COST STRUCTURE AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS LISTED AT NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

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

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DEDICATION

I wish to dedicate this work to my family, for their support, to see to it that I succeed: My beloved Wife Emily Esokomi for her support and encouragement, and my dear children Griffin, Valary,Ethel, Alehandro and Tarshley for their patience.

ABSTRACT

Notwithstanding the negative effect interest rate capping on loan performance of commercial banks, another cause of concern has been the rising operational costs despite the technology innovations which were cited to cut costs. Commercial banks in Kenya have been grappling with increased cost in recent years. The increased operational costs are attributed to the rising employee and interest expenses amongst other factors. For example, according to the Central Bank of Kenya (CBK) in 2012 there was 13% increase in employment costs, which outpaced the annual rate of inflation at 9.4% in the banking sector. The total employment costs for the banks in Kenya was recorded to be 17.2% of the total income earned. The purpose of this study is to establish the relationship between cost structures and financial performance of commercial banks listed at NSE in Kenya. The study utilized cross-sectional descriptive survey design. Fixed costs and variable costs were used as the study independent costs while net total assets and customer deposits were used as the control variables. These were regressed against returns on assets which was used as a proxy measure of financial performance. The adjusted R squared established that there was variation of financial performance due to the differences in banks cost structure and other factors that influence financial performance. From the study findings, variable costs negatively correlated with the returns on assets of commercial banks. Fixed costs positively correlated with the returns on investments of commercial banks. The study established the relationship between variable costs and returns on assets of commercial banks to be negative an indication that a unit change in variable costs would lead to decrease in profit margins. The study also revealed that the fixed costs, net total assets and customer deposits have positive relationship with the returns on assets. This is an indication that a unit increase in any of these variables would lead to an increase in ROA. The study recommended that Banks quoted at the NSE should have optimal cost structure which will enable them conduct banks operations efficiently to ensure better returns to the shareholders on their committed investments. In addition, the capital market analysts, financial analysts and investment analysts should advise the banks management on the optimal cost structure. This implies that banks will be able to efficiently manage their costs and achieve optimal cost structure which does not hurt profit margins.

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ACRONYMS AND ABBREVIATIONS

CBK – Central Bank of Kenya

CPA – Capital Market Authority

NSE - Nairobi Securities Exchange

RBV - Resource Based View

ROA - Return on Assets

ROE - Return on Equity

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

It is inevitable that cost affect commercial banks ' financial performance. The concept of cost structure has received essential emphasis in the management accounting. Cost structure of the banks determines the pricing structure of the banks products and consequently varies between various sections of the banking firm and has an influence on the financial performance of the banks (Podder, 2012). The cost structure of a bank is normally expressed as a definition of cost incurred in a good/ service in relation cost of the good/service to adversely affect the bank's financial performance (Swarnapali, 2014). The cost drivers of commercial banks stems from various transactional activities. Among the costs which the banks faces include staffing expenses, marketing expenses tax expenses among others. Provision of various services carries some costs which may differ dependent on their nature and pertaining to different business activities. That is to say, cost structure has an influence on business performance in various ways and to various levels for commercial banks. Since commercial banks experience changing business operation environment due to government and CBK policies, they face serious competition which hampers how they operate and that is why keeping cost structure in check is pertinent for their profitability. In that regard, the imperative is clear, cost minimization and efficient management of cost structure may be a recipe for better financial performance (Wanjiku, 2012).

Transaction cost economic theory developed by Coase (1937) is one of the theories which underpin the concepts of this study.
A fundamental framework has been shown for decisions on a company's vertical limits. Commer cial banks must be profitable in order to maintain the intermediary role in the financial sector.

Therefore, the intermediation role and the eventual performance of the commercial banks have critical implications in terms of economic growth and development of countries. This is seen in the reduction of transactional costs, information asymmetry, risk diversification, moral hazard as well as costs management. Sound financial performance acts as incentive to the bank principals (i.e. shareholders) to invest more as it increases their profit levels and the return to their investments. The study will be anchored by four theories which underpin study concepts. Additionally, Adam Smiths (1937) agency theory will be relevant to the study. It purports that the management can aim to reduce the cost of operations to ensure profitability and align to the principal's interests.

Profitability is referred to as "a business organization's ability to rely year by year" in accordance with Ayanda (2013). Among the factors influencing productivity rates is the cost structure. Components such as the value of assets, funds, and infrastructure costs, employee costs, risk management and compliance costs, marketing expenses, and IT services, or maintenance costs, are part of the operating system (Cytonn Investments, 2014). Many financial institutions have posted huge write downs (Schiff & Schiff, 2018).Commercial banks realize the importance of structuring banks costs, taking out costs and investing the savings in strategic programs that will help them gain competitive advantage (Peacock, 2005). Schiffs and schiffs (2018) argues that commercial banks need to take a more strategic approach cost structuring as part of a broader efficient effort. Balancing fixed and variable costs reductions with long term strategic costs initiatives will leave banks much better positioned for future performance.

1.1.1 Cost Structure

Cost structure refers to an outline of the funding structure into the various operations of organizations and is divided into fixed and variable costs (Nicolai, 2008). Many expenses are,

however, not classifiable as fixed or rising costs. Such expenses are referred to as semi-fixedor semi-variable costs. A semi-fixed cost has both fixed cost characteristics and cost when certain production levels have been exceeded (Ayanda, 2013). The cost structure of a bank or financial institution according to Cytonn Investments (2014) comprises the costs for goods and services provided, operating expense and overhead expenses. The operating expenses are typically excluded from sales in order to achieve operating profits and are expressed in the income statement of the organization (Ayanda, 2013).

IMF describes cost structure as among the most vital accounting concepts. The key factors governing the cost structure can be either value-led or cost-led. Value-led model is the one that concentrates on value of the product or service but less concentration on the cost. Cost-led model is where a firm focuses on minimizing the cost of operation at all circumstances. Cytonn Investments (2016) reports that cost structures guide management actions, encourage behavior and foster the cultural values necessary to achieve the strategic objectives of an organization (Ansari et al. 1997). The cost structure, in particular, is a critical concept to every company's success. This is why the concept has expanded to include cost structure and management. Costs such as financial accounting and management accounting because it varies in essence is faced with new challenges by accountants (Muturi, 2016).

Cost structure positively affects the general gainfulness of the organization relying upon the viability of the bank the board in assessment of the expenses. Market factors, for example, financial specialists' hazard craving, which thusly is influenced by the condition of the worldwide economy, essentially influence the expense of assets. For example, following the US sub-prime loaning emergency in 2007 and the sovereign obligation emergency in the Euro Zone in 2011, the expenses of activities rose strongly in these locales.

The advanced change of money related administrations is probably going to bring about more challenge, with noteworthy segments of banks' items and benefit in danger (Waiyaki, 2017). Boundaries to passage may have ascended as far as center bank consistence costs, yet controllers' eagerness to face non-bank rivals in item regions generally overwhelmed by banks has expanded, and the financial aspects of banking have moved (Odemwingi, 2018). Cloud framework and versatile channels imply that the arrangement of money related administrations never again requires high fixed-cost centralized server farms and branch systems, so costs are increasingly factor. These and other rising issues have affected the cost structures of numerous banks.

There are several indicators in the cost structure. According to Groth and Kinnery, (1994), distribution and infrastructure costs constitute a large part of the banks ' cost base to reduce prices needs to find ways to streamline their distribution channels. The variables of the cost structure are found in banks income statement. However, some studies such as that of Desrochers (2014) used different indicators of cost structure for manufacturing companies such as marketing costs, IT expenditure, research and innovation costs and cost of production.

