FIRM SPECIFIC FACTORS AND FINANCIAL PERFORMANCE OF COMMERCIAL AND SERVICES FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

By

MICHAEL MUSYOKA MUEMA

19/00288

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE DEGREE IN DEVELOPMENT FINANCE IN THE SCHOOL OF BUSINESS AT

KCA UNIVERSITY

JANUARY 2023

DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that it contains no material written or published by other people except where due reference is made, and author duly acknowledged.

Michael Musyoka Muema

19/00288

Signature ……. Date…….

I do hereby confirm that I have supervised the master's dissertation of

Michael Musyoka Muema

and have certified that all revisions that the dissertation panel and examiners recommended have been adequately addressed.

Signature …… Date …….

Dr. Michael Njogo

School of Business

KCA University

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ABSTRACT

The major interest of this study was to establish the relationship between specific factors and financial performance of commercial and services firms listed at the Nairobi Securities Exchange. The study was necessitated by the poor performance of the industry as has been reviewed and found out that most of the firms in this industry declared profit warnings during the period understudy. The specific firm factors fundamentally explain the status of the firm and hence the study considered some of the fundamental factors in a firm to study the industry. The objectives of the study were meant to determine the combined effect of Liquidity, Leverage, Tangibility and Firm Size on the financial performance of commercial and services firms listed at the Nairobi Securities Exchange. The study was anchored on the following theories namely Trade off theory, liquidity preference theory and Resource Based View theory. The study period was between 2012-2021 and a covered ten-year period. The study employed use of the secondary data as derived. The descriptive research design was adopted for the study. Panel data technique was adopted to test for descriptive, diagnostic tests and running regression analysis. Analyzed data was presented and displayed using tables, figures, graphs `and other pictorials. The diagnostic test revealed there was no multi-collinearity between the variables, some variables were nonstationary and were treated using trend fitting and first differential using Im Pesaran Shin Unit root test. Hausman test revealed the Fixed effect model was preferred over the Random effects method. Heteroscedasticity was tested using the Modified Wald test and the output revealed the data was not homoscedastic. Normality revealed the data was skewed to the right. Model was fitted using the general least square which was preferred since it accommodates and accounts for heteroscedasticity and auto correlation Additionally, some of the variables were transformed from their nominal values to natural log values. The hypotheses were tested using the fitted model and it was revealed some variables were conclusive and agreed with reviewed literature while others were conflicting and ambiguous desiring further studies on these variables. Lastly the study recommended the managers of the firms to put keen efforts in management of resources especially leverage, liquidity, and Tangibility. Leverage and liquidity had inconclusive effect on the ROA.

Key Words; Financial Performance, Firm Specific Factors, Diagnostic Tests, Model fit

ACKNOWLEDGEMENT

I first and foremost acknowledge the Almighty God for the favor that he has given me this far in my studies. He has provided me with resources, soundness of mind and overall good health. Were it not for his immense love I wouldn't have come thus far. Secondly, I recognize the KCA university fraternity namely fellow students and lecturers. Their immeasurable support in my journey has provided the necessary support and motivation for me to come this far.

My supervisor Dr Njogo was specifically a strong pillar in this journey. He was available for the supervisory support and has academically helped in criticizing and providing alternative ideas in my work. His inspiration, guidance and corrections made the journey easier, and his reassurance didn't go unnoticed. Additionally special thanks to my colleagues who stepped in during my busy schedules to make sure everything else was in order. Lastly, I recognize my spouse Stella who worked tirelessly to review and critique my document thus improving on the quality of the output.

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DEDICATION

This work is dedicated to the Almighty God, my spouse, children, and my lecturers who have been a strong support and source of encouragement throughout the study.

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LIST OF ACRONYMS

ROA	Return on Assets
ROE	Return on Equity
ROCE	Return on Capital Employed
RONW	Return on Net worth
CAMEL	Capital Adequacy, Asset Quality, Management Efficiency, Earnings Ability and Liquidity
CMA	Capital Market Authority
NSE	Nairobi Security Exchange
BSE	Bombay Stock Exchange
MM	Modigliani and Miller
OLS	Ordinary least Square
MBV	Market Book Value
VIF	Variation Inflation Factor

DEFINITION OF TERMS

Asset Tangibility/ Asset Structure	Refer to all the fixed assets owned by a firm. This includes the Land and Building, machinery, and current assets like Inventories (Irungu, 2019).
Firm Size	This refer to how big a firm is. The measurement of size varies and can be measured using various parameters like, Assets Held, Sales Turnover, The Number of Labor Force and the total size of the balance sheet (Dogan, 2013).
Leverage	It is the use of debt or borrowed funds to finance the activities of the firm. This includes the acquisition of assets that will help improve income generation and therefore manage the debt costs and remain profitable (Wawire, 2021).
Liquidity	This refers to the capability of the firm to service the short-term obligations. It oils the functioning of business or the firm on daily basis. (Maina, 2021)
Firm Performance	This is a subjective method used to measure how a firm has been using its resources in order to meet the various goals of the firm. Additionally, it's a measure of the overall health of the company and can be used for comparison with other firms within the industry (Irungu, 2019).
Firm Specific Factors.	They are also referred to as firm level Factors. These are internal factors that fundamentally are in the control of the management and firm policy. They include financial and non-financial factors, but all affect the firm performance (Mwebia, 2012).

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Commercial and services firms in Kenya play a vital role in the economy. They represent the biggest number of firms listed at the Nairobi Securities Exchange. The firms in this industry contribute to the economic development of Kenya in a significant way (Njenga, 2017). Firm specific factors include factors such as firm Size, Tangibility, Leverage, Liquidity among others (Maina, 2021). Effective Management of firm's specific factors contributes to the success of a firm, thereby enhancing the reputation of such firms and maximizing the firm's performance (Hassan & Bhutta, 2013). Maina (2021) study on internal factors that influence income diversification in the banking sector concentrated with bank specific factors namely Capital adequacy, Asset quality, Management efficiency, Earning ability and Liquidity. The CAMEL Model as discussed by the author is only applicable to the banking sector and hence can't be applied as generic in other industries.

Malkolunthu and Regasamy (2012) argues that firm specific factors are used to define the indicative performance or the extent of the firms' ability to achieve the desired objectives. The performance may include operational performance and the overall financial condition. It implies the concept can be used to test the operational performance and condition of firms in the commercial and services sector. Humphrey et al (1997) considered a study on megamergers and profit function. They used size as independent variable against the profit. The authors concluded

Size had a positive and significant relationship to the profit while internal factors like corruption that strongly influence profitability growth had a strong negative relationship to the firm size.

This study area has attracted interest across the global economic spectrum and has considered varied industries in different countries. As argued previously the factors equally apply differently. A study on firm specific factors analysis in respect to profitability growth of food sector in USA considered variables like debt-to-equity ratio, tangibility of the assets, size of the firms, Age, and food inflation. Profitability was measured in terms of the net incomes after taxes divided by the sales (Hassan & Bhutta, 2013). Based on the reviewed studies and scholarly work above this study area has attracted a lot of interests with scholars and researchers considering diverse forms of specific factors based on interest and industrial focus, however there is minimal review of the effect of firm specific factors on growth of commercial and services industry.

1.1.2 Firm Specific Factors

Firm specific factors are internally controlled by the firm management, and they usually differ from one firm to the other. These factors include but not limited to firm size, tangibility, leverage, corporate governance among others. In the banking industry the factors are referred to as bank specific factors and relates to the direct results of the managerial decision of a bank (Bougateff, 2017). Hintova et al (2020) considers firm specific factors as factors at the firm level that influence the firm performance. This factor can be broad or narrow in context. In their study on the influence of firm specific factors on firms' performance they classified the variables such as liquidity, firm size measured by log of total assets, years measured by the age of the firm, asset turnover ratio measured by the firm sales relative to the assets and cost effectiveness as measured by the earnings after taxes as ratio of total assets.

Firm specific factors can also be said to be micro in nature or referred as micro factors. They are described as direct into contact with the business or the firm and have direct effect on routine activities of the firm (Rauch & Freese, 2000). Micro factors are significant combination of all the

factors that are close to the firm and understanding them helps a business to plan for the routine and strategic operations. They include firm size, capacity, capability, and strategies (Rauch & Freese, 2000).

Mutunga (2018) considered a study on micro factors financial performance of manufacturing firms in Kenya, she classified the micro factors into four broad categories namely production capacity, management factors, operational factors, and size of the firm. Each of the four broad categories has specific factors that influence the firm performance. The production capacity had factors such as ease of production, innovation, better technology, while management factors include specific factors like management styles or structures, reporting style and accountability while operational factors include inputs/outputs process, operational factors costs, and reduction costs. Lastly the firm or company size includes factors like Total employees, number of branches and assets valuation. This confirms that classification of firm specific factors is dependent on regulatory requirements and researcher's interest.

Lastly, Maina (2021) in his study on bank specific factors and income diversification of commercial banks considered firm specific factors from the regulatory point of view. The bank specific factors are used to test the internal performance of the bank. The study classified the bank specific factors based on CAMEL Model as requirement of the Basel II accord. According to the author these factors in the context of the banking industry are highly regulated compared to other industries of the economy. From this discussion it is evident that firm specific factors are micro in nature and can influence the performance of the firm.

1.1.3 Financial Performance of Firms

Financial performance is a quantitative and qualitative measure of how well a firm is utilizing its resources in primary form to generate revenue. Financial performance of firms has been reviewed by many scholars and different methodologies employed used to derive or test the financial performance of the firms (Live & Tegen, 2016). Klapper and Love (2004) argue that theoretically firms with higher investment assets tend to grow fast and hence have better ratings in terms of financial performance in the future. In the studies by Abbas et al (2013) and Glancy (1998) firm performance is measured using annual growth in profits while Rahman et al (2021) defined financial performance as a measure of increase in revenue and profitability.

Alshurafat et al (2021) study measured financial performance using return on assets while Ahmed, Naveed, and Usman (2011) used growth in net profit to compute the financial performance. The current study will consider return on assets to measure the financial performance of commercial and services firms listed at the Nairobi securities exchange.

1.1.4 Firm Specific Factors and Financial Performance of Firms

Chandrapala and Knapkora (2013) considered a study on firm specific factors and financial performance in the republic of Czech. They evaluated dependent variables size, age, debt ratio, quick asset ratio, inventory, sales growth, physical capability intensity and turnover ratio. The variables were proxied against ROA. They used census sampling design where one thousand and ninety-five companies in Czech Republic over the period 2005-2008 were factored. Data was sourced from Albertina database. Due lack of complete data about one hundred twenty-one companies were deleted and therefore the final sample had nine hundred seventy-four firms. The results output showed that the firm's size, debt ratio, inventory, and capital turnover significantly affected performance as estimated by ROA. The analysis output on Variable size indicated a

statistically significant positive effect on ROA. Therefore, as a firm size grows, its ability to generate assets returns tremendously improves.

Jimoh and Attah (2022) considered a study titled firm specific characteristics and financial performance of listed Agricultural companies in Nigeria. Variables tested in this study were firm size, Dividend payout ratio, Asset maturity, firm liquidity, firm growth, firm leverage, and firm age. The variables were proxied against the Returns on Asset as a test of financial performance. The study size was five companies listed in Nigeria Stock Exchange. The statistical model results revealed that Assets maturity positively and significantly affected returns on Assets of the firms. Dividend payout revealed favorable and significant impact on the firm performance of listed agricultural firms in Nigeria. Liquidity equally had a positive effect on the financial performance however firm size revealed a negative effect on the ROA as a metric of firm performance for listed agricultural firms in Nigeria.

In East Africa, the study area has attracted interest in different sectors. Daniel and Tilabum (2012) studied the effect of firm level characteristics on the profitability of insurance firms in Ethiopia. The study found out that firm leverage, tangibility & size had positive statistically significance impact on the profitability of insurance firms. Mwenda, Ndege and Pastroy (2021) did a study on the influence in firm specific factors on financial performance of firms listed at Dar es salaam stock exchange. In this study authors focused on a mixture of financial and non-financial factors. They found out that dividend payout, firm leverage and sales growth had significant influence on the firm performance while the non-financial factors like management competence, human capital, firm size, firm age and geographical diversification had positive significant effect on the performance of insurance firms in Tanzania.

Mwebia (2017) reviewed on selected firm characteristics and financial performance of firms trading in the Nairobi Securities Exchange. She used variables firm size, leverage, age, and tangibility against the performance as estimated by Return on Equity. It was revealed that all the independent variables had significant effect on the ROE. The research study however concentered on the census of the NSE.

1.1.5 Nairobi securities exchange

Kenya's Nairobi securities exchange has different segments that trade different securities and is the leading stock exchange in East Africa. The exchange is regulated by capital markets authority of Kenya (CMA). The exchange deals with equities, bonds and derivatives. The trading firms listed are categorized into several segments namely Agricultural, Auto Mobiles and accessories, Banking, Commercial and Services, Construction, Investment, investment and services, Manufacturing and Allied, Telecommunication and Technology, Real Estate, Investment Trust and Exchange traded fund (NSE, 2021).

The scope of this study will be limited to the Commercial and Services listed firms. The firms are Express Kenya Limited, Sameer Africa PLC, Kenya Airways Ltd, Nation Media Group, Standard Chartered ltd, TPS Eastern Africa (Serena)Ltd, Scan group, Uchumi Supermarket, Longhorn publishers, Deacons and Nairobi Business Ventures (NSE, 2021). The study period will be for the last 10years i.e., form 2012-2021. This period has been preferred since firms in this industry have had varied financial performance. The firms under consideration differ characteristically and have been in operation for varying time hence the desire to study the industry (Mwebia, 2013).

1.2 Statement of the problem

The effect of firm specific factors on the financial performance of firms differs depending on the factors specified and the estimation method for financial performance of the firm (Live & Tegen, 2016). The varied effect demands for further review of literature and research to understand the effect of selected firm specific factors on the financial performance of commercial and service firms listed at the Nairobi Security Exchange.

According Mwangi, Muathe and Onsongo (2020), financial performance of selected firms at the Nairobi Security Exchange have been declining. Several companies issued profit warnings during the period under study. In the year 2016 alone eighteen companies issued profit warning out of the sixty-seven firms listed at the NSE by then. Commercial and services firms equally performed dismally and some of the companies were on the verge of collapse. Commercial and services firm have issued the highest level of profit warnings during the period, signifying internal challenges to the companies or external pressure from the business environment. In year 2013, 2014, 2015, and 2016, 43%, 55%, 39%,18% and 25% respectively of the profit warning issued were from the commercial and services firms listed in the NSE (CMA, 2018). Based on above analysis, commercial and services have issued profit warnings consistently in the recent and some firms have stopped trading at the NSE. This signifies the need to study about the industry and review how the firm's fundamentals affect the financial performance of these firms.

