

**THE EFFECT OF BANK SIZE ON PROFITABILITY OF
COMMERCIAL BANKS IN KENYA**

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FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD
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DECLARATION

I declare that this research project is my original work and has not been submitted for examination in any other university or institution of higher learning .

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This research project has been submitted for examination with my approval as the University Supervisor

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DEDICATION

This project is dedicated to my grandparents especially my late grandfather for walking with me through this journey through your encouragement although you didn't live to see the end of it. Special dedication goes to my dear husband and children for their encouragement to pursue postgraduate studies.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance Technique
APT	Arbitrage Pricing Theory
CBK	Central Bank of Kenya
GDP	Gross Domestic Product
KCB	Kenya Commercial Bank
KNBS	Kenya National Bureau of Statistics
MPT	Modern Portfolio Theory
ROA	Return on Assets
ROE	Return on Equity
ROI	Returns on Investment
SPSS	Statistical Package for the Social Sciences

ABSTRACT

Company size plays an important role in determining the kind of association the company enjoys within its functional atmosphere and external environment. Size of a firm plays vital role in competing with competitors through the cost reduction and more opportunities to take advantage of. The study sought to determine the effect of bank size on profitability of commercial banks in Kenya. To achieve this objective the study used a descriptive survey. The population of the study constituted all the 43 commercial banks in Kenya. The data was gathered from financial statements and records. Data analysis was done using a regression model. The descriptive findings concluded that commercial banks had a sufficient capacity to generate profitability from their assets. However, this was dependent on some factors like efficiency of the bank, its credit policies, and management and investment decisions. Bank size is moderately positively correlated to profitability of commercial banks in Kenya. The regression results conclude that logarithm of asset was statistically significant since its probability value obtained from the regression model above was below (5%). Liquidity, operating efficiency and capital adequacy were found to be statistically insignificant since their p-values are more than 5%. The limitation of this study is that the business environment is characterized by risks and uncertainties due to its turbulent nature. Macroeconomic factors for example regulations, technology and other microeconomic factors might have affected the findings obtained in this study. The empirical findings found in this study might be useful in guiding central bank of Kenya in setting policies and procedures that encourage commercial banks to grow and expand to enjoy some of the benefits that accrue for large firms like access to credit facilities and economies and scale. This will provide a platform for commercial banks to borrow and invest in capital projects in order to realize profitability.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Company size plays an important role in determining the kind of association the company enjoys within its functional atmosphere and external environment. Size of a firm plays vital role in competing with competitors through the cost reduction and more opportunities to take advantage of. For instant, large companies are able to benefit from the economies of scale and from the economies of scope. More to this, large companies are able to benefit from the superior management and the superior capabilities in product development, marketing, commercialization, financial scope, specialization, stronger bargaining power, stronger competitive power, bigger market share. Further, they have more opportunity to work in the fields which require high capital rates since they have much more resources and this situation provides them the opportunity to work in more profitable fields with little competition (Dogan, 2013). The advantages of larger firms stem from their market power and greater access to capital markets and the larger a firm is, the greater the influence it has on its stakeholders, argues (Velnampy, 2013).

Banks are the major source of debt financing for business and non-business enterprises in Kenya. Therefore the stability of banking sector is of paramount importance to the financial system as it plays an imperative role in the operation of an economy. (Arif, Khan & Iqbal, 2013). As such, an understanding of the factors that affect bank profitability is crucial to the stability of the economy. Most of the existing empirical relationship between size and profitability has found size to be positively correlated with profitability. This positive nexus stems from implementing greater differentiation and specialization strategies and should therefore lead to higher

efficiency. Size represents a contingent factor that falls into the category of a firm's characteristics (Kigen, 2014).

The issue of bank success profit wise continues to be an inexhaustible debate. The determinants of bank profitability have been categorized by various scholars into micro and macro factors. Size as a micro factor has been perceived an important determinant of profitability and the reasons given are that a large business reduces cost because of economies of scale and scope. This study will focus on determining the effect of size on profitability of commercial banks in Kenya.

1.1.1 Bank Size

The size of a business means the ability it possesses and the variety and number of production capability or the quantity and multiplicity of services the business can be offered concomitantly to its customers. In a simpler way, the best indication of "bigness" of a firm is the size of its management group or the amount of assets it possesses compared to others in the same industry (Sritharan, 2015). Firm size is the speed and extent of growth that is ideal for a specific business. Bank size is usually used to examine the economies or diseconomies of scale in the banking sector. A large bank reduces cost because of economies of scale and scope.

Size is commonly measured by gross sales or gross value of assets, logarithm of total assets, number of employees and sales turnover. Growth in size of a firm can be in terms of revenue, profits, assets or number of employees which are all essential for increased financial health and profitability. A study by Omondi and Muturi (2013), suggest that firms should expand in a controlled way with the aim of achieving an optimum size so as to enjoy economies of scale which can ultimately result in higher level of profitability. However, firms that become exceptionally large, the effect of size could be negative due to some reasons for example bureaucracy (Yuqi, 2007).

This study aims at identifying whether the increase or decrease in size of commercial banks asset wise has any influence on the bank profitability.

1.1.2 Profitability

A 'profit' is the remainder of the revenue created by a business after it pays all expenditures directly related to the generating of the revenue, such as producing a product, and other expenses related to the conduct of the business' activities. Profitability therefore is the capability of a business to earn a profit. Profitability is core of any institution's long and short-term strategy and in today's global economic climate and regulatory environment. With compressed margins and increasing competition, it is imperative for financial institutions to understand how customers, branches, channels, officers and products contribute to the bottom line (Saunders & Cornett, 2006).

From the poised research works, bank profitability has been measured using several ratios such as : return on assets (ROA) (Flamini et al., 2009), return on equity (Saona, 2011) and the net interest margin (Naceur & Goaid, 2008). Bank profits are explained by both internal and external determinants. The factors however, vary from bank to bank because of difference in shareholder and managerial decisions and activities. Previous studies suggest that capital size, size of deposit liabilities, size and composition of bank's credit portfolio, interest rate policy, exposure to risk, management quality, labor productivity, bank size, bank age, ownership, ownership concentration, and structural affiliation among others influences bank profitability. However, there are other factors to consider in determining profitability. For instance, the attribution of certain income and operating expenses, the assignment of capital, and a robust, multi-dimensional reporting and analysis framework must all be in place to utilize profitability information in an actionable manner. It is important to know

that the level of profitability attained would depend on the variation of its determinants over time (Sharma & Gounder, 2012).

The importance of bank profitability at both the micro and macro levels has made researchers, academics, bank managements and bank regulatory authorities to develop considerable interest on the factors that determine bank profitability (Athanasoglou, Brissimis & Delis, 2005). Achieving the profitability objective of a bank is a major concern for top-level management of banks and economic analysts. This concern relates to the significant impact of the profitability of commercial banks on the potential growth of the economy. The management of any firm should be able to identify its strength and weakness, likewise exploit opportunities and tackle threats if it is determined to make profits.

1.1.3 The Effect Size on Profitability

Firm size has been considered as an important determinant of firm profitability. Larger firms are said to be able to produce goods more cheaply compared to small firms. This is because the former have achieved more learning, greater cumulative experience and they are able to spread their fixed costs over a greater amount of production (Kigen, 2014).

In existing literature, size has been considered as a fundamental variable in explaining firm profitability by and a number of studies on the relationship between these two conclude that impacts of size on profitability can be negative or positive. Onounga (2014), who found a positive nexus on the two elements suggested that the Kenyan Government should set policies that encourage commercial banks to raise their assets (which measures size) and capital base as this will enhance the profitability of the financial sector. Results by Mule, Mukras and Nzioka (2015), indicated that there is a

positive significant relationship between firm size and profitability, that is, return on equity, implying that a unit change in firm size leads to an increase in return on equity of firms. On the contrary, some authors claim that size may have no or negative impacts on profitability. Shepherd (1972), found that growth in size causes a diseconomies of scale whereas Niresh and Velnampy (2014), had results showing that firm size has no profound impact on profitability of firms. This study will seek to specifically investigate whether size, measured by the logarithm of total assets has effects on profitability of commercial banks in Kenya.