1.1.2 Financial Performance

Financial performance is a proportion of how well a firm can utilize its assets from its most essential business to create returns. It is the extent to which a set objective is or has been attained. Basing on Ongore (2013) profitability or financial performance is the measure of the organization operations and policies and outcomes expressed in monetary value over a certain period. Financial performance has repercussions to bank’s health and eventually the business continuity. Improved financial performance reflects the effective cost structure management of the bank as well as management efficiency. High operating efficiency and cost minimization of day to day expenses is anticipated to add positive to the formation of bank wealth. This is turn

leads to profitability and consequently to the growth of banks industry and economy at large. For a firm to improve its financial performance, it should aim at minimizing costs and expenses (Singla, 2008).

The indicators of financial performance are split into four categories of gearing, profitability, and liquidity and investor ratios. The financial metrics are divided into two categories. One is cash flow metrics including, Investment Return (ROI), Net Present Value (NPV)and Internal Return Rate (IRR) (Schimdt, 2015).

According to Singla (2008) financial performance is crucial in both external and internal stakeholders. To the external users from investor perspective it is important in deciding whether to sell or buy stock or bonds of a company. To the internal stakeholders, it helps the management of the organization in identifying the strengths, weaknesses and the overall target levels of the organization. These aspects are pertinent in attaining the mission, goals and objectives of the business and the evaluation of investment decisions. Financial performance is commonly measured in return on equity and return on assets. This study will use returns on assets as a measure of financial performance of commercial banks listed by NSE.

1.1.3 Cost Structure and Financial Performance

The allocation of costs is one of the internal aspects of a company primarily responsible for its financial performance (Narasimhan, Swink & Kim, 2005). The cost incurred in the running a business is related to the effective use of the company's assets and reflects the margin for net profit. A firm with large operating costs in most cases has low profit margins, however, it does not necessarily mean that a firm with small operating cost has high profit margins. Although a better financial performance may reflect small operating costs, it does not automatically mean that small operating cost is the recipe for better performance for the companies of the same size.

The distribution of expenses and where the company decides to incur cost is usually more important in generating revenue and consequently improve financial performance than a mere cut of costs and expenses. For instance, a company can focus on IT and technology and the margin of returns are greater than for another company which decides to focus on marketing expenses. The two companies may incur similar costs but generate different revenue. Companies use performance curves based on their resources; however, the know-how and decisions implemented in operational management can put businesses on new performance curve (Pisano, 1996).

Existing literature has shown that operations efficiency in their costs is closely associated with financial performance of firms. Dhillon (2012) showed that there was insignificant positive correlation between overall profitability and operating costs. The operating quality of the banks was checked by Gill et al. (2014) and found to adversely affect potential banks output. His findings showed that an increase in corporate costs and the operational risk of operating efficiency has adversely affected the future performance of companies. This research aims to assess the financial performance consequences of the cost structure of commercial banks listed on the market for Nairobi shares.

1.1.4 Commercial Banks Listed at Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE) begun in 1951 and has the responsibility of proffering a platform for trading to the listed companies. The NSE oversees its Member firms while the Capital Markets Authority (CMA) regulates it. Additionally, companies listed at NSE is also regulated by the Kenyan Companies Act (KCA). As such they are required to follow the guidelines provided in Act with regard to preparation of their financial statements (Nairobi Securities Exchange, 2015). The reason for choosing commercial banks listed in NSE is because

they are affected by all these banking acts and regulations which is reflected on their operational expenses and bank management.

In this regard, the World Bank report (2016), argues that commercial banks in Kenya have tremendously improved their asset portfolio and liquidity over the years. This has had a positive impact on the economy as it has made the economy more resilient to both internal and external shocks. In comparison to her neighbors, the Kenyan banking sector has been credited for its diverse size and its innovative product diversification.

Over the recent couple of years, commercial banks in Kenya have experienced massive industrial changes. The banks have been exposed to major regulatory changes such as interest laws, prudential regulations among others. For instance, after the introduction of interest cap law in 14th Sep 2016, the banks operating expenses reduced however at the expense of operating income which declined to 68.5% in December 2017 (Kenya Institute for Public Policy Research and Analysis, 2018). As such, regulations have forced the banks to strategic responses either in their operational models, credit policies, and investment policies among others. The intent has been clear, to improve the financial efficiency, profitability and sustainability, commercial banks managers must change with industry changes.

1.2 Research Problem

Costs structure still remain a major and universal concern for all businesses and researchers .Over the last decade, the several financial institutions have accelerated their growth through acquisitions without complete and holistic integration of their new products, processes, and systems. The result is that many of the larger banks are complicated, matrix institutions, with broad, diverse services and products that are backed by legacy IT systems. The change in business models has resulted in more costs in their running and operations which limits the profit

margins of banks. In the banking sector, mergers and acquisitions approaches are used to meet the needs of the new dynamic business environment and to reduce costs (Yeboah & Asirifi, 2016). However, little is known on how banks' cost structure changes affect the banks financial performance. Additionally, it has become even harder to distinguish between managerial costs and financial costs. This is because some of the costs are difficult to define or can become hard to assign them on the appropriate cost structure. In that regard, knowledge in costs and expenses of commercial banks listed at NSE is very important in understanding the concepts of cost structure. Besides, given the severe conditions preceding a firm posting requires the budgetary presentation of firms recorded in the money related instrument be commendable thus it is imperative to ponder whether changes in cost structures influence execution contrarily or decidedly.

Costs structure of commercial banks generally results from normal banking operations. If managed well, these costs have positive influence on the banks' performance and profitability (Frederick, 2014). Cost structures usually relate negatively with the performance of banks and are commonly expressed in terms of percentage of income (Swarnapali, 2014). A study by Obanyi (2013) has argued that operating costs affect the competitiveness of commercial banks in Nigeria in a significant way and adversely. Companies need to be cost efficient in their operation for them to realize or attain the core objective of profit maximization. This should be attained through use of quality costing and business process re-engineering.

Notwithstanding the negative effect interest rate capping on loan performance of commercial banks, another cause of concern has been the rising operational costs despite the technology innovations which were cited to cut costs. Over recent years, Kenya's commercial banks have struggled against higher costs. The higher operating expenses were related among other reasons

to the growing workers and interest expenditures. According to the Central Bank of Kenya (CBK) in 2012 there was 13% increase in employment costs, which outpaced the annual rate of inflation at 9.4% in the banking sector. The total employment costs for the banks in Kenya was recorded to be 17.2% of the total income earned. In addition, the banking sector has been expanding tremendously over the years as a result of increased competition and capitalization in strategic expansion of banks hence increasing the cost of operations. Similarly, costs have also been increasing as a result of increased capitalization directed towards the strategic expansion of banks through their branches countrywide. In the last couple of years, much of the urgency in bank management in Kenya has been to reduce costs and improve efficiently. But that has been rarely achieved with banks being unable to indiscriminately cut cost due to fear of hampering growth of revenues when the economic outlooks improves which motivates this study. Nevertheless, there is need for banks to survive and make decent returns by being effective and efficient in bank operations.

