

**THE RELATIONSHIP BETWEEN CORE CAPITAL AND
FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN
KENYA**

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D63/77209/2015

**A RESEARCH PROJECT SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF
MASTER OF SCIENCE IN FINANCE DEGREE, UNIVERSITY OF
NAIROBI**

OCTOBER, 2016

DECLARATION

I declare that this research proposal is my original work and has never been submitted elsewhere for award of a degree or diploma at the University of Nairobi or any other educational institution.

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

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ACKNOWLEDGEMENTS

I extend a heartfelt appreciation to a number of people who, through their support both directly and indirectly the research project was a success. I thank the almighty God for giving me life and ability to complete the project on time.

Special thanks to my supervisor Dr. Iraya for the support and guidance offered throughout the study.

I also acknowledge my employer (Bank of Africa) and immediate supervisors for understanding and giving the time and support to complete my studies.

Last but not least, special appreciation goes to Jenny & Alan Smith and Chris & Tony Kershaw for their financial support throughout the study among many others.

To all of you, I say THANK YOU.

DEDICATION

To my daughter Delyne Verossa Sazsa for the many evenings and Saturdays she spent alone while daddy's was held up in class.

To my wife, Hellen Moraa for the love, encouragement and support to keep soldiering on till the end.

To my parents Rose and Stephen Oyier who believed in me from the onset and for laying the best foundation over the years.

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ABBREVIATIONS AND ACRONYMS

BCBS	Basel Committee on Bank Supervision
CBK	Central Bank of Kenya
NI	Net Income
NSE	Nairobi Securities Exchange
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
ROS	Return on Sales
STT	Static Trade-off Theory

ABSTRACT

This research was undertaken to determine the relationship between core capital and financial performance of commercial banks in Kenya. So far, the studies available have arrived at different findings. This study will be aimed at contributing to determining what proportion of core capital influences performance of commercial banks in Kenya. The researcher ran an explanatory study on 33 out of the 43 banks in Kenya between January 2011 and December 2015. Data was analysed by SPSS software version 21 and was presented using graphs and frequency tables. Secondary data obtained from the CBK's Bank Supervision Annual Reports was analysed through multiple linear regressions. Return on assets was used to measure financial performance while shareholders equity and retained earnings, current ratio, log of sales and assets less obligations were used to measure core capital, liquidity, bank size and solvency margin respectively. The results demonstrated that there exists a strong positive linear relationship between return on assets and core capital, a weak positive relationship between liquidity, solvency margin and return on assets and a weak negative relationship between size and return on assets. It also showed that 42.8% of the financial performance is determined by the four independent variables implying that the selected independent variables are important determinants of bank's financial performance as they explain almost half of its changes. Consistent with previous estimations that inadequate capital in the banks was a cause of less financial performance in the commercial banks this study determined that banks have a responsibility to ensure their capital base is adequate enough to be able to offer loans and other vital financial services to their customers. The study recommended that the banks should ensure their capital base is adequate enough to be in a position to earn higher revenues and make higher profits. Analysis of variance (ANOVA) was used to confirm the findings of regression. The critical F value at 2.74 was less than the computed value at 26.196. This confirms that overall the multiple regression model was statistically significant, in that it was a suitable prediction model for explaining how the selected independent variables affects the financial performance of commercial banks.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The financial sector in Kenya plays a key role in a country's development process by serving as an intermediary in the financial process. The strength of financial institutions is very critical in stimulating economic development and growth, foreign and domestic investment poverty reduction and employment creation (Kyalo,2002). Banking in Kenya and the financial services in general has been identified as a success pillar to attaining Vision 2030 of making Kenya a middle income country by providing a facilitating macro-economic stability for long term development (GOK, 2007).Since banks are such critical entities in an economy the stability and success as going concerns is given a lot of attention by various stakeholders including the national government through its regulator, the Central Bank of Kenya (CBK).

A commercial bank is defined as a financial institution that offers services ranging from extension of loans and auto loans to businesses, taking deposits, lending of mortgages, and other investment products such as certificates of deposit and savings accounts. The history of Commercial banks in Kenya dates back to 1896 when the predecessor of the current Kenya Commercial Bank, the National Bank of India opened the first branch in Mombasa. The bank would extend its operations to Nairobi eight years later in 1904. The Kenyan banking sector has undergone tremendous developments since the sector was placed under the supervisory armpit of the Central Bank of Kenya in 1966.

