquidity. Capital structure further showed weak negative insignificant relationship with firm size. Further, capital structure showed a weak negative but insignificant relationship with firm profitability. The study concludes that capital structure has a negative relationship with financial reserves of listed firms in Kenya. The study also concludes that liquidity, firm size and firm profitability have a positive relationship with financial reserves of listed firms in Kenya. The study recommends that listed firms in Kenya reduce their debt to asset ratios for them to increase their financial reserves. The listed firms in Kenya also need to increase their asset levels for increased financial reserves and increase their net income through reduced costs and expenses. There is need for future studies to be done on other periods other than 5 years as it is for the present research paper. This may be done on a longer period like 10 years. There is need to look at other factors influencing financial reserves of listed firms in Kenya. Future studies should adopt different measures of capital structure and financial reserves. Other studies can adopt primary data for similar study. Future studies can undertake a similar study on non-listed firms. Specific sectors of the listed firms can also be considered in future studies.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to the Study

The optimal mix of stock and debt may have a significant impact on a company's value and cash reserves, both of which are utilized to support the company's day-to-day operations. The working capital and capital asset requirements of a business must be met from the company's financial reserves. An organization's capital structure influences its profitability, thus it's important to think about every aspect of its capital investments (Obiero, 2016). In a large part, a company's achievement may be attributed to its use of liability financing. This gave corporate leaders the opportunity to proceed with caution when making budgetary commitments (Kariuki, 2018).

This analysis was grounded on free cash flow, trade off, and pecking order theory. According to free cash flow theory, management has an opportunity to increase shareholder value when FCF exceeds the whole amount of money required for investments with a profitability index (Jensen, 1986). According to the trade-off hypothesis, the main benefit of debt financing is tax savings, whereas the main disadvantages are agency<sup>2</sup> and potential bankruptcy expenditures (Kraus & Litzenberger, 1973). According to the pecking order<sup>2</sup> theory, management favors using internal funds rather than seeking external investment, and when internal funds are insufficient, financial advantage is prioritized above equity funding (Myers & Majluf, 1984).

It's common practice for publicly traded corporations to take on debt to fund daily operations and growth plans. The capital structure of a business is affected by its level of debt. Publicly traded companies are tasked with keeping their equity at a certain minimum. Capital and financial reserves are created, both of which are essential to the smooth running and eventual success of the businesses. Cash structure is of particular relevance to these companies since its expansion and maintenance demands large amounts of capital (Sifuna, 2018). Listed companies should strike a good balance between debt and equity to minimize the expenses associated with each funding option while still reaping the advantages of each. The purpose of this research is to determine whether or not there is a connection between a company's capital structure and its financial reserves for publicly traded companies in Kenya.

### **1.1.1 Capital Structure**

The capital structure of an organization describes the many ways in which funds are raised. Companies rely on the availability and quantity of such resources since they are crucial to the operation of the business and have a substantial influence on its operations. Two primary sources of support are from inside and beyond. The debt-to-equity ratio is a key indicator of the capital structure. Companies may raise money via debt and equity (Pandey, 2004).

The choice between debt and equity financing is a major financial decision for every company. In business, equity refers to the personal funds that owners put into their companies. The cost of capital may be decreased, or the valuation of a firm can be increased (the sum of all loans and all stock), when debt and equity are pooled (Pandey, 2002). Borrowing from financial institutions or issuing bonds are two examples of debt financing that carry a set interest rate. As shown by Jibrán et al. (2012), companies may reduce their taxable income by taking out loans, which encourages them to borrow more money to maximize their tax benefits and, by extension, their profits. Management should take preventative measures to lessen the impact of threats like high debt levels, which may indicate financial distress. While normal levels of debt may keep a business afloat, abnormally high debt might threaten its viability (Kuria, 2010). Maintaining operations and funding investments requires careful management of a company's financial structure. Company valuation, as proposed by Ross et al., depends on the relative proportions of stock and debt (2009).

Financial leverage is measured by the debt ratio. The ratio of a company's total debt to its total assets is one way to evaluate the firm's financial health. A low debt ratio implies that a firm relies only on short-term loans, whereas a high percentage suggests that the company relies heavily on all types of loans. Kramoli and Dobe (2020) as well as Ibhagui and Olokoyo (2018) utilize this index to represent the ownership structure of a company. Despite this metric, the debt-to-equity ratio remains the method of choice for evaluating a company's financial structure. Uzliawati et al. (2019) are only few of the studies that have employed this capital structure measure (2018). This method was favored because it focused only on the most crucial aspects of the capital structure. Equity ratio is another metric used to analyze the capital structure of a company. Several studies have used this metric, including those by Naseem et al. (2019); Hussain et al. (2021).

### **1.1.2 Financial Reserves**

Reserves are the minimum amount of money an organization should have set aside to cover emergencies (Booth & Myles, 2014). As per Hugonnier and Morellec (2017), fortifying a company's financial standing, financial reserves are a percentage of earnings put aside for that purpose. Financial reserves are defined by Grizzle, Sloan, and Kim (2015) as sums of money set aside or amounts allotted over the course of an accounting year to stockpiles that must be kept in levels deemed necessary by the administration for current assets as well as for taxation, insurance, debt repayment, and possibly other supplemental costs or expenditures related to the operator or operational processes of an enterprise. Hugonnier and Morellec (2017) definition will be used for this investigation.

Campbell (2012) contends that boosting future prosperity is the true motivation for saving money in the first place. The section of the balance sheet devoted to shareholders' equity is often where financial reserves are reported (Dinayak, 2014). A company's financial reserves are a pool of money it saves up over time (often from surplus profits) to use in the event of an emergency. These funds are kept in a separate bank account from the regular operating funds, and are reported separately in the financial statements.

There are a number of undeniable advantages for organizations that set aside cash on hand. It lessens the impact on the company's cash flow while helping it weather financial storms. The ratio of available cash to total debt is a common indicator of financial stability (Nguyen, 2019). The ratio of retained profits to capital investment is another metric used to evaluate performance (Yemi & Seriki, 2018). The ratio of retained earnings to capital will be used to analyze the adequacy of the reserve fund.

### **1.1.3 Capital Structure and Financial Reserves**

Reserve funds might be impacted by changes in capital structure<sup>2</sup>. A company should save enough of its profits to cover its expenses of maintaining its cash reserves, which should be about equal to the costs of obtaining any necessary outside funding. Companies absorb low- to medium-sized losses with cash on hand or by paying a premium for external stock so they don't have to go into default. Nonetheless, significant losses caused by the actualization of implied volatility may lead

to defaults. Significantly, the risk of insolvency increases in tandem with tail risk, debt levels, and the expense of external finance, all as financial reserves decrease. This suggests that corporations have less money on hand as the debt to equity ratio rises.

As total equity rises in relation to total debt, the debt-to-equity ratio falls, according to the first empirical theory. A study by Harford (2019) shows that companies having a lot of cash on hand are more inclined to raise their debt levels to compensate for the rise in total equity. The authors of the study by Amahalu et al. (2017) found a statistically and favorably significant correlation between financial reserves and other measures of wealth. The detrimental effect on capital structure is affected by financial reserves, as discovered by Acharya et al. (2019). That's why it's important to look at how cash reserves affect the capitalization of publicly traded companies.

#### **1.1.4 Listed Firms in Kenya**

Capital Markets Authority is the governmental agency responsible for issuing licenses and regulating the Nairobi Securities Exchange (CMA). Securities issued and traded on the NSE must be approved by the CMA before they can be listed and offered to the public (NSE, 2021). The NSE presently has 62 businesses listed, representing a wide range of sectors (NSE, 2021). Businesses in the areas of real estate investment trusts, exchange traded funds, banking, business and services, construction and related trades, energy, insurance, and investments and investment services were discussed. Agriculture, cars, banks, commerce, services, and manufacturing and allied were all included.