Literature on banks strategies of operation gives contradictory views on the nexus between cost structure and financial performance. For example Obamuyi (2013) findings showed that changes in costs incurred, both fixed and variable, did not affect future performance of manufacturing firms in Nigeria. However, Hu (2009) who investigated cost, allocative and overall technical efficiencies of banks in Taiwan during 1997-2006 found that technical efficiencies improved cost efficiency and which led to positive financial performance. Lipunga (2014) also found that an increase in operational efficiency added positively to banks performance in Cameroon. On the other hand, Gambacorta (2004) revealed a negative association of the overall costs incurred on financial performance. These studies show mixed conclusions probably due to differences in terms of the macro-economic conditions, the financial systems as well as the operating

environment of the firms under studies. Additionally, there is no local study which linked costs structure on the financial performance of commercial banks in Kenya. This study bridged the gap to specifically answer the question: What is the relationship between costs structure and the financial performance of commercial banks listed at Nairobi Security Exchange in Kenya?

1.3 Objective of the Study

The study seeks to establish the relationship between cost structures and financial performance of commercial banks listed at NSE in Kenya.

1.4 Value of the Study

The study intends to examine the effect of cost structures on the financial performance among the commercial banks listed at NSE in Kenya. The findings thereof could be of value both to practice and to the theory of costs structure and profitability. Theoretically, the study would contribute to an understanding of the costs structure and its effect on financial performance of commercial banks. The study could be useful in the advancement of the present frontier of knowledge on costs structure and performance of commercial banks, with special reference to commercial banks in Kenya.

The study yield useful information to the bank managers. In practical terms, the study would help bank managers and planners to come up with effective methods of reducing banks operation cost, and would enable banks to generate more profit as a result of increase in operational income and decrease in operational costs leading to continuity and sustainability of the bank.

The policy producers could profit by the data particularly service of money and related organizations in planning approaches that could make favorable working condition inside the financial business. The administration through national bank of Kenya is the strategy creator of

the bank procedures and items offered to clients. The research information could help them in ensuring the policies they create do not pose a threat to the banks operations and performance.

CHAPTER TWO: INTRODUCTION

2.1 Introduction

This chapter covers the existing documented literature on cost structures and management of cost to achieve efficiency in the organization. The chapter details the theories developed around the concept of cost structures and management as well as the previous studies which have been done on the area.

2.2 Theoretical Review

Cost structure is among the organizations financial aspect that has to be managed for the firm to operate efficiently and increase the margins of profits. The managers of the organizations are responsible for managing all the cost to achieve the interest of stakeholders. In that regard, this study was anchored on the cost management efficiency theory, agency cost theory, Transaction cost economics theory, the X-efficiency theory of the firm and bank focused theory.

2.2.1 Cost Management and Efficiency Theory

This theory invalidates the use of managers by providing better details on when and where losses exist and which expenditures contribute to an estimate. Costs are either static or adjustable in the "customary cost-conduct system." Fixed costs remain steady within the relevant context as shifts in the travel operator in relation to variable costs (Steliaros, 2006). In the subsequent model, supervisors intentionally alter assets because of changes in volume. Although output implies the optimum mix of inputs to a certain rate of returns, certain components are capable of mediating to obstruct or restrict resource adjustments. The idea of these items is that these activities are carried out at "no" costs in which they switch seamlessly.

The value of change itself is a crucial factor in determining how adjustment happens. For example, growing labor inputs that require cost of searching, hiring, and training while reducing these same inputs may require severance payments. When there are change costs, directors gauge the expense of expelling (including) capital if activity decays (increments) against the option of not modifying (Kallapur and Edinburg, 2005). Change occurs if the costs for the adjustment are more than reimbursed by continuous gains linked to the successful production of another rate of return (Kallapur, Eldenburg 2005). Change expenses could be a creative property, such as changes to the work, or they may result if administrative motivation is different from that of the company. For instance, if an individual supervisor encounters misfortune (gain) of status or position when the quantity of his subordinates diminishes (builds), his choices about decreasing (expanding) work assets might be hued by private modification costs (Hamermesh,1995).

Therefore, without worrying about how managers assess misfortunes resulting from the incorrect combining of resources, there is no thought about the effects that transition costs have on effectiveness decisions. The business will face greater expenditures in a consummately competitive environment than rival that matched (or joins into the market with fresh, simplified technology and limitation) and acknowledged indisteriably high costs (Anderson et al. 2003). (Anderson et al., 2003).

The theory suggests that certain financial management strategies that fit well with certain businesses, but not with others. The difference in the corporate environment and external factors are responsible for this. This therefore means that commercial banks are not exposed to conventional financial management standards. To accomplish the intended purpose, the correct accounting activities should be identified upon evaluation of the specific business context. A

positive influence on financial performance of business banks can only be achieved when the balance between operations of the financial system and companies is met.

2.2.2 Agency Cost Theory

The agency cost theory was first advanced by Adam Smith (1937). The theory is considered to be the oldest theory on economics and management. The theory suggests that when an organization is managed by people who are not the owners of the organization they are less likely to act in an unbiased way that would entirely have principal's interests at heart. The theory was further advanced by contributions from Ross (1973) and Jensen and Meckling (1976).

The theory provides an understanding that aid implementation of various mechanisms for governance that are put in place to control the agent's actions and inactions thereof. Despite the contributions of Ross (1973) and Jensen and Meckling (1976) so much still remains in abstract in regard to the forms of agency cost structure, their classification and various factors that affect them. The only underlying concept is that principal owners of an organization incur costs that help them ensure they compel the management to action in the best interests of the owners of the organization, which can be well analyzed in reference to the cost structure (Caldwell, 2006). In that regard, the management can aim to manage costs and expenses to ensure profitability and align to the principal's interests.

2.2.3 Modigliani and Miller Theory

This is a theory of a modern business fund starts with the suggestion on superfluity in Modigliani and Miller (1958). Until them, most of the theories about capital structure were not believed. Modigliani and Miller agree that the business has a clear revenue structure. The company only has to divide its revenue into the speculators when it selects a particular level of obligation and

value to support its advantages. The equal access of speculators and companies to cash-related markets is expected that takes customized influence into consideration.

Modigliani and Miller contended that cost of capital stays autonomous of changes in the capital structure. This must be conceivable in an ideal proficient market and two indistinguishable firms with comparable capital structure must direction a similar worth. On the off chance that this isn't the situation and speculators understand the distinctions in firm worth, they will practice exchange, by selling their proprietorship in exaggerated firm and purchasing partakes in underestimated firm, until the two firms have a similar market esteem. Where the suspicions held in recommendation I are expelled bit by bit, this was to prompt capital structure perplex (Myers, 1984). The hypothesis is valuable in connecting the cost structure of the firm in the feeling of how firms produces its assets and firms execution.

2.2.4 Transaction Cost Economic Theory

Exchange Cost Economics (TCE) is one of the most settled speculations to address the central issues encompassing the tasks conduct of an association. Ronald H. Coase, in 1937, was the first to feature the significance of understanding the expenses of executing, however TCE as a conventional hypothesis began vigorously in the late 1960s and mid 1970s as an endeavor to comprehend and to make exact expectations about vertical incorporation ("the settle on or-purchase choice"). In its history spreading over now more than five decades, TCE has extended to get one of the most persuasive administration hypotheses, tending to not just the scale and extent of the firm yet in addition numerous parts of its interior activities, most eminently corporate administration and association plan. TCE is consequently a hypothesis of the firm, yet in addition a hypothesis of the board and of administration.

The theory of TCE proposes that the optimal stock degree be calculated by comparison of expense and benefits associated with inventory degrees. Holding charges cover fees of applications and transitions. Application costs include purchasing inventory that includes expenditures for the agency, receiving, review and documentation of the items obtained for a sales application or application framework. Whatever the case, transport expenditures are incurred in the maintenance or transport of stocks and are generated by stock and opportunity expenses. There are a few thought processes of lower or higher inventory levels that focus heavily on what an organization is. Organizations should reduce their costs in order to concentrate and this can be accomplished by reducing stock expenses. The securities exchange experts also appreciate this training (Sack, 2000).