Licensed commercial banks continue to grow in number standing at 43 as at December 31st2015 (CBK, 2015). During this period, a numerous banks entered the market while

other also exited. A greater percentage of those that exited the market, mostly in the mid-1980s and mid-1990s, did so due to financial problems, and their exit has been attributed largely to undercapitalization, high non-performing loans, mismanagement, illiquidity and low profitability (CBK, 2005). Currently, the number of commercial banks listed with NSE stands at 11. The Central Bank of Kenya plays a statutory mandate of regulating the operational conduct of commercial banks in the country. However, it does not play the role of licensing commercial banks. Licensing is the responsibility of the Directorate of Fiscal and Monetary Affairs upon approval by the Cabinet Secretary for National Treasury.

1.1.1 Core capital

Core capital adequacy refers to the amount of capital holding of a financial institution in line with the financial institution's regulators' requirements (Obiero, 2002). It is normally expressed as the prerequisite equity's core capital ratio expressed as a percentage of risk-weighted assets. The main aim of the regulator putting this requirement is to limit the amount of leverage that institutions take in order to avoid institutions becoming insolvent. The Basel Committee on Banking Supervision, from which the Basel III rules coin out the global foundation for commercial banks' regulation, defines core capital as that part of the shareholders' equity that a commercial bank has to support given the trading, lending and other risks that it may incur (BCBS, 1999). It essentially consists of retained profits and equity capital. Core capital is also known as Tier 1 capital and it comprises of the amount of money paid up to initially purchase the shares (or stocks) of the commercial bank, the retained profits (subtracting any accumulated losses), and other Tier 1 capital securities that are quantifiable. It is that part of equity that would be difficult to distribute to the

shareholders and serves as permanent capital in the bank. Core capital provides a cushion for a bank against business shocks such as loan defaults, foreign exchange losses and interest rate shocks. The capital also provides a signal that the bank is well prepared to undertake more business (CBK, 2005).

In a number of jurisdictions, a bank with higher core capital is in a position to lend more loans and collect more deposits from the public because the law pegs lending to any one borrower, a group of borrowers and connected lending to the amount of core capital (Gudmundson, Ngoka&Odongo, 2013). Likewise, the amount of deposits to be collected from the public by the bank is also pegged to the amount of core capital that the bank holds. In most jurisdictions, this requirement has been enacted in local banking laws such that banks that do not meet minimum thresholds are subjected to punitive penalties and withdrawal of the banking license if the violation persists to the detriment of the general public. Core capital may be seen from an absolute amount perspective (e.g. Kshs. 250m) or from a ratio perspective (e.g. 8%). This research project will focus on the absolute amount perspective as a measure of core capital in a commercial bank.

1.1.2 Financial Performance

Financial performance measures the efficiency with which a company utilizes its assets to generate revenues in its primary mode of doing business. The term performance refers to how well an institution/firm utilizes its resources to meet the preset objectives thus generating revenues within a given period of time and can be used for comparison purposes across industries. The major indicators such as revenue generation, cash flow, operating income among others can be used.

The common financial indicators of financial performance applied by most commercial banks include: return on investment (ROI), earnings per share, return in sales, return on equity (ROE), as well as sales growth. The popular ratios that are used to measure the performance of a business organization are summarized as growth and profitability and they include: increase in market shares, return on investment (ROI), return on asset (ROA), revenue growth, return on equity (ROE), return on sales (ROS), stock price, liquidity, sales growth and operational efficiency. Return on average assets (ROA) and Return on equity are usually used as key financial measures in determining the level of financial performance of commercial banks (Maria et al., 2002).

1.1.3 Core Capital and Financial Performance

Capital decisions are crucial in any economy more so for developing economies such as Kenya. The making of these decisions is very crucial and becomes difficult when the economic environment in which companies operate in experience a high degree of instability. The financial structure of any organization is a key managerial decision. This is because it is a reflection of the organization's plan to deal with competitors, while at the same time maximizing the returns to the organization. Despite the many research studies carried out concerning the appropriate level of capital over the years, there exists no known consensus as to how the appropriate level of capital influences the performance of firms (Barton & Gordon, 1987).

Adequate core capital helps lessen the chance that banks will become insolvent if sudden shocks occur. Core capital helps determine the financial capacity of a bank in meeting its

liabilities and other risks such as operational risk, credit risk among other risks. It helps cushion the bank against potential losses and hence protects the interests of the bank's depositors and other lenders. An undercapitalized bank will find itself subjected to high excess costs during periods of tight money. A bank with low capital is faced with many risks which could adversely affect its earnings leading to low financial performance.