In recent years, poor financial reserves have been a problem for Kenya's publicly traded companies. This is a result of the growing difficulties faced by businesses in terms of their productivity. Firms have been unable to finance activities or investments that need immediate cash or financing due to low financial reserves. For public companies, difficulties have also arisen from their financing structures. Despite initially being supported by stock financing, the enterprises have raised their amounts of debt financing.

## **1.2 Research Problem**

Similar factors were proposed in prior research on financial reserves, for example, the stationary trade-off framework proposed by Miler and Orr (1966). There should be some kind of conceptual link between a company's capital structure and its cash on hand. The optimal amount of savings might be found at the point where residual costs and benefits overlap. This happens when a situation arises when the buffer reserves' value is ideal. In the absence of this, there is no target level for optimum financial reserves, since the money is used to cushion investment needs and retained profits (Ferreira & Vilela,2004). By putting money away, you boost your equity's retained profits. To put it another way, a rise in financial reserves would cause issues with the capital structure because of the effect on the overall equity. Others, however, argue that the impact of establishing a financial reserve on the capital structure would be minimal. The reasoning for this is the claim that reserves only account for a negligible portion of equity in most businesses.

NSE-listed corporations have often incurred total financial losses despite having cash reserves due to substantial debt. Listed corporations have lately suffered financial challenges due to a lack of cash reserves sufficient to cover their short-term financing needs (NSE, 2021). As the meager sums set aside for reserves attest, this is clearly the case. Determining the best financing structure has also proven difficult for many companies. NSE (2021) reports that equity accounts for more than 60% of the capital for most listed companies. Capital structure issues have arisen as a result of this, since fewer businesses are turning to debt funding. Debt has been more important as a means for firms to fund the growth of their capital structures and the improvement of their bottom lines in recent years. Debt financing allows companies to acquire financial assets, which may boost their productivity (Anyanzwa, 2015).

The correlation between capital structure and cash on hand has been the subject of several studies. Capital structures were shown to have a negative effect on enterprises' financial reserves throughout the world, as shown by Khan et al. (2019). The financial listed corporations were excluded from the research to concentrate on other types of businesses. Researchers Nguyen and Le Minh (2017) discovered a negative and statistically insignificant correlation between the form of capital and the availability of cash. Although the research focused on financial reserves, it linked such reserves to debt in addition to capital structure. Capital structure and financial reserves are

favorably and statistically associated, according to research by Amahalu et al., (2017). Some research found a favorable correlation between capital structure and financial reserves (Amahalu et al., 2017), while others found a negative correlation (Khan et al., 2019), while yet others found no correlation at all (Nguyen & Le Minh, 2017). Therefore, it is important to look at the connection between the two in publicly traded Kenyan banks.

Makworo (2018) investigated the effect of capital structure on the liquidity of Kenyan non-financial enterprises listed on stock exchanges. The research focused on liquid assets rather than just financial reserves. The research aimed to determine links between non-financial factors and all publicly traded companies. Kioko (2019), on the other hand, looked on the effect of various capital arrangements on the liquidity of NSE-listed commercial and services businesses. The research relied on the hypothesis that other publicly traded companies are commercial. The research also included on the presence of savings. Capital structure of publicly traded Kenyan firms was analyzed by Olanrewaju (2021). The research used capital structure not as an independent but as a dependent variable, and it was linked to financial output rather than capital. This demonstrates that there are inadequacies in the survey results; as a result, we must ask, how do listed companies in Kenya's capital structure and financial reserves relate to one another?

### **1.3 Research Objective**

To establish the link between the capital structures of listed companies in Kenya and their financial reserves.

### **1.4 Value of the Study**

The findings of the study benefit operators in the industrial sector who are making investment decisions by giving them a critical benchmark on the need for enterprises to identify and maintain the right capital structure necessary to grow financial reserves. One way to do this is to determine the best capital structure for each company so that they can always count on having enough cash on hand.

This study provides a rich source of background information for researchers, teachers, and students interested in conducting their own surveys on this subject. Such research is valuable to academics



because it may help them fill in research gaps and provide direction for future research in the field. It is important to detect survey gaps to make sure there is sufficient depth of information in the region compared to the number of survey studies with a limited scope.

Investors in both existing and prospective listed companies may get insight from the study results on the connection between capital structure and financial reserves. Managers of publicly traded companies in Kenya may also benefit from the research by learning how to optimize their capital structure in a way that boosts their financial security. Listed companies' capital structures and financial reserves are examined in this research, which may be useful to policymakers like the NSE and CMA. If policymakers had this knowledge, they could craft measures that helped businesses optimize their capital structure and build up their financial reserves.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

In this section, the variables influencing financial reserves and the theoretical literature examining those issues were discussed. It also included a discussion of the theoretical underpinnings, a synthesis, and examples of actual data from both domestic and foreign surveys.

#### **2.2 Theoretical Review**

Three theories of capital structure served as the basis for this study. Theories of agency, trade-offs and pecking order were involved.

##### **2.2.1 Free Cash Flows Theory**

An original free cash flow theory was created by Jensen (1986). If a business's free cash flow (FCF) is more than what the company requires for the projects with a positive net present value (NPV), then the hypothesis predicts that the company's management will have an opportunity to gain an advantage for themselves. According to Jensen, if a corporation has spare cash lying about, its management may gamble on commercial ventures with a negative net present value (NPV) in the hopes of making a profit from the company's development. Executives are incentivized by FCF to grow the company and its process scope, which increases the executive team's responsibility and the salaries of its members. We do this by putting the surplus funds into endeavors that have negative net present values. As a result, if the dividend is increased, the free cash flow (FCF) available to management is reduced, and the managers are prohibited from using the FCF to finance unproductive ventures. The major objective of directors and management is to increase the value of investors. Reducing the typical FCF might lead to lower agency costs (Jensen & Michael, 1996).

The theory has been criticized by a number of academics since it presupposes that employing leverage will improve a financial system. The theory's central tenet, that tax benefits are valued in terms of tax interests, has been called into doubt (Khoa & Thai, 2021). According to this theory, loan interest is beneficial since it is not subject to taxation. Scholars have argued that in practice, corporate power is lower than predicted by this hypothesis (Nicodano & Regis, 2019). Despite

much empirical proof to the contrary, the theory has been challenged since it predicts a positive link between profits and leverage (Fan, Sarkar & Zhang, 2019).

The concept that dividends lessen FCF current mainstream to undertake one's individual mendacious utilization and untenable efforts is supported by Donaldson's (1997) claim that executives of enterprises with FCFs have a tendency to misappropriate funds by acknowledging superfluous benefits or making untenable new investments. CEOs are more inclined to spend free cash flow (FCF) to expand the firm rather than pay dividends or repurchase shares. This topic relies heavily on free cash flow theory, which explains why business leaders are more interested in funding long-term investments and expanding existing initiatives than they are in handing out bonuses. "(Hansen, 1999).

### **2.2.2 Trade-off Theory**

According to Kraus and Litztenberger (1973), the hypothesis is used when a business is trying to find a middle ground between keeping its cash on hand at a constant level and the actual cost of the borrowing. Therefore, a company decides how much reserves to retain depending on the profits or losses that would arise from keeping such reserves at a certain level. To minimize the risks associated with bankruptcy, firms will use debt cautiously. In order to determine the optimal capital structure for a business, it is necessary to weigh the benefits of obtaining outside financing (tax shelter) against the expenses of keeping financial reserves (bankruptcy cost) and the agency costs associated with equity vs agency cost versus reserves (Jensen & Meckling, 1976).

However, several experts have criticized the trade-off argument. After debating the MM irrelevance hypothesis, Luigi and Sorin (2009) argue that the introduction of corporate taxes into trade-off theory afforded debt benefits by constituting a tax shielding, indicating a 100 percent debt financing. Business owners that have both physical assets and high profits are more likely to take out loans than their counterparts who have just the latter (Sheikh & Wang, 2011). The consequence of this hypothesis is that some of the businesses may end up pursuing undertakings that do not have positive NPV since some of the shares to be issued may potentially be mispriced and incur unfavourable selection costs. Since the sort of finance a company opts for may reduce the costs associated with perverse incentives, capital structure plays a vital role in information

asymmetries (Kemsley & Nissim). Since the capital structures of publicly traded corporations provide credence to the hypothesis's central premise that such structures might fluctuate, it is relevant to our inquiry.