2.3 Empirical Review

Karim and Jhantasana (2005) investigated cost structure of Thailand's life insurance industry and studied the relationship between efficiency and cost structure. The purpose of their paper was to evaluate the cost structure and its relationship with profitability in Thailand's life insurance. They also examined the association between profitability and inefficiency by examining the association between annual profitability and inefficiency. Their study revealed that financial leverage and banks efficiency influenced the performance when operational costs are held constant. Their study revealed that the cost structure has a significant effect on efficiency. They found that the mean inefficiency was negatively correlated to size and ROE and ROA ratios showing that efficient firms on average had higher returns on equity and on assets indicative of inefficiency effect on profitability of insurance companies. However, the Karim and Jhantasana study was conducted in Thailand hence geographical gap.

Ireri and Kananu (2015) examined the impacts of the cost structure on loaning financing costs of business banks in Kenya. They contended that loaning financing costs is a key marker of the negligible expense of present moment and long haul outer subsidizing in an economy and gives valuable data about advancements in the normal expense of getting. The investigation utilized a clear research plan. A concentrate on an example size of 34 business banks was embraced. Optional information was gathered for the year 2013 from budget reports of the business banks and the NSE handbook. Essential information was gathered by utilization of semi-organized polls. The discoveries of the investigation demonstrated that the cost structure affected the loaning financing costs of CBs in Kenya. In any case, their needy variable was loaning loan costs while the reliant variable of this investigation is monetary execution.

Ditman and Morey (1995) examined the cost structure of 54 traveler lodgings in the U.S. by DEA. The information factors incorporated the room division use, vitality costs, compensations, non-pay costs for property, related costs for variable publicizing, non-pay costs for variable promoting, fixed market uses, finance and related costs for regulatory work and non-pay costs for authoritative work. While the yield factors included all out income, level of administration conveyed, piece of the pie and pace of development. The outcomes indicated that the cost administration of inn was 89%. That means the hotel industry was efficient. However, the study focused on tourist industry while the current study focused on the financial industry.

Gambacorta (2004) argues that the structure of financial cost and credit risk lead to a rise in financial intermediation costs. The report used quantitative analysis and concentrated on the quality of Singapore's financial institutions. The research related the effect on the financial performance of the banks of cost structure and of financial intermediation costs. For the year 2003, the study used secondary data. The results show that the margin of net interest has a

positive effect on price, which would affect the market interest level explicitly and therefore shift the demand. However, the study was conducted in Singapore which has different micro and macro-economic environment as compared to Kenya. Hence, the current study concentrated on the Kenyan financial industry.

Atieno (2012) investigated the strategies used by commercial banks to manage costs in allocation of funds. The study used cross-sectional descriptive survey design in collecting data from the respondents. The target population consisted of all the 43 commercial banks operating in Kenya. Questionnaire was the data instrument used in collecting the primary data. The data was then summarized, coded and tabulated then analysed using quantitative techniques. In the findings of the study established that commercial banks need to recognize the various cost drivers that affect their operations. The examination finished up and prescribed that business banks need to receive various methodologies to oversee costs which incorporate mergers and acquisitions, rebuilding, business process reengineering, union of business capacities, legitimization of staff incidental advantages, showcasing decrease, re-appropriating, client re-association and innovative redesign. However, the study did not link the strategies of managing the costs structure to financial performance neither did it investigate the influence cost structure on financial performance. The study also used questionnaires as a method of collecting information which implies that the gathered information may be biased as it is obtained from the perceptions of the respondents.

Wang (2010) researched the effect of free incomes and organization costs in 505 firms recorded in Taiwan Stock Exchange during the years 2002-2007. In his examination, two proportions of profit for resources and profit for value were utilized to gauge the firm execution. There was a notable positive relationship between resource turnover ratio and company (return on resources

and capital gain) and a negative relationship between working costs and the execution of the business (return on resources and profit for value).

Finally, Sakina (2006) looked to explore on the X-proficiency of business banks in Kenya and to set up whether the X-productivity of these banks is influenced by economies of scale. The informational collection comprised of yearly activity expenses of banks including premium cost. Stores and obtained assets were treated as the data sources while the credits to clients, ventures, and different earnings were treated as yields. The example included 33 banks for the period 2000 to 2005. A stochastic econometric cost outskirts was utilized to quantify X-proficiency level of business banks in Kenya. The observational outcomes acquired built up that X-proficiency existed in the Kenya‟s business banks industry at 18% and it was seen as influenced by economies of scale. In an offer to build up whether the constancy of X-productivity was identified with bank size, Sakina (2006) further discovered that normal huge banks will in general be more diligent than normal little banks at the degree of 23%. Furthermore, bank size influences X-productivity for enormous banks.

2.4 Conceptual Framework

The conceptual framework is a diagrammatical representation meant to clearly illustrate knowledge of the variables under study. According to this study, the conceptual framework is based upon the link between cost structure and financial performance of banks listed at NSE. The figure below shows the conceptual framework.

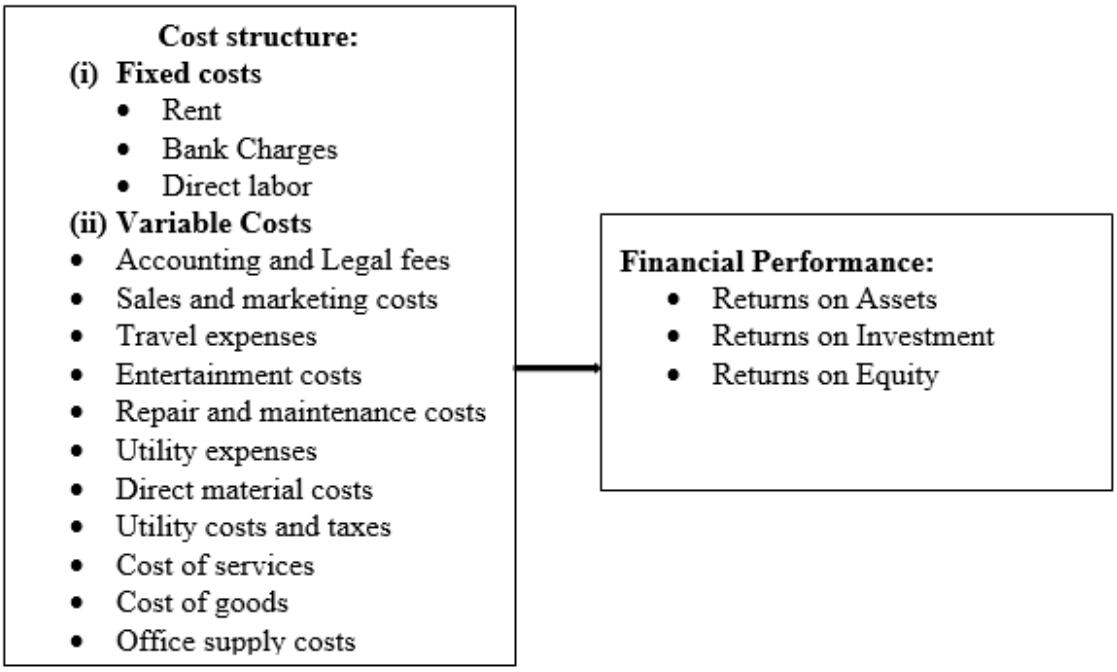

Figure 2.1 Conceptual Framework

2.5 Summary of the Review

From all the studies revealed, it is apparent that the no study focused on linking cost structure with the financial performance of commercial banks. Majority of the studies focused on the efficiency aspect of banks on managing their operations costs. While other studies focused on different costs such as agency costs. Additionally, there is one study which focused on costs of operations and its effects on interest rates but did not include the financial performance. Another

study focused on the strategies of managing costs but did not investigate how these strategies impact the financial performance of the banks.