Core capital and financial performance are expected to be linearly related. Gudmundson, Ngoka and Odera (2013) also observed that the capital structure of a bank has an important effect on its performance. Obiero (2002) observed that between 1984 and 2001 there were 39 financial institutions which failed, of which 14 failed partly due to non-performing loans and undercapitalization. The core capital enables a bank to lend more because lending to any one person, a group of related persons and even to insiders of the bank is usually linked to the amount held as capital (CBK, 2005). If a bank is able to lend more, the more interest income the bank can earn and thus the higher level of profits.

1.1.4 Commercial Banks in Kenya

Commercial banks in the country are established under the Banking Act (Cap, 488), the Central Bank of Kenya Act (Cap, 491), Companies Act (Cap, 486), and other prudential guidelines by the CBK. As at 31 December, 2015, the Kenyan banking sector had an aggregate of 43 licensed commercial banks with only one mortgage finance company and nine microfinance banks. Foreign banks had a total of seven representative offices while foreign exchange bureaus were 102 with three providers of money remittance services whereas credit reference bureaus were 2. Out of all the banks only 11 of them were listed at the NSE.

As at the end of year 2015 the Banking Act required that all licensed banking institutions should maintain an absolute core capital of Kshs. 1 billion and a minimum of 8% in terms of the percentage the core capital to total risk-weighted assets. A number of banks met these minimum thresholds while a few did not meet them. Indeed, a number of tier 1 banks had core capitals far higher than the minimum required by the law. However, despite the efforts such as the introduction of capital adequacy measures and creation of Deposit Protection Fund, more banks have been put under receivership or even collapsed due to their financial performance (Obiero, 2002).

The banking sector in Kenya has experienced significant growth both in asset accumulation and financial performance. This significant growth has been attributed to the industry expansion strategy that targets to widen the branch networks both locally and abroad. Further, increased use of technology that has incorporated mobile phones platform and the emphasis on complex customer needs as opposed to the traditional products has significantly contributed to this growth. The CBK annual supervision report of 2015 emphasizes that banking institutions need for dynamism and adoption of robust ICT systems that will cope with the changing requirements. Consumers will continue to demand personalized services hence banking institutions will continue to design new products in order to remain competitive. The anticipated licensing of deposit taking microfinance institutions is also expected to down-stream the retail market segment. (CBK, 2015).

1.2 Research Problem

Core capital is the basis upon which banks extend loans to their customers and thus earn interest income which increases or decrease banks' profits. The level of core capital influences the amount of profits made. The higher the core capital the higher the lending

ability and thus the higher the interest earned and, by extension, the profits generated. The expected relationship is that the profitability of a bank is linearly related to its core capital. Adequate core capital helps lessen the chance that banks will become insolvent if sudden shocks occur. A bank which is undercapitalized will find itself subjected to high excess costs during periods of tight money. A bank with low capital is faced with many risks which could adversely affect its earnings leading to low financial performance.

Theoretically, a large amount of capital has the effect of lowering the risk attributable to equity holders with a resultant effect of lowering the expected return to equity investors. In addition, a higher capital will reduce the earnings after tax by reducing the tax shield benefit of interest payments. Despite these arguments, the results on the studies conducted by various scholars are varied. Kiambi (2011) in a study conducted on the two variables found that the two are positively related but weakly. Ndungu (2003) found that sound asset and liability management had a significant influence on profitability. A study done by Mwege (2009) did not establish any clear relationship between core capital and performance. The CBK Bank Supervision Annual Report (2009) emphasized that core capital is key to financial soundness of commercial banks and the banking sector.

Xuezhui and Dickson (2012) conducted a study on the Tanzanian banking sector and established that there exists a negative impact by core capital on the profitability of a bank as a result of the opportunity cost of foregone investments. Gardner and Mills (2000) concluded that although adequate core capital is a good thing from the perspective of safety, if additional capital is not put to good use, with excess equity the return on equity will drop. Further, excess capital can tempt banks to over invest sometimes in unprofitable ventures. Responses to excess capital include increased dividends and stock repurchases to

reduce capital, taking more loans or higher revenue producing assets, increasing off balance sheet activities and acquiring other institutions or expanding.

While the aforementioned research outcomes provide valuable insights on core capital requirements, no clear relationship linking these two variables has been provided hence this study seeks to establish the nature if any of the relationship of the two. The study hypothesises is that commercial banks' capital negatively (positively) affects return on assets. A review various financial performance measures including the ROA ratios. ROA is an important indicator that measures the financial performance of banks.