1.1.4 Commercial Banks in Kenya

The banking sector in Kenya is an important part of the economy and it is one of its major drivers. The Banking industry in Kenya is governed by the Companies Act, the Banking Act, the Central Bank of Kenya Act and the various prudential guidelines issued by the Central Bank of Kenya (CBK). The banking sector was liberalized in 1995 and exchange controls lifted. The CBK, which falls under the Minister for Finance docket, is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and proper functioning of the financial system.

In Kenyan the banking sector comprised of Commercial Banks, Non-Bank Financial Institutions, Forex Bureaus and Deposit Taking Microfinance Institutions as the regulated entities. Specifically, as at 31st December 2014, the banking sector was composed of the Central Bank of Kenya, as the regulatory authority, 43 banking institutions (42 commercial banks and 1 mortgage finance company), 8 representative offices of foreign banks, 9 Microfinance Banks, 2 Credit Reference Bureaus, 13 Money Remittance Providers and 87 Foreign Exchange (forex) Bureaus. Out of these banking institutions, 30 were locally owned while 13 were foreign owned. However, the commercial banking sector was dominated by seven banks which control 70

percent of deposits. The remaining banks are small and have limited outreach (CBK, 2014).

The banking sector is among the sectors under the monetary services that is expected to contribute greatly to the realization of Kenya's Vision 2030 (Republic of Kenya, 2007). In today's globally competitive and highly regulated environment, managing risk effectively while satisfying an array of divergent stakeholders is a key goal of banks. However, Banks consider how to fairly balance the risk and interests of the various participating parties, including protecting the interest of those who are directly and indirectly affected - specifically the local community that reside within or close to the area impacted by the project (Kamau & Anami, 2010). According to Mutuku (2005) many firms in financial services, particularly, banks industries in Kenya have increasingly been engaged in investment activities yet it has never been established that this has improved or decreased their profitability. The issue of private partnership and its effect on firms' profitability is important to the managers of companies in Kenya today, especially in these times of intense competition and changing customer expectations. Company Managers have to find innovative ways to attract investors and remain in business and one of the ways is to be good to the stakeholders so that they do well. (Kamau and Anami, 2010)

Numerous reforms have been executed in the banking sector since 1990s aiming at increasing performance, stability, productivity, financial access and efficiency. However, bank profitability on average has been intermittent. Commercial banks' performance in Kenya over the last decade has not been remarkable In the period 2008-2013, increases in Profits before Tax (PBT) has been below 20% on average terms. Also, it important to recognize the many changes in technology and several financial innovations have been developed in Kenya's banking sector in terms

of management, mobile banking, interactions with clients and relationships with other institutions. All these developments are likely to affect banks` performance and their total cost of operations Onuonga, (2014) It is, therefore, important to know whether bank size and other control variables affect the commercial bank performance so as to influence policy making and management decisions that can improve profitability in Kenya`s banking sector.

1.2 Research Problem

Firms in the Kenyan economy and in the world at large vary widely in size and profitability. So far, profit maximization continues to be the leading criterion managers want to maximize, given other goals. In the last half a decade, Kenya has realized fast growth in attaining financial stability, controlled commercial bank regulations and economic security. These developments have impacted profitability of banks in the country. Bank profitability and factors that influence it, is important to the managers today, especially in these times of intense competition and changing customer expectations (Abiodun (2013). In particular, the impact of the size on the banking profitability is widely discussed by researchers.

The existing empirical studies provide mixed results evidence for the relationship between size and profitability. Some authors found that a firm`s size has a positive relationship with firm`s profitability. For instant, according to Sritharan (2015), firm`s size is positively related to profitability measure of return on assets. Arif, Khan and Iqbal (2013), found that all the measures of size used in their research have positive impact on profitability of commercial banks and concluded that commercial banks in Pakistan can maximize their profitability if they manage to increase size by expansion strategies and restructuring. In contrast, some other researchers have found a negative influence of firm`s size on profitability (Becker-Blease et al., 2010 and Banchuenvijit,

2012). More than above, some other scholars have found an insignificant influence of firm's size on firm's profitability. Findings by Kigen (2014), show that there is no relationship between profitability and total assets of the insurance companies in Kenya.

Based on the above arguments, influence of firm's size on firm's profitability is deficient in terms of a unanimous conclusion and so the debate continues. Further empirical studies are therefore necessary and this study hopes to reduce the size-profitability relationship gap by answering questions as well as giving a further understanding to this nexus specifically on the Kenyan setting. Hence, the main motivation of this study arises from the question of: Does firm size have influence on the profitability of commercial Banks in Kenya?

1.3 Objective of Study

The objective of this study is to examine the effect of bank size on profitability of commercial banks in Kenya.

1.4 Value of Study

The study will provide a reference to bank managers to be able to make sound decisions with due regard to profitability and the risks associated with firm size. This study will provide invaluable insight on the advantages or disadvantages of increased asset size to the bank returns. A positive relationship in the findings will indicate that managers should make decisions that lead to increased asset size and the reverse is true.

Information on bank size will guide the authorities in formulating proper policies and legal mechanisms to guide the operations and foster the growth of this fledgling financial industry. This will widen the government tax base through attraction of both

local and foreign players invest in bank assets. The study also aims at shedding light on how banks are influenced by other internal factors which will aid practitioners in making concrete policies to guide the industry and promote good corporate governance.

This study will aid private investors in understanding the Kenyan banking sector and in making informed decisions. Based on the impact of selected variables on banks' profitability, retail or small scale investors in the industry can lobby the government for more favorable policies to protect and ensure the growth of their investments.

This study will come in handy to provide a podium, eminence discussions and dialogs amongst scholars, academicians, policy makers, and professionals and provides a basis for further research regarding the effects that size has on banks' profitability.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter probes into the literature on size and banks' profitability. The chapter looks at the theoretical framework and review of empirical studies both internationally and locally. It also discusses the various factors affecting the profitability of banks.

2.2 Theoretical Review

The theoretical foundations of private equity are found in the modern literature of capital assets that acknowledges the special role of capital structure on investment opportunities. This study is grounded on J Curve Phenomenon, Modern Portfolio Theory and Arbitrage Pricing Theory.

2.2.1 The J-curve Phenomenon

This theory by Davies (1962), explains the returns on investment of firms over the life of investment between point of entry and exit. According to Bremmer (2006) in his book, *The J Curve: A New Way to Understand Why Nations Rise and Fall*, the J curve is generated by plotting the profits generated against time from inception onwards. The common practice of paying the management fee and start-up costs do not produce an equivalent book value. As a result, a firm's profit will initially show a negative direction. When the first realizations are made, the profits start to rise quite steeply. After about three to five years the firm has grown product wise and the public is also aware of its existence so the profits rise hence the J-curve phenomenon (Jeng & Wells, 2000).

The J curve is used to illustrate the historical tendency of firms to deliver negative returns and investment gains in the later years as the portfolios of the companies they have invested in mature. In the early years, a number of factors contribute to negative returns. These include; management fees, investment costs, high leverage and underperforming investments, which are identified early and written down. Over time, the firm will start to experience unrealized gains followed by events in which gains will be realized. A steep J Curve illustrates that investors and firms are recouping their cash flow investments at a high rate (Grabenwarter & Weidig, 2005).

This study will take interest in this theory because it explains the factors that affect profitability. The depth and length of a J-Curve depends on several factors. The J-Curve effect is also more pronounced where firms' managers are more conservative, thus writing down assets early on or carrying the value of their investments close to cost until they are forced to write up the value of their assets close to or at the time of the realization. A steep J Curve indicates that fund managers took a shorter duration to invest their capital to get more assets. The longer it takes to generate distributions, the longer the trough of the J-Curve (Meyer, 2005).

2.2.2 Modern Portfolio Theory

Markowitz (1952), is the father of modern portfolio theory. He formulated the portfolio problem as a choice of the mean and variance of a portfolio of assets. He proved the fundamental theorem of mean variance portfolio theory, namely holding constant variance, maximize expected return, and holding constant expected return minimize variance. These two principles led to the formulation of an efficient frontier from which the investor could choose his or her preferred portfolio, depending on individual risk return preferences. The important message of the theory was that

assets could not be selected only on characteristics that were unique to the security. Rather, an investor had to consider how each security co-moved with all other securities.