Dogan (2013) found out that size of the firm had a positive effect on the profitability of companies listed at Istanbul stock exchange the listed firms. In this study the focus was on all the firms listed at Istanbul stock exchange while this study will focus on commercial and service firms listed at the Nairobi Security Exchange. Mao and Gu (2008) study considered debt leverage and

assets activity as the key firm characteristics. This study will adopt leverage, firm age, asset tangibility and liquidity as the key firm specific factors.

In the developing countries, the study area has attracted interest in different sectors. Daniel and Tilabum (2012) study revealed that firm size, tangibility & Leverage had a `favorable and statistically significant effect on the profitability of insurance firms in Ethiopia. This study focused on commercial and service firms listed at the Nairobi. Idris and Bala (2015) researched the effect of firm specifics on the profitability growth of listed foods and beverage companies in Nigeria. They measured profitability growth based on stocks returns. This study used return on assets to measure the financial performance of commercial and service firms listed at the Nairobi Security Exchange.

In Kenya this area of focus has equally attracted interest though in different aspects. Maina (2021) reviewed effect of bank specific factors on income diversification for listed banks within the country, while Wawire (2021) studied the firm specific characteristics and operational efficiency of agricultural firms. The research study used size of the firm, assets tangibility, liquidity, cash reserves and liquidity as the independent variables. Mwebia (2017) researched the selected firm characteristics effect on the financial performance of all trading firms at the Nairobi Securities Exchange. Independent variables were firm leverage, tangibility, and size, while the firm performance was calculated using return on equity ratio. Study output shows the independent variables had significant effect on the ROE. Mwebia however concentered on the census of all the NSE listed firms.

This study area is evolving based on the literature reviewed globally, regionally, and locally. There also exist contextual and methodological knowledge gaps. There is a variation in the selection of independent variables and measurement of firm financial performance. Majority of

studies reviewed focused on sectors such as pharmaceuticals, restaurants, banking, and agricultural sectors other than the commercial and services sector. To fill these gaps, this study focus will be on commercial and services sector at the NSE, which has been given limited focus based on the reviewed literature. In view of the above, the study will seek to research on effect of leverage, firm age, asset tangibility and liquidity on the performance of commercial and services companies trading at NSE.

1.3 Research objective

1.3.1 General Objective

Establish effect of firm specific factors on the financial performance of commercial and services firms' sector at the Nairobi Securities Exchange.

1.3.2 Specific objectives

i. To evaluate the effect of leverage on the financial performance of commercial and services firms listed at the Nairobi Securities Exchange.
ii. To find out the effect of firm age on the financial performance of commercial and services firms listed at the Nairobi Securities Exchange.
iii. To evaluate the effect of tangibility on the financial performance of commercial and services firms listed at the Nairobi Securities Exchange.
iv. To ascertain the effect of the liquidity on the financial performance of commercial and services firms listed at the Nairobi Securities Exchange.
v. To determine the effect of firm Size on the financial performance of commercial and services firms listed at the Nairobi Securities exchange

1.4 Research Hypotheses

H_{01}: Leverage has no effect on the financial performance of commercial and services firms listed at the Nairobi Securities Exchange

H_{02}: Firm Age has no effect on the financial performance of commercial and services firms listed at the Nairobi Securities Exchange

H_{03}: Tangibility has no effect on the financial performance of commercial and services firms listed at the Nairobi Securities Exchange

H_{04}: Liquidity has no effect on the financial performance of commercial and services firms listed at the Nairobi Securities Exchange

H_{05}: Firm Size has no effect on the financial performance of commercial and services firms listed at the Nairobi Securities Exchange.

1.5 Significance of the Study

The Study reviewed the effect of firm specific factors on the financial performance of commercial and services companies trading Kenya Securities market. Findings of this review were meant to be of benefit to several stake holders. The industry has firms that are primarily strategic to the government, hence the study would immensely benefit the government or the concerned arm of government dealing with commercial and services companies to understand why the firms are performing significantly different despite being in the same industry. Financial advisors and consultants equally might find the output beneficial to understand and provide necessary financial details regarding the industry performance visa viz the other industries. The advisory can be used for decision making by the recipients of the information or data.

Potential investors will find the study output useful in making investment decisions. The main aim of any investors is to maximize the profits and hence the findings of this study can be used by investors and potential investors in understating the firms better and deduce the most viable and potential firms for profit (returns) maximization. The providers or lenders of capital in this industry will immensely gain from the findings of this study or review especially on the financial status of the firms in commercial and services industry that probably would help such stakeholders make proper decisions and hence minimize credit risk. Finally, the study subscribes and contributes to the body of knowledge and literature framework which is beneficial and crucial in the world of scholars, researchers and academicians interested in this area of study or related areas.

1.6 Scope of the Study

The research study reviewed firm specific factors and the financial performance of commercial and services firms listed at the Nairobi Securities Exchange. The independent variables considered during the investigation covered leverage, firm age, firm size, tangibility, liquidity, and proxy variable was financial performance estimated using return on assets. The purpose of the study was to establish how firm specific factors have influenced the financial performance of firms. Analysis covered commercial and services companies trading at the NSE and for a period of ten years from i.e., 2013 to 2021.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter covers theoretical review, empirical review, conceptual framework, operationalization of variables. The theories considered as the most appropriate for this study are Resource based view, Liquidity preference and the Tradeoff theories. Empirical review has looked at various scholars and studies that have been done around the globe relating to the area under study. The studies have considered area of study, explanatory variables considered, the dependent variables, the country of study, industry under consideration, the source of data, data analysis, results interpretation, and the authors. Lastly, the conceptual framework and operationalization of variables.

2.2 Theoretical Review

In this section the following theories namely Resource Based View theory, Liquidity preference Theory and the Tradeoff theory and pecking order are discussed in detail. The theories are used to support the explanatory variables used in the study and how they relate to the dependent variable.

2.2.1 Resource Based View Theory

Resource-based view theory authored by Penrose (1959) argues that managers have the administrative responsibility of developing the framework of how the resources will be exploited for the benefit of the organization. The author further argues that there is a possibility of variation in the bundles of production held and controlled by the firms in similar industry. The concept has developed overtime and has been enhanced further. Barney (1991) argues that organization can model the resources in order to gain a competitive advantage or edge. The firm resources help develop strategies that will enhance the gross efficiency and the productivity of the organization.

Based on this school of thought Barney classifies resources into three namely, Physical Capital resources which generally are the material resources like plant, equipment, technology, location and access to raw materials.

Secondly, Barney (1991) argues that human capital resources which include the training, experience judgement, intelligence, insight from managers and workers from the organization. Lastly capital resources include formal structure of the organization, planning, controlling, and coordinating systems. These resources can be modelled based on the uniqueness and immobility (obtainability from other firms). According to Barney (1991) resources should bear the characteristics of the being rare, valuable, imperfectly imitable, and non-substitution to provide a competitive advantage in terms of income diversification and better performance. Therefore, firms should use and manage their overall assets in a way to gain and improve their overall efficiency in diversifying their incomes. Based on Burney's argument firm growth capability will be achieved only through use of shared services methodology across business lines in order to enhance performance either through cost reduction or income diversification leading to a firm growth over the time.

In the same line of thought Baker and Sinkular (2005) indicates that firm performance is a cum combination of a function of the specific resources and capabilities of the firm. Therefore, excellent performance of the firm is related to the firm characteristics. These classifications of the firm are capital resources, physical resources, and human capital resources. However, its argued that firms do not necessarily gain competitive advantage from in all the resources. Some proponents of this theory le Pearce and Robin (2010) propose that firms can easily gain competitive advantages and superior performance through effective utilization of internal resources.

This theory anchors the study since firm characteristics like leverage, firm age, tangibility, and liquidity enables a firm to exploit unnecessary threats that may be facing them. The resource-based view theory explains in details variations of performance since the theory addresses firm characteristics or resources. These factors are unique and cannot be duplicated from one firm to the other. In view of this theory, the study will unearth how firm level factors understudy will help or how they contributed to the firm's growth of different firms listed in NSE under commercial and services industry.

2.2.2 Liquidity Preference Theory

This theory was formulated by John Keynes (1936). According to the tenets of this theory, investors and firms holds cash to maintain a form of liqusidity because of different motives. These motives are transactional motive, precautionary motive, and speculative motive. Njiru (2019) argues that liquidity is the expediency of holding cash for the motives mentioned above and therefore individuals and firms will hold cash for either of these three reasons. He further specifies that firms hold cash to meet deals, financial risk, precaution, and compensation.

Transactional motives are common when the firms hold the cash to facilitate payments of the current needs that are repetitive in nature like fueling cars, purchase of raw materials, paying salaries and wages. On the other hand, precautional motive occurs incase firms decide to retain cash in order to provide cushion for unforeseen emergencies, it, can be for the purpose of servicing or financing unexpected deals. Lastly, for speculative motive a firm holds cash or maintains liquid assets or highly liquid assets in order to take advantage of prospective adjustment in the interests' rates or bonds (Pandey, 1997).

The liquidity theory has been applied in various studies that have considered liquidity as a variable. Wawire (2021) in his study on firm level factors and operational efficiency considered

the principles of the theory and argued that money is used as a medium of exchange to facilitate the transactional motive. In respect to the current study the theory will be applicable in explaining the liquidity aspect and its necessity in the financial productivity of the commercial and services industry sector in the Nairobi Securities Exchange.

Different scholars have made conflicting conclusion regarding the effect of liquidity on the financial productivity of the firms. These conflicts have come from various studies done in different parts of the world and the industrial differences that emanate from the desire by scholars to differentiate their studies based on the area and market of focus. Additionally, the liquidity theory will help unearth how commercial and services companies trading at the Securities Exchange manage their liquidity costs and how they utilize their excess liquidity and lastly how insufficient liquidity affect the performance.

2.2.3 Tradeoff Theory

This theory is an advancement of the Miller and Modigliani (1958) theory of capital structure which takes into consideration the effect of taxes and bankruptcy cost which the MM Theory did not handle. The theory puts into context how firms select or decide on their capital structure. The principles of this theory were advanced by Myers and Robin (1966) after noting the inefficiencies and inadequacies of the Miller and Modigliani theory. Trade off theory proposes that firms opt for internal funding over the external funding. In this case firms don't have a predetermined or optimum debt to equity ratio due to information asymmetry. Proponents of this theory try to close the gaps identified in the MM theory by addressing the costs of Debts, Financial distress, and bankruptcy hence the tax advantage and tax shield form debt financing which mitigates the increasing costs that are related to financial distress and capital structure.

The optimal capital structure will evolve as firms trade off the benefits and costs of borrowing, holding the firm's assets and investments plans consent. The theory holds on the assumption that firms set a target for debt-to-equity ratio and eventually switch debt to equity ratio or vice versa till the firm value is at maximum. The optimal firm value is achieved when the sum tax shield is equivalent to the marginal present value of the of the costs of bankruptcy or financial distress. Myers, (2001) concluded that the optimal benefit associated with debts issues affect the increase in the present value of the costs associated with issuing more debts as depicted below.

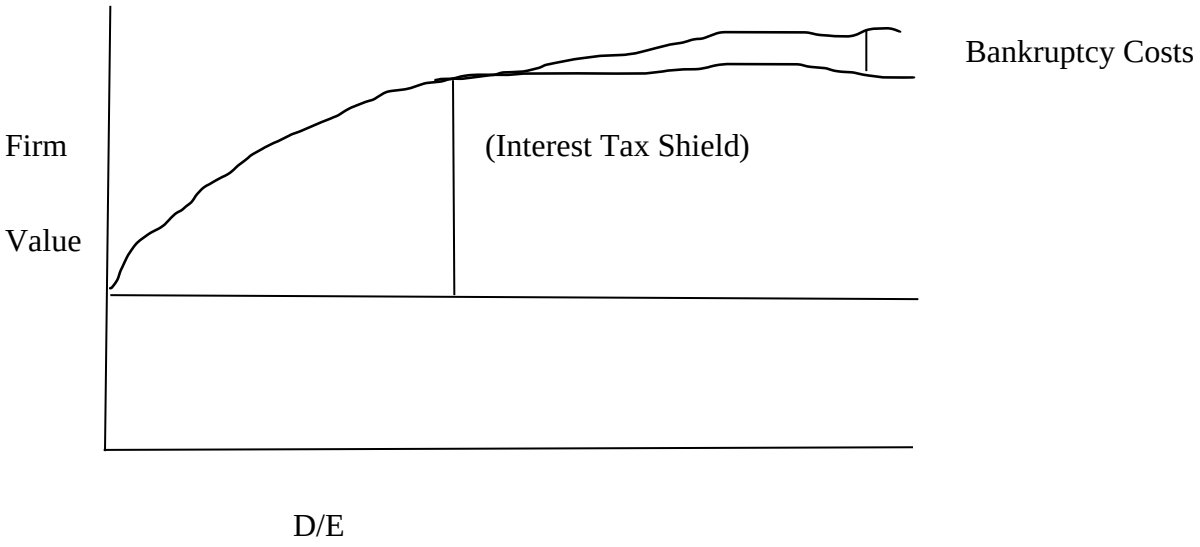

Figure 1:Optimal Debt to Equity Structure

The opponents of the tradeoff theory however argue that trade off does not exist, i.e., there is no existence of capital structure targets rather trading firms follow a financing hierarchy. i.e., internal funding is preferred over and above external financing (Myers and Majluf 1984). This implies that when firms need capital, they first exhaust or utilize all internally generated funds (retained earnings) and then review the dividend payout ratio to let the unaffected dividend flow.

In case a firm has inadequate cashflow from internal sources it results to drawing cash from cash and highly marketable and disposable securities. Lastly, where the external source is required then the order of preference; debts, hybrid securities (for example convertible bonds) and issue Equity. From these arguments it is evident that firms do not have a target on debts to equity rather they use the pecking order preference principle since internally generated funds are supposed to be cheaper source of finance and with no interference from outside. The opponents of this principle have however criticized the applicability since it does not address differences in capital structure of the industry. i.e., firms operating in similar business. Additionally, its argued that other than taxes advantages and bankruptcy costs there are other factors that that influence capital structure of the firm e.g., agency relationships and conflicts (Jensen and Meckling 1976).