### **2.2.3 Pecking Order Theory**

Organizations, according to this hypothesis, prefer to fund themselves rather than seek funding from other means (Myers and Majluf, 1984). It acknowledges that when companies' own resources are inadequate, they go to other sources for capital and inducement rather than bolstering the obligation ratio. Therefore, there isn't a single optimal combination of internal and external financing that will maximize a company's value. According to this theory, there is a preferred sequence in which a business might implement its financing strategies to achieve the most savings on their financial overhead. It says that if a firm can't get by on its own cash reserves initially, then it should look into debt financing and then then consider going public. The trade-off theory's flaw of failing to account for asymmetric information is mitigated by this idea. Since there is a disparity in the amount of information available to internal and external stakeholders, the hypothesis proposes that tensions would arise. The idea takes into account the impact of signaling in the context of asymmetric information (Kraus & Litzenberger, 1973).

The idea, like the MM hypothesis, assumes the existence of a competitive market. Management, on this view, has a duty to maximize returns for shareholders since they have superior knowledge of the company's potential (Tale, 2014). There is also an assumption of knowledge asymmetry between the parties involved. It may not be applicable to real-world situations since it ignores problems that may develop if the management of a company were to grow careless and complacent with the company's financial outcomes (Kishore, 2009). Companies that favor the pecking order concept maximize their use of internal capabilities (financial reserves) to finance projects before resorting to external sources of financing, making this hypothesis a significant consideration for this study.

## **2.3 Determinants of Financial Reserves**

### **2.3.1 Capital Structure**

The capital structure of an organization illustrates the interplay of all of its sources of account, which may be broken down into two categories: assets and liabilities. It offers a framework for how a firm funds its benefits, which might be in the form of a duty (either long-term or immediate), value (either normal or loved), or a mix of the two. An organization's capital structure serves to explain how it employs diverse asset sources to support its development and operations. This is important information for investors. The organization's ownership structure integrates its commitments and offers an amalgamation of current and noncurrent obligations, such as bank credit, convertible advances, debentures, preference and common share. Borrowers and bank overdraft are considered to be current liabilities. Furthermore, preference and common shares were associated with noncurrent liabilities (Saad, 2010). Yousef (2019) capital structure had negative performance on financial reserve levels. Khaki and Akin (2020) found a positive relationship between capital structure and financial reserves as represented by retained earnings.

### **2.3.2 Firm Liquidity**

A company's liquidity is its capacity to quickly convert its assets into cash. Strong liquidity positions a company to take advantage of high-profit investment opportunities and weather financial storms without going under. As the pecking order hypothesis proposes, firms often choose internal funding over external financing, making it easy to amass cash reserves via profit. If a company's internal resources are adaptable enough, it won't have to go on a constant chase for new sources of funding. A company's current (or quick) ratio reflects its ability to meet its immediate cash obligations. Evidence that a corporation can meet its existing commitments with the resources at its disposal. A favourable current ratio leads to high financial reserves (Mutegi, 2016). Abrar, Ghazyla and Arisandi, 2019) found that no relation existed between retained earnings and firm liquidity.

### **2.3.3 Firm Size**

Various metrics, such as revenue and number of customers or locations where the firm conducts activities (indicated by the number of branches), may be used to approximate a business's size. Companies with more resources might diversify their investment portfolios and take use of

economies of scale in order to improve revenues and decrease costs. In the long run, this is strengthening our financial cushion. There has been some debate in the statistical literature about whether or not a company's size matters when it comes to their need for a cash reserve. The negative association between company size and cash on hand was found by Mulama (2017). The effect of an unexpected financial demand is magnified for larger businesses. According to Yemi and Seriki (2018), larger corporations are better equipped to set up sizable emergency funds.

#### **2.3.4 Firm Profitability**

A company's capacity to increase profits while decreasing losses is referred to as its profit growth. The amount of money set aside for emergencies might change depending on how well the business is doing. If a business is doing well and making plenty of money, it may have more than enough cash on hand to put aside in case of need. If a company is generating a loss or just a little profit, it may be unable or unwilling to lay aside any funds for emergencies, which might result in the exhaustion of the company's financial reserves (Lee & Wang, 2021). Profitability is shown to have a positive correlation with cash on hand.

### **2.4 Empirical Review**

The empirical research relevant to capital structure and financial reserves are presented in this section. Studies on a global, regional, and local scale are included here.

#### **2.4.1 Global Studies**

According to research by Khan et al. (2019), the capital structure of non-financial companies listed on the Karachi Stock Exchange has a significant impact on their cash on hand. The research for the poll relied heavily on secondary sources. Seven years (2006–2013) are analyzed using an interpretive survey design. SPSS's cointegration test, multiple regression, correlation, and frequency distributions were used to analyze the data. The research found that capital structure has a significant negative effect on a company's cash reserves. There is a lack of background information since the focus of this inquiry was on non-financial companies listed on the Karachi Stock Exchange. As a result, all NSE-listed firms will be the primary focus of this survey.

The effect of capital structure on the financial performance of traded insurers was studied by Hakima (2017). The study used a survey format for descriptive purposes. Six insurance firms with stock on the open market made up the survey's sample. Information was gathered from listed firms' annual reports and financial statements from 2011 to 2016. When analyzing the data, we employed techniques like correlation and other types of regression modeling. Liquidity and debt ratio were significantly correlated with financial success. Profitability was only moderately connected with company size. The study's narrow focus on capital structure creates a vacuum in the literature that the current study attempts to fill.

Ho Chi Minh Stock Exchange non-financial public businesses' capital structures and financial reserves were studied by Nguyen and Le Minh (2017). Between the years of 2009 and 2014, a whole five years passed. A total of 105 companies were selected for this analysis. The study used a retrospective survey method. The inquiry has employed descriptive statistics and regression using secondary data. Borrowing was shown to have a negative association with financial reserves, whereas capital reserves were found to have a positive link with corporate value.

In 2013, Caldeira and Loncan investigated the effects of cash on the market value of a company in Brazil. There were 288 establishments in the sample, all of which were found between 2002 and 2010. The research used a descriptive methodology. Through the use of multiple regressions, the association between the explanatory variables and the determinants was graphically shown. Long-term debt was shown to have a positive link with firm value, but short-term debt, bank size, liquidity, and reserves all showed negative correlations. A conceptual void exists in the study because of its exclusive focus on cash on hand and the market value of the company. This study highlights the link between cash on hand and capital structure.

#### **2.4.2 Regional Studies**

Oketah and Ekweronu investigated the variables that influence the financial reserves of publicly listed Nigerian manufacturing companies (2020). This study used a retrospective survey method with data from the years 2010 through 2017. According to the results of the panel regression analysis, the capital structure had a negative and insignificant effect on financial reserves, the

dividend payout ratio (DPR) had a similar effect, and the net profit margin (NPM) had a similar direct effect. Reserves are mostly determined by the capital structure.

Using a data set of South African retail companies, Chireka and Fakoya (2017) looked at the variables that determine the level of corporate financial reserves. Using panel data regression, the research investigates the correlation between firm cash reserves and the identified driving variables. The study's authors uncovered evidence that the size of a company's cash reserves was significantly influenced by the capital structure, dividend payments, cash flow volatility, and availability of liquid asset alternatives.

The factors that affect corporate reserves in several African nations were investigated by Aftab, Javid, and Akhter (2018). The sample size is 5,957 organizations representing 47 countries throughout Africa, and it covers the years 2007 through 2016. Applying the Panel Generalized Method of Moments allows for the incorporation of causality into the aforementioned predictor components. The survey consists of two parts; the first of which is to run the model for all firms. As shown by the outcomes of the investigation, the size, financial power, capital investment, and free money flow of the sampled companies are significantly positively linked with corporate reserve, while working capital, profit growth, market-to-book ratio, intangible assets, dividends and are significantly negatively correlated with corporate reserves.