Most of the studies reviewed employed secondary data and descriptive research design. However, some of the studies adopted descriptive research design but used primary data which is not suitable in majority of the financial studies. Since only one study which has directly linked cost structure with financial performance but the study was conduct in different country and different economic environment hence a geographical gap. In that regards, the current study filled the contextual and geographical gaps by providing empirical information on the influence of cost structure on financial performance of banks.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The analysis approach to use in this thesis is addressed in this section. The chapter outlines the nature of the experiment, population of the analysis, community measurements, methods and sources to be used for collection of data and strategies for analysing data.

3.2 Research Design

This investigation utilized cross-sectional engaging study structure. The unmistakable cross-sectional overview structure consists of the data collection that represents, organizes, summarizes, and depicts the accumulation of knowledge on and after occasions (Kothari, 2012). Cross-sectional expressive study structure objective is to portray the information and qualities of the investigation. It is a precise study structure and is probably the best technique for gathering data that shows connections. Cross-sectional unmistakable reviews includes gathering information at specific point in time, depicting the occasions and afterward sorting out, organizing, and breaking down the gathered information. It is an exact review structure and is perhaps the best strategy for gathering data that exhibits connections.

3.3 Population

Populace implies a total arrangement of articles or components that have comparative attributes that are important to the exploration. This definition guarantees that populace of intrigue is homogeneous. Cooper and Schindler (2014) indicated that the community relates to the economic potential of all the elements of the test. The criteria set by the scientist are used to solve these attributes. The goal of this analysis is to document business banks in NSE. The 2019

NSE document (https:/@www.nse.co.ke/listed-companies/list.html) notes there are 12 commercial banks listed in the NSE. Thus the study was be a census survey hence no sampling.

3.4 Data Collection Procedures and Sources

The research used supplementary information from CBK-owned commercial banks ' NSE handbooks and financial statements. Data collected were obtained from the selected commercial banks for a period of ten years from 2008 to 2018. The study also used information from consolidated and audited reports. The study took note of fixed costs and variable cost aspects of the cost structure. Since banks have different costs, costs either are listed under the conceptual framework in Chapter 2 as fixed costs or variable costs. Each individual costs was summed to obtain the composites of fixed costs and variable costs. The values of fixed and variable costs were transformed into natural logs for the purposes of analysis. Additionally, the study acknowledges the importance of bank size in determining its performance. The bank size can be measured using proxies such as market share, net total assets, total deposits or amount of loans among others. In that regard, the study used net total assets and total deposits as control variables.

3.6 Data Analysis

The data obtained was cleaned and entered in SPSS version 23 for further analysis. Banks cost structure was divided into two components. The first is fixed costs and the second is the variable costs. The fixed costs are regular expenditure by banks and them that are unlikely to fluctuate with time while the variable costs are expenses which keep on varying depending on the output of production and time. The return on assets was used as a measure of financial performance of commercial banks listed by NSE. Pearson correlation of moments was done to identify the linear relationship between cost structure and financial performance.

The study used a multi-linear regression model to estimate the linear regression in order to rectify the independent variable costs and the dependent variable, i.e. the financial performance of banks. The logic that certain banks can incur additional fixed costs or variable costs than others is the reason why multiple linear regression models are used. In that regard, multiple linear regression allowed analysis of the two components of cost structure.

3.6.3 Regression Model

The following regression equation was used:

$$\mathbf{ROA = \alpha + \beta_1 FC + \beta_2 VC + \beta_3 NTA + \beta_4 TD + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots Equation\ 3.1}$$

Where:

ROA is the dependent variable of the study (A proxy measure of banks financial performance)

FC is Fixed Costs (Independent Variable)

VC is Variable Costs (Independent Variable)

NTA is the Net total assets (control variable)

TD is the Total Deposit (Control Variable)

β is the coefficient of independent variable.

α is constant

ε is the error term

CHAPTER FOUR: ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This section consists of details from financial reports on the research factors collected by banks. The focus of the chapter is on collecting, evaluating and reviewing the findings. The results of the inferential analysis are outlined in Section 4.2 and the results of the analytics are discussed in Section 4.3 and in Section 4.4.

4.2 Descriptive Statistics

Table 4.1 shows the summary statistics of the data.

Table 4.1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Variable Costs	70	12845520	34200000	18539222.58	4.945250964
Fixed costs	70	2755966.8	8122500	4374653.99	1.169426.6072
ROA	70	0.14%	7.70%	4.68%	1.62
Customer Deposits	70	34799000	445398000	161335354.3	9.889139227
Total Net Assets	70	44009000	555630000	190788313	2.170099616

As shown in Table 4.1 the total numbers of banks were seven which makes the number of observations 70 since the study obtained data for 10 years. The seven banks were selected because there financial reports had the data required for the study. The other banks which were not involved in the study either had incomplete data or did not document their financial statements for the period under study.

The results revealed that the minimum amount of variable costs is 12,845,520 Million Kenya shillings for the period under study. The Maximum was 34,200,000 Million Kenya Shillings and

the mean was 18,539,222 Million Kenya Shillings. The variable costs of banks was spread by a standard deviation of 4.94 showing that banks greatly differed in the amount of variable costs that they pay.

The results also revealed that the minimum fixed costs incurred by banks for the period between 2009 and 2018 was 2,755,966 Million Kenya shillings. The maximum fixed costs recorded for the same period was 8,122,500 Million Kenya Shillings. The mean fixed costs incurred by banks was 4,374,653 Million Kenya Shillings. The fixed costs of the banks was spread by a standard deviation of 1.17 which implies that the banks do not report much differences in fixed costs.

The Returns on Assets (ROA) results were also revealed. The study showed that the minimum ROA was 0.14% and the maximum ROA was 7.70% for the study duration between 2009 and 2018. The mean ROA was 4.68% while the spread was 1.62 standard deviation indicating that the banks did not deviate largely from each other in terms of returns on assets.

The results also revealed that the minimum customer deposits by banks for the period between 2009 and 2018 was 34,799,000 Million Kenya shillings. The maximum customer deposits recorded for the same period was 445,399,000 Million Kenya Shillings. The mean customer deposits reported by banks was 161,335,354Million Kenya Shillings. The customer deposits spread by a standard deviation of 9.89 which implies that the banks largely differ in the amount of deposits that they receive.

The results also revealed that the minimum total net assets reported by banks for the period between 2009 and 2018 was 44,009,000 Million Kenya shillings. The maximum total net assets recorded for the same period was 555,630,000 Million Kenya Shillings. The mean total net assets reported by banks was 190,788,313 Million Kenya Shillings. The total net assets was spread by a

standard deviation of 2.17 which implies that the banks differ in terms of assets hence implying that the study involved both large and medium-sized banks.

4.3 Inferential Statistics

Inferential measurements are utilized to produce deductions about the examination factors. The inferential measurements utilized incorporate Pearson Correlation of Moments which shows the straight connection between the factors and the OLS relapse which is utilized to show the quality and the impact of free and control factors on the needy factors.