For the current study the above discussion on trade off and pecking order will help in understanding how leverage as part of capital structure influence the firm's profitability. The argument is based on Fama and French (2000) as quoted by Mwebia (2017) who argued that profitable firms are less levered compared to non-profitable firms. Frank and Goyal (2003) made a conclusion that most of the large firms accumulate debts so that they can support and maintain dividend payout while the small firms behave in the opposite direction. Koech (2013) postulates that due the distinction of specific firm characteristic's, targeted debt ratios vary across the firms. Firm differences like financial systems, tax administration systems and bankruptcy lead to the differences in leverage target ratios across the countries and industry. Finally, Liquidity theory anchors that the firms with more tangible assets and more taxable income shield have high debt ratios. However, firms with a high value of intangible assets whose value will disappear in case of liquidation should rely more on equity financing.

2.3 Empirical Review

2.3.1 Leverage and Financial Performance

Ojuji and Odita (2012) did a study on determinants of firm profitability in Nigeria using dynamic models. The review considered effect of capital structure i.e., leverage ratios on the profitability. The study sample size was thirty listed companies under non-financial category in Nigeria. The data used in this study covered a period of seven years from 2004 -2010. They used panel data methodology to analyze the data. They found out that capital structure of companies surrogated by leverage ratios have major detrimental impact on the financial performance of the company as measured by the return on assets (ROA).

Ahmad and Zaid (2020) studied the impact of firms' specific variables on the financial performance of Indian firms. In this study the authors considered a population of one thousand sixty-nine firms listed in Bombay stock exchange for the period between 2011 and 2017. The research study adopted the cost of financial distress, growth opportunities, firms size, total taxes, asset's structure, and leverage. Two dependent variables were used as proxy to measure financial performance, Returns on Assets and Returns on capital. The study was analyzed using the panel data regression methodology. The model had seven thousand four hundred and eighty-three (7,483) observations for analysis. The data was extracted from Prowess Q database in India. They found out that cost of financial distress, growth opportunities, firm size, total taxes had positive and significant effect on the financial productivity of the Indian firms as estimated by both Return on Assets and return on capital employed. Asset's structure and debt structure (Leverage) on the contrary negatively and significantly impacted on the financial performance of the Indian firms.

Zheng et al (2021) did a study on the financial performance of Chinas listed firms in Presence of Corona virus. The study was motivated by the shortage of existing literature on the impact of

dangerous and contagious diseases on the firm's performance. The reviewed the effect of Covid 19 on China's One hundred and twenty-six firms listed firms within China but across Sixteen Industries. The study reviewed the explanatory variables namely Assets turnover, liquidity, efficiency leverage, State ownership, industry, Size, and coronavirus. The proxy was performance as measured return on equity, return on assets, return on growth rate. The variables were moderated by corporate social responsibility and corporate social culture. the authors adopted a panel data analysis methodology and used data as gathered from Wind Database. To derive the sample of 126 firms the study used stratified sampling method in order to select firms from the Chinese listed firms across the sixteen major industries.

In the Zheng et al (2021) study, firms were well distributed from the main stock markets in China i.e., Shanghai and Shenzhen Stock markets using financial data for the second quarter of 2019 to the second quarter of 2020. Selected financial period was to help the authors examine the impacts of virus before and during the virus outbreak and there by avoid the seasonal effects. During the period of study, the authors were able to eliminate change of corporate governance in this firms since the mechanism were already determined throughout the quarters. After performing the regression analysis for the panel data using the general least square method, it was established that liquidity and capital structure negatively but insignificantly affected the revenue growth rates i.e., financial leverage had an effect of about 7.5% on the financial growth of revenue. However, the effect on the ROE varied across the industries and it was concluded that Chinese listed firms with high debts experienced low ROE due to the high leverage burdens and this led to poor firm performance as revenue and profits declined during the pandemic.

Mathur and Gill (2021) did a study on the factors that affect the potential growth of Canadian firms. The study factored one hundred and sixty-four firms listed in Toronto Stock Exchange from

2008 to 2010. Independent variables considered for this study were size of the firm, current ratio, leverage, firm capital productivity, cash flow, age, industry dummy and dependent variable was potential growth. The data was collected from a collection of about eight hundred published reports that were made public by the trading companies. Out of the collection, one hundred and sixty-four (164) were admissible for analysis of the manufacturing and services industry. Random sampling technique was used to derive the sample and hence a representative sample. All firms that had incomplete data were eliminated during the time of the study. The panel data analysis technique was adopted, and ordinary least square method was used. The review found positive correlation or relationship between current ratio and potential growth, leverage also had positive relationship with potential growth same case to cash flow and industry dummy. However, firm size and age had negative relationship to the potential growth. The model used was significant with an R^2 of 0.344 equivalent to 34.4%. The finding of this study however contradicted the findings of Heshimati and Mateev (2021) on the effect of leverage on potential growth in profitability probably due to different tax systems and administration and interest payment on debt is also tax deductible in some jurisdictions.

Charles et al (2018) considered investigation on effect of firm characteristics on profitability of consumer goods companies trading in Nigeria Securities market. The regressor variables considered in this study included firm size, firm age, sales growth, liquidity, and leverage while the response variable was the profitability. Target population was twenty-two listed consumer goods companies. The data was obtained from secondary sources namely the published financial statements as shared by the publicly listed firms. The census sampling technique was adopted for the study but due to obstructions and unavailability of financial data for some firms, the final sample had eighteen (18) listed consumer good companies considered for the analysis. The study

period covered six years from 2011-2016. The data analysis employed multiple regression using panel data techniques. The author used STATA as the preferred software for statistical analysis. The hypotheses were tested after all the necessary tests were conducted like multi-collinearity, heteroscedasticity among others.

These tests were meant to improve validity of the results. OLS regression model was used to estimate the effect of explanatory variables on the response variable as measured by returns on sales. From the regression analysis, the study found that firm age has no significant effect in explaining and predicting profitability, size of the company has positive effect on the profitability supporting resource-based view theory that large firms performs better than the small firms. On the other hand, sales growth significantly affected profitability. Liquidity had negative effect but significant on the profitability. Leverage measured as a ratio of total liabilities to total assets signified negative and significant effected on the profitability of listed consumer goods companies in Nigeria. It implied higher levels of leverage lower profitability of consumer goods firms proxied by ROS. The findings contradict the Resource-based theory which postulated the higher the leverage the higher the expected profitability (Charles et al, 2018).

Locally the study area has attracted attention from various scholars who have considered different contexts to explain the effect their effect on the financial performance. Koech (2013) examined effect of capital structure on the profitability of financial firms trading in Nairobi Securities Exchange. He considered effect of leverage on the firm performance as calculated by the Return on Equity. Population of eleven financial firms listed at the NSE for a period of Five years i.e., from 2008-2012 was considered. Data was sourced in secondary sources namely financial statements published as a requirement by the CMA and shared to the public for all trading companies. The study adopted the multiple regression analysis concept using the SPSS software

where ROE was regressed against the debt, interest rate and debt equity proportion. The study found out that debt level had a negative significant effect on (ROE) thus implying arise in unitary level of debts leads to a decrease in equity returns implying decrease in profitability.

Muturi and Omondi (2013) considered a review on the factors affecting the financial performance of companies trading at the NSE. They considered all the firms excluding banks and insurance companies. The study therefore considered about twenty-nine companies. Explanatory research design and purposive sampling design technique were employed. Data was collected from financial statements and reports declared and shared publicly by the listed companies. 203 reports of the sampled companies were used to obtain the data for analysis. The variables used in this study were leverage, Liquidity, company size, and companies' size. The variables were proxied against ROA as a measure of firm performance. The author used the panel data technique to analyze the data where Pearson and multiple regression were used at 95% confidence level. From study findings it was concluded that liquidity and company size have a positive significant correlation to the firm performance as measured by ROA. Leverage in this however had negative correlation to the financial performance. This negative correlation to the financial performance was significant and hence findings were inconsistent with the study hypothesis that leverage has no significant effect on firm performance. The findings implied that as debt level rise or increase, beyond certain optimum level, financial performance declines and the possibility of bankruptcy increase hence costs outrun the benefits from cost benefit analysis.

2.3.2 Firm Size and Financial Performance

Chandrapala and Knapkora (2013) considered a study on firm specific factors and financial performance in the republic of Czech. They evaluated the dependent variables size, age, debt ratio, quick asset ratio, inventory, sales growth, physical capability intensity and turnover ratio. The

variables were proxied against performance as measured by ROA. Census sampling design was used during the study and one thousand and ninety-five companies (1,095) in Czech Republic over the period 2005-2008 were factored. The data was sourced from Albertina database. Due lack of complete data about one hundred twenty-one (121) companies were deleted and therefore the final sample had nine hundred seventy-four firms (974). The data analysis considered a panel data methodology. The pooled, OLS regression and fixed effects models were run for analysis after some diagnostic tests. The results output showed that the firm's size, debt ratio, inventory, and capital turnover have significant effect on ROA. The model for this study had an R^2 of 0.0523 which indicates a weak model. The size variable was found to have statistically significant positive effect on ROA. Therefore, as the firms grows its ability to generate returns seems to gradually improve. As mentioned earlier, the model is weak thus necessitating further studies and findings in this area study.

A study on firm size influence on profitability of Sri Lankan diversified holdings firms considered firm size, debtor ratio and firms' growth as the independent variables proxied against profitability as measured by ROA. The study sourced data from financial statements published in the annual report of the listed companies at Colombo Stock Exchange. The authors considered a of period five years from 2008- 2012 on firms listed by 2007 and eleven firms listed under the diversified holdings sector were taken as a balanced panel. The panel data analysis technique was used for analysis due to its flexibility in modelling differences in behavior across individuals. The Pooled OLS was factored for the study and descriptive statistics we used to show the averages of the variables. Data was collected from the annual published financial reports and by primary survey then sorted and analyzed using STATA V12. The Pearson and regression analysis were used to measure the relationships and the strength between study variables. Before running the

regression, the author performed diagnostic test and multi collinearity was ruled out. The results revealed that at 1% confidence level, debt ratios negatively but with significant effect to the firm's profitability. This agrees with the pecking order principle that argues that profitable firms might lower leverage than unprofitable firms. Growth rate was found to have a too weak negative association to the profitability but significant. Finally, the variable size was found to have a significant effect on the profitability. This implied that firms in diversified holding sector in Sri Lanka have higher profitability. This could be accounted by the economies of scale effect where big firms are effective compared to small firms (Sritharan 2018).

Swarnpalli (2014) did a study on the firms' specific determinants and financial performance of licensed commercial banks in Sri Lanka. The study aimed at investigating the impact of bank specific factors which include operating expenses, credit risk, liquidly risk, capital strength and book size. The regressand was financial performance as measured by ROA and ROE. The study utilized data for four years specifically from 2009-2012. The data was extracted from income statements and other financial reports for the period as downloaded from the individual bank websites. The OLS regression was employed for the data analysis to identify the relationship between the bank's performance and their form specific attributes. Additionally, Karl Pearson correlation method was employed in evaluating the association between firm attributes and the financial performance. The output revealed operating expenses had a negative and significant effect to the performance of the firm while credit risk, liquidity and capital strength were not significant. Lastly the bank size significantly and positively related to the performance of banks. The significant positive effect was noted in both models as measured by the ROA and ROE thus implying banks with relatively large size are more profitable.

Jimoh and Attah (2022) considered a study on firm specific characteristics and financial performance of listed Agricultural companies in Nigeria. The experimented variables were firm size, Dividend payout, Asset maturity, firm liquidity, firm growth, firm leverage and firm age. The variables were proxied against the Returns on Asset as a measure of financial performance. The study size was the five agricultural companies in Nigeria Stock Exchange. The selection of the companies was based on availability of data from published financial reports of listed firms from year 2010-2020. Analysis was done by use of the static panel data regression methodology. Breusch Pagan Langragian multiplier was used as a preliminary test to determine the most appropriate estimation technique while the Haussmann test was used to solve the dilemma of selecting between Fixed effects and Random effects model for regression analysis. The model of the study had a R^2 of 0.743 hence a strong indication that the variables captured explained the relationship between the variation in firm performance to a great extent. The results revealed that Assets maturity positively and significantly affect the returns on Assets of the firm. Dividend payout had a positive and significant effect on the firm performance of agricultural trading firms in Nigeria Security Market. Liquidity equally had positive effect on the financial performance however the firm size was found to have a negative effect on the firm performance of listed agricultural firms in Nigeria. This finding was against priori expectation and contrary to other finding of the same variable in other studies.

Mehari and Ameiro (2013) considered a study on firm specific factors that determine insurance companies' performance in Ethiopia. The study considered firm level characteristics like size, leverage, tangibility, loss ratio, growth in writing the premiums, liquidity and age on performance of insurance companies in Ethiopia and proxied against the Returns on Assets. The study considered nine insurance companies over the period 2005-2010. The data was collected from

audited annual reports of insurance companies as obtained from The National Bank of Ethiopia and insurance companies publication reports. The sample size of nine was derived from a population of fourteen insurance firms. The study employed panel data analysis technique. To determine the most appropriate regression model for the study, fixed and random effects were tested using the Hausman test. The random effect model was preferred which further necessitated the need to test Pooled OLS regression model and the Pooled OLS was preferred for the study. The study finding revealed that there was negative relationship between age and ROA but statistically insignificant. This implied age of insurers is not considered as a powerful explanatory variable to determine the performance of insurance companies in Ethiopia. On the contrary the size was positively related to ROA and with statistical significance effect. Therefore, large firms performs better than the small insurance firms possibly because they can diversify assured risks and respond quickly to changes in the market conditions. From the Pooled OLS regression leverage was positively and significantly related to the performance of insurance companies at 1% level of significance. This implied that insurance firms with high leverage in Ethiopia perform better than companies with low financial leverage. Lastly liquidity had positive but insignificant effect on ROA while the variable risk had negative but statistically significant relationship to the ROA.

Mafumbete et al (2017) studied on the influence of the firm specific determinants on the financial performance in the power industry. The study considered capital structure, liquidity, firm size and working capital as determinants of the financial performance. The research adopted a mixed research design where both quantitative and qualitative data methods were employed. Data was extracted from the secondary sources like management bulletins, audit reports and annual published financial statements from 2010-2014. The questionnaires were used to collect the primary data with a response of 67%. The study employed use of probability and non-probability

sampling method; the purposive sampling was used as a non-probability sampling to select sample respondents. The technique was preferred since it allows the target population to be represented in the sample hence more accurate compared to the non-probability sampling technique. The stratified sampling technique was considered to ensure full representation in the sample. To ensure the questionnaire was reliable and valid, the data collection tool was pretested to assess pellucidity of questions, remove the redundancies and irrelevancies. The secondary data was analyzed using E-Views V8 and STATA V13 and the regression was done using simple linear regression model. The result revealed that majority of the respondents (92%) believed that company size has a significant effect the profitability and hence large firms performs better than the small firms due to the advantages of economies of scale. Additionally large firms can diversify hence better financing options. The regression analysis results revealed that capital structure and firm size lead to a decrease in financial performance by 6.7% as measured by ROA, while rise in firm size led to a decline in financial performance as measured by ROI.