Financing reserves were studied by Doku, Kpekpena, and Boateng, who looked at how they affected the bottom lines of publicly listed factories and affiliated businesses in 2022. Over the course of a decade, secondary data and dynamic panel data analytic techniques were used to a sample of 9 Ghanaian state companies (2010–2019). Quantitative secondary data was collected from organizations' financial records using a document analysis guide. Tobin's Q was used to evaluate how much leeway to provide to economic growth and revenue volatility, and the focus was on financing reserves within those constraints. Methods from longitudinal surveys were used, which are most effective when dealing with panel data. As a direct consequence of this, the RR demonstrated a somewhat positive association with Tobin Q and an extremely high correlation with EVA. The regression model was also quite explicit and interesting.



### **2.4.3 Local Studies**

This study by Mulama (2017) looked at what influences retained profits in companies traded on the Nairobi Stock Exchange. Cross-sectional and longitudinal survey techniques were used to better analyze firms organized into different groups in the range of 2009 to 2012. Non-financial 14 businesses listed at the NSE were investigated to remove sector-specific disparities. Banks and other financial establishments were left out. Accounting documents produced by NSE were used as secondary sources for this investigation. Using a data collecting sheet, we were able to compile this information. The analysis based on linear regressions, with the help of SPSS software. Profitability and retained profits were shown to have a weakly positive correlation, according to the survey data. Retained profits had a marginally negative relationship with both the size and growth potential of the companies, according to the research. The dividend payout ratio was shown to have a negligible relationship to stockholders' equity. Recent research has shown a robust unfavorable relationship between retained profits and leverage.

Holdings of liquid assets by Kenyan non-financial companies on public exchanges was studied by Makworo (2018), who looked at how capital structure affected this variable. The research was based on a multi-case analysis of thirty-four non-financial companies trading at NSE. This study, which employs a statistical survey technique, follows on from an interpretation-based strategy. Brief descriptive coefficients that summarize data make up the two primary forms of statistical investigations. Thirty-four businesses were selected at random for statistical study. Due to a steady decline in the cash ratio, these firms have become far more resistant to shocks to their capital structure. Companies' capital structures and cash on hand were positively correlated.

Kioko (2019) looked how capital structure is lined to liquidity of NSE-listed commercial and service enterprises. Ten non-financial firms were researched, while eleven NSE-listed commercial and service providers were the primary focus of the examination. The response rate of 91% from the 10 firms was deemed sufficient to continue with the research. Correlation analysis reveals a weak but favorable linking of DER to cash on hand. There was a moderate but positive correlation between size and liquid assets. Liquidity was inversely related to cash on hand. Another finding indicated a slight but negative correlation between cash on hand and profits.

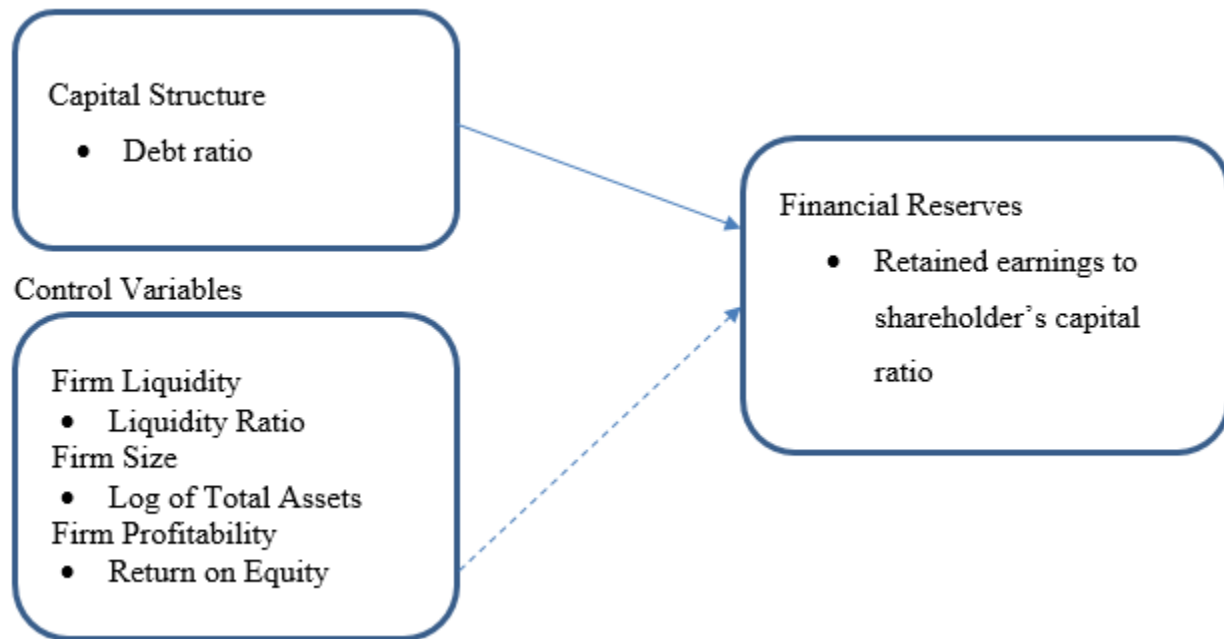
Olanrewaju (2021) looked at how the financial performance of publicly traded Kenyan industrial businesses affected their capital structure. Seven companies were included in the data set, which covers the years 2010-2016. Panel Vector Auto regression was performed and analyzed in EVIEWS 10, and Wald granger causality was used to determine if there was a possibility of causation between parameters. As measured by total debt ratio, the findings demonstrate that past performance has little to no bearing on the capital structure, however it was shown that the capital structure percentage of enterprises does affect their financial success. However, when looking at capital structure via the lens of the debt-equity ratio, it was shown that DER and ROA have a symmetrical relationship, whereas ROE has an asymmetrical relationship with DER.

## **2.5 Conceptual Framework**

Capital structure was used as a criterion variable in this study. The level of savings was the dependent factor. In this case, firm liquidity, company size, and firm profitability all had a role in determining the nature of the connection between the two. Connections between the various factors are shown in a conceptual framework (Figure 2.1).

## Independent Variable

## Dependent Variable



**Figure 4.1: Conceptual Framework**

### 2.6 Summary of Literature Review and Research Gaps

From the reviewed literature, there exists both theoretical and empirical support for capital structure and financial reserves. Theoretical literature in support of the variables is free cashflow, trade-off and pecking order theories. Empirical literature has however produced conflicting outcomes on relationship between capital structure and financial reserves. The empirical literature showed that research gaps exist in relationship between capital structure and financial reserves. The studies have related other factors to the financial reserves other than capital structure. The studies have also related capital structure to other variables like performance other than financial reserves.

The literature has also shown gaps related to their contexts. The reviewed studies have been done on other firms other than listed firms. Other studies have also used part of the listed firms in their research. This has been based on the sectors in which the firms existed. The studies have also adopted different research methodologies in their research. Some have used differing research designs, data as well as analytical techniques. This created link between the capital structure of listed corporations in Kenya and the financial reserves of such firms in order to bridge these gaps.

## **CHAPTER THREE**

### **SURVEY METHODOLOGY**

#### **3.1 Introduction**

In this chapter, the methodology of the survey that was employed will be presented. It incorporates the survey design, the population, the collecting of data, and their analyses.

#### **3.2 Research Design**

A survey strategy based on correlation was used for this study. An association between research variables was determined by using this survey methodology. The setup let the researcher determine whether and how capital structure and financial reserves are related for Kenyan listed firms.

#### **3.3 Population of the Study**

To that end, the research focused on publicly traded companies in Kenya. As of December 2021, 62 companies were listed on the Nairobi Securities Exchange (NSE), according to a report by NSE (2021). Publicly traded companies in Kenya were included in the study's time frame (2017-2021). By 2021, the NSE would have hosted 42 companies that had been founded between 2017 and 2019. All relevant businesses were included in this investigation. Due to the population being under 100 (the threshold for a sociological survey), this is the case.