Any bank should have a portfolio of investments in different types of investment to maximize profits and minimize risks. Its standard practice for banks to invest in a diversified portfolio to minimize risk and harness the returns of the various investment options on offer (Cumming, 2009). The modern portfolio theory (MPT) is a theory of finance that attempts to maximize expected portfolio returns for a given amount of portfolio risk, or equivalently minimize risk for a given level of return by carefully choosing the proportions of various assets. MPT models a portfolio as weighted combination of assets, so that the return of a portfolio is the weighted combination of the assets return.

This theory is relevant in this study as it guides the bank investors on rules concerning the choice of portfolio. One type of rule regarding portfolio selecting is that the investor does (or should) maximize the discounted (or capitalized) value of future returns. Since the future is not known with certainty, it must be "expected" or "anticipated" returns which are discounted. The process of selecting a portfolio may be divided into two stages. The first stage starts with observation and experience and ends with beliefs about the future performances of available securities. The second stage starts with the relevant beliefs about future performances and ends with the choice of portfolio. Through combining different assets whose returns are not perfectly positively correlated, MPT seeks to reduce the total variance of the portfolio return. MPT also assumes that investors are rational and the markets are efficient (Markowitz, 1952).

2.2.3 Arbitrage Pricing Theory

Ross (1976), developed the Arbitrage Pricing Theory (APT) which is an asset pricing theory that states that the expected return of an investment or a financial asset can be modeled as a linear relationship of various macro-economic variables or where degree of correlation to changes in each variable is represented by a beta coefficient. It is a one-period model in which every investor believes that the stochastic properties of returns or profits of capital assets are consistent with a factor structure. Ross argues that if equilibrium prices offer no arbitrage opportunities over static portfolios of the assets, then the expected returns on the assets are approximately linearly related to the factor loadings.

In the APT context, arbitrage consists of trading in at least two assets, with at least one being not its true market value. The arbitrageur sells the asset which is relatively too expensive and uses the proceeds to buy one which is relatively too cheap. Under the APT, an asset is said to be under or overvalued if its current price deviates from the price predicted by the model. Ross further argues that each investor will hold a unique portfolio with its own particular array of betas, as opposed to the identical "market portfolio".

This theory is significant to a bank manager who has to continuously evaluate investment options in light of asset size, limited resources and the paramount need to maximize shareholders returns. This can be termed as the process of arbitraging between the opportunities available. Arbitrage is the practice of taking positive expected return from overvalued or undervalued securities in the inefficient market without any incremental risk and zero additional investments. The model-derived rate of return will then be used to obtain the price or value of the asset correctly. The asset

value should equal the expected end of period asset value or future cash flows discounted at the rate implied by the model. If the asset value changes, arbitrage should bring it back to the line (Dybvig and Ross, 2003).

2.3 Factors Affecting Bank Profitability

Bank profitability is influenced by both internal factors and external factors which management or shareholders of firms can't control. This section will debate a number of factors that affect bank profitability with empirical evidence.

2.3.1 Size of a Firm

The size of a company is the amount and variety of production capacity and ability a company possesses or the amount and variety of services a company can provide concurrently to its customers (Jonsson, 2007). Compared to small firms, larger firms are able to produce the same goods more cheaply because they have achieved more learning and greater cumulative experience and they are able to spread their fixed costs over a greater amount of production and this is known as economies of scale. Collins & Preston (1969) show that there is a positive association between firm size and profitability and it stems from implementing greater differentiation and specialization strategies and should therefore lead to higher efficiency.

2.3.2 Operational Efficiency

Operational efficiency is the proficiency of a company to curtail the unwelcome and maximize resource capabilities so as to deliver quality products and services to customers (Kalluru & Bhat, 2009). If firms operate more efficiently, they might expect improved productivity and consequently profitability. Consequently, the consumer could expect better and fair prices, quality service, better security and reliability of financial structures. Relatively, more efficient firms tend to maintain

more stability levels in terms of output and operating performance compared to their other industry peers according to (Mills & Schumann, 1985).

2.3.3 Liquidity

Liquidity is a serious factor that has an impact on the profitability of banks. Liquidity is the ability of a business to pay off its short-term debt obligations. Kijjambu (2015), states that liquidity may arise from the possible inability of a bank to accommodate decrease in liabilities, thus affecting bank profitability, since it becomes hard to raise funds for increasing demand for loans. There is a certain level of liquidity that each business shouldn't fall below depending on the field of operation because failure to meet short term obligations may lead to losses and eventually collapsing of a firm.

2.3.4 Capital Adequacy

Capital adequacy according to Obamuyi (2013), is calculated as the ratio of total equity to total assets. The Signaling Theory (Berger, 1995) argues that there is a positive relationship between a bank's profits and its level of capital. The Signaling Theory argues that a higher capital signals positively to the market on the value of the bank. The positive signal provides private information to the bank to enhance capital as the future prospects are good. Contrary to the above theory, the Risk Return Theory argues that capital and bank profitability are negatively associated (Saona, 2011).

2.3.5 Solvency

Solvency is the ability of a company to meet its long-term fixed expenditures. If a firm is solvent, then it means its management can simply answer yes to questions like: Is the company keeping debts and other liabilities under control? Are the company's assets growing? Solvency can be tested by looking at ratios like: Debt-to-Net-Equity, Working Capital and Quick Ratio. A solid company doesn't have to pass all financial

ratios of analyzing stocks with flying colors, but at a minimum, it should comfortably pass the ones regarding profitability and solvency (Gaist, 2009). A study conducted by the European Journal of Accounting Auditing and Finance Research EJAAFR (2013), to investigate the effect of solvency on profitability among Jordanian Industrial sectors revealed that solvency has a significant relationship with earnings before interest and tax, net profit margin, return on asset (ROA), and return on equity (ROE).

2.3.6 Macro-economic Environment

The external or macro-economic environment determinants of bank profits are related to both the economic and legal environment in which the banks functions (Nassreddine, et al, 2013). The environmental factors include market structure, regulation, inflation, interest rates, market growth, and the general economic conditions such as economic booms or recessions. Gul et.al (2011), research was focused on examine the relationship between bank specific and macroeconomic factors on bank profitability. The results found evidence that both internal and external factors have a strong influence on profitability. In addition, Khrawish (2011), concluded that there are significant and negative relationships between ROE signifying profitability and annual growth rate for gross domestic product, and the Inflation Rate of the commercial banks. A study by Ovamba (2014), on the relationship between macroeconomic factors and bank profitability had results indicating that macroeconomic factors (real GDP, inflation and exchange rate) have insignificant effect on bank profitability in Kenya.

2.4 Empirical Review

The empirical review will discuss the literature done in the recent past both internationally and locally on private equity and other factors affecting bank profitability.

2.4.1 International Evidence

Arif, Khan and Iqbal (2013), investigated the impact of various measures used in research for bank size on the profitability of Pakistani banks. Quarterly data of all domestic scheduled banks for five years (2005-2009) is extracted from the quarterly statements of the banks. The banks are divided into the three size categories on the basis of assets. Descriptive analysis and linear regression is run separately for each group for comparison purpose. On the basis of results it is found that all the measures of size used in research have positive impact on profitability of commercial banks. It is concluded that commercial banks in Pakistan can maximize their profitability if they manage to increase size by expansion strategies and restructuring.

Babalola (2013), set out to investigate the effect of firm size on the profitability of manufacturing companies listed in the Nigerian Stock Exchange. Data was analyzed by using a panel data framework which was fitted to the secondary data obtained from sampled firms for the period 2000-2009. The data were sourced from the Annual Reports and Accounts of the random sample of 80 non-financial quoted firms listed on the Nigeria Stock Exchange (NSE). Profitability was measured by using Return on Assets, while both total assets and total sales were used as the proxies of firm size. According to the results of the study, firm size, both in terms of total assets and in terms of total sales, has a positive impact on the profitability of manufacturing companies in Nigeria.

Niresh and Velnampy (2014), explored the effects of firm size on profitability of quoted manufacturing firms in Sri Lanka. Data of 15 companies which were active in Colombo Stock Exchange between the years 2008 to 2012 was used. As indicators of firm profitability, Return on Assets and Net Profit were used whereas Total Assets and Total Sales were utilized as indicators of firm size. Correlation and regression methods were used in the empirical analysis. The findings revealed that there was no indicative relationship between firm size and profitability of listed manufacturing firms. In addition, the results showed that firm size has no profound impact on profitability of the listed manufacturing firms in Sri Lanka.