Muturi and Omondi (2013) considered a review of the financial performance of companies at the Nairobi Securities exchange. They factored explanatory variables leverage, company size and age. The variables were proxied against firm performance estimated by the returns on asset. The descriptive research design was adopted to explain cause effect relation between the firm specific factors and firm performance. The purposive sampling technique was employed during the study and focus was the twenty-nine (29) firms that were not in the category of banks and insurance. The study period covered seven (7) years from 2006-2012. The study used secondary data as gathered from financial reports shared publicly by the listed firms. Descriptive and inferential statistics were used to analyze the data while the hypothesis test was at 5% significance level. From the results analysis, it was found out that leverage has a significant but negative effect on the financial

performance while liquidity has positive and significant effect on the on the financial performance of the listed firms at the NSE. Company size had a significant positive effect on the financial performance. It implied that large firms or companies are more competitive over small firms since they have a wide array of resources and enjoy economies of scale. However, firms that become extremely large risk negative financial performance due to the bureaucracy and inertia that sets in extremely large firms, but age may be used to help a firm become more efficient as firms discover their potential.

Bogonye, Banafa and Kingi (2016) considered research titled effect of firm specific factors on the financial performance of the non-financial firms listed at the NSE. The study considered independent variables namely Asset tangibility, Firm Size, Firm liquidity, and growth opportunities which were proxied on the financial performance as measured by ROA. The study adopted a descriptive research design to analyze the effect of the of the firm specific factors on the financial performance. The target population of this study was comprised of all the thirty-seven (37) non-financial firms listed at the NSE. The data was collected for 5 years from 2011-2015. The study employed secondary data as gathered from the published financial reports of non-financial firms at the time. Panel Data technique was employed in analyzing the data since it had cross sectional and time variability. The Descriptive statistics, correlation analysis and panel multiple regression analysis were used to analyze the data was subjected to multi collinearity test in order to cure the problem of multi-collinearity. The regression output found out that Asset tangibility has a negative significant effect on the financial performance of the non-financial firms listed at the Nairobi Securities exchange at the time i.e., firms that have high tangibility experienced low ROA. Liquidity on the other hand had positive correlation to the financial performance though not

significant. Growth opportunities had a positive insignificant correlation to the financial performance. Lastly firm size had a positive and but insignificant effect on the ROA.

2.2.3 Tangibility and Financial Performance

Several studies in this area have factored to study or analyze how tangibility affects the financial performance of firms or its relationship with financial distress. The scholars have used the fixed assets as a proportion of the total assets to analyze the asset structure. Below is a discussion on various studies that have considered tangibility as an explanatory variable. Ahmad and Zaid (2020) did a review on the impact of firms' specific factors on the financial performance of the Indian firms. They considered variables like financial distress cost, growth opportunities, firm size, total taxes, asset structure (Tangibility of Assets) and Leverage. The dependent variable was firm performance measured by ROA, ROCE, and Return on Net worth. Target population was all non-financial firms listed at the Bombay Stock Exchange and covered the period between 2011-2017. The target population was four thousand and fifty-six firms (4,056) non-financial firms however the final sample had one thousand and sixty-nine firms (1,069) which had complete secondary data. The data for this firms was extracted from journals, books and Annual financial reports that were extracted from the Prowess Database. The model used for the analysis had seven thousand four hundred and eighty-three observations (7,483). The data analysis adopted panel technique where descriptive, correlation and multiple regression analysis was done. The panel diagnostics tests were tested for redundant fixed effects and correlated random effects.

The fixed effect model was preferred for the study and the results revealed that firm specific factors proxied on ROA had an R^2 of 0.56 and therefore the model was okay in explaining firm performance using the explanatory variables in the model while 44% of variation was explained by variables outside the model. The model further revealed that distress Costs, growth

opportunities, size and total taxes had a positive and significant impact on the ROA of Indian firms. However, Asset structure or the tangibility and financial leverage had negative and significant impact on the financial performance as measured by the ROA. Model two of the study regressed the variables proxied against the Return on the net worth. The model had a R^2 of 0.56 or 56% just like the previous model implying the model was good enough to explain the variability of the financial performance of the Indian listed firms. The model results found out that Tangibility, size and leverage negatively and significantly impacted on the net worth while the rest of the variables revealed a positive but insignificant effect on the net worth. The last regression analysis model tested the explanatory variables against the ROCE. The model had an R^2 of the 0.365 which implied that the model could only account for 36.5% of the total variations and hence about 64.5 % of the variation were caused by factors outside the model. From the results it is deduced that asset structure, size and leverage had a negative and significant effect on the ROCE while the growth opportunities, total taxes, and cost of financial distress had a positive and insignificant effect on ROCE.

From the above discussion of results, it can be concluded that assets tangibility or the asset structure had a negative effect which was significant on the financial performance of the Indian firms as measured by ROA, ROCE and RONW.

Abdioglu (2019) did a study on the impact of the firm specific characteristics on the financial distress and capital structure decisions. In the study leverage, long term debt, short term debts, tangibility, size, sales growth rate, market to book ratio, return on equity and year dummies were considered as the explanatory variables. The independent variables were regressed on Z score by Altman and S score by Springate. The study considered the manufacturing firms listed in the Turkish market for the period between 2007 -2017. The author used secondary data sourced from

Finnet Database in Turkey. The study analyzed a balanced panel and therefore the final sample had one thousand eight hundred (1,800) firms- years only. The firm fixed effect was used to account for firm level omitted variables which were time invariant. The year dummies were included in the regression in order to control for cross sectional dependence. The time series or seasonality effect was controlled using heteroscedasticity robust standard errors in all the regressions by clustering at the firm level.

The study had two panels i.e., Z score Panel and S score panel. From the results based on the Z score panel it was revealed that leverage had negative relation to the Z score therefore higher levels of debts impairs the financial performance of the Turkish listed firms. Maturity of debts on the other hand has a positive effect on the firms Z score implying that the maturity of debts improves the financial performance of manufacturing in Turkey. However, from the same result asset tangibility or the assets' structure had a negative effect on the Z score. This output implied that growth of assets beyond certain optimum level leads to idle assets thus impairing the financial performance.

The results of Panel B on the S score revealed that leverage had a negative effect on the S score, but long-term debts had a positive effect on the S score. Similarly, result on tangibility indicated negative effect on the S score similar effect to Z score. This implied that Asset structure or tangibility of the firm increases the financial distress level thus impairing the performance of the firm.

Safarova (2010) considered a study on the factors that determine the firm performance of New Zealand listed companies. The study analyzed the New Zealand listed companies over the period between 1996-2007. The variables used during the study were corporate governance, cash on hand,

leverage, firm specific risk, size, growth, and tangibility. The variables regressed on ROA, Economic Profit and Tobin Q.

The sample size of the study had seventy-six (76) listed firms excluding financial, investment, property, and international companies. The ROA was used as a measure of financial performance since it measures how effective the assets are in creating profits. The Economic Profit on the other hand indicate residual income or income adjusted for any capital cost, risk, size as well as accounting for the time value of money. The economic profit determination is not limited by the accounting principles that are based on historical costs. Lastly the Tobin Q hypothesizes a combination of value for all the companies in the stock market and should be approximately equal to the to the replacement costs. The data analysis revealed that tangibility which is the current variable of interest had a negative and significant effect on the Tobin Q however when tested against ROA and Economic profit it had positive but insignificant effect. This implies the significance is weak and not very reliable hence tangibility effect is more effective on the Tobin Q as a measure of financial performance.

In Africa, the study area has attracted interest and various scholars have put up efforts to study the effect of tangibility on the financial performance of firms in different contexts of staggered industries.

Ogieriakli and Ajao (2018) considered a study on firm specific factors and the financial performance of insurance firms in Nigeria. The study factored twelve (12) quoted companies in Nigeria Stock Exchange for the period 2009-2017. The variables considered were size, leverage, tangibility, premium growth and age of companies. The dependent variable was ROA. The study used panel data of econometric analysis technique to run the descriptive statistics and the regression analysis. The Fixed effect model was used to regress the variables and the model output

had an R^2 of 0.5175502 implying that the model accounted for 52 % of the financial performance to the captured variable while 48% was a result of variables outside the model with a linear significant relation and no unlikely autocorrelation. The regression model revealed that company size had a negative relationship to the ROA which contradict the priori expectation that size has a positive effect on the ROA. Leverage on the other hand has positive relationship to the ROA which too contradicts expectation. Growth of premium revealed negative relationship to the ROA of the insurance firms in Nigeria. Age positively related to the to the ROA. Lastly, tangibility was negatively related to the to the ROA, but insignificantly implying asset structure negatively influence financial performance of insurance firms in Nigeria hence the insurance companies do not consider high growth of Assets since it does not relate to better performance.

In Ethiopia a study by Mehari and Ameiro (2013) considered the effect of the firm specific factors and how they influence insurance companies' performance in Ethiopia. In this study, the explanatory variables were Age, size of the company, leverage, loss ratio, tangibility, premium growth and liquidity proxied against the financial performance. The study sample had nine insurance firms and used audited and published for data extraction. OLS regression model was used for analysis a 5% significance level. The Random Effects model was preferred for analysis and the results revealed that firm size, loss ratio, and tangibility had positive coefficient and were significant. Therefore, in Ethiopia, tangibility positively and significantly affects the financial performance of the insurance companies unlike thus contracting the previous study in Nigeria.

In the study by Bogonya, Kingi and Banafa (2016) on firm specific factors and financial performance of firms listed in Nairobi stock exchange, the authors considered tangibility and how it affects financial performance of firms. The proxy was ROA. The Asset structure has been discussed in great strides because of the effect it has on capital structure and financial performance.

The study considered non-financial firm listed at the NSE between 2011 – 2015 and relied heavily on the secondary for data collection. The descriptive research design was used in the study in order to explain the cause effect analysis. The regression model revealed that tangibility has negative significant effect on the firm performance of non-financial firms in Kenya.

2.2.4 Liquidity and Firm Performance

Liquidity has been defined generally the as the capacity of a business unit to service or finance its short-term obligations and other daily or repetitive activities. It is mostly measured using the current ratio. Matar et al (2018) considered an analysis of factors affecting corporate performance of the listed firms in Jordan. The analysis was done using panel analysis. The variables were a combination of both firm specific and macro-economic factors proxied against ROA and MBV. The variables were GDP, Inflation rate, interest rate, firm size, financial leverage, investment, liquidity, and sales growth. The data used the for the analysis was from Jordanian Industrial Exchange and services for the period 2007-2016 as listed in Amman Stock Exchange. The firms considered in this study were the non-financial listed firms due to their poor performance during the period. The sample had one hundred and sixteen (116) from a target population of 224.

The panel data regression was used for the data analysis where the descriptive research design was adopted to describe the data output. In the first model, the variables were regressed against ROA. The study found out that all the factors under investigation positively influenced the Jordanian firm's performance as measured by ROA however investment was insignificant. Inflation had significant negative effect on the financial performance. From this finding, liquidity positively and in a significant way influenced the ROA implying that liquidity improves the ability of a firm to generate profits. The Second regression model where the proxy was MBV, the findings revealed that liquidity as measured by current ratio had no correlation to the MBV. The study

therefore concluded that profitability of the Jordanian firms is gauged and influenced by the debt maturity or firms' liquidity.

A study by Szajat et al (2020) on the influence of firm level factors on financial productivity of metallurgical industry of Slovakia, considered forty-eight (48) operating firms. The data was from year 2007 -2017. The choice of the industry was motivated by the effort to best capture individual firm specific effects on the firm performance. The data was collected from the non-public version of a database Finstart Premium. The explanatory variables were liquidity, firm size, as measure by the logarithm of assets, age, asset turnover, and cost effectiveness as the independent variables. The dependent variable was return on assets and return on sales. The multi regression analysis technique was preferred, and fixed effect panel regression model was selected for the final analysis. Results or output were classified in two based on the proxy variable. The regression output based on the ROA, the variables age, cost effectiveness, and liquidity effect was positive and significant on the firm performance, nevertheless firm size negatively affected the ROA. Lastly Asset turnover had a positive impact on the ROA however it was insignificant.

The fixed effects regression model based on the return on sales revealed that liquidity has a negative effect on the ROS similarly to age, and asset turnover however cost effectiveness has positive effect and significant on ROS. Lastly the firm size has positive but insignificant effect on ROS. From the above findings, the Liquidity impact on financial performance of the metallurgical industry in Slovakia measured by different ratios is ambiguous hence the desire to reveiw the effect of liquidity on financial performance in a different industry and environment.

Mlanga and Abiodun (2019) considered study on the effect of firm specific characteristics and macro-economic factors on the financial performance of banks in Nigeria. In the study the authors considered bank specific variables like fund source, capital strength, loan quality, liquidity,

management quality, direction of efforts while the macroeconomic variables were GDP, Inflation and the annual lending rate. The Financial performance was measured using ROA. The study sample comprised of fifteen deposit banks whose reports were available between 2005-2014.The panel data analysis was preferred for the study where the Random Effects Model was used for estimation using the STATA software. The model had an R^2 of 0.5431 implying the model explained 54.31% of the variation using the captured explanatory variables. The results deduced the explanatory variables capital strength had a negative effect on the ROA and insignificant. Liquidity in this case had negative but significant effect on the financial performance. The results contradicted the priori expectation, possibly implying that the deposit banks in Nigeria were overtrading.