4.3.1 Correlation Analysis

Pearson correlation of moments was used to check the linear relationship between variables. Table 4.2 shows the summary of the results.

The connections of the factors of the model were produced and the discoveries displayed as appeared in Table 4.2 above. The discoveries show that there is a negative connection between factor expenses and profits for resources (ROA) (r= - 0.13). The discoveries show that the relationship is huge since p-esteem is under 0.05 (P= 0.009). The outcomes likewise showed that there is sure connection between fixed expenses and ROA (r= 0.184). The discoveries demonstrated uncover that the relationship is noteworthy since p-esteem is under 0.05 (P= 0.014).

Furthermore the outcomes likewise demonstrated that there is certain relationship between's client stores and ROA (r= 0.336). The relationship uncovered was noteworthy since the p-esteem is under 0.05 (p= 0.007). The table additionally shows that there exists positive connection between complete net resources and profits for speculations (r= 0.314). The relationship uncovered was critical since the p-esteem is under 0.05 (p=0.012).

Table 4.2 Correlation Analysis

		ROA	Variable Costs	Fixed Costs	Customer deposits	Total Net Assets
ROA	r coefficient	1				
	P-value					
Variable Costs	r coefficient	-0.13**	1			
	P-value	0.009				
Fixed Costs	r coefficient	0.184**	.913**	1		
	P-value	0.014	0			
Customer deposits	r coefficient	.336**	.594**	.022**	1	
	P-value	0.007	0	0		
Total Net Assets	r coefficient	.314*	.594**	.651**	.118**	1
	P-value	0.012	0	0	0	0

4.4 Regression Analysis

In addition to descriptive analysis, the study conducted multiple regression analysis to generate inferences between the independent, control and dependent variable(s). The study intended to determine the extent to which variable costs and fixed costs affects profitability of banks. Since profitability is affected by many factors, the study included total net assets and customer deposits of the banks as proxy measures of the size of the bank to control the model outputs. The findings of regression outputs are presented in Table 4.3, Table 4.4 and Table 4.5.

Table 4.3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.357a	0.284	0.268	1.56047

As shown in the Table 4.3, model of summary of the regression analysis between independent variables (fixed costs, variable costs) and control variables (total net assets and customer deposits) and the dependent variable (Return on Assets). From the analysis R square was 28.4%,

while adjusted R Square was 26.8%. This implies that the independent and control variables used in the model explains 26.8% change in ROA. The other 73.2% can be explained by other variables such as semi-fixed costs, banks efficiency, capital adequacy, financial leverage, corporate governance and amount of loans among other variables.

Table 4.4 Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	20.673	4	5.168	12.122	.009b
	Residual	141.234	66	2.435		
	Total	161.907	70			

From the Table 4.4 shown above, the analyzed data which was used to generate inferences was significant given the F statistics (12.122) p-value was less than 0.05 (p=0.009) implies that model was significant. That means that, jointly, the independent and control variable have significant effect on dependent variable.

Table 4.5 Regression Coefficients

	B	Std. Error	Beta	t	sig.
(Constant)	2.281	0.953		2.393494229	0.071
Variable Costs	-4.566	0.812	-0.297	-5.623152709	0.03
Fixed Costs	3.363	0.95	0.224	3.54	0.5
Customer deposits	2.098	0.842	0.359	2.491686461	0.025
Net total assets	0.89	0.37	0.015	2.405405405	0.04

As shown in Table 4.5 the model equation will be,

ROA = 2.281 + 3.363 FC – 4.566 VC + 0.89 NTA+ 2.098 TD + ε ……..Equation 3.1

As shown in the table of coefficients it was established that at 5% significance level, variable costs had a p-value of 0.03 which is significant, fixed costs had a p-value of 0.5 which is also significant, customer deposits had a p-value of 0.025 and net total assets was also significant at p-value of 0.04.

When taking all the independent variables and control variables as constant, the ROA will be 2.281. This shows that banks can still make profits from other sources such as investments even if they don't incur operational costs. The table indicates that the increase in one unit of variable costs will lead to a 4 566 departure from income on assets when all other factors are constantly retained. More results indicate that a unit rise in fixed costs leads to an increase of 3,363 in return on capital if all the other variables are kept stable. In comparison, a unit rise in customer deposits would result in an investment return increase of 2,098 if all other factors are kept continuously. The findings also revealed that an increase in net total assets would result in a 0.89 improvement in capital returns. The results show that only variable costs have a negative effect on asset returns.

4.5 Discussion of Findings

The commercial banks listed at NSE cost structure is determined by both fixed costs and variable costs. The variable costs was computed by adding all non-fixed costs to arrive at a composite of variable costs. From the investigation discoveries, the balanced R square presumes that there is variety of gainfulness of business banks recorded at NSE. The factors in the model clarifies 26.8% change in productivity which suggests there are different components which influence the benefit of business banks. For instance, the study did not include the semi-fixed costs which is part of the cost structure and which may have a significant effect on profitability. Additionally, other banks factors such as corporate governance, bank efficiency, financial leverage, amount of loan given and capital structure of the banks has a significant influence on the financial performance of the commercial banks. This was in line with Karim and Jhantasana (2005) who investigated cost structure of Thailand's life insurance industry and studied the relationship between efficiency, cost structure and financial performance. Their study revealed that financial

leverage and banks efficiency influenced the performance when operational costs are held constant.

The variation of commercial banks listed at NSE has been attributed by cost structure. From the study findings, fixed costs have positive and significant effect on profitability (B= 3.363, p= 0.5). This relationship can be attributed to the fact majority of fixed costs for banks involves setting another branch and may be incurred as rents or space letting. This implies more operations and larger market share which then leads to improved financial performance. On the other hand, variable costs had negative and significant effect on profitability (B= -4.566, p= 0.03). This shows that increase in variable costs leads to decrease in profitability. In that regard, the banks are supposed to manage the variable costs so that they do not largely hamper the profit margins.

The results are consistent with those of Atieno (2012) who investigated the strategies used by commercial banks to manage costs in allocation of funds. The study established that commercial banks need to recognize the various cost drivers that affect their operations. In tandem with this study, variable costs are the main drivers of operations cost which has negative influence on ROA hence the bank management should aim at cutting variable costs. In many cases, fixed costs are not affected by production level, therefore an increase in them implies that there will be increase in operations elsewhere hence more revenue that can be generated. However, the variable costs are affected by production levels. To increase production levels, the variable costs also increase which increase the revenue generated up to a certain level usually known as optimal production. When this level of production is reached increase in variable costs leads to decrease in profit margins. This especially in smaller banks which do not have large operations as compared to large sized banks which have many operations and high productivity levels. Sack (2000) supports this view, arguing that companies must reduce their costs in order to be

competitive and that can be accomplished by keeping inventory cost at a reasonable low, which does not hinder the desired levels of production.

Additionally, the size of the bank has an effect on profitability. Larger banks have more operations, large market share and large asset base which boosts their profitability. In that regard, some factors such as fixed costs may not hamper their profitability to a great extent. From the study findings, net total assets and the customer deposits have positive effect on returns on investments which strengthens the argument that larger banks make more profits than medium sized banks. In that sense, instead of minimizing the operational expenses, the banks management should be looking at how to grow, acquire more assets and customers which would lead to more revenue generation.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The following section outlines the summary, conclusion and recommendations of the study. The conclusion and recommendations were based on the core objectives of the study. The data was obtained from the secondary source and analyzed. The main objective was to establish the relationship between cost structures and financial performance of commercial banks listed at NSE in Kenya.