Dahmash (2015), tested the size effectiveness on company profitability for the Jordanian context for a large sample of 1,538 companies listed in Amman Security Exchange. The study covered the period between 2005 and 2011. The results of the analysis indicated a highly significant value for the three main sectors of the sample. The highest significant value result was for the industrial sector companies, followed by the services sector companies, and lastly the financial sector companies. The results of the detailed industry analysis concerning the whole sub-sectors were similar with the highest values for the food and beverages companies, the commercial and educational services companies, and the insurance companies. The results indicated that the bank companies, the diversified financial companies, and the real estate companies have insignificant coefficient values for the total assets with company size. However, the bank companies only were insignificant for the total revenues coefficient of the company size.

Sritharan (2015), examined the influence of firm's size on firm's profitability in listed firms of Sri Lankan hotels and travels sector firms. The study performed a fixed effect econometric estimation models and used the data for the time period from 2008 to

2012. The study used its source of data as statements of financial positions, which published in the annual report of the listed companies in Sri Lanka. 30 firms' data were taken as a balanced panel to represent the sample size. The dependent variable of return on assets measured with net profit divided by total assets. The key independent variable of this study was firm's size which was calculated as the logarithm of total sales. According to the fixed effect model result firm's size is positively related to profitability measure of return on assets.

2.4.2 Local Evidence

Kamau (2014), sought to determine the effect of internal factors on the profitability of private hospitals in Kenya. A case study research design was adopted by this study. The population for this study was departmental heads and staff in the finance department of the Karen Hospital. Stratified random sampling was used to get the data sources with primary data collected using semi structured questionnaires. A sample size of 5 respondents was chosen to form the pilot study. The study established a positive relationship between profitability of private hospitals and firm size, volume of capital and tangibility of assets with leverage showing a negative relationship. The study concluded that firm size, leverage, volume of capital and tangibility of assets affect profitability of private hospitals in Kenya.

Kigen (2014), investigated the effect of size on the profitability of insurance companies of Kenya. A key indicator of insurance companies profitability was return on assets (ROA), defined as the before tax profit divide by total assets. Profitability was the dependent variable while total assets, leverage and market share were the independent variables. A census study of 48 general and long term insurance companies which cover the period of 2009- 2013. Secondary data was obtained from the statements of v positions of insurance companies and annual reports of Insurance

Regulatory Authority (IRA). The study was quantitative in nature. The findings show that there is no relationship between profitability and total assets of the insurance companies and there is significantly positive relationship between size as measured by market share of the insurance companies and profitability.

Onuonga (2014), aimed at investigating the impact of the internal determinants of profitability of Kenya's top six commercial banks over the period 2008-2013, This paper used generalized least squares method to estimate the impact of bank assets, capital, loans, deposits and assets quality on banks profitability. He used return on assets (ROA) as a measure of profitability. The findings revealed that bank size, capital strength, ownership, operations expenses, diversification do significantly influence profitability of the top six commercial banks. The result suggests that the Kenyan Government should set policies that encourage commercial banks to raise their assets and capital base as this will enhance the performance of the sector. Another implication of the study is that commercial banks need to invest in technologies and management skills which minimize costs of operations as this will impact positively on their growth and survival.

Kiptanui, Chenuos and Biwott (2014), aimed at determining the effect of profitability, firm size and liquidity on capital structure. The study adopted panel data from 34 firms listed in Nairobi Securities Exchange for a period of years 2006-2012 excluding commercial banks. Pearson Correlation was employed to test linear relationship between the variables while multiple regression model were used to test the hypothesis. Findings obtained indicated that that profitability and liquidity are negatively and significantly related to capital structure. However, firm size is positively correlated and not significant on capital structure.

Mule, Mukras and Nzioka (2015), explored the effect of corporate size on profitability and market value of listed firms on the Nairobi Securities Exchange (NSE) in Kenya. In this study, data for companies which were active in (NSE) between the years 2010 to 2014 were used. Panel correlation and multiple regression methods were used in the empirical estimations. Results indicated that there is a positive significant relationship between firm size and profitability, that is, return on equity, implying that a unit change in firm size leads to an increase in return on equity of firms listed at the Nairobi Securities Exchange. In addition, the results show that corporate size has no statistically significant impact on firm market value under random effect specification.

2.5 Summary of Literature Review

Profitability as seen in theoretical framework is one of the most important goal of financial management which leads to maximization of proprietors' wealth. Identifying the factors that would catalyze or hinder the achievement of this significant goal therefore needs much attention. The determinants of bank profitability world over have been categorized into internal or micro and external macro factors. Size has been perceived an important determinant of profitability. According to Kigen (2014), persistence of profitability is greater in larger companies, because compared with smaller companies, the larger ones have more access to resources and consequently they have more flexibility to the changes in a dynamic market.

Literature show mixed results on the effect of size on profitability. Results by Kamau (2014), Onuonga (2014), Mule, Mukras and Nzioka (2015) indicated that there is a positive significant relationship between firm size and profitability. In contrast, (Becker-Blease et al., 2010) found a negative effect of size on profitability. More to these divergent empirical conclusions were the findings by Niresh and Velnampy

(2014), which revealed that there was neither an indicative nor a profound impact between firm size and profitability of firms.

While various studies address different issues relating to profitability in commercial banks in Kenya, none of these specifically focuses on the impact of bank size on the profitability of these commercial banks. This study, therefore, seeks to augment to the literature by investigating the effect of bank size on the profitability of commercial banks in Kenya. Precisely, it determines if size in terms of assets, has taken a critical role in controlling profitability of the commercial banks, and whether it has assisted in the improvement or otherwise of the financial health of the commercial banks.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the method that was used in data collection and analysis. It consists of the research design, population, data collection, data analysis, analytical model, and significance test.

3.2 Research Design

According to Cooper and Schindler (2006), research design refers to the way data mining and analyses are structured to fulfill the research objectives through empirical evidence. Denvir and Millet (2003), concurs with this definition by asserting that research design ought to provide adhesive force that glues a project together. This study used descriptive research design. Kothari (2004), defines descriptive research as the statistical studies that detect trends and patterns in a condition, individuals or group. He illustrates a descriptive design as a design that attempts to accurately describe the characteristics of the variables. A descriptive research design is used in structuring research showing all major component of project, which entails sample or groups, measures, treatments or programs and the different methods that work in unity to address the research phenomenon (Kothari, 2004). Ngigi (2009), and Ndichu (2014), successfully used descriptive design and thus its applicability.

3.3 Population

Population is a distinct set of elements that the researcher intends to employ in making inferences according to Mugenda and Mugenda (2003). The population study included all the 43 commercial banks in Kenya as at December 2013 (See appendix D).

3.4 Data Collection

Data collection entails gathering and computing information on selected variables, in a conventional systematic manner that enables researcher to answer stated research and evaluate conclusions. This study used secondary data. According to Dawson (2009), and Mugenda and Mugenda, (2003) secondary research data is the already gathered information from previous studies and other scholars on the same subject. The secondary data was collected from Central bank of Kenya website (CBK), Kenya National Bureau of statistics (KNBS) and annual financial reports of individual commercial banks for example the statement of financial position. The study covered a period of five years from 2010 to 2014 on all the commercial banks. The selected period was considered adequate to give comprehensive information on trend and sufficient variables necessary in determining the effect of bank size on profitability of the commercial banks.

3.5 Data Analysis

Marshall and Rossman (1999), defines data analysis as the process of bringing order, structure and interpretation of the composed data. It also entails preparation of the collected information; the way data is coded, edited and cleaned in preparation for analysis using softwares statistical. The study used analytical software of advanced Excel and Statistical Package for the Social Sciences (SPSS) version 21 for data analysis. The choice of SPSS is based on the fact that it is systematic and covers a wide range of major statistical and physical data analysis. The study used tables and figures to interpret the data. A multiple linear regression equation was used to determine the relationship between private equity, other selected control variables and bank profitability.