#### **3.4 Data Collection**

This investigation made use of secondary data gathered in accordance with a predetermined plan (Appendix II). The data collection schedule included information on the company's retained profits, shareholder capital, net income, current liabilities, current assets, total assets, total equity and total debt. The information was compiled from the annual reports of Kenyan companies' public offerings in a period of 2017 to 2021. The NSE's yearly reports were downloaded from their website.

#### **3.5 Data Analysis**

Descriptive as well as inferential statistics were used in this investigation. Calculating a mean and standard deviation was a big part of descriptive statistics. We used inferential statistics, including regression and correlation, to draw conclusions. The capital structure and cash on hand of publicly traded Kenyan companies were correlated to determine their connection. For this study, we used

a multiple panel regression model to determine how different elements of a company's capital structure influenced the size of their cash reserves among Kenya's publicly traded companies. SPSS 17 was used for the data analysis, and its results were essential in producing the statistics.

### 3.5.1 Diagnostic Tests

The regression model was subjected to a range of tests in this investigation. This study underwent a battery of diagnostic tests, including those for normality, homoscedasticity, and multicollinearity. To ascertain whether the data are normally distributed, a normality test may be performed. The Shapiro–Wilk test confirmed these hypotheses. The assumption of normality of the data serves as the null hypothesis. For levels of significance below 5%, the alternative hypothesis must be accepted. As long as the value is larger than 5%, the null hypothesis will not be rejected.

The Breusch Pagan test was used to examine homoscedasticity and determine whether or not the error term remains stable over time. The assumption under consideration is that the error term does not vary with time (homoscedasticity). A significance level over 0.05 indicates that the null hypothesis is not rejected, whereas a significance level below 0.05 indicates that it is.

Using variance inflation factors, we tested for multicollinearity to see whether the survey's potential predictor variables were highly linked with one another (VIF). The lack of a straight line connection between all of the predictors is the null hypothesis. If the VIF is more than 2, we may confidently declare that the null hypothesis is false.

### 3.5.2 Inferential Statistics

The analytical model took the form of:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Where;

**Y** = financial reserves determined by the proportion of a company's retained profits to the total amount of shareholder capital

**$\alpha$**  = constant term

**$\beta_1$ -  $\beta_4$**  = regression coefficients

**$X_1$**  = capital structure as measured by debt-to-equity ratio

**$X_2$**  = firm liquidity as measured by liquidity ratio

- X<sub>3</sub> =firm size as measured by the log of total assets
- X<sub>4</sub> =firm profitability as measured by return on equity
- ε =other factors influencing financial reserves

### **3.5.3 Tests of Significance**

The F-test was used in this investigation to determine whether or not the analytical model has statistical significance. In cases in which the model demonstrates F-statistics having significance values about less below 5%, the model is presumed to be significant, and conclusions were based, whenever possible, on the outcomes predicted by the model.

## CHAPTER FOUR

### DATA ANALYSIS AND PRESENTATION OF FINDINGS

#### 4.1 Introduction

This chapter presents the study findings based on the objective of establishing the relationship between capital structure and financial reserves of listed firms in Kenya.

#### 4.2 Descriptive Statistics

**Table 4.1: Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Financial reserves	205	-3233.33	341.48	26.5108	260.49701
Capital structure	205	-5.80	24.27	1.1124	2.17957
Liquidity	205	.00	713.38	10.3592	69.98186
Firm size	205	4.68	14.08	9.7033	2.26093
Firm profitability	205	-577.90	304.86	5.8649	73.56213

From the descriptive statistics, outcomes showed that financial reserves showed an average value of 26.51% indicating that listed firms had 27% of their shareholder's funds in financial reserves. The reserves had a standard deviation of 260.5% indicating that the financial reserves differed greatly across the firms and period. This was brought by the substantial number of firms that had accumulated deficits in their financial reserves as shown by the minimum reserve of -3233.33%.

Capital structure showed an average debt-to-equity ratio of 1.11%. This shows that the capital structure of the listed firms had more debt than equity. The standard deviation for capital structure was 2.18% indicating high variation in the firm's capital structure.

The firms showed an average liquidity ratio of 10.36% within the period. This indicates low liquidity levels among the listed firms. The liquidity had a standard deviation of 69.98% which shows a high variation from the mean indicating that the liquidity varied highly across the firms and periods. On the other hand, firm size showed a mean average log of 9.70 indicating that the listed firms have a high asset level indicating that they are large. Firm size had a standard deviation of 2.26 indicating low variation from the mean. Firm profitability had a mean value of 5.86% with a standard deviation of 73.56%. This indicates that the listed firms made 5 shillings for every 100 shillings of equity. There was a high variation from the mean showing the profitability highly fluctuated across the period and differed across the firms.

### 4.3 Diagnostic Tests

**Table 4.2: Normality Test**

	Statistic	df	Sig.
Financial reserves	.243	205	.000
Capital structure	.518	205	.000
Liquidity	.104	205	.000
Firm size	.972	205	.000
Firm profitability	.487	205	.000

From the test for normality, the Shapiro Wilk statistics for all the variables showed significance values below 5%. The null hypothesis that the data is normal is rejected when the significance values are below 5%. The study therefore concludes that the dataset utilized for analysis in this research was not normally distributed.

**Table 4.3: Multicollinearity Test**

	Collinearity Statistics	
	Tolerance	VIF
Capital structure	.724	1.381
Liquidity	.930	1.076
Firm size	.842	1.188
Firm profitability	.659	1.518

Multicollinearity was tested using VIF. From the results, the VIF values were below 5. This indicates low variance inflations. Capital structure showed a VIF of 1.381; Liquidity of 1.076; Firm size of 1.188; and firm profitability of 1.518. Therefore, the researcher concluded that the variable data has no Multicollinearity issues.

**Table 4.4: Heteroscedasticity Test**

#### Breusch-Pagan Test for Heteroscedasticity

Chi-Square	df	Sig.
.994	1	.318

From the findings on heteroscedasticity test, the Breusch Pagan statistics of 0.994 had a significance of 0.318. The significance value is far above 5% showing that there was no issue relating to heteroscedasticity existed in the dataset. The researchers could not find evidence to



contradict the null hypothesis, which stated that the variability of the errors does not rely on the data set. Hence, there is homoscedasticity in the data.

### 4.3 Correlation Analysis

**Table 4.5: Correlations**

		Financial reserves	Capital structure	Liquidity	Firm size	Firm profitability
Financial reserves	Pearson	1				
	Correlation					
	Sig. (2-tailed)					
Capital structure	N	205				
	Pearson	-.713**	1			
	Correlation					
Liquidity	Sig. (2-tailed)	.000				
	N	205	205			
	Pearson	.023	.125	1		
Firm size	Correlation					
	Sig. (2-tailed)	.739	.074			
	N	205	205	205		
Firm profitability	Pearson	.255**	-.038	-.106	1	
	Correlation					
	Sig. (2-tailed)	.000	.593	.130		
Firm profitability	N	205	205	205	205	
	Pearson	.684**	-.085	.019	.115	1
	Correlation					
	Sig. (2-tailed)	.000	.226	.792	.101	
	N	205	205	205	205	205

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

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

Capital structure showed a significant correlation coefficient of -0.713 ( $p=0.000$ ). This showed that capital structure had a negative strong relationship with financial reserves of listed firms. It showed a positive but insignificant relation with liquidity with a correlation of 0.125 ( $p=0.074$ ). This reflects no significance in the relationship between capital structure and liquidity of the listed firms. Capital structure further showed weak negative insignificant relationship with firm size ( $r=-0.038$ ;  $p=0.593$ ). This shows that capital structure and firm size among listed firms are not significantly related. Further, capital structure showed a weak negative relationship with firm profitability ( $r=-0.085$ ;  $p=0.226$ ). This shows that capital structure and firm profitability have no significant relationship as far as the listed firms in Kenya are concerned.