Mafumbate (2017) in his study on determinants of financial performance in the power industry in Zimbabwe, considered capital structure, firm size, and liquidity. The dependent variable financial performance was calculated using ROI, ROA and Profitability. Study considered a cross sectional analysis since the it concentrated with one firm only during the period however the author considered both primary and secondary data. The target population was about 60 Employees from the five (5) subsidiaries of Zesa Holdings. The sample size had 40 respondents. the descriptive research design was used for the study since blended both quantitative and qualitative, Additionally the design aided in finding solutions to the real causes of poor financial performance with data from 2010-2104. The top-level management were the target respondents for the primary data collection. The data was analyzed using simple linear regression model and statistical analysis was dine using the excel and STATA V13. The statistical analysis employed STATA software to test whether the relationship between financial performance of the power utility estimated by ROI and ROA related to capital structure decisions, firm size, and liquidity. The study findings revealed

capital structure decisions had negative impact and significant effect on the firm performance of Zesa holdings. Firm size negatively and significantly affected the financial performance of Zisa holdings. Lastly liquidity results from the regression analysis indicates that liquidity had positive and significant effect on the financial performance of Zisa Holdings in all the metrics used to proxy financial performance. This implied that increase in the liquidity led to improvement in financial performance of Zisa company. The results indicates that firm is managing its debtors well. This probably indicate the company is using the prepaid metering system.

The study topic has attracted interests in East Africa too though the context and selection of variables also differ.

Abera and Abebe (2019) carried out a study on the determinants of financial performance, evidence from the Ethiopia insurance companies. The authors considered size, capital adequacy, leverage, loss ratio, liquidity, age, GDP and inflation while the dependent variable was financial performance measure by the ROA and ROE. The study adopted quantitative research approach with a balanced panel data of nine insurance firms or companies over the period from 2010-2015 using secondary data from both internal and external sources. The sources were published from the statements of financial performance which were considered significant in identifying the specific firm factors. The external sources where sources were the annual reports of National Bank Ethiopia which enables the macro – economic determinants of performance. The purposive sampling technique was used to generate the sample which had 54 observations. The data was sorted and analyzed using the STATA software. From the regression analysis, the results indicates that capital adequacy, has positive and significant effect on ROA while the effect was negative on ROE but significant. Firm size of the insurance companies in Ethiopia has a favorable and significant impact on both the ROE and ROA. Implying that firm size in Ethiopia has positive and

significant effect on the financial performance of the insurance industry. Loss ratio and age of the insurance company on the other hand had negative and significant effect on the ROA and ROE both at 1% and 5% significant level. This implies that increase in liquidity of insurance firms in Ethiopia improves financial performance both in ROE and ROA and hence insurance companies can honor the claims as and when they fell due.

In Kenya the study area has also attracted interest in different industries. The selection of the variable is based on interest by researcher and the proxy intended.

Irungu (2019) did a study on the effect of firm level factors on financial performance of listed firms at the NSE. In his PhD thesis the independent variables leverage, liquidity, asset structure, firm size and age as the moderating variable proxied against financial performance estimated by the ROA and ROE. The study adopted a descriptive research design using the panel data technique for analysis. The design was preferred since it allowed researcher to observe and describe the behavior of the subject without influencing it in any way. The target population was the 64 listed commercial firms, and they were all considered for observation using secondary data as sourced from the published financial statements that were shared publicly. The study finding revealed that leverage had negative but significant effect on the ROA of financial firm's while liquidity had positive but significant effect on the ROA of the financial firms. Asset tangibility and firm size too had had positive effect on the ROA of non-financial firms. Similar results were revealed on regressing independent variables against the ROE of the financial firms. A regression analysis of the same variables for non-financial firms revealed that leverage had negative but significant effect on ROE while liquidity, asset structure, firm size had positive and significant effect on the ROE. Similar output was observed upon regressing against ROA. From the results output of this study,

it is evident liquidity impacted financial performance in an advantageous and significant way for all the listed firms at the NSE.

2.4 Conceptual Framework

A conceptual framework is a hypothesized model explaining the relationship between the independent variable and the dependent variable (Smith ,2004). Mutunga (2018) postulates conceptual framework describe the concepts relevant to the study and diagrammatically represents their relationship. The Figure below is conceptual framework adopted for the study.

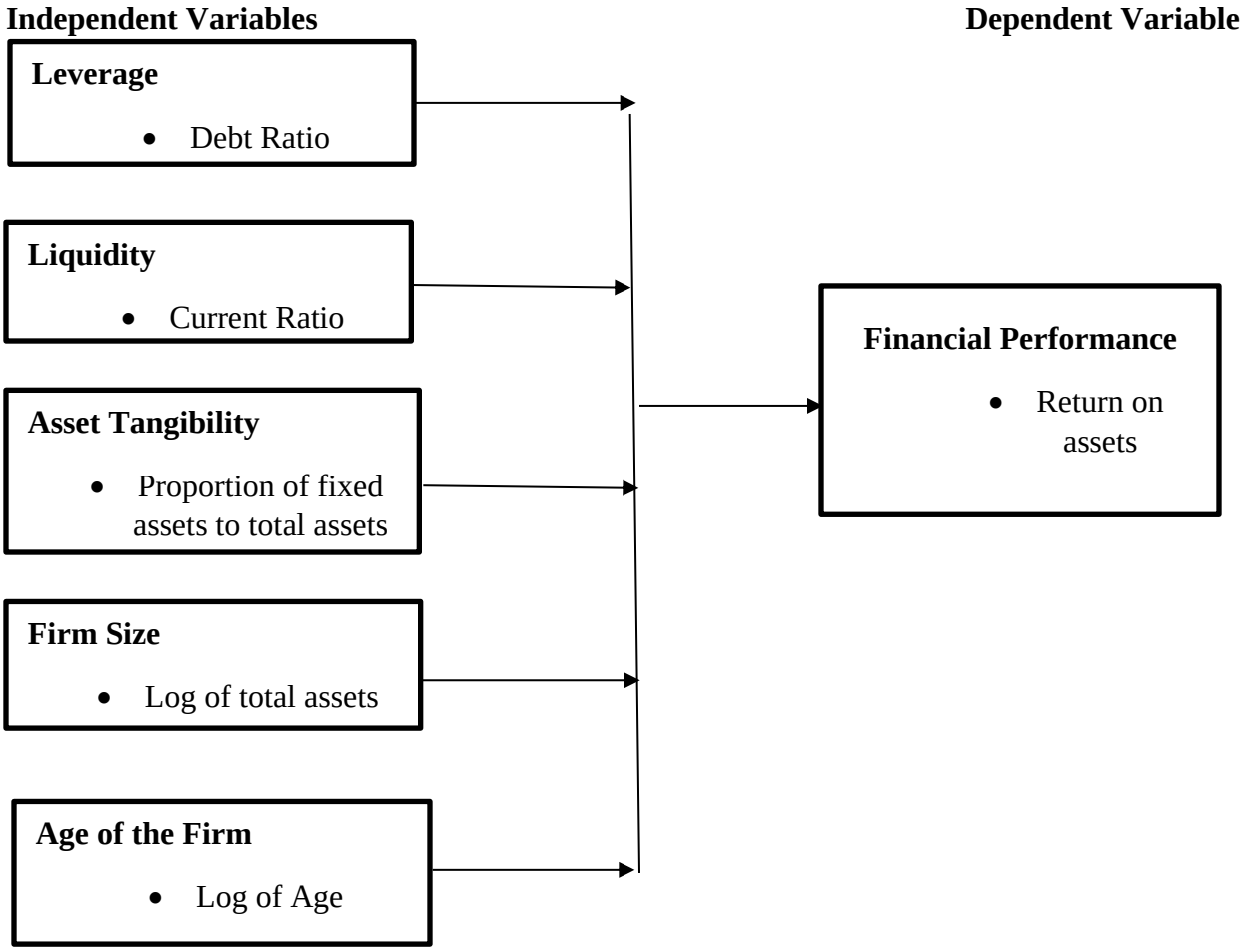

Figure 2: Conceptual Framework

Source: Author (2022)

2.5 Operationalization of Variables

This section shows how the study variables were fulfilled in the entire journey.

Table 1:Operationalization of Variables

Variable	Notation	Nature of the Variable	Measure	Scale	Analysis
Leverage	Lvg	Independent	Debt÷Equity	Ratio	Descriptive and regression
Liquidity	Liq	Independent	Current Asset÷Current liabilities	Ratio	Descriptive and regression
Firm Size	Log Asset	Independent	Logarithm of Total Assets	Ratio	Descriptive and regression
Firm Age	Log Age	Independent	Logarithm of Age	Ratio	Descriptive and regression
Tangibility	Tang	Independent	Fixed assets ÷ Total Assets	Ratio	Descriptive and regression
Financial Performance	roa	Dependent	Return on Assets	Ratio	Descriptive and regression

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section covers the methodology that was adopted in the study from research design, sampling technique, target population, instrumentation, data collection and proposed data analysis for the study.

3.2 Research Design

Research design is a structure or a skeleton showing all major parts of a research, samples or groups and how they connect i.e., it holds the research together (Millicent et al, 2003). The study used the descriptive research design. The design was preferred since it supports the cause effect analysis. The design also allows the use of historical data to explain the trend in performance and lastly the design incorporates the current practices in the industry.

3.3 Target Population

Wawire (2021) defines the target population as the total sum of all the observation used to derive a sample. The target population in this study was all the firms in the Nairobi Securities Exchange that were in operation from year 2012 -2021. The total firms listed in NSE were 64 companies however only the 9 firms in the Commercial and services industry were considered for the study.

3.4 Sample and sampling technique

Maina (2021) defines sample as a select number of individual members or elements that represent the entire target population due to commonalities. The study employed census sampling method since the number of firms under commercial and services category in the NSE were few i.e., only nine (9) firms were active throughout the study period. The sampling frame was the entire commercial and services firms listed in the NSE. Therefore, a total of nine firms was considered

for a period of 10 years. The period under consideration was preferred since it was accommodated use of more recent data to study the industry. Additionally, during the period several firms had issued profits warnings severally and, in some cases, government sponsored companies had been bailed out several times. Lastly during the period some companies stopped trading in NSE signifying difficulties in operations or in ability to meet the NSE and CMA regulations. To ensure the panels were balanced for analysis only firms with complete data and listed before 2012 considered for the study. Several firms were dropped during the data analysis due to incomplete data collected during the study period and this affected the requirement for balanced panels. The companies were Uchumi Supermarket, Deacons, and Nairobi business ventures,

3.5 Instrumentation

This refers to the tool used for data collection from the records of financial statements published and shared publicly by the commercial and services firms as required by CMA and NSE. The data was collected from Secondary sources, namely the published financial instruments. Data collection sheet was used (Appendix 2).

3.6 Data analysis

Data analysis refer to the systematic use of a software to bring meaning, order, and structure in a panel data set. The study employed use of excel data capture sheet and STATA software in data analysis and generation of outputs. The panel data analysis technique considered and employed and consideration to the use of Pooled OLS, Fixed Effect regression method or Random effect regression method. To determine the most preferred regression method the Breusch-pagan LM test and Hausman test were used. The panel data analysis was preferred econometrically since it reflected changes in firm level and the order of variables over the time. i.e., it factors time variations within the cross sections.

To ensure panel balance, only firms with no missing data were subjected to the analysis however these reduced observations. The panel data analysis versatility allowed control of omitted variables and account for heterogeneity. It also increased the efficiency of the estimators as argued by (Maina, 2021). The study incorporated descriptive statistics and correlation analysis. The descriptive statistics table was used to describe the averages of the of the observed variables while the correlation analysis was used to describe the association between variables additionally the Vif technique was used to confirm or test the collinearity of variables. Lastly, regression statistics output was used to make the conclusion about the study regarding the research hypothesis and answering the research questions. The following panel data regression analysis model was used to baseline the study, $\gamma = \beta o + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \omega_{it}$,Where, γ represent the financial performance of the firms, β_0 is the constant; β_1, β_2, β_3, β_4 β_5 represents the beta factors of independent variables, X_1 represent the leverage , X_2 represent the liquidity, X_3 represent the tangibility, X_4 an represent the firm size X_5 represent the firm age, $it_1 \ldots\ldots it_5$ represent the time variation and ω_{it} is the error term. During data collection it was revealed some variables could have contributed to unreliable coefficients and as results Firm age and Firm Size were transformed from their nominal form to natural log form. The transformation was meant to reduce the effect of spurious interpretation of raw and unreliable data resulting to a huge margin of error.

3.7 Diagnostic Tests

The panel data was subjected to diagnostic's tests to test for reliability and validity of the regression analysis. The following diagnostic's tests were done to ensure that the data fits the classical linear regression model (CLRM) assumptions under OLS.

3.7.1 Multi collinearity

The test involved drawing a correlation matrix and checking for existence of high correlation between any pair of the independent. The strong correlation between the independent variables will be tested using the VIF. The study will employ the Gujarati 2007 rejection threshold of 0.8 i.e., a VIF of above 0.8 will be concluded to suffer from multi collinearity and a value below 0.8 will indicate no Multi collinearity.

3.7.2 Heteroscedasticity

This test considered whether to employ use of the Breusch pagan / Cook Wei's berg for Random effects Model or the Modified Wald test for Fixed Effects model for heteroscedasticity. The heteroscedasticity is a situation where variance of error term will not be constant. At 5% confidence level, the P value should not be greater than the five percent in order to declare heteroscedasticity does not exist, otherwise the data will be homoscedastic.

3.7.3 Normality

The test of normality was be done using the Shapiro wilk test. The test confirms the null hypothesis that residuals are normally distributed. At 5 % confidence level values above 0.05 indicates normal distribution otherwise no normal distribution of residuals. Additionally, the PP plots was also employed for the figurative and visual distribution of residuals.

3.7.4 Stationarity

This is a test for seasonality. It indicates that the process property means, variance, and autocorrelation structure do not change over the time. There are several tests for stationarity like the unit root tests, Dickey Fuller, among others. The current study employed the Im Pesaran Shin Unit test of Stationarity.

3.7.5 Hausman Test

Hausman (1978), Provided a statistical procedure to solve the dilemma between Fixed effect and Random effect. According to Hausmann the Null hypothesis is that Random effect model is preferred over the Fixed effect model. The null hypothesis being that there is no correlation between the two. The test was subjected to 5% significance test where if the outcome of P value was less than 0.05 then the null hypothesis was rejected and alternative hypothesis accepted and if P value >0.05 then the null hypothesis was accepted and alternative hypothesis was rejected.

CHAPTER FOUR

FINDINGS AND DISCUSSION

4.1 Introduction

This section covers the study findings, reviews, and hypothesis tests. The section further broadens the descriptions of the findings based on the regression analysis and diagnostics tests. The chapter further covers the fitted regression model output which has been used to describe the hypothesis tests. The analysis was based on micro-panel themes to achieve the study objectives

4.2 The Response rate

The study targeted all the firms operating and trading in the commercial and services industry to evaluate the effect of firm specific factors on the financial performance. The study employed census technique and secondary data was collected from audited financial statements over a period of 10yrs. i.e from 2012-2021. The targeted companies were twelve as listed in the NSE during the period of study. The data gathered revealed that some companies did not trade or were not active during certain years and as such data was unavailable. For this study such companies were not considered in the analysis as a requirement for balanced panel. The companies that were not considered in the analysis were Nairobi Ventures, Deacons, and Uchumi Supermarket. The final sample had Nine Companies and therefore considerable response was considered as Nine companies. This response was about 75% of the target population or sample. According to Wawire (2021) a response of between 50-75% is good enough and therefore with 75% response from target firms was considered adequate for the micro panel analysis.