3.5.1 Analytical Model

The regression equation that was used in this study will be multivariate function comprising six dependent variables, which are: Bank size, operational efficiency, capital adequacy, liquidity, that affects bank probability. The dependent variable was bank's profitability which will be determined using Return on Assets (ROA).

It will be as follows:

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

Where:

Y = Profitability was measured using Return on Assets (ROA) calculated as net income divided by total Assets.

X₁ = Bank size which was measured using the Log of Total assets

X₂ = Operational efficiency, obtained by dividing total operating expenses divided by total income.

X₃ = Capital adequacy which was determined by ratio of Capital to total Weighted Assets

X₄ = Liquidity which was measured as the ratio of current assets divided current liabilities.

α = Regression constant

ε = Error term normally distributed about the mean of zero.

$\beta_1 \beta_2 \dots \beta_n$ will be the coefficients of the variation to determine the volatility of each variable to financial performance the in regression model.

3.5.2 Test of Significance

The study tested the level of statistical significance of the findings at 95% to determine whether the model was a good predictor using the Analysis of variance technique (ANOVA). The ANOVA solves the difficulty that arises with either z-test

or t-test when examining the significance of the difference amongst more than two samples at the same time. If the results of the test fell within the 5% level of significance, this meant that the sample selected was a true representation of the population.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This chapter presents the results of the data analysis. This was guided by the objective of this study which was to determine the effect of bank size on profitability of commercial banks in Kenya. Secondary data in the form of published financial reports of commercial banks was obtained from CBK. This data was then converted to the desired form and entered into SPSS version 22. Data analysis was then conducted to generate descriptive analysis, correlation analysis and regression analysis. These results are as shown in the proceeding sections.

4.2 Descriptive Statistics

The descriptive statistics has been used to give the values of the means and standard deviations of the variables in the regression model in relation to the effect of bank size on profitability of commercial banks in Kenya. The findings are presented in the table 4.1 below:

Table 4.1 Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ROA	43	-.10	.08	.0261	.02431
Liquidity	43	.22	1.92	.4629	.22055
Operating Efficiency	43	-.65	4.47	.7595	.75032
Capital Adequacy	43	.00	1.11	.2555	.14086
Log of Assets	43	6.24	9.48	7.4092	.57398
Valid N (listwise)	43				

Source: Research findings

From the above findings, financial performance of most commercial banks was estimated at 0.26% of the total assets, the standard deviation is 0.2431. The logarithm

of assets of commercial banks in Kenya was found to be 7.4%; which was an indication that the banks generated income from their assets. The level of liquidity of commercial banks was 5% which means that some commercial banks were able to meet their financial obligations. Capital adequacy was found to be 26% while the level of efficiency of commercial banks had a mean value of .7595 which was an indication that most commercial banks were efficient in their operations. The findings therefore conclude that even though the estimated level of financial performance by most commercial banks was not impressive, most banks had an adequate capacity generate profitability. However, this was dependent on some factors like efficiency of the bank, its credit policies, and management and investment decisions.

4.3 Inferential Statistics

Inferential statistics refers to use of data from a population to get results beyond the population alone

4.3.1 Correlation Analysis

The study conducted a correlation analysis between the bank size and profitability of commercial banks in Kenya to find out the strength of the relationship between the variables. Pearson's correlation analysis was also used to determine the existence of multicollinearity between the independent variables. Multicollinearity exists when independent variables are highly correlated ($r \geq 0.9$) and tends to lead to a poor regression model. The findings are presented in the table 4.2 below:

Table 4.2 Correlation Analysis

	ROA	Ln assets	Liquidity	Capital Adequacy	Efficiency	Solvency
ROA	1					
Liquidity	-.170	1				
Operating Efficiency	-.098	-.100	1			
Capital Adequacy	-.003	.262	-.042	1		
Log of assets	.531	-.291	-.113	.289	1	

Source: Research findings

From the results above, the findings reveal that there was no correlation between liquidity, operating efficiency and capital adequacy with financial performance of commercial banks in Kenya. The correlation scores are as follows: -.170, -.098 and -.003. There was a moderate correlation between log of assets and financial performance of commercial banks in Kenya. The correlation score is R=.531. Generally, the findings therefore conclude that there is a weak or no correlation between bank size and profitability of commercial banks in Kenya.

4.3.2 Regression Analysis and Hypothesis Testing

The study conducted a regression analysis to test the hypothesis of the study which projected the existence of a positive relationship between bank size and profitability of commercial banks in Kenya. The results are presented in the tables below:

The model summary illustrates the variation in the value of the dependent variable which is explained by the regression model. The results are provided in the table 4.3 below:

Table 4.3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.552 ^a	.305	.287	.02057

a. Predictors: (Constant), Log of Assets, Operating Efficiency, Liquidity, Capital Adequacy

Source: Research findings

From the above results, R is the multiple correlation coefficient which is $r=.552$ which means that there is moderate correlation between bank size and profitability of commercial banks in Kenya. R^2 is the coefficient of determination which is the proportion of variance in the dependent variable that can be explained by the independent variables in the regression model. The results show a value of 0.305 which implies that the independent variables explain 31% of the variability of profitability of commercial banks.

4.3.3 Analysis of Variance

The study conducted analysis of variance to determine the linear relationship among the variables in the regression model. The results are provided in the table 4.4 below:

Table 4.4 Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.030	4	.008	17.742	.000 ^b
Residual	.069	162	.000		
Total	.099	166			

a. Dependent Variable: ROA

b. Predictors: (Constant), Log of Assets, Operating Efficiency, Liquidity, Capital Adequacy

Source: Research findings

The above findings reveal that F is statistically significant since its probability value is less than 0.05; this suggests a linear relationship between bank size and profitability

of commercial banks. This implies that 95% chance that the relationship among the variables is not due to chance.

4.3.4 Model of Coefficients

The study examined the model of coefficients. The table below summarizes the results of the regression equation. The values in column B represent the extent to which the value of that independent variable contributes to the value of the dependent variable. The other column shows the level of significance of the study variables.

Below are the results in the table 4.5 below:

Table 4.5 Model of Coefficients

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.152	.025		-6.132	.000
Liquidity	-.008	.008	-.064	-.920	.359
Operating Efficiency	4.103E-005	.002	.001	.021	.983
Capital Adequacy	.021	.011	.131	1.859	.065
Log of Assets	.024	.003	.559	7.811	.000

a. Dependent Variable: ROA

Source: Research findings

The regression model obtained for this study is as follows;

$$ROA = -.152 + 4.103E-005 X_1 + .021X_2 + .024X_3 + \epsilon$$

The regression model obtained shows that there is a positive relationship between operating efficiency, capital adequacy and logarithm of assets with profitability of commercial bank in Kenya. This implies that holding all other factors constant a unit increase in one of the variables obtained in the regression model results into a corresponding increase in profitability of commercial banks in Kenya.

Liquidity was excluded from the regression model obtained since it showed a negative relationship with profitability. This contradicts the hypothesis of this study which predicts a positive relationship between bank size and profitability of commercial banks in Kenya.

Further, the regression results observe that logarithm of asset is statistically significant since its probability value obtained from the regression model above is below 0.005 (5%), $p=0.000$. On the other hand, liquidity, operating efficiency and capital adequacy are statistically insignificant since their p -values are more than 5%, $p=.359$, $p=.983$ and $p=.065$ respectively.

4.4 Interpretation of the Findings

The descriptive findings concluded that commercial banks had a sufficient capacity to generate profitability from their assets. However, this was dependent on some factors like efficiency of the bank, its credit policies, and management and investment decisions.

The correlation results found that there was a positive moderate correlation between logarithm of assets and profitability of commercial banks. The correlation score is $R=.531$. These findings are consistent to Kiptanui, Chenuos and Biwott (2014) who studied the effect of profitability, firm size and liquidity on capital structure. Findings obtained indicated that that profitability and logarithm of assets had a positive moderate correlation. The findings observe that there is no correlation between liquidity and profitability of commercial banks in Kenya this is represented by $R= -.170$. These findings conform to a study by Kiptanui, Chenuos and Biwott (2014) that studied the effect of profitability and firm size and concluded that there was no correlation between the two. Further, it was revealed that no correlation between

capital adequacy and operating efficiency with profitability of commercial banks. This correlation scores were as follows $R = -.003$ and $R = -.098$.