On the other hand, liquidity had an insignificant correlation coefficient of 0.023 ( $p=0.739$ ). This indicated that liquidity had a weak positive but insignificant relationship with financial reserves of the listed firms. Firm size, nevertheless, had a Pearson correlation coefficient of 0.255 ( $p=0.000$ ) indicating a weak significantly positive relationship between firm size and financial reserves. Firm profitability showed a correlation of 0.684 ( $p=0.000$ ) indicating that firm profitability had a strong, significant and positive relationship with financial reserves of listed firms.

#### 4.4 Regression Analysis

**Table 4.6: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.824 <sup>a</sup>	.679	.673	1.07101

a. Predictors: (Constant), firm profitability, Liquidity, firm size, Capital structure

The model summary shows that the model had a correlation (R) of 0.824. This indicates that capital structure, liquidity, firm size and firm profitability had a strong relationship with financial reserves of listed firms in Kenya. The summary showed an r square of 0.679 indicating that capital structure, liquidity, firm size and firm profitability contributed 67.9% to the financial reserves of listed firms in Kenya.

**Table 4.7: Analysis Of Variance**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9398739.500	4	2349684.875	105.736	.000 <sup>b</sup>
	Residual	4444433.204	200	22222.166		
	Total	13843172.705	204			

a. Dependent Variable: financial reserves

b. Predictors: (Constant), firm profitability, Liquidity, firm size, Capital structure

From the analysis of variance, outcomes showed an F-statistics of 105.736, which was less than the critical value of 2.416. This shows that the regression model is best for this research as it fits the dataset. The f-statistics showed significance value of 0.000 which was far below the critical value of 0.05. Hence, capital structure, liquidity, firm size and firm profitability have a significant effect on financial reserves of listed firms in Kenya.

**Table 4.8: Regression Coefficients**

Coefficients <sup>a</sup>		Unstandardized		Standardized	t	Sig.
Model		Coefficients		Coefficients		
		B	Std. Error	Beta		
1	(Constant)	-64.845	29.287		-2.214	.028
	Capital structure	-.278	.127	-.238	-2.189	.030
	Liquidity	.400	.155	.107	2.586	.010
	Firm size	15.547	5.032	.135	3.090	.002
	Firm profitability	1.339	.175	.378	7.662	.000

a. Dependent Variable: financial reserves

From the regression coefficients, holding capital structure, liquidity, firm size and firm profitability constant, the financial reserves would stand at -64.278. A unit increase in capital structure through debt to equity ratio would cause a reduction in financial reserves by 0.278. However, a unit increase in liquidity would increase the financial reserves by 0.4. In addition, increase in assets as firm size by one unit would increase the financial reserves by 15.547 while unit increase in firm profitability would increase financial reserves by 1.339. This indicates that capital structure, liquidity, firm size and firm profitability have a significant effect on financial reserves of listed firms in Kenya.

#### 4.5 Discussion of Findings

Capital structure showed a negative significant correlation coefficient. This showed that capital structure had a negative strong relationship with financial reserves of listed firms. The findings concur with those of Khaki and Akin (2020) found a positive relationship between capital structure and financial reserves as represented by retained earnings. The findings differ with those of Yousef (2019) capital structure had negative performance on financial reserve levels. Nguyen and Le Minh (2017) found that a negative correlation across borrowing and financial reserves.

Liquidity had a positive insignificant correlation coefficient. This indicated that liquidity had a weak positive but insignificant relationship with financial reserves of the listed firms. Abrar, Ghazyla and Arisandi, (2019) found that no relation existed between retained earnings and firm liquidity. The findings differ with those of Mutegi (2016) who found that favourable current ratio leads to high financial reserves.

Firm size had a positive significant correlation coefficient indicating a positive relationship between firm size and financial reserves. The findings concur with the findings of Yemi and Seriki (2018) who found that large firms experienced high levels of financial reserves. Based on their research, Mulama (2017) found that companies of all sizes had a weak link with financial reserves.

Firm profitability showed a positive significant correlation indicating that firm profitability had a strong, significant and positive relationship with financial reserves of listed firms. The findings are similar to those of Dewi and Fachrurrozie (2021) who found a positive relation between firm profitability and financial reserves. If a company is just breaking even or really losing money, it may be unable to afford to put aside any funds as reserves, which might lead to a catastrophic drain on the company's financial resources in the event of an emergency (Lee & Wang, 2021).

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter gives an overview of the results in accordance with the study objectives. The conclusion and recommendation were also indicated in the research. The limitations and areas for future studies closed the chapter.

#### **5.2 Summary of Findings**

From the descriptive statistics, outcomes showed that financial reserves showed an average value of 26.51% indicating that listed firms had 27% of their shareholder's funds in financial reserves. Capital structure showed an average debt-to-equity ratio of 1.11%; liquidity ratio of 10.36%; firm size average log of 9.70; while firm profitability had a mean value of 5.86%. Correlation analysis showed that capital structure showed a regression coefficient which was negative and significant. This illustrated that capital structure yielded a negative strong relationship with financial reserves of listed firms. However, liquidity had an insignificant correlation coefficient of 0.023 ( $p=0.739$ ). This indicated that liquidity yielded a weak positive although non-significant relationship with financial reserves of the listed firms. Firm size, nevertheless, had a Pearson correlation coefficient of 0.255 ( $p=0.000$ ) indicating a weakly significantly positive link of financial reserves to firm sizes. Firm profitability showed a correlation of 0.684 ( $p=0.000$ ) indicating that firm profitability had a strong, a link that is both substantial and beneficial with the financial reserves of listed companies.

The model's summary indicates a R value of 0.824, which is statistically significant. This indicates that capital structure, liquidity, firm size and firm profitability had a strong link to financial reserves of listed firms in Kenya. The summary showed an r square of 0.679 indicating that capital structure, liquidity, firm size and firm profitability contributed 67.9% to the financial reserves of listed firms in Kenya.

From the analysis of variance, outcomes showed an F-statistics of 105.736, which was less than the critical value of 2.416. This shows that the regression model is best for this research as it fits the dataset. The f-statistics showed significance value of 0.000 which was far below the critical

value of 0.05. Hence, capital structure, liquidity, firm size and firm profitability have a significant effect on financial reserves of listed firms in Kenya.

From the regression coefficients, holding capital structure, liquidity, firm size and firm profitability constant, the financial reserves would stand at -64.278. A unit increase in capital structure through debt to equity ratio would cause a reduction in financial reserves by 0.278. However, unitary increase in liquidity would increase the financial reserves by 0.4. In addition, increase in assets as firm size by one unit would increase the financial reserves by 15.547 while unit increase in firm profitability would increase financial reserves by 1.339. This indicates that capital structure, liquidity, reserves of Kenyan public companies are strongly influenced by both business size and profitability.

### **5.3 Conclusions**

From the findings, the study concludes that capital structure has a negative relationship on financial reserves of listed firms in Kenya. This was based on the negative correlation coefficient shown by capital structure in the regression. This stipulates that when the debt levels in listed firms are high the financial reserves are low. The study also concludes that liquidity has an insignificant relationship with financial reserves of listed firms in Kenya. This was shown by the positive but insignificant correlation coefficient with financial reserves. This is an indication that liquidity is not a significant factor determining financial reserves of listed firms in Kenya. Firm size, nevertheless showed a significantly positive correlation coefficient. This study concludes that firm size has a positive relationship with financial reserves of listed firms in Kenya. Firms with high level of assets show high levels of financial reserves.

Outcomes showed that firm profitability had a strong, significant and positive relationship with financial reserves of listed firms. This study concludes that firm profitability has a positive relationship with financial reserves of listed firms in Kenya. This indicates that profitability improves the financial reserve levels among listed firms in Kenya. From the regression analysis, capital structure, liquidity, firm size and firm profitability have a strong relationship with financial reserves of listed firms in Kenya. This means that capital structure, liquidity, firm size and firm profitability are the main influencers of financial reserves among listed firms in Kenya.