Commercial and Services Companies	Response	Response Rate
12	9	75%

Table 2;Response Rate

4.3 Exploratory Analysis

This involved checking whether there was existence of differences between the firms and within the firms. Exploratory analysis was done by drawing the trend plots and spaghetti plots. Trend plots was used to explain the differences within the firm during the study period, while the overlain plots also referred to as spaghetti plots was used to describe or account for the differences between the firms. The firm performance as measured by ROA was explored for all the firms considered in the analysis before determining the relationship between firm specific factors and the financial performance.

Within The firm

The figure below shows the trend output of the financial performance for the listed commercial and services firms during the study period. The trend plot shows that the ROA of the firms has been constant for most of the firms. However, some firms namely Eveready and Sameer Limited had very volatile return on performance with some years declaring negative returns on the Assets returns shown below

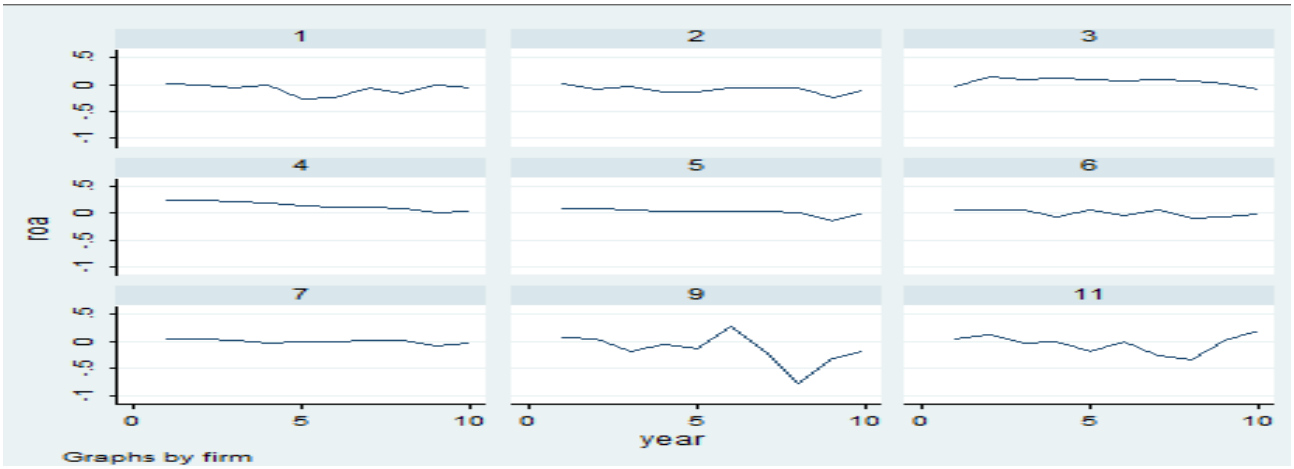

Figure 3; Trend Analysis

Between the firm

This exploratory analysis was done using the overlain plots also named as spaghetti plots. The graph show that firms had almost a similar intercept thus ruling out the possibility time related effects.

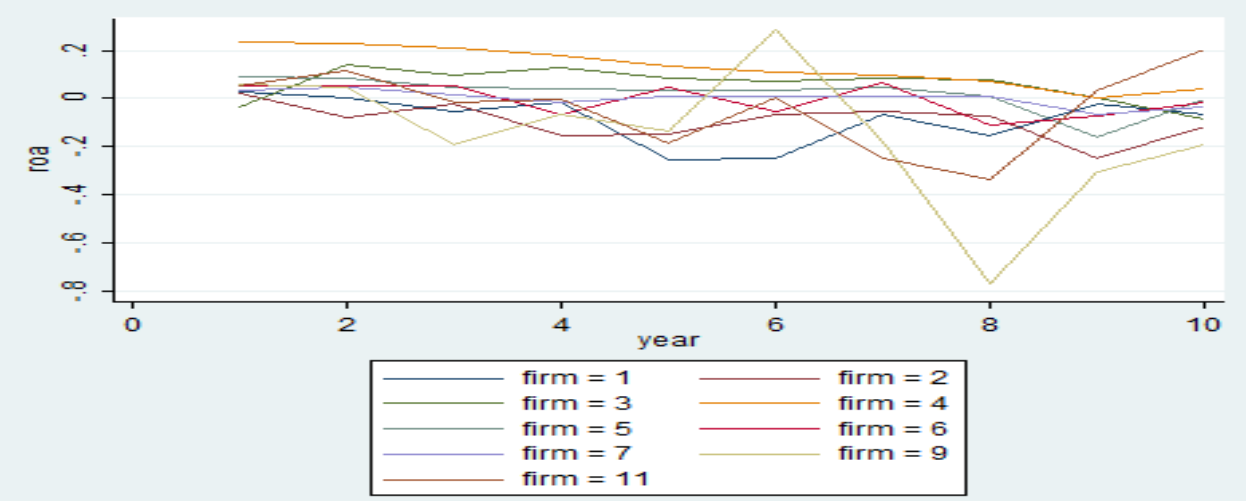

Figure 4 Spaghetti Plots

4.4 Descriptive statistics

4.4.1Description of the dependent variable financial performance

The output below shows financial performance across all the nine commercial and services firms between 2012-2021 as measured by ROA. Based on the table below overall average return on assets was -1.7% across the industry with a volatility of 14.5%. The average minimum return on assets was a loss in value of assets by 77.2% while the highest growth in value of assets was about 28.7%. The volatility of the financial performance between firms was about 8.4% while the volatility within firms was about 12.05%. This implied that the volatility was higher within the firms compared to between firms.

Variable		Mean	Std. Dev.	Min	Max	Observations	
roa	overall	-.0174233	.1446403	-.7720878	.286809	N =	90
	between		.0843809	-.1443648	.1322646	n =	9
	within		.1205019	-.6451464	.4137504	T =	10

Table 3: Descriptive Statistics for ROA

4.4.2 Descriptive Statistics of the independent variables

The table 4.4.2 below shows the descriptive statistics of the independent variables that influenced the financial performance of the commercial and services firms listed at the NSE.

Variable		Mean	Std. Dev.	Min	Max	Observations	
lvg	overall	1.056975	6.271754	-26.98707	30.96222	N =	90
	between		3.266746	-6.719422	4.671222	n =	9
	within		5.453661	-19.21068	27.34798	T =	10
tang	overall	.4196906	.2934645	-.5357398	1	N =	90
	between		.2366801	-.0904914	.6946788	n =	9
	within		.189126	-.2061133	.9642089	T =	10
lqd	overall	2.195044	4.732024	.2905294	40	N =	90
	between		1.713408	.7627036	6.246303	n =	9
	within		4.444452	-3.453834	35.94874	T =	10
ltotal~s	overall	16.92848	2.462401	11.97787	21.78027	N =	90
	between		2.560142	13.29369	21.06584	n =	9
	within		.4145942	15.61266	17.89198	T =	10
lage	overall	3.777427	.4666562	2.772589	4.779123	N =	90
	between		.4845331	3.010433	4.74026	n =	9
	within		.0820777	3.539582	3.985869	T =	10

Table 4: Descriptive Statistics for Independent variables

Firm Age

The results indicate that the overall mean of the log firm age was 3.77% with a standard deviation of 47.7%. The firm age was transformed into a natural log to avoid spurious output. The minimum firm age variation was 2.77 while the highest was 4.77 thus implying the firm age varied between 16 to 119 years of operation. The age volatility between the firms was 0.484 which was lower compared to the within the firms at 0.08. The results indicates that variation in age is higher between the panels and lower within the panels.

Firm Size

The variable firm size was measured using the value of the firm Assets. The nominal value was transformed into the natural log to generate reliable results for the ease of interpretation. in this section the results are based on the natural log of firm assets. It was found out that the average firm size based on natural log assets was 16.92 with standard deviation of 2.46. The variation of the firm size measure by the total assets was higher between the panels at 2.56 compared to within the firms which was about 0.42.

Liquidity

The liquidity is a measure of the firm capability to service the daily operations and other short-term obligations. In this study liquidity was measure using the current ratio and from the output the overall mean of the liquidity was 2.195 with a standard deviation of the 4.73. The standard deviation of the liquidity between the firms was 1.71 while within the panels was 4.4. This implied that variation within the firm was higher compared to between the panels with a minimum of -3.45 and a maximum variation of 35.94.

Tangibility

This variable was used to measure the proportion of fixed asset with respect to total assets across the industry. The study revealed that overall tangibility of the industry was about 0.41 with standard deviation of 0.29. The tangibility ratio between the firms was 0.23 while the firms was 0.19. This implies that variation in-between the firms are higher compared with a minimum of -0.09 and a maximum of about 0.69 compared to variation within the firms.

Leverage.

This was a measure of the accumulated debt to the total equity within the commercial and services industry. The output reveals that the overall leverage was about 1.05 with av variation of 6.27. The study equally found out that the variation between the panels 3.27 with a minimum of -6.72 and a maximum 4.67 while the variation within the firms of panels was 5.45 with a minimum of -19.21 and a maximum of 27.34. This implies that leverage was higher within the firms and lower between the firms.

4.5 Specifications tests or Diagnostic tests

These tests are done to test the suitability of the model. This improves on the reliability of the coefficients of the variables. The tests done in this study are multicollinearity, stationarity, Hausman test, heteroscedasticity, and normality.

4.5.1 Multicollinearity

This test helps to account for correlation of variables used in data set. Multi collinearity of variables reduces reliability of the statistical results. In this study the pairwise and VIF test for multi collinearity were adopted. According to Gujarat,2007 a correlation coefficient of above 0.8 or VIF greater than 10 indicates multicollinearity exists and therefore the variables with the highest VIF value should be revised or dropped from the analysis. The collinearity test using pairwise correlation technique was done at 5% significance. The table below shows the pairwise correlation output and from the results all the variables were not correlated at five percent level of significance. In detail the tangibility and leverage had a positive and insignificant correlation (r=0.00858, P=0.4213) while liquidity and leverage had a positive and insignificant correlation (r= 0.0396, P=0.7109). Firm age was weakly correlated to leverage but in an insignificant way (r=0.0308, P=0.7730) Similarly to tangibility (r=0.0191, P=0.8580). Firm age was negatively correlated to

liquidity and was insignificant (r=-0.1698, P=0.1097). Lastly firm size as measured by total volume of assets had a negative and significant correlation to leverage, tangibility and firm age however the for firm age correlation was insignificant while the correlation to liquidity was Positive but insignificant (r=0.2021, P=0.0561). From the results discussed above, the multi collinearity was rule out since none of the variable had a coefficient above 0.8.

Pairwise correlation

	lvg	tang	lqd	logage	logtot~s	roe
lvg	1.0000					
tang	0.0858	1.0000				
	0.4213					
lqd	0.0864	0.0396	1.0000			
	0.4183	0.7109				
logage	0.0308	0.0191	-0.1698	1.0000		
	0.7730	0.8580	0.1097			
logtotalas~s	-0.2410	-0.2935	0.2021	-0.1950	1.0000	
	0.0221	0.0050	0.0561	0.0655		
roe	-0.7654	0.1273	-0.0088	0.0181	0.2427	1.0000
	0.0000	0.2319	0.9343	0.8652	0.0212	

Table 5:Pairwise Correlation output

VIF

The VIF output was equally used to test and discuss the multicollinearity test. The results below indicate a mean VIF of 1.12 thus implying no correlation at 5% significance level. None of the variable had a value greater than 10 thus ruling out multicollinearity too.

Variable	VIF	1/VIF
logtotalas~s	1.26	0.791761
tang	1.11	0.902986
lqd	1.09	0.913519
lvg	1.08	0.922906
logage	1.06	0.943589
Mean VIF	1.12	

Table 6:Variation Inflation Factor (VIF)

4.5.2 Stationarity

This test is carried out to determine whether the variables are stationary or non-stationary. The null hypothesis state that the null hypothesis all the panels have unit roots while the alternative states that some of the panels have no unit roots (Maina, 2021). The natural logs for variables age and firm size were considered in this study. The Im Pearan shin unit- root test was adopted for this test at 5% significance level.