The regression model obtained shows that there is a positive relationship between operating efficiency, capital adequacy and logarithm of assets with profitability of commercial bank in Kenya. This implies that holding all other factors constant a unit increase in one of the variables obtained in the regression model results into a corresponding increase in profitability of commercial banks in Kenya. These findings are consistent with a study conducted by Kigen (2014) who concluded that there was a positive relationship between size, liquidity and efficiency with profitability of insurance companies in Kenya.

Further, the regression results observe that logarithm of asset is statistically significant since its probability value obtained from the regression model above is below 0.005 (5%), $p = 0.000$. These findings are consistent with Niresh and Velnampy (2014) who explored the effects of firm size on profitability of quoted manufacturing firms in Sri Lanka and concluded that there was a statistically significant relationship between firm size and profitability.

Liquidity, operating efficiency and capital adequacy are statistically insignificant since their p-values are more than 5%, $p = .359$, $p = .983$ and $p = .065$ respectively. These findings are consistent with a study by Dahmash (2015) who tested the size of effectiveness on company profitability in sample of 1,538 companies listed in Amman Security Exchange. The findings concluded that there was a statistically insignificant relationship between efficiency, capital adequacy with profitability of listed firms.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussions drawn from the data findings analyzed and presented in the chapter four. The chapter is structured into summary of findings and discussion, conclusions, recommendations and areas for further research.

5.2 Summary

The descriptive findings concluded that commercial banks had a sufficient capacity to generate profitability from their assets. However, this was dependent on some factors like efficiency of the bank, its credit policies, and management and investment decisions. This was proved by the level of financial performance and operating efficiency of commercial banks which were as follows; 0.26% and .7595 respectively.

The correlation results found that there was a positive moderate correlation between logarithm of assets and profitability of commercial banks. The correlation score is $R=0.531$. The study further revealed that profitability and logarithm of assets had a positive moderate correlation. The findings observe that there is no correlation between liquidity and profitability of commercial banks in Kenya this is represented by $R= -0.170$. Finally, the results found that no correlation between capital adequacy and operating efficiency with profitability of commercial banks. This correlation scores were as follows $R= -0.003$ and $R= -0.098$.

The regression model obtained shows that there is a positive relationship between operating efficiency, capital adequacy and logarithm of assets with profitability of commercial banks in Kenya. This implies that holding all other factors constant a unit increase in one of the variables obtained in the regression model results into a

corresponding increase in profitability of commercial banks in Kenya. Further, the regression results observe that logarithm of asset is statistically significant since its probability value obtained from the regression model above is below 0.005 (5%), $p=0.000$. Liquidity, operating efficiency and capital adequacy are statistically insignificant since their p-values are more than 5%, $p=.359$, $p=.983$ and $p=.065$ respectively.

5.3 Conclusions

The study concludes that there is a moderate correlation between firms and profitability of commercial banks in Kenya. This implies that commercial banks should continue improve on their level of efficiency by investing in modern technologies. This will enable them to make maximum use of available resources like assets and line of credit to invest in projects that can promise higher returns. It is also important for commercial banks to consider investing in other lines of business other than their core activities to minimize their risks and boost profitability. It was found that bank size and profitability had a statistically significant relationship this is an indication that quite a number of commercial banks were financially stable in terms of asset base, branch network and customer portfolio.

5.4 Recommendation for Policy and Practice

The study recommends that commercial banks should invest in other lines of business for example product diversification and investments to supplement their income from core business. This will boost their stability and contribute to profitability.

It further recommends that commercial banks should make maximum use of their available resources for example assets to boost their profitability and effectively execute their core functions for example providing retail banking services to

individual customers; commercial loans and lines of credit to businesses; payment and clearing services; and engaging in capital markets activities. It is worth noting that large commercial banks are active in each of these areas and have a demonstrable and positive impact on the economy.

The empirical findings found in this study might be useful in guiding central bank of Kenya in setting policies and procedures that encourage commercial banks to grow and expand to enjoy some of the benefits that accrue for large firms like access to credit facilities and economies and scale. This will provide a platform for commercial banks to borrow and invest in capital projects in order to realize profitability.

5.6 Limitations of the Study

The cotemporary business environment is characterized by risks and uncertainties due to its turbulent nature. Macroeconomic factors for example regulations, technology and other microeconomic factors might have affected the findings obtained in this study. The study therefore recommends that a study should be conducted after ten years and then findings and conclusions can be compared after which logical conclusion can be made.

The study used secondary data is often not presented in a form that exactly meets the researcher's needs. This is because secondary data involves past information which may not be a true reflection of the current needs of the study. This might have exposed that study to bias and assumptions and impacted negatively on the study findings.

The other limitation of this study is that it was limited to five years only. This might have limited the findings of this study since this period is not enough to give a

comprehensive analysis in relation to the effect of bank size on profitability of commercial bank in Kenya.

The other limitation faced by the researcher is time and cost constraints. This project was done within a limited period of time, the researcher had to go out of his way to create extra time to work on the project and meet the deadline. This was however not easy balancing school work and family.

Obtaining secondary data on the measurements the variables was not an easy task. Most commercial banks are known to work under strict confidentiality, the researcher went out of his way to look for someone who works for central bank of Kenya to get the secondary data as per the specific measurements of the study. This took a while. The researcher had to learn how to clean, sort and code the data within a short period of time this was very challenging.

5.5 Suggestions for Further Research

Future researchers might consider investigating similar variables that are bank size, profitability, capital adequacy, liquidity, efficiency and logarithm of assets in other sectors for example listed firms in Kenya to test whether these findings will hold. The findings obtained can then be compared to find out whether there are areas of commonalities and unique factors.

The study recommends that future researcher who has an interest in this study might test these variables in another sector for example microfinance banks, manufacturing firms or any other sector whereby these variables have not been investigated then findings can be compared after which plausible conclusions may be drawn.

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APPENDICES

APPENDIX I: SECONDARY DATA FOR COMMERCIAL BANKS IN KENYA

2014	ASSETS	ROA	Operating Efficiency	Capital Adequacy
Kenya Commercial (KCB)	376969.4	0.0421	0.4644	0.21
Co-op Bank	282689.1	0.0295	0.4833	0.177
Equity Bank Limited	276115.7	0.0549	0.5651	0.187
Standard Chartered Bank Ltd	226118.1	0.0371	0.5158	0.216
Barclays Bank	222636	0.0467	0.3996	0.198
CFC Stanbic Bank	175808.8	0.0215	0.4985	0.22
NIC Bank Ltd	171347.2	0.032	0.4816	0.189
Commercial Bank of Africa	141175.8	0.0294	0.2836	0.189
Diamond Trust Bank Kenya	137299.4	0.0409	0.7083	0.209
I & M Bank	137087.5	0.0293	0.3789	0.273
Citibank, N.A.	122864.9	0.0065	0.4293	0.179
National Bank(NBK)	107112.5	0.0216	0.6204	0.139
Chase Bank Limited	79397.81	0.0308	0.553	0.203
Bank of Africa	62211.64	0.0023	0.3789	0.153
Bank of Baroda (K) Ltd	61944.65	0.0358	1.2559	0.242
Prime Bank Limited	61812.66	0.0288	0.4764	0.168
Housing finance	60490.83	0.0144	0.3921	0.153
Imperial Bank Limited	56599.36	0.0365	0.8105	0.159
Ecobank Kenya Ltd	54917.67	0.0316	0.5908	0.394
Family Bank	45934.46	-0.007	0.4799	0.198
Bank of India	34370.42	0.0297	0.6987	0.259
African Banking Corporation	32991.93	0.0162	0.8743	0.135
Consolidated Bank of Kenya	21438.73	0.012	0.7299	0.192
Fina Bank Limited	19753.65	0.0203	0.8424	0.206
Equitorial Commercial Bank	17244.09	0.0269	0.6074	0.238
Gulf African Bank	16954.23	0.013	0.6404	0.261
Development Bank of Kenya	16589.36	-0.02	0.6623	0.372
Giro Commercial Bank	16515.4	0.0134	0.7702	0.172
Fidelity Commercial Bank	15798.78	0.0325	0.3562	0.328
Guardian Bank	15278.03	0.0033	0.5306	0.217
Victoria Comm. Bank Ltd	15082.2	0.0262	0.2346	0.296
First community Bank	15077.05	-0.019	0.3959	0.166
Habib AG Zurich	14570.6	0.0179	0.2551	0.164