#### **5.4 Recommendations**

Outcomes led to the conclusion that capital structure has a negative relationship on financial reserves of listed firms in Kenya. This indicates that when the debt-equity ratio within a listed firm increases, the levels of financial reserves reduce. This study recommends that listed firms in Kenya reduce their debt to asset ratios for them to increase their financial reserves. This can be done by reducing the debt levels within their capital structure. They can also do reduce the ratio by increasing the level of equity in their financing strategies.

This study concludes that firm size has a positive relationship with financial reserves of listed firms in Kenya. This indicates that listed firms with increasing asset levels experience increased financial reserves. This study recommends that listed firms in Kenya increase their asset levels for increased financial reserves. This can be done through purchase of more assets, which would increase the size of the firms for increased financial reserves.

The paper concluded that firm profitability has a positive relationship with financial reserves of listed firms in Kenya. This indicates that profitability improves the financial reserve levels among listed firms in Kenya. This paper recommends that listed firms increase their net income through reduced costs and expenses. This would increase the return on equity, which would in turn increase the financial reserves within the listed firms in Kenya.

#### **5.5 Limitations of the Study**

This research was limited by the time available for data collection. Given that the researcher had to study more than 60 firms listed at the NSE, the time factor became a major challenge. The data from the annual reports sourced from NSE had to be entered into excel before analysis. This took a lot of time. This limited the study to listed firms between 2017 and 2020 to overcome the limitation. The study also adopted annual data for ease of compilation. The paper used secondary data to also overcome the limitation. The data was sourced from the available reports from a single source of NSE other than getting the reports from all the banks.

The study also faced the limitation of data credibility where it was hard to confirm the credibility of the data. To overcome this, the study got the annual reports from the NSE which the regulator for listed firms in Kenya and mandated to publish the annual reports after verification. The study

was also limited by the focus and scope. The study looked at the capital structure and financial reserves assuming other variables of study. This was overcome by making recommendations for future research.

### **5.6 Suggestions for Further Research**

This research was faced by the limitation of the period, which was 5 years. This means that where the change in relationship or the variables after the five-year period is not considered. This may mean that a different period may give different outcomes on the relationship among the variables. In that case, there is need for future studies to be done on other periods other than 5 years as it is for the present research paper. This may be done on a longer period like 10 years.

This research was restricted to capital structure and financial reserves. The study was also restricted by the measures adopted for the variables. The adoption of different factors of financial reserves and measures of the variables may produce different outcomes. There is need to look at other factors influencing financial reserves of listed firms in Kenya. Future studies should adopt different measures of capital structure and financial reserves.

The adoption of secondary data created a limitation. The credibility of the data sources also limited the research. Other studies can adopt primary data for similar study to eradicate the challenge that comes with the credibility of the data. The investigation was restricted to listed institutions. Future studies can undertake a similar study on non-listed firms. Specific sectors of the listed firms can also be considered in future studies.



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## APPENDICES

### Appendix I: Data Collection Schedule

	Total debt	Total equity	Total assets	Current assets	Current liabilities	Net income	Shareholder's capital	Retained earnings
	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M
2017								
2018								
2019								
2020								
2021								

**Appendix II: Research Data**

company	years	Total assets	Total Debt	Current Assets	Current liabilities	Profit	Total Equity	Retained Earnings
	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M
Absa Bank Kenya Plc	2017	325363	156843	168397	186246	10361	44584	36592
	2018	374109	186984	177354	207725	10645	43393	35194
	2019	377936	244395	194895	237739	12281	44079	37095
	2020	379216	229677	208855	253630	8849	44969	42524
	2021	428722	256465	234234	268717	15549	54353	47251
B.A.T	2017	11231	9965	8665	6575	3336	7840	2721
	2018	12556	8414	8624	5177	4085	9309	3332
	2019	11562	8705	9198	6859	3886	9715	3933
	2020	18767	6911	9782	5339	5517	11856	4979
	2021	21586	6612	10969	4673	6483	14974	6153
Bamburi	2017	47203	5870	13507	8133	1973	33200	17963
	2018	50357	3716	12444	9423	1645	22540	17897
	2019	49085	3716	12092	8781	1008	22021	17251
	2020	49446	2191	12709	7017	1128	23132	18527
	2021	51728	2273	14748	7876	1098	23109	18970
BOC	2017	2315	1553	1307	579	84	1589	1385
	2018	2287	1607	1308	641	120	1519	1301
	2019	2173	2488	1228	632	90	1439	1346
	2020	2089	2540	1191	474	156	1608	1401
	2021	1997	3248	1155	401	169	1589	1402
Britam General Insurance	2017	10597	780	10445	1435	470	22670	333
	2018	10402	1204	10278	2235	-52	23956	83
	2019	10330	3260	10232	1853	-185	29377	1767
	2020	11697	5811	11620	1689	364	17067	7384
	2021	12843	6219	12843	1974	422	19084	9346
Car and General	2017	9400	1453	4812	4836	80	9896	3,621
	2018	10174	1697	5029	5079	220	9852	3586
	2019	11484	1573	5550	6357	4	9818	3551
	2020	11903	1296	4952	5722	274	9590	3323
	2021	14448	1272	6883	7365	887	9568	3302
Carbacid	2017	3307	148	1008	148	319	2924	2509
	2018	3371	147	1065	113	379	3044	2637
	2019	3504	175	956	168	377	3127	2729
	2020	3628	195	1056	183	427	3252	2876
	2021	3919	213	1243	249	540	3489	3176
	2017	61570	14656	10918	12832	743	44808	32772
	2018	66087	14843	13420	14817	1041	50897	38184

Centum Investment Plc.	2019	101764	16145	15393	14817	743	51576	35158
	2020	101864	7486	18334	17460	-3392	47438	41963
	2021	109432	4122	25604	23070	-607	41822	41752
CIC GENERAL INSURANCE COMPANY	2017	11459	1550	9418	573	272	7637	4228
	2018	11347	2962	9335	377	380	7738	4263
	2019	12062	3629	10107	540	278	7853	4105
	2020	12597	3469	10679	710	15	7628	3784
	2021	12086	4974	10250	581	2400	7984	4407
Co-operative Bank of Kenya Ltd	2017	386900	21200	253900	287400	16400	61906	55330
	2018	413400	23900	245400	306100	18200	60587	53976
	2019	457000	26400	266700	332800	20700	77088	62402
	2020	536900	46000	286600	378600	14300	85597	74582
	2021	579800	42900	310200	407700	22600	94920	84225
Diamond Trust Bank Kenya Limited	2017	363303	38080	196048	286751	3682	48370	35934
	2018	377719	47023	193074	300003	2448	53657	42071
	2019	386230	60677	199089	302641	9279	58851	47483
	2020	425054	63111	208593	298167	3942	61971	51003
	2021	456843	71866	220425	331452	4415	67294	54854
EABL	2017	22135	9928	22135	21984	8515	11988	10,867
	2018	71247	7946	21526	25784	7256	11,652	1933
	2019	87065	8223	29602	33659	11515	16155	4,016
	2020	88658	5681	25968	31044	7021	19,899	16578
	2021	100117	13023	34093	39702	6962	22887	19541
EAPC	2017	27357	817	1949	6196	-3362	16891	14116
	2018	37604	705	1986	8122	7853	24809	22170
	2019	36541	980	3618	3789	-2962	21520	19046
	2020	35177	1174	2414	16244	-2799	18753	16437
	2021	34641	1287	2443	13181	1736	21012	18431
Equity Bank Kenya Ltd	2017	524465	221698	279092	373143	18918	93142	79082
	2018	573384	231026	297227	422758	19824	94957	85034
	2019	673682	290564	366440	482752	22561	111777	99150
	2020	1015093	307324	477847	740801	20100	138641	118767
	2021	1304914	420774	587775	958977	40072	176191	158103
Eveready	2017	771	223	576	214	271	549	326
	2018	574	136	322	127	-110	438	228
	2019	249	139	195	130	-304	110	-100
	2020	201	160	158	152	-69	41	-187
	2021	159	153	116	152	-35	6	-204
FLAME TREE GROUP	2017	1681	1423	1142	885	40	790	420
	2018	1839	1423	1133	991	34	813	487
	2019	2281	1224	1079	890	45	1057	417