Stationarity test for Dependent variable

The table below shows the unit root test for financial performance as measured by ROA. This is revealed by the P value which has value higher.0.05 hence insignificant there. The null hypothesis is rejected, and we conclude that the performance, The P value is higher than the 0.05 hence insignificant. The null hypothesis was rejected, and we conclude firm performance has unit roots or is not stationary.

```
Im-Pesaran-Shin unit-root test for roa

Ho: All panels contain unit roots        Number of panels   =       9
Ha: Some panels are stationary           Number of periods  =      10

AR parameter: Panel-specific             Asymptotics: T,N -> Infinity
Panel means:  Included                                sequentially
Time trend:   Not included

ADF regressions: No lags included

                                                 Fixed-N exact critical values
                         Statistic      p-value        1%       5%       10%
------------------------------------------------------------------------------
 t-bar                     -2.0228                    -2.320   -2.060   -1.930
 t-tilde-bar               -1.6459
 Z-t-tilde-bar             -1.5456       0.0611
------------------------------------------------------------------------------
```

Table 7:Stationarity test for Financial Performance

Due to the Non-Stationarity, the problem was cured by fitting a trend as shown below and the results adopted since the P Value was less than 0.05 thus indicating ROA is stationary after fitting the trend.

```
Im-Pesaran-Shin unit-root test for roa
-------------------------------------------------------------------------------
Ho: All panels contain unit roots            Number of panels   =       9
Ha: Some panels are stationary               Number of periods  =      10

AR parameter: Panel-specific                 Asymptotics: T,N -> Infinity
Panel means:  Included                                    sequentially
Time trend:   Included

ADF regressions: No lags included
-------------------------------------------------------------------------------
                                                 Fixed-N exact critical values
                     Statistic      p-value          1%       5%       10%
-------------------------------------------------------------------------------
t-bar                  -3.0438                     -3.030   -2.740   -2.590
t-tilde-bar            -1.9945
Z-t-tilde-bar          -2.9946       0.0014
-------------------------------------------------------------------------------
```

Table 8: Trend Fitting for Financial Performance

Unit root test for leverage

The test revealed that P Value was above 0.05 hence the null hypothesis is rejected, and alternative hypothesis adopted that leverage is nonstationary. To cure the challenge, the trend was introduced as the first level of curing non stationarity, however the challenge persisted, and first differential adopted to solve the stationarity challenge. The trend and first differential did not reveal any different results and as a result leverage was concluded to be non-stationary in the commercial and services companies listed in the NSE.

```
Im-Pesaran-Shin unit-root test for lvg
-------------------------------------

Ho: All panels contain unit roots            Number of panels  =       9
Ha: Some panels are stationary               Number of periods =      10

AR parameter: Panel-specific                 Asymptotics: T,N -> Infinity
Panel means:  Included                                    sequentially
Time trend:   Not included

ADF regressions: No lags included

                                                        Fixed-N exact critical values
                         Statistic      p-value          1%       5%       10%
------------------------------------------------------------------------------
 t-bar                    -1.0711                      -2.320   -2.060   -1.930
 t-tilde-bar              -0.8120
 Z-t-tilde-bar             1.9201         0.9726
------------------------------------------------------------------------------
```

Table 9: Unit root Test for Leverage

Unit roots for tangibility

Just like the previous variables, tangibility was found to be non-stationary. The null hypothesis was rejected since the P Value was higher than 0.05 hence alternative hypothesis was adopted. This implied that tangibility had unit roots or is not stationary. As shown on the table below the p Value was 0.8237 which is higher the 0.05. Therefore, unit roots or non-stationarity was present. Further test on the same to eliminate non-stationarity.

```
Im-Pesaran-Shin unit-root test for tang
---------------------------------------

Ho: All panels contain unit roots            Number of panels  =       9
Ha: Some panels are stationary               Number of periods =      10

AR parameter: Panel-specific                 Asymptotics: T,N -> Infinity
Panel means:  Included                                    sequentially
Time trend:   Not included

ADF regressions: No lags included

                                                        Fixed-N exact critical values
                         Statistic      p-value          1%       5%       10%
------------------------------------------------------------------------------
 t-bar                    -1.3692                      -2.320   -2.060   -1.930
 t-tilde-bar              -1.0503
 Z-t-tilde-bar             0.9297         0.8237
------------------------------------------------------------------------------
```

Table 10: Unit Root Test for Tangibility

Trend fitting in tangibility

The non-stationarity of the tangibility above was cured by fitting a trend. This revealed that tangibility was stationary at 5% significance level and hence the null hypothesis adopted, and alternative hypothesis rejected after trend fitting. The new p value 0.0318 which less than 0.05

```
Im-Pesaran-Shin unit-root test for tang
-------------------------------------------------------------------------------
Ho: All panels contain unit roots            Number of panels   =       9
Ha: Some panels are stationary               Number of periods  =      10

AR parameter: Panel-specific                 Asymptotics: T,N -> Infinity
Panel means:  Included                                    sequentially
Time trend:   Included

ADF regressions: No lags included
-------------------------------------------------------------------------------
                                                 Fixed-N exact critical values
                     Statistic      p-value          1%       5%       10%
-------------------------------------------------------------------------------
t-bar                  -3.5165                     -3.030   -2.740   -2.590
t-tilde-bar            -1.7203
Z-t-tilde-bar          -1.8549       0.0318
-------------------------------------------------------------------------------
```

Table 11:Trend fitting for Tangibility

Unit root test for liquidity

The study out put on liquidity revealed that the liquidity was significant at 5% level. This implied that liquidity was stationary hence adopt the null hypothesis and reject the alternative hypothesis that liquidity is not stationary.

```
Im-Pesaran-Shin unit-root test for lqd
-------------------------------------------------------------------------------
Ho: All panels contain unit roots            Number of panels   =       9
Ha: Some panels are stationary               Number of periods  =      10

AR parameter: Panel-specific                 Asymptotics: T,N -> Infinity
Panel means:  Included                                    sequentially
Time trend:   Not included

ADF regressions: No lags included
-------------------------------------------------------------------------------
                                                 Fixed-N exact critical values
                     Statistic      p-value          1%       5%       10%
-------------------------------------------------------------------------------
t-bar                  -2.5845                     -2.320   -2.060   -1.930
t-tilde-bar            -1.6687
Z-t-tilde-bar          -1.6404       0.0505
-------------------------------------------------------------------------------
```

Table 12:Unit Root Test for Liquidity

Unit root test for firm age.

This variable was transformed using natural log of age. The variable tested for unit root was log age at 5%level significance. The output revealed that natural log of age was stationary and significant hence the null hypothesis was adopted. The p value as shown below was 0.000 lower than the 0.05 hence the variable was stationary.

```
Im-Pesaran-Shin unit-root test for logage
-----------------------------------------

Ho: All panels contain unit roots            Number of panels  =       9
Ha: Some panels are stationary               Number of periods =      10

AR parameter: Panel-specific                 Asymptotics: T,N -> Infinity
Panel means:  Included                                    sequentially
Time trend:   Not included

ADF regressions: No lags included
-------------------------------------------------------------------------
                                                 Fixed-N exact critical values
                     Statistic      p-value          1%       5%       10%
-------------------------------------------------------------------------
 t-bar                -95.9968                     -2.320   -2.060   -1.930
 t-tilde-bar           -2.4920
 Z-t-tilde-bar         -5.0622        0.0000
-------------------------------------------------------------------------
```

Table 13: Unit Root Test for Firm Age

Unit root test for firm size

The variable was transformed using the natural log assets. The variable tested for unit root test was log assets at 5% level of significance. it was found out that the natural log of assets was nonstationary and hence the null hypothesis was rejected. The P value was 0.5032 higher than 0.05 hence nonstationary.

```
. xtunitroot ips logtotalassets

Im-Pesaran-Shin unit-root test for logtotalassets
-------------------------------------------------

Ho: All panels contain unit roots            Number of panels  =       9
Ha: Some panels are stationary               Number of periods =      10

AR parameter: Panel-specific                 Asymptotics: T,N -> Infinity
Panel means:  Included                                    sequentially
Time trend:   Not included

ADF regressions: No lags included
-------------------------------------------------------------------------
                                                 Fixed-N exact critical values
                     Statistic      p-value          1%       5%       10%
-------------------------------------------------------------------------
 t-bar                -1.9854                     -2.320   -2.060   -1.930
 t-tilde-bar          -1.2720
 Z-t-tilde-bar         0.0081        0.5032
-------------------------------------------------------------------------
```

Table 14: Unit Root Test for Firm Size.

Results of firm size unit root test after fitting the trend.

Due to the non-stationarity of the firm size despite the transforming the variable into natural log, the transformed variable was tested for stationarity upon fitting the trend. The results revealed that the P value was 0.05 and hence the variable was concluded as stationary and hence the null hypothesis that the variable contain unit roots and the alternative hypothesis was adopted.

```
Im-Pesaran-Shin unit-root test for logtotalassets
-----------------------------------------------------------------------------
Ho: All panels contain unit roots            Number of panels  =       9
Ha: Some panels are stationary               Number of periods =      10

AR parameter: Panel-specific                 Asymptotics: T,N -> Infinity
Panel means:  Included                                    sequentially
Time trend:   Included

ADF regressions: No lags included
-----------------------------------------------------------------------------
                                                 Fixed-N exact critical values
                     Statistic      p-value          1%       5%       10%
-----------------------------------------------------------------------------
 t-bar                 -2.4331                     -3.030   -2.740   -2.590
 t-tilde-bar           -1.6619
 Z-t-tilde-bar         -1.6123       0.0534
-----------------------------------------------------------------------------
```

Table 15:Trend Fitting for Firm Size

4.5.3 Normality Test

This test was done to determine the skewness and the shape of the data adopted. The adopted tests were skewness, kurtosis, and Shapiro Wilk test.

Skewness and Kurtosis

The graphical output below shows the skewness and kurtosis of the data used in this study. From the bar graph the data is not normally distributed since it is skewed to the right and highly peaked.

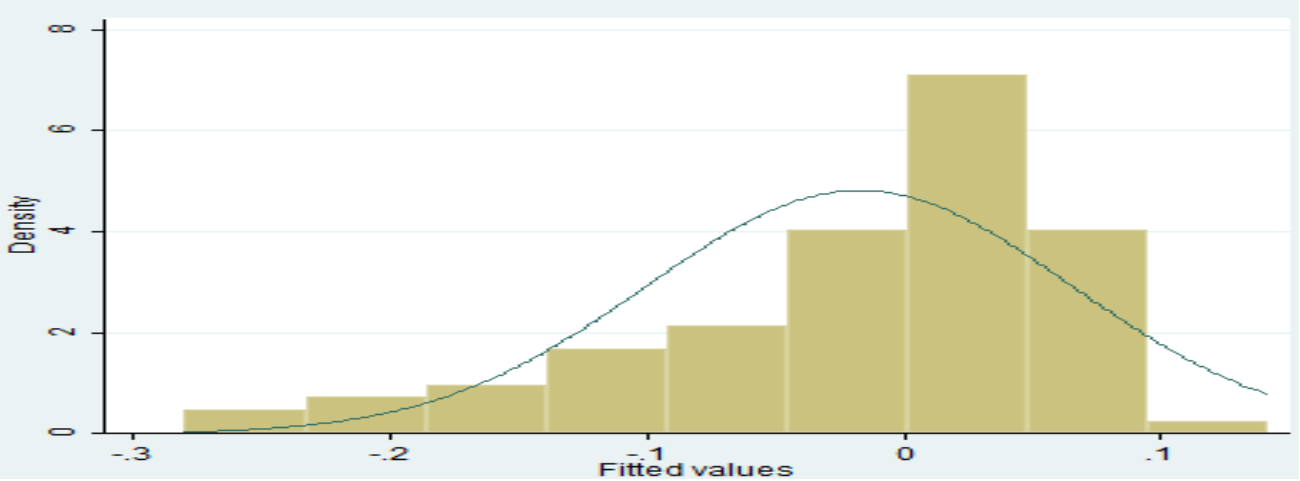

Figure 5: Normality Output

Shapiro wilk test

This test assumes data is normally distributed. For P value $>$ 0.05 we fail to reject the null hypothesis and conclude that data is normally distributed however for values P $<$ 0.05 then the data is abnormally distributed. The results below from Shapiro Wilk test shows that the data is abnormally distributed since the P value is less than 0.05.

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
r	90	0.91264	6.608	4.165	0.00002

Table 16: Shapiro Wilk Test

4.5.4 Heteroscedasticity.

This test is used to determine whether errors ($\cup i$) terms are constant using the Modified Wald test technique. The null hypothesis in this case is homoscedasticity with P$>$ 0.05. If the P value $<$ 0.05 it is, then concluded the data is heteroskedastic. In this study the Fixed Effect panel technique was preferred over the Random effect method and therefore Modified Wald Test preferred over the Breusch pagan test for Random Effects. The results below indicate the Prob$>$ chi^2 = 0.000.

which is less than 0.05 hence heteroscedasticity is present. The errors are not constant and hence the desire to use the robust errors or a model that can account for heteroscedasticity. In this study the general least square technique was adopted over the regression technique.

```
Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (9)   =      5118.62
Prob>chi2 =       0.0000
```

Table 17:Modified Wald Test

4.5.5 Hausman test

This test is used to determine which model to use between Fixed effects and Random Effects. The null hypothesis is Random Effects (RE) while the Alternative hypothesis is fixed effect (FE). From the test analysis $P > 0.05$ Random Effect is preferred over the Fixed Effects and if the $P < 0.05$ the Fixed effects model is preferred over Random Effects (RE). The test estimate in the output table below shows the null hypothesis was rejected and the alternative hypothesis accepted because the $Prob > Chi^2 = 0.0036$ is less than 0.05. The Fixed Effect model in this case preferred.

	Coefficients			
	(b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
lvg	-.0007358	-.0026498	.0019141	.001164
tang	.1104346	.2786791	-.1682446	.0636027
lqd	.001551	.0010478	.0005032	.
logage	-.3800283	.0306857	-.410714	.1730771
logtotalas~s	.0445632	.0165254	.0280378	.031893

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

Test: Ho: difference in coefficients not systematic

chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 17.53
Prob>chi2 = 0.0036
(V_b-V_B is not positive definite)

Table 18: Hausman Test

Model fitting

The model is fitted after running the diagnostic tests. From this study the data was noted to suffer from non-stationarity of some variables and heteroscedasticity. Additionally serial correlation was not tested on the basis that it's not common in micro panels. The general least square method was preferred for model fitting since it much superior to regression technique due to its capability to account for stationarity, heteroscedastic and serial correlation. The GLS technique was used to fit the model and the output below show a summary of the coefficients of the variables.

```
Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:        homoskedastic
Correlation:   no autocorrelation

Estimated covariances      =         1          Number of obs      =        90
Estimated autocorrelations =         0          Number of groups   =         9
Estimated coefficients     =         6          Time periods       =        10
                                                Wald chi2(5)       =     43.98
Log likelihood             =  64.71775          Prob > chi2        =    0.0000
```

roa	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
lvg	-.0026498	.002074	-1.28	0.201	-.0067148	.0014151
tang	.2786791	.0448102	6.22	0.000	.1908528	.3665054
lqd	.0010478	.0027629	0.38	0.705	-.0043675	.006463
logage	.0306857	.0275667	1.11	0.266	-.023344	.0847154
logtotalassets	.0165254	.0057032	2.90	0.004	.0053474	.0277034
_cons	-.5295446	.1584759	-3.34	0.001	-.8401517	-.2189376

Table 19: General Least Square Output

The original mathematical model was written as a follows $\gamma = \beta o + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \omega_{it}$,Where, γ represent the financial performance of the firms, β_0 is the constant; $\beta_1, \beta_2, \beta_3, \beta_4 \ \beta_5$ represents the beta factors of independent variables, X_1 represent the leverage , X_2 represent the liquidity, X_3 represent the tangibility, X_4 an represent the firm size