K-Rep Bank Ltd	13117.89	0.0015	0.4984	0.115
Transnational Bank Limited	12147.29	0.0329	0.6705	0.256
Paramount-Universal Bank	10402.33	0.0119	0.7073	0.255
Habib Bank Limited	10239.92	0.0123	2.1794	0.337
Credit Bank Ltd	9449.365	0.0337	0.518	0.586
Oriental Comm. Bank	8864.577	-0.01	0.9601	0.188
Middle East Bank of Kenya	7857.515	0.0092	0.7141	0.11
Jamii Bora Bank	5936.601	0.0116	0.3078	0.218
UBA BANK	4755.786	-0.059	0.4249	0.107
Dubai Bank Limited	3502.266	0.0013	0.6608	0

2013	Capital Adequacy	ROA	Liquidity	Efficiency	Assets
Kenya Commercial (KCB)	0.225	0.077	0.333	2.280774	323312.5
Equity Bank Limited	0.236	0.055	0.34	1.940341	238194.4
Co-op Bank	0.211	0.06	0.326	2.511912	228874.5
Standard Chartered Bank Ltd	0.173	0.058	0.38	1.714326	220523.9
Barclays Bank	0.208	0.047	0.42	1.889477	207009.6
CFC Stanbic Bank	0.21	0.041	0.679	1.992724	170726.5
Commercial Bank of Africa	0.21	0.055	0.4112	3.253345	124882
Diamond Trust Bank Kenya	0.354	0.049	0.326	2.67925	114136.4
NIC Bank Ltd	0.19	0.046	0.2854	2.139591	112916.8
I & M Bank	0.148	0.07	0.3402	2.650343	110315.7
National Bank(NBK)	0.135	0.036	0.42	2.921978	92493.03
Chase Bank Limited	0.241	0.048	0.405	4.465814	76568.93
Citibank, N.A.	0.216	0.058	0.63	2.066267	71242.66
Bank of Africa	0.15	0.029	0.256	1.738453	52683.3
Bank of Baroda (K) Ltd	0.189	0.038	0.606	2.482191	52021.52
Prime Bank Limited	0.306	0.019	0.424	1.498195	49460.89
Housing finance	0.184	0.04	0.3312	1.324136	46755.11
Family Bank	0.415	0.041	0.365	2.096345	43500.99
Imperial Bank Limited	0.127	0.02	0.338	1.570807	43006.23
Ecobank Kenya Ltd	0.15	0.043	0.318	4.434487	36907.14
Bank of India	0.338	0.029	0.752	1.608665	30721.44
Fina Bank Limited	0.181	0.042	0.65	1.577145	25638.05
Consolidated Bank of Kenya	0.198	0.062	0.275	2.546611	23069.93
African Banking Corporation	0.289	0.043	0.38	1.420209	19639.37
Gulf African Bank	0.214	0.027	0.338	3.21808	16053.97
Development Bank of Kenya	0.314	0.016	0.386	2.518129	15580.63
Equitorial Commercial	0.151	0.03	0.3461	1.420517	15562.48

Bank					
Victoria Comm. Bank Ltd	0.332	0.028	0.308	1.818024	13644.24
Giro Commercial Bank	0.371	0.025	0.505	1.848725	13623.3
K-Rep Bank Ltd	0.236	0.018	0.311	1.519723	13199.24
Guardian Bank	0.18	0.023	0.334	1.661281	12834.69
Fidelity Commercial Bank	0.258	0.018	0.4263	1.717637	12778.51
First community Bank	0.304	0.025	0.287	1.27908	11305.4
Habib AG Zurich	0.185	0.01	0.824	1.260841	11009.48
Transnational Bank Limited	0.123	0.012	0.496	1.583673	9657.868
Habib Bank Limited	0.266	0.013	0.63	1.498385	8078.122
Paramount-Universal Bank	0.419	0.014	0.63	2.247333	8028.877
Credit Bank Ltd	0.148	0.01	0.367	1.285	7308.854
Jamii Bora Bank	0.363	0.005	0.424	1.220918	7010.322
Oriental Comm. Bank	0.469	0	0.44	1.803045	7006.507
Middle East Bank of Kenya	0.172	-0.008	0.23	1.2107	5765.799
UBA BANK	0.108	-0.075	1.128	0.492765	3709.63
Dubai Bank Limited		-0.033	0.215	0.641932	2926.86

2012	Assets	ROA	Liquidity	Operating Efficiency	Capital Adequacy
Kenya Commercial (KCB)	304112.3	0.0365	0.355	0.2855	0.227
Equity Bank Limited	215829.3	0.051	0.46	0.2241	0.301
Co-op Bank	199663	0.0367	0.358	0.3529	0.238
Standard Chartered Bank Ltd	195493	0.0411	0.39	0.2783	0.258
Barclays Bank	185101.6	0.0472	0.468	0.1376	0.18
CFC Stanbic Bank	133378.2	0.0233	0.464	0.4424	0.255
NIC Bank Ltd	101771.7	0.0286	0.3538	0.5291	0.418
Commercial Bank of Africa	100455.6	0.0263	0.4762	0.4888	0.164
Diamond Trust Bank Kenya	94511.82	0.0325	0.38	0.468	0.198
I & M Bank	91519.62	0.0367	0.354	0.5503	0.173
Citibank, N.A.	69579.8	0.0636	0.82	0.2434	0.161
National Bank(NBK)	67154.81	0.0109	0.3	0.4336	0.284
Chase Bank Limited	49105.5	0.0184	0.434	0.5793	0.235
Bank of Africa	48957.93	0.0097	0.256	0.7088	0.132
Bank of Baroda (K) Ltd	46137.78	0.0298	0.558	0.636	0.227
Prime Bank Limited	43462.89	0.022	0.475	0.7043	0.325
Housing finance	40685.93	0.0169	0.368	0.6153	0.405
Imperial Bank Limited	34589.61	0.0406	0.393	0.5573	0.17
Ecobank Kenya Ltd	31771.34	-0.033	0.4	0.9829	0.187
Family Bank	30985.1	0.0175	0.386	0.311	0.132

Bank of India	24876.82	0.0236	0.659	0.7251	0.251
African Banking Corporation	19070.78	0.0222	0.425	0.6065	0.387
Consolidated Bank of Kenya	18000.86	0.0077	0.474	0.6466	0.295
Fina Bank Limited	17149.89	0.0165	0.44	0.6432	0.144
Equitorial Commercial Bank	14109	-0.034	0.3233	0.8179	0.169
Gulf African Bank	13561.82	0.0179	0.2898	0.2019	0.145
Development Bank of Kenya	13417.1	0.0054	0.46	0.8116	0.569
Giro Commercial Bank	12279.81	0.0184	0.5505	0.7057	0.215
Fidelity Commercial Bank	11772.12	0.0076	0.343	0.8307	0.249
Guardian Bank	11745.36	0.0131	0.386	0.6933	0.836
Victoria Comm. Bank Ltd	10322.82	0.034	0.384	0.5123	0.421
First community Bank	9958.766	0.0242	0.4	0.1453	0.173
Habib AG Zurich	9702.223	0.0258	0.863	0.4052	0.727
K-Rep Bank Ltd	9548.05	0.0205	0.31	0.2905	0.307
Transnational Bank Limited	8801.382	0.0242	0.6	0.4399	0.15
Paramount-Universal Bank	7254.561	0.0152	0.66	0.8167	0.302
Habib Bank Limited	7014.395	0.0408	0.6302	0.2949	0.185
Credit Bank Ltd	6407.485	0.0109	0.489	0.5718	0.475
Oriental Comm. Bank	6219.906	0.0152	0.45	0.8258	0.403
Middle East Bank of Kenya	5869.715	0.0076	0.4089	0.7049	0.158
Jamii Bora Bank	3479.656	0.015	0.62	0.1118	0.463
UBA BANK	2923.811	-0.098	1.128	0.914	0.089
Dubai Bank Limited	2584.333	-0.009	0.241	0.2941	