	2020	2489	1404	85	122	-16	1085	487
	2021	2875	1768	361	133	-433	1190	590
HFC	2017	67541	1488	49640	36744	312	1269	601
	2018	60588	411	43186	34721	643	1158	3586
	2019	56455	911	38552	37400	138	1040	3551
	2020	55445	984	40235	39944	-1776	1346	3654
	2021	52904	1075	37309	37715	-876	7866	3414
Home Africa	2017	4478	79	3797	1026	221	-392	-889
	2018	4502	70	3822	5555	-129	-1052	-1365
	2019	4348	408	3955	6289	-189	-1941	-1991
	2020	4443	405	3998	6724	-194	-2,563	-2524
	2021	4538	436	4042	7100	-87	2563	1836
I & M Bank Ltd	2017	229	127	153	169	5	44	23
	2018	254	118	167	213	9	38	27
	2019	284	282	175	230	12	47	34
	2020	308	260	187391	263	10	52	40
	2021	556	173	210620	297	11	52	44
JUBILEE INSURANCE COMPANY	2017	13797	1147	13742	1150	656	8149	19513
	2018	13087	1396	13022	387	1586	33,270	17,897
	2019	6505	1875	6479	505	-748	32,132	17251
	2020	5810	1746	5784	363	-100	11,328	11,117
	2021	5281	1563	5259	251	-878	23,109	11328
Kakuzi Plc	2017	5746	292	2407	236	592	3891	4070
	2018	6461	391	2593	390	482	4669	4375
	2019	5941	310	2317	236	713	5218	4814
	2020	6907	427	2917	260	622	5566	5084
	2021	6887	343	2958	277	320	5539	4972
Kapchorua tea	2017	2030	232	789	228	-72	1416	1197
	2018	2489	342	1097	376	257	1672	1351
	2019	2033	278	872	193	-152	1468	1177
	2020	1942	95	876	181	11	1427	1132
	2021	2082	49	872	186	34	1486	1072
KCB Bank Kenya Ltd	2017	621723	411666	422685	499549	29114	88991	10506
	2018	674302	434361	455880	537460	33859	97789	13264
	2019	758345	468258	539747	686583	36897	92608	14066
	2020	826395	544837	595255	767224	25719	111271	16391
	2021	239408	584441	675481	837141	47815	123823	24559
KENYA ORCHARDS	2017	108	60	63	36593	8	15	-42
	2018	115	56	56	27443	13	24	-33
	2019	136	71	71	42847	6	33	-25
	2020	126	68	96	49949	-1	20	-37

	2021	127	68	98	46962	3	24	-33
Kenya Re	2017	42733	4315	22743	6723	4559	27205	20794
	2018	44363	1590	17891	7628	3102	28373	22015
	2019	50361	1962	19346	10471	4176	31951	18982
	2020	53237	4239	20766	5901	3984	34397	20860
	2021	55824	3969	24893	7489	4000	37040	22057
KQ	2017	147623	11809	26017	132439	-6306	4857	52
	2018	136634	14437	27976	129512	-7588	-2489	-64
	2019	195673	13647	25660	67815	-12975	-17896	-83
	2020	171462	9887	27173	85330	-36573	-64165	-116
	2021	155555	9333	25685	80965	-16028	-83337	-132
Limuru Tea	2017	262	118	140	39	-32	188	164
	2018	246	138	160	46	4	193	167
	2019	222	126	140	17	3	194	168
	2020	231	124	136	20	-8	191	167
	2021	208	103	114	10	-14	182	158
Longhorn Publishers Plc.	2017	1761	625	1202	776	156	946	340
	2018	2435	687	1780	1333	196	1040	444
	2019	2344	920	1474	1240	154	1104	516
	2020	2450	582	1304	1361	-214	787	148
	2021	2878	873	1644	2137	32	819	157
Nation Media Group	2017	11320	2262	6311	3128	1955	8166	6302
	2018	11198	3157	6428	3290	1634	7878	6826
	2019	12097	3623	6912	3574	1296	7798	7397
	2020	11484	3505	6957	3410	120	7933	7403
	2021	12990	3549	8127	4106	731	8090	7614
Safaricom Plc	2017	61078	6308	24551	54198	48444	108113	64422
	2018	166233	7912	26150	43169	53814	123064	75640
	2019	191171	8682	48661	46329	61966	142972	65221
	2020	211564	10138	47270	56587	73284	141334	82785
	2021	228101	14827	53034	75391	67957	135169	96572
Sameer Africa Plc.	2017	2970	800	1698	1097	13	1605	611
	2018	2588	591	1300	1439	-692	818	-86
	2019	1531	374	867	1001	-697	121	-1148
	2020	969	198	259	334	-194	115	-1105
	2021	1070	248	315	237	201	334	-888
Sanlam General Insurance	2017	2689	543	1614	312	69	4052	-69
	2018	2867	630	2290	367	116	1587	1459
	2019	2905	773	2326	256	4	1735	99
	2020	3534	876	3386	365	138	1239	-1115
	2021	3630	878	3516	400	-792	1293	-1761

Sasini	2017	7742	542	1502	289	521	7064	2699
	2018	12961	731	2645	459	449	11324	2727
	2019	14674	451	1887	444	-4	12885	2264
	2020	14578	531	1983	346	41	13053	2316
	2021	15143	909	2537	398	768	13444	2526
Stanbic Bank Kenya Ltd	2017	280953	135443	130536	154661	5401	42956	22949
	2018	292705	144434	146604	191585	8948	44623	24429
	2019	318986	155307	152817	194222	7710	49035	28030
	2020	319199	160665	158180	217444	6227	41857	32703
	2021	285125	147917	185313	242345	9756	46512	36358
Standard Chartered Bank Kenya Ltd	2017	281516	107038	134328	213349	10071	45665	28003
	2018	302296	155498	127860	224284	11847	46639	27129
	2019	325873	205304	136535	228434	12174	47761	27691
	2020	325605	176597	130719	256498	7396	50890	31880
	2021	327873	200941	136182	265469	12598	53214	33301
Standard Group	2017	4460	1481	1874	2212	-181	1865	1523
	2018	4072	1324	1703	2186	-130	1348	1212
	2019	3563	790	1104	2183	-138	926	734
	2020	3516	841	1082	2433	-322	711	263
	2021	3816	1065	1240	3132	-23	653	205
Total Kenya	2017	38012	9759	26454	15256	2738	21417	9475
	2018	39259	8766	27261	15404	2313	22666	10724
	2019	37565	11327	23805	11057	2535	24382	12440
	2020	42987	11834	29312	14287	3297	26860	14918
	2021	47030	12583	32655	16179	2739	28611	16669
TPS Eastern Africa (Serena) Ltd.	2017	17487	1332	2647	2453	119	9165	2315
	2018	17598	1268	2115	4875	179	9138	2435
	2019	17986	1140	1920	2888	182	9201	2617
	2020	17307	738	1484	2230	-1210	7508	1499
	2021	17429	1094	2030	2522	-633	6958	898
UNGA GROUP LTD	2017	108278	4545	6599	4026	5735	5479	2934
	2018	114566	4324	6596	3080	8886	5609	3368
	2019	136004	4591	6677	3414	8434	6055	3634
	2020	126246	5960	7813	5018	12543	6091	3630
	2021	126950	3659	6047	2676	3690	6390	3809
Williamson's Tea	2017	8364	879	3013	1001	-352	5960	5110
	2018	9505	913	3657	1097	810	6136	5462
	2019	8272	811	2808	968	212	6317	5002
	2020	7901	798	2213	877	117	6847	4817
	2021	8048	761	2098	1082	67	6094	4351
	2017	13759	5817	10924	868	696	8965	508



WPP Scangroup Plc.	2018	14425	5378	11241	1225	960	8489	-814
	2019	12803	3407	10710	696	291	7193	-2128
	2020	8742	3858	7747	256	357	6042	-4026
	2021	9445	3951	8600	262	-42	6157	-784