X_5 represent the firm age, $it_1 \dots \dots \dots it_5$ represent the time variation and ω_{it} is the error term. However, to avoid using spurious data to do the analysis, the variables Firm age and Firm size were transformed using their natural log. The transformed model was used in this section and structured as follows $\gamma = \beta o + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 logX_{4it} + \beta_5 logX_{5it} + \omega_{it}$,Where, γ represent the financial performance of the firms, β_0 is the constant; $\beta_1, \beta_2, \beta_3, \beta_4 \ \beta_5$ represents the beta factors of independent variables, X_1 represent the leverage , X_2 represent the liquidity, X_3 represent the tangibility, $logX_4$ an represent the log firm age $logX_5$ represent the log firm size, $it_1 \dots \dots \dots it_5$ represent the time variation and ω_{it} is the error term. The fitted model based on the results above $\gamma = -0.5295 + 0.0027X_{1it} + 0.278710X_{2it} + 0.0010X_{3it} + 0.0307logX_{4it} + 0.0165logX_{5it}$. The overall model is statistically significant where $Prob > chi = 0.0000$ while the $wald\ chi = 43.98$ which indicate a fair predictive power for the variables under consideration with a log likelihood of 64.72. The model coefficient indicates that leverage has a negative effect on the return on assets as a measure of financial performance, holding all other factors constant one unit rise in leverage leads to significant financial performance (ROA) erosion by 0.26% however this is non-significant and inconclusive since p-value is above 0.05 and oscillates between a negative and positive effect. Tangibility on the other hand has a positive significant effect on the financial performance. i.e., a unit rise in tangibility leads to 27.87% in financial performance as measured by ROA. The effect is significant since the Pa value of is less the 0.05 and conclusive. Liquidity as measure of firm capability to oil itself had weak and insignificant effect on the ROA however from the confidence interval the effect was inconclusive since it oscillates with a negative and positive range. Ceteris paribus a rise in one unit of liquidity in the commercial and service industry led to increase in ROA by a marginal effect of 0.01units Kes with a P value of 0.705 hence insignificant. Firm age was measured by the number of years that the firm was in operation

with respect to the study period. The nominal value was converted into natural log to get reliable coefficient. The results output revealed that firm age effect on the financial performance as measured by ROA is inconclusive. From the results, a rise in firm age by one 1% led to increase of the financial performance (ROA) by 0.031 units or kes however as shown on the output the confidence interval range is between -0.023 to 0.085 hence the effect is ambiguous and inconclusive. Lastly the firm size as measured by the natural log of Assets had a significant effect on the financial performance of the commercial and services firms listed at the NSE. The P value was 0.004 against the 0.05 with a positive coefficient of 0.0165 hence implying firm size has positive significant effect on the ROA. The interval range was within a positive margin and hence the effect is conclusive. Therefore, a unit rise in firm size of commercial and services companies leads to 1.65% rise in ROA hence improvement in financial performance.

4.7 Hypothesis Testing

The section was analyzed using the results used in fitting the model. The hypothesis was tested using the general least square methodology used in fitting the mathematical model. The hypothesis was tested at 5% level of significance. The criteria of acceptance or rejection was, if p value $<$ 0.05 then reject the null hypothesis and accept the alternative hypothesis. However, if the P value$>$ 0.05 then accept the null hypothesis and reject alternative hypothesis.

H_{01}: Leverage has no significant effect on the financial performance of commercial and services firms listed at the Nairobi Securities Exchange

The hypothesis was tested using the general least square methodology used in fitting the mathematical model. The hypothesis was tested at 5% level of significance. The results or the output above shows that leverage has a P value 0.201 and a weak negative coefficient of 0.003 hence the null hypothesis is accepted, and the alternative hypothesis rejected. It therefore implies

that Leverage has no significant effect on the financial performance of commercial and services firms though inconclusive since confidence level ambiguous. This result conflicts the findings of Ojuji & Odita (2012), Ahmad and Zaid (2020), Charles et al (2018) and Koech (2018) who all found that leverage has negative and significant effect on the financial performance of Nigeria, Indian and Kenyan firms respectively. Additionally, the output conflicts the findings of the Mathur and Gill (2011) who found that leverage has positive significant effect on financial performance of the Canadian Firms.

H_{02}: Firm Age has no significant effect on the financial performance of commercial and services firms listed at the Nairobi Securities Exchange

The hypothesis was tested using the general least square methodology used in fitting the mathematical model above. The hypothesis was tested at 5% level of significance and the results revealed that firm age has a positive effect signified by the positive coefficient however the P value was higher than 0.05 hence the effect was insignificant but within an inconclusive interval range. This creates ambiguity on the exact effect of firm age on the ROA of the commercial and Services firms listed in the Nairobi Securities Exchange. The outcome does not help in deciding on rejection or acceptance of the hypothesis, as such the output is ambiguous and inconclusive.

H_{03}: Tangibility has no significant effect on the financial performance of commercial and services firms listed at the Nairobi Securities Exchange.

The hypothesis was tested using the general least square methodology used in fitting the transformed mathematical above. The hypothesis was tested at 5% level of significance and from the results output the commercial and services firms' tangibility has positive effect on the ROA. The P value was 0.000 against 0.05 level of significance thus implying tangibility has a positive

significant effect and therefore reject the null hypothesis and accept the alternative hypothesis additionally the confidence level is within a positive margin hence it concluded that tangibility has a positive significant effect. The results agree with the studies by Ahmad & Ziad (2020) who found tangibility has positive and significant effect on the financial performance of the Indian firms however the results conflict a study by Abdioglu (2019) who found that tangibility had negative effect on the financial performance of distressed manufacturing firms in Turkey similarly to studies by Ogierikli & Ajao(2018) in Nigeria who concluded tangibility had negative effect on ROA of the Insurance Firms and Bogonye, Kingi and Benafa(2016) who found that tangibility had negative and significant effect on the insurance companies listed in Kenya.

H_{04}: Liquidity has no significant effect on the financial performance of commercial and services firms listed at the Nairobi Securities Exchange

The hypothesis was tested using the general least square methodology used in fitting the mathematical model above. The hypothesis was tested at 5% level of significance and the study revealed that the P value was 0.705 which was greater than the test level of significance of 0.05 and a weak positive coefficient of 0. 001.This implied that liquidity has weak positive but insignificant effect on the ROA. However, the confidence interval was conflicting since it lies between a positive and negative margin. This creates ambiguity and inconclusiveness on the real effect of liquidity on the ROA. The output conflict the studies done by Matar et al (2018) who found that liquidity has positive effect on financial performance (ROA) of the Jordanian Listed firms. Similar result to Szajt et al (2020) and Mafumbate (2017) who found positive and significant effect on the ROA of metallurgical firms in Slovakia Zesa holdings respectively.

H_{05}: Firm Size has no significant effect on the financial performance of commercial and services firms listed at the Nairobi Securities Exchange.

The hypothesis was tested using the general least square methodology used in fitting the mathematical model. The hypothesis was tested at 5% level of significance. The results or the output above shows that leverage has a P value of 0.004 and coefficient 0.017. The confidence interval was within a positive margin thus implying firm size has a positive and significant effect on ROA therefore the Null hypothesis was rejected, and the alternative hypothesis failed to be rejected. This output agrees with Chandrapala and Knapkora (2013), Sritharan (2018) Swarnpali (2018) who all found that firm size has a positive and significant effect on the ROA for firms in Czech, Sri Lanka, however it contradicts Jimoh & Attah (2022) who found that firm size has a negative effect on the financial performance of agricultural firms listed in Niger

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction.

This section of the study covers the major findings of this study discussion based on empirical review, research objectives and hypotheses. The section further proposes best practices and areas of further review or research based on the gaps or areas not fully satisfied by this study. Lastly the section discusses on the conclusion, recommendations, and limitations.

5.2 Summary of the major findings

This section discusses the findings based on the research objectives.

5.2.1 The relationship between leverage and financial performance of commercial and services firms listed at the NSE

On this objective the study found out that liquidity had weak negative correlation to the financial performance. This implied that that unit rise in leverage led to a reduction in ROA leading for erosion in financial performance.

5.2.2 The relationship between firm age and financial performance of commercial and services firms listed at the NSE.

The study found out that firm age has a positive effect on the financial performance even though the confidence interval margin was inconclusive thus implying the effect could also be negative on the financial performance.

5.2.3 The relationship between tangibility and financial performance of commercial and services listed firms.

The research objective was to find out the association of tangibility to ROA of commercial services firms. The study found out that, tangibility contributed positively and significantly to the ROA thus improving the financial performance of the companies.

5.2.4 The relationship between liquidity and financial performance of commercial and services firms listed at NSE

The study revealed that liquidity has positive and weak effect on the financial performance, however the effect was ambiguous since the confidence interval was within an inconclusive margin

5.2.5 The relationship between the firm size and financial performance of commercial and services firms.

The study revealed that firm size as measure by the total assets has a positive effect on the financial performance of the companies in commercial and services industry. This implied a unitary rise in assets led to growth or improvement in financial performance as measured by ROA.

5.3 Conclusion of the study

From the study findings, it is concluded that the five variables used in this study have a significance in the financial performance of commercial and services firms. However, some are ambiguous, and their effect should be studied further to establish the exact effect they have on the financial performance as measured by ROA. In detail the study revealed that leverage and debt structure have negative effect on ROA though weak and inconclusive. This implies that it wise for the firm management to determine the optimal debt to accumulate since overreliance on debts lead to debts costs that may go beyond the certain limits thus outweighing the benefits leading to erosion of

financial performance of the firm. Additionally, debts within manageable levels helps a company to oil its activities and acquire resources and services that would improve financial performance. The firm age has a positive effect on firm performance even though the confidence interval was inconclusive. This implied that as a firm matures its able to process and enhance production capacities thus improving financial performance (ROA) however with an equal measure as a firm age there is also a possibility of accumulating in efficiencies or retaining redundant technologies that may affect the firm performance as result leading to erosion on returns on assets. This could explain the ambiguity on the confidence interval the variable. Tangibility on the other hand refers to the accumulated level of fixed assets. the fixed assets help in production process and thus improving the financial performance. From the results its revealed that firms that have high level of fixed assets perform well in ROA. However, firms should not exceedingly accumulate assets beyond a certain level. Such assets will be underutilized with minimal returns. Liquidity is the accumulated capacity of a firm to service daily operations. The study revealed an ambiguous effect of liquidity on ROA implying that the effect could be positive and impact in growth of assets returns however beyond certain limits idle liquidity becomes expensive to maintain and as such cost of maintaining such liquidity outweighs the benefit. Firms should maintain optimum liquidity for optimum returns. Firm size revealed a positive and significant effect on the ROA. This implied that growth in the firm size contributes probably efficiencies through accumulation of better assets that improve productivity hence improve financial performance. Such accumulated assets reduce exposure to distress in case of liquidity or financial distress thus improving financial performance

5.4 Recommendation of the Study.

The study recommends that the management if the firms operating in commercial and services to put keen attention on liquidity, leverage, tangibility, and firm size. This variable has a critical

effect on the firm financial performance. The conclusion has shown that some variables have ambiguous effect or inconclusive effect on financial performance. Such variables should be critically reviewed or evaluated to determine their optimum and hence operate at the optimum level of such variables. Liquidity as a grease that oils the firm operations is critical. Firms should be reviewing their liquidity levels and ensure that they have sufficient resources to facilitate business and meet payment for example to sort the short-term debts and financing repetitive activities. The repetitive activities if not checked may in the long run become a financial burden and may stall business and limit returns hence financial performance is affected. Liquidity should be maintained at optimum levels to avoid idle resources incurring unnecessary costs especially if its financed short term fixed contracts. Leverage on the other hand is a critical variable in any firm and firms should maintain only optimum debt levels. The optimum debt ceiling helps a firm to avoid unnecessary debts that may outrun the benefits. As noted in the study leverage has ambiguous effect on the firm performance and therefore firm owners, management and financiers should know the optimum debts levels of their firms and debtors. The overaccumulation becomes an expense burden to the firm(s) thus limiting the financial performance or returns on assets. This calls for the firm establish cheap sources finance and rank them. Where such sources are sources are exhausted or not available then debts can be activated but debts ceiling must be respected or adhered to avoid debt stress. Adhering to debt ceilings helps manage the debts costs and enjoy the tax benefits optimally and avoid debt stress. Firm tangibility is critical and important as revealed in this study. As firm do business, they should accumulate assets both fixed and short term, however firms with high proportion of fixed assets have a higher ROA hence better financial performance. This implies firms should invest in fixed assets and align with the technology changes. In this case the acquired assets will help in production and delivery of services thus

improving firm performance. At the same time firms should retire or dispose fixed assets that are not productive. That way the firm performance improves through use of the disposed assets to retire certain debts this bringing efficiency into the firm. Same breath goes with firm size where accumulated growth brings impetus and efficiency however beyond certain limits such growth may bring bureaucracy, and this affect the financial performance. Firm growing exponentially should invest in better or modern methods of management of resources both the physical and human capital. Lastly firm age critically helps determine the efficiencies with a firm. For young firm efficiencies may not have fully matured but as form ages the firm matures, and human capital is able to remove in efficiencies and improve on delivery. For mature firms, they are experienced and hence likely to attract better skills to improve on productivity and can equally afford to accumulate higher debt and liquidity.

5.5 Areas of further Studies.

This study employed selected firm specific factors to study about the association of firm specific factors and financial performance. The selected variables are fundamental financial factors in nature however the firm performance is affected by both financial and non-financial factors. Further research in this area is recommended based on the non the non-financial factors to establish challenges affecting firms in the commercial and services industry. During analysis it was revealed several firms did not trade is some of the years during the study period probably indicating difficulties experienced with the industry. Surprisingly it was revealed that between year 208 to 2021, 50% percent of the companies in this industry consistently issued profit warning and performed dismally in terms of profits. Additionally, 33% of the firms issued profits warning twice between 2018 and 2021. This shows an industry that is under financial performance distress and hence the proposal for further studies in this industry. A different technique can be applied in

analyzing the industry like the use of the moderating factor or time series technique to confirm whether different results will be established. A different measure of performance can also be adopted.

5.6 Limitations of the Study.

The study intended to review all the firms listed or trading between 2012 to 2021, however some firms did not have data during some years of the study period. As a result, such firm were entirely dropped from the analysis since it's a requirement the panel must be balanced. The removal of such firms from the analysis reduced the observations and target population hence impacting on the reliability of the coefficients. The data collected only covered listed firms and hence no comparing can be done with the non-listed firms operating in the commercial and services industry.

Appendix 1: Commercial and Services Companies

Serial Number	Name of The Firm
1	Express Kenya Plc.
2	Kenya Airways Ltd
3	Longhorn
4	Nation Media
5	Scan Group limited
6	Standard Group limited
7	TPS Easter African
8	Uchumi Supermarket
9	Eveready Limited
10	Deacons Limited
11	Sameer Limited
12	Nairobi Business Ventures Ltd

Appendix 2 The data Collection Form

Commercial firm	Serial Number	Year	Log Firm Age	ROA	Lev	Liq	LnSize	Tang

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