	2011	ASSETS	ROA	Liquidity	Operating Expense	Capital Adequacy
Kenya Commercial (KCB)		282494	0.05	0.313	0.155057	0.207
Equity Bank Limited		176911	0.068	0.37	0.153215	0.278
Co-op Bank		167772	0.072	0.272	0.275187	0.164
Barclays Bank		167305	0.05	0.425	0.07351	0.217
Standard Chartered Bank Ltd		164182	0.037	0.34	0.165897	0.315
CFC Stanbic Bank		140087	0.064	0.378	0.298606	0.143
Commercial Bank of Africa		83283	0.058	0.45	0.344572	0.193
Diamond Trust Bank Kenya		77453	0.046	0.357	0.347271	0.19
I & M Bank		76903	0.042	0.383	0.35082	0.292
Citibank, N.A.		74646	0.022	0.63	0.232763	0.159
NIC Bank Ltd		73581	0.036	0.274	0.371823	0.168
National Bank(NBK)		68665	0.046	0.34	0.213207	0.145
Bank of Africa		38734	0.042	0.261	0.54498	0.214

Bank of Baroda (K) Ltd	36701	0.022	0.492	0.417675	0.464
Chase Bank Limited	36513	0.036	0.472	0.454311	0.16
Prime Bank Limited	35185	0.036	0.423	0.497886	0.165
Housing finance	31972	0.046	0.291	0.451076	0.206
Ecobank Kenya Ltd	27210	0.064	0.41	-0.6528	0.17
Family Bank	26002	0.031	0.282	0.172293	0.256
Imperial Bank Limited	25618	0.042	0.336	0.408736	0.126
Bank of India	23352	0.023	0.785	0.488708	0.469
Consolidated Bank of Kenya	15318	0.014	0.276	0.454625	0.176
Fina Bank Limited	14630	0.02	0.48	0.45838	0.237
Equitorial Commercial Bank	12927	0.012	0.323	0.636069	0.271
Gulf African Bank	12915	0.028	0.38	0.174326	0.198
African Banking Corporation	12507	0.043	0.346	0.405984	0.142
Giro Commercial Bank	11846	0.021	0.419	0.507779	0.22
Development Bank of Kenya	11523	0.028	0.36	0.680261	0.375
Fidelity Commercial Bank	10789	0.041	0.306	0.617575	0.354
K-Rep Bank Ltd	9318.7	0.046	0.29	0.160813	0.182
Guardian Bank	8753.9	0.028	0.301	0.5116	0.436
First community Bank	8740.3	0.029	0.48	0.105581	0.143
Habib AG Zurich	8721.8	0.016	0.734	0.311177	0.336
Victoria Comm. Bank Ltd	7645.2	0.038	0.36	0.363771	0.127
Transnational Bank Limited	7286.9	0.019	0.67	0.239499	0.54
Habib Bank Limited	5860.5	0.014	0.779	0.234811	0.3
Credit Bank Ltd	5394.1	0.012	0.413	0.407573	0.152
Oriental Comm. Bank	5030.1	0.005	0.44	0.576946	1.105
Paramount-Universal Bank	4727.2	0.024	0.58	0.605152	0.142
Middle East Bank of Kenya	4639.2	0.013	0.323	0.503591	0.7
UBA BANK	3206.4	0.02	1.918	0.660235	0.365
Dubai Bank Limited	2316	0.006	0.339	0.203625	
Jamii Bora Bank	2070	0.01	1.46	0.049791	

	2010	ASSETS	ROA	Liquidity	Operating Expense	Capital Adequacy
Kenya Commercial (KCB)		223025	0.052	0.307	0.137253	0.232
Barclays Bank		172691	0.062	0.541	0.085061	0.312
Co-op Bank		153984	0.036	0.394	0.223264	0.165
Standard Chartered Bank Ltd		142880	0.054	0.55	0.154692	0.143
Equity Bank Limited		133890	0.07	0.4	0.141927	0.279
CFC Stanbic Bank		107139	0.02	0.368	0.316486	0.162
Commercial Bank of Africa		63592	0.042	0.447	0.256107	0.145

I & M Bank	62552	0.048	0.435	0.393888	0.199
Citibank, N.A.	62070	0.046	0.69	0.179273	0.36
National Bank(NBK)	60027	0.045	0.41	0.195931	0.369
Diamond Trust Bank Kenya	58606	0.049	0.358	0.364108	0.184
NIC Bank Ltd	54776	0.044	0.304	0.312607	0.155
Prime Bank Limited	32444	0.024	0.488	0.544618	0.138
Bank of Baroda (K) Ltd	32332	0.019	0.651	0.430769	0.236
Ecobank Kenya Ltd	26892	0.057	0.58	0.383683	0.193
Bank of Africa	26699	0.007	0.42	0.500801	0.152
Chase Bank Limited	21859	0.018	0.424	0.438044	0.145
Family Bank	20188	0.025	0.45	0.119047	0.239
Bank of India	19671	0.025	0.806	0.4766	0.432
Imperial Bank Limited	19399	0.05	0.288	0.30495	0.212
Fina Bank Limited	14112	0.064	0.48	0.477438	0.171
Development Bank of Kenya	10650	0.011	0.4	0.522468	0.272
Consolidated Bank of Kenya	10479	0.022	0.33	0.300397	0.132
Equitorial Commercial Bank	10399	0.025	0.337	0.569326	0.145
African Banking Corporation	10297	-0.003	0.41	0.342563	0.201
Giro Commercial Bank	10224	0.047	0.438	0.524245	0.249
Gulf African Bank	9594.1	0.062	0.289	0.144164	0.162
Fidelity Commercial Bank	8208.5	0.005	0.372	0.680543	0.175
Habib AG Zurich	8127.1	0.046	0.788	0.308434	0.403
Guardian Bank	8031.2	0.031	0.391	0.629681	0.193
K-Rep Bank Ltd	7670	0.014	0.3	0.169846	0.216
First community Bank	6380.1	0.014	0.4	0.147958	0.144
Victoria Comm. Bank Ltd	6215.4	-0.025	0.3	0.365867	0.235
Habib Bank Limited	5425.5	0.05	0.865	0.217707	0.417
Transnational Bank Limited	4761.9	0.043	0.77	0.218384	0.706
Oriental Comm. Bank	4558.3	0.033	0.42	0.554031	0.36
Credit Bank Ltd	4530.1	0.04	0.556	0.378966	0.376
Paramount-Universal Bank	4419.8	0.007	0.6	0.619326	0.474
Middle East Bank of Kenya	4018.4	0.064	0.424	0.517152	0.525
UBA BANK	2363.1	0.051	1.348	0.428128	0.814
Dubai Bank Limited	1874.3	-0.059	0.495	0.16393	0.357
Jamii Bora Bank	1723.2	0.002	0.278	0.0631	0.357

Source: <https://www.cbk.co.ke>

APPENDIX II: LIST OF COMMERCIAL BANKS IN KENYA AS AT DECEMBER 2014

1. ABC Bank Kenya
2. Bank of Africa
3. Bank of Baroda
4. Bank of India
5. Barclays Bank Kenya
6. CfC Stanbic Holdings
7. Chase Bank Kenya
8. Citibank
9. Commercial Bank of Africa
10. Consolidated Bank of Kenya
11. Cooperative Bank of Kenya
12. Credit Bank
13. Development Bank of Kenya
14. Diamond Trust Bank
15. Dubai Bank Kenya
16. Ecobank Kenya
17. Equatorial Commercial Bank
18. Equity Bank
19. Family Bank
20. Fidelity Commercial Bank Limited
21. First Community Bank
22. Giro Commercial Bank
23. Guaranty Trust Bank Kenya
24. Guardian Bank
25. Gulf African Bank
26. Habib Bank
27. Habib Bank AG Zurich
28. Housing Finance Company of Kenya
29. I&M Bank
30. Imperial Bank Kenya
31. Jamii Bora Bank
32. Kenya Commercial Bank
33. K-Rep Bank
34. Middle East Bank Kenya
35. National Bank of Kenya
36. NIC Bank
37. Oriental Commercial Bank
38. Paramount Universal Bank
39. Prime Bank Kenya
40. Standard Chartered Kenya
41. Trans National Bank Kenya
42. United Bank for Africa
43. Victoria Commercial Bank

Source: <https://www.cbk.co.ke>