5.2 Summary

The study objective was to determine the relationship between cost structures and financial performance of commercial banks listed at NSE in Kenya. The objective was achieved by obtaining data from audited and documented financial statements. The data consisting the variable costs and fixed costs as independent variables and net total assets and customer deposits as control variables as well as ROA for a span 10 years was analyzed using SPSS version 25.

The revised R squared revealed that variations in bank costing structure and other factors affecting financial performance also resulted in a variance in financial performance. Variable costs were compared from the findings of the study to the return on commercial banks ' capital in a negative way. Fixed costs associated favorably to commercial banks ' investment returns.

The study found that the correlation between variable cost and revenue for commercial banks ' capital was negative, which indicated that a rise in unit costs would result in a reduction in profit margins. The study also showed a positive relationship between fixed costs, net assets, and customer deposits and property returns. This is an example if a unit change will lead to an increase in ROA in any of these variables.

5.3 Conclusion

Based on the findings of the report, this study found that a negative relationship exists between variable cost and financial performance and a positive relationship between fixed cost and financial performance of NSE banks. The study showed that the cost structure has an impact on profitable business banks. The study shows a positive correlation to competitive competitiveness between the fixed costs of commercial banks mentioned on the Nairobi Securities Börse. This is because fixed costs require more industry and more retail room to run the banks.

The study concludes that variable costs affect the profitability of the commercial banks listed at the NSE. The higher the variable costs the less the profitability margins in terms of return on assets. This can be attributed to the production curve whereby when a certain production level is reached increase in variable costs would shrink the profit margins. The banks management should therefore consider balancing the variable costs with the desired level of production for maximum efficiency.

5.4 Recommendations

The study could be beneficial to policy makers in the sense that it will give them clear understanding on the relationship of cost structure and financial performance of the firms. The study found that additional fixed costs would result to better financial performance. Therefore, policy makers might set policies requiring commercial banks to have certain number of bank branches for them to increase their market share and operations which would then generate more revenue and reach more customers. This would ensure that commercial banks listed at NSE serve the financial needs of every citizen in the country.

This study is beneficial to the financial institutions management. The study will broaden their understanding on the impacts of cost structure on the general financial performance of the banks and the implications on the banks returns. Banks quoted at the NSE should have optimal cost structure which will enable them conduct banks operations efficiently to ensure better returns to the shareholders on their committed investments. In addition, the capital market analysts, financial analysts and investment analysts should advise the banks management on the optimal cost structure.

The study also strongly recommend the commercial banks to consider increasing their assets base and customer base. The bank management can consider maximizing shareholder wealth and market share to offset the negative effects of cost structure. The study also suggest the need of the banks to embrace the cost management and finance strategies that would increase the size base of the companies and utilize the generated earnings from their operations to acquire more assets and improve their financial performance.

5.5 Limitations of the Study

The researcher encountered a number of challenges during data collections. There were delays in collection of the data since some of the banks listed at Nairobi security exchange did not document or publish their financial statements. Additionally, majority of the banks had not yet published their financial statements for year 2018. Due to this challenge, only seven commercial banks listed at NSE were involved in the study. In other cases, the financial statements of the banks did not clearly show the operational expenses hence it was difficult to ascertatin which expenses were categorized as fixed or variable costs. Therefore the data obtained might not draw accurate results and conclusion might be misleading.

5.6 Areas of Further Study

Given the challenges and limitations of the study, further research should be done on impacts of cost structure on equity to have comprehensive understanding of the effects of cost structure on financial performance of commercial banks. Additionally, other studies have found that banks' efficiency influences banks' financial performance. This study used banks size as control variable and found that the net total assets and total deposits influence financial performance. To bridge the gap between cost structure and efficiency, future studies should investigate the relationship between bank efficiency and cost structure to comprehensively understand the realm of managerial and financial accounting.

REFERENCES

Amare, B. T., (2012). Determinants of commercial banks profitability: An empirical evidence from the commercial banks of Ethiopia, (MBA Thesis, Addis Ababa, University).

Athanasoglou, P., Brissimis, S and Delis, M (2008), Bank-specific, industry-specific and macroeconomic determinants of bank profitability, *Journal of International Financial Markets, Institutions, and Money,* 18(1): 121-36

Ayanda A. M., Christopher E. I. and Mudashiru M. A. (2013). Determinants of banks' profitability in developing economy: evidence from Nigerian banking industry. *Interdisciplinary Journal of contemporary research in business,* 4(1), 55-181

Ayele, H.N., (2012) Determinants of Bank Profitability: An Empirical Study on Ethiopian Private Commercial Banks, Unpublished MBA Project, Addis Ababa University.

Bikker, J.A., Hu, H., (2002), Cyclical patterns in profits, provisioning and lending of banks and procyclicality of the new Basel capital requirements. *BNL Quarterly Review,* 221(2), 143-175.

Isik, I., & Hassan, M. K. (2002). Cost and profit efficiency of the Turkish banking industry: An empirical investigation. *Financial Review*, *37*(2), 257-279.

Karasulu, M. (2001), The Profitability of the Banking Sector in Korea, IMF Country Report, July.

Katrodia A. (2012). Corporate Governance Practices in the Banking Sector. *ABHINAV Journal of Research in Commerce and Management,* 1(1), 37-44.

Khambata, D (1996). The practice of multinational banking: macro-policy issues and key international concepts (2nd ed.). New York: Quorum Books.

Khrawish, H.A. (2011) Determinants of Commercial Banks Performance: Evidence from Jordan. *International Research Journal of Finance and Economics. Zarqa University, 5*(5), 19-45.

Kinyua, J. K., Gakure, R., Gekara, M., & Orwa, G. (2015). Effect of internal control environment on the financial performance of companies quoted in the Nairobi Securities Exchange. *International Journal of Innovative Finance and Economics Research*, *3*(4), 29-48.

Kothari, C.R (2006), Research Methodology: Methods and Techniques, India: New Age Publications.

Lipunga, A.M (2014), Determinants of Profitability of Listed Commercial Banks in Developing Countries: Evidence from Malawi*, Research Journal of Finance and Accounting,* 5(6), 41-49

Nairobi Security Exchange (2015). Audit committee size, experience and firm financial performance. Evidence Nairobi Securities Exchange, Kenya.

Ongore, V. O., & Kusa, G. B. (2013). Determinants of financial performance of commercial banks in Kenya. *International journal of economics and financial issues*, *3*(1), 237-252.

Podder A. (2012). The determinants of bank net interest margin: Evidence from the Lebanese banking sector. *Journal of Money, Investment and banking*, *23*(3), 86-98.

Ray, S. C., & Das, A. (2010). Distribution of cost and profit efficiency: Evidence from Indian banking. *European Journal of Operational Research*, *201*(1), 297-307.

Swarnapali, C. B. (2014). Determinants of banks' financial performance in developing economies: evidence from kenyan commercial banks (*Doctoral dissertation, United States International University-Africa)*.

Swink, M., Narasimhan, R., & Kim, S. W. (2005). Manufacturing practices and strategy integration: effects on cost efficiency, flexibility, and market-based performance. *Decision Sciences*, *36*(3), 427-457.

Wanjiku, K. R. (2012). Credit Risk Management Strategies and Performance of Standard Chartered Bank, Kenya. *Nairobi: University of Nairobi*.