Flamini et al., (2009) investigated the determinants of bank profitability in sub-Saharan Africa and found that in a capital market characterized by imperfections, a higher capital ratio has the effect of lowering the equilibrium deposit rate requirement by depositors as well as the equilibrium expected return on assets required by shareholders. Deposits have short term characteristics but also have quick adjustments that in effect increase bank's expected earnings quickly. This goes to show that the correlation between equity and returns is of a positive nature. The longer the time period taken by the loan to reprice, the more negative the relationship between past equity and current returns.

Kyalo (2002) in establishing the relationship between level of capitalization and efficiency among banks listed in the NSE found that highly capitalized banks are the least efficient and vice versa, which was the opposite of similar research conducted in the developed economies by Hughes et al., (1998) that indicated highly capitalized banks are the most efficient with the reverse being true.

It is not clear within the Kenyan context, whether core capital is related to financial performance in Kenyan banks as various external studies have established conflicting conclusions on the same. Banks are important intermediaries of the economy and bank capital determines how sustainable banks will be as going concerns. It is therefore important to investigate the relationship between core capital and financial performance of commercial banks in Kenya so that the state holders in the sector understand the relevance and importance of capital in the banking sector especially on financial performance. The research question of this study is; what is the relationship between core capital and financial performance of commercial banks in Kenya?

1.3 Objective of the Study

The objective of this study is to establish the relationship between core capital and financial performance of commercial banks in Kenya.

1.4 Value of the Study

Potential investors in the Kenyan commercial banks, shareholders of the firms, academicians and financial researchers and the management will be the main beneficiaries of this study. Current and potential investors in these banks will understand better the impact of capital level on firm performance and make informed decisions before venturing into any investment.

Core capital decision is a wide area of study where a lot of research has been done. Yet, there is no empirical evidence that it has been exhaustively covered and that all options that relate to it have been researched and reviewed. Thus, additional information based on concrete evidence will be a welcome additive to the existing scope of knowledge. The study

will also form a basis for further research.

The more the knowledge about a phenomena one has the better equipped they are to face the challenges in the future. Relationship between core capital and financial performance among commercial banks will be a welcome weapon to facing the challenges of better management, capital appreciation, and shareholder wealth maximization.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In this chapter, previous studies related to the topic are reviewed. The chapter covers a review of theories on capital structure, review of empirical studies that have been done on core capital and financial performance, a detailed discussion on core capital and financial performance and finally a conclusion from the literature review.

2.2 Theoretical Framework

This section of the study shows a review of literature and theoretical models associated with the study with a primary focus on capital structure. The various theories associated with capital structure try to explain the overall effect on the cost of capital and firm value of the various forms and proportions of funds that make up the capital structure. These forms of literature act as a guide to corporate finance managers in the choice of the optimal proportion of debt and equity for their firm.

2.2.1 Capital Structure Theory

The starting point for understanding business finance in a modern sense is provided by capital structure theorem according to Modigliani and Miller (1958). The theory assumes that firms have a particular set of expected future cash flows. Choosing a certain capital structure mix to finance business operations or a firm's assets implies that cashflows will be divided among the investors. It assumes the existence of equal access for both firms and investors to financial markets and thus it is possible to have homemade leverage. The investor is assumed to be in a position to create any leverage that is necessary even if it is not offered.

The classic arbitrage-based irrelevance propositions show that arbitrage by individual investors will make the effect of leverage irrelevant to the determination of the value of a firm. The second proposition of this MM theorem of capital structure irrelevance proposition states that the dividend payout a company adopts does not affect its market price neither does it affect the return to shareholders given a firm's investment policy (Miller and Modigliani, 1963). Put differently, in perfectly competitive markets the choice of capital structure by a firm and the dividend policy adopted are irrelevant. The 1958 paper triggered various researches aimed at disputing the theory to be just a matter of theory. The most commonly used elements include investor clientele effects, agency conflicts, transaction costs, bankruptcy costs, among others.

Even though the MM theory is silent on the practicalities of how firms should finance their operations, it highlights the importance of financing decisions in any organization. This theory forms the foundation of much theory of corporate finance. As a result of the theory, more theoretical developments were made in this field (Molyneux & Thornton, 1992).