APPENDICES

Appendix I: Commercial Banks Listed at NSE

Barclays Bank Ltd
Stanbic Holdings Plc.
I&M Holdings Ltd
Diamond Trust Bank Kenya Ltd
HF Group Ltd
KCB Group Ltd
National Bank of Kenya Ltd
NIC Group PLC
Standard Chartered Bank Ltd
Equity Group Holdings
The Co-operative Bank of Kenya Ltd
BK Group PLC

Source: (NSE, 2019).

Appendix II: Data Collection Sheet

Bank	Year	Variable	Fixed costs	ROA	Customer Deposits	Total Net Assets
KCB Group	2018	23,946,190	4,920,450	5.12 %	447,329,101.00	467,741,000
KCB Group	2017	22,179,080	5,472,760	4.94 %	445,398,000	555,630,000
KCB Group	2016	22,956,180	5,591,890	5.64 %	386,611,000	504,777,670
KCB Group	2015	21,846,700	5,538,600	5.01 %	347,702,000	467,741,000
KCB Group	2014	17,701,770	4,607,310	5.93 %	276,750,000	376,699,000
KCB Group	2013	15,634,100	3,958,000	5.50 %	276,750,000	376,969,000
KCB Group	2012	29,872,560	7,075,080	5.20 %	223,493,000	304,112,000
KCB Group	2011	18,612,300	4,520,130	4.98 %	210,174,000	282,494,000
KCB Group	2010	16,441,600	4,227,840	5.17 %	163,189,000	223,025,000
KCB Group	2009	13,762,640	3,489,120	3.57 %	137,968,000	172,384,000
Barclays Bank	2018	19,868,329	5,037,041	3.98 %	234,918,349	226,043,000
Barclays Bank	2017	19,127,063	3,775,078	3.68 %	189,305,000	271,682,000
Barclays Bank	2016	13,155,506	3,194,909	4.02 %	259,498,220	178,447,780
Barclays Bank	2015	13,775,040	2,869,800	5.01 %	241,153,000	165,359,000
Barclays Bank	2014	14,158,040	3,353,220	5.44 %	154,067,000	226,043,00

						0
Barclays Bank	2013	14,690,480	2,977,800	5.80 %	226,043,000	164,779,000
Barclays Bank	2012	13,206,710	3,720,200	7.00 %	137,915,000	185,102,000
Barclays Bank	2011	13,108,635	3,320,854	7.18 %	124,207,000	167,305,000
Barclays Bank	2010	14,917,895	3,874,778	6.24 %	123,826,000	172,691,000
Barclays Bank	2009	12,845,520	3,380,400	5.30 %	125,869,000	165,151,000
I&M holdings	2018	15,509,750	3,662,024	4.21 %	139,465,000	185,102,000
I&M holdings	2017	14,180,360	3,403,286	4.09 %	134,247,000	183,953,000
I&M holdings	2016	14,908,049	3,872,220	5.27 %	103,740,630	164,116,120
I&M holdings	2015	13,182,615	3,295,654	5.66 %	147,846,000	103,741,000
I&M holdings	2014	13,702,610	3,378,726	5.64 %	86,621,000	137,299,000
I&M holdings	2013	14,495,997	3,526,053	5.50 %	86,621,000	137,299,000
I&M holdings	2012	15,765,621	3,791,732	5.20 %	65,640,000	91,520,000
I&M holdings	2011	14,440,988	2,888,198	5.80 %	76,903,000	56,944,000
I&M holdings	2010	15,114,734	3,211,881	4.80 %	45,995,000	62,552,000
I&M holdings	2009	14,115,216	2,861,192	3.94 %	34,799,000	44,009,000
Equity Holdings	2018	31,184,620	7,905,960	5.67 %	412,982,000	277,116,000
Equity Holdings	2017	34,200,000	8,122,500	5.68 %	406,402,000	298,703,000
Equity	2016			6.00		

Holdings		28,447,258	6,756,224	%	379,749,000	277,274,670
Equity Holdings	2015	23,797,998	5,422,329	6.56 %	236,610,000	341,290,000
Equity Holdings	2014	24,760,800	5,880,690	7.26 %	234,990,000	328,382,000
Equity Holdings	2013	20,322,900	4,950,450	7.70 %	202,485,000	277,116,000
Equity Holdings	2012	19,734,261	4,356,915	7.40 %	215,829,000	140,286,000
Equity Holdings	2011	20,456,331	5,528,738	6.84 %	176,911,000	121,774,000
Equity Holdings	2010	20,409,660	4,886,820	6.95 %	95,204,000	133,890,000
Equity Holdings	2009	20,590,500	5,008,500	5.66 %	65,825,000	96,512,000
National Bank of Kenya	2018	18,570,866	3,482,037	1.23 %	123,186,000	121,774,000
National Bank of Kenya	2017	18,288,055	4,629,887	0.67 %	100,165,000	109,942,000
National Bank of Kenya	2016	17,846,764	3,388,626	0.14 %	96,966,520	115,114,370
National Bank of Kenya	2015	15,976,662	3,772,267	0.32 %	110,662,000	125,295,000
National Bank of Kenya	2014	16,845,600	4,264,709	1.90 %	104,734,000	122,865,000
National Bank of Kenya	2013	15,324,498	4,198,493	1.90 %	104,734,000	122,865,000
National Bank of Kenya	2012	15,422,314	4,168,193	1.70 %	55,191,000	67,155,000
National Bank of Kenya	2011	14,425,327	3,806,684	3.56 %	56,728,000	68,665,000
National Bank of Kenya	2010	13,951,477	3,733,494	4.49 %	47,805,000	60,027,000

National Bank of Kenya	2009	14,500,925	2,900,185	4.13 %	41,995,000	51,404,000
Co-operative Bank	2018	26,835,423	5,160,658	4.34 %	287,172,600	339,550,000
Co-operative Bank	2017	26,636,545	5,958,175	4.31 %	285,990,000	382,830,000
Co-operative Bank	2016	22,438,433	4,786,866	5.15 %	249,471,750	349,997,760
Co-operative Bank	2015	22,323,686	5,508,442	4.14 %	263,709,000	339,550,000
Co-operative Bank	2014	26,263,584	5,909,306	4.43 %	216,174,000	282,689,000
Co-operative Bank	2013	24,390,730	5,575,024	4.70 %	282,689,000	216,174,000
Co-operative Bank	2012	22,273,023	5,356,803	4.80 %	140,525,000	199,663,000
Co-operative Bank	2011	21,413,106	4,226,271	3.68 %	142,705,000	167,772,000
Co-operative Bank	2010	21,370,516	5,269,442	3.61 %	124,012,000	153,984,000
Co-operative Bank	2009	23,934,701	4,544,564	3.26 %	91,553,000	110,531,000
NIC Group	2018	17,671,405	4,712,375	3.12 %	144,006,000	156,762,000
NIC Group	2017	17,819,629	4,397,051	2.94 %	142,006,000	192,817,000
NIC Group	2016	16,801,370	4,603,115	3.66 %	104,160,200	161,847,350
NIC Group	2015	17,998,996	3,599,799	3.99 %	92,791,000	137,087,000
NIC Group	2014	16,398,602	4,372,960	4.44 %	105,194,000	156,762,000
NIC Group	2013			4.60		

		14,988,169	3,597,161	%	137,081,000	92,791,000
NIC Group	2012	14,361,273	3,191,394	4.20 %	76,446,000	101,772,000
NIC Group	2011	14,373,629	3,347,284	4.57 %	62,009,000	73,581,000
NIC Group	2010	13,761,299	3,393,197	4.41 %	45,318,000	54,776,000
NIC Group	2009	13,412,372	2,755,967	3.30 %	36,977,000	44,655,000