2.2.2 Static Trade-Off Theory

The trade-off theory by Modigliani and Miller (1958) who argue that the trade-off between the tax deductibility of interest expense and the costs of financial distress determine the optimal debt ratios for firms. on a trade-off between the tax. The findings of Graham et al.,(2001) are that most companies do have a target level of debt, but only a few of them have a strict target level of debt. The trade-off theory proposes that firms should continuously balance their target level of debt in line with stock price movements in order to maintain their target debt range. Transaction costs and the costs of issuance of debt affect

a few financial officers in their choice of debt capital for their firms. Despite the propositions of this theory, in practice much of its propositions are not widely used. The theory maintains that the benefits of debt financing must be fully evaluated against the costs of debt financing if a firm is to achieve the optimal capital structure. According to Myers et al., (1999), static trade-off theory easily becomes an empirical hypotheses in that firms should strive towards having an optimal debt ratio instead of having an actual debt ratio.

2.2.3 Pecking Order Theory

According to this theory by Stewart, Myers and Nicholas (1984), companies select their sources of finance in order of priority. This order is made according to the principle of least effort whereby equity is the last resort and internal finance is given first priority. According to the theory, firms utilise internal funds, then debt with equity finance being the last (Modigliani and Miller, 1958). Contrary to this, the theory in its pure form does not give a well-defined targetdebt-to-value ratio. The theory holds that firms which can finance projects without the need to raise external finances through the issuance of debt and equity are more lucrative. The major reason why managers are reluctant to issue new equity is the asymmetric information between managers and stockholders. This means that managers are more informed about the true value of a firm as compared to less informed outside investors (Westerfield, 2008).

2.2.4 Market Timing Theory

This originated from the work of Kwast and Rose (1982). The theory postulates that managers prefer to issue debt securities to equity or vice versa according to the time varied costs of both equity and debt. As a result of these, issuance decisions in the past will affect the long run capital structure since long term capital structure is the outcome of prior issuance decisions.

Since the return to the bondholders is fixed, stockholders are entitled to the remaining earnings after deducting the interest payments to the bondholders. The price of stocks is more responsive to information about a firm's future performance. If such information is at the disposal of the firm's management, which may be favorable or unfavorable, stock prices will increase or decrease significantly as compared to bond prices. Also if this information has not been reflected in the market prices, the price of stocks will appear to be undervalued or overvalued in comparison to bond prices (Molyneux & Thornton, 1992).

2.2.5 Agency cost theory

The proponents of this theory are Jensen and Meckling (1976). This theory of capital structure proposes that for a firm to optimize the capital structure, the resultant costs of conflicts between parties should be minimized. According to the proponents, agency costs are vital considerations in financial decisions because of the existence of the conflict by shareholders and debt holders. Debt and its associated cost which is the accompanying interest payment can be used to reduce agency conflict in the event of failure by the management to meet interest payments when they fall due. Because of this threat that may lead to job losses by the management, managers will be forced to operate the firm as

efficiently as possible thereby aligning their behavior closer to shareholder wealth maximization.

2.3 Determinants of a Firm's Financial Performance

Performance measures the efficiency of the company's utilisation of the available resources to generate revenues in its primary mode of doing business. The term performance refers to how well an institution/firm utilizes its resources to meet the preset objectives thus generating revenues within a given period of time and can be used for comparison purposes across industries. There are several factors that are considered as influencers of how a firm performs. These factors include; size of the firm, liquidity and solvency margin.

2.3.1 Size of the Company

Financial performance has been positively linked to the size of company. Arguments were floated by Hardwick (1997) that the positive correlation between size and performance of companies can be attributed to efficiencies in operating costs that improve performance by increasing output and subsequently reducing the cost per unit of output. Investors will be able to diversify their risks in large corporates and respond to the changing market circumstances. Bain (1968) argues that the large firms possess monopoly power which enables them to set prices of their goods above the economic costs of production thereby profiting additionally. These sentiments were also argued by Scherer (1980). Adam (1996) in his study, believes that the ability of large firms to diversify their investment portfolios could enable them to significantly reduce their business risk exposure.

2.3.2 Liquidity

Studies done by Shiu (2004) show that company with more investments in liquid assets show a better performance since they are able to meet their cash needs more easily thereby reducing their overall exposure to liquidity risks. Lack of sufficient cash to meet short term financial needs may force a company to sell off investment securities at below market price just to settle their claims. As a result, their financial performance may be hindered. According to Adam and Buckle (2003), liquidity is a measure of management's ability in fulfilling immediate commitments to the various policy holders without an increase in the profit from investments and without being forced to sell off financial assets. Having sufficient liquidity is hence a measure of improving company financial performance.

2.3.3 Solvency Margin

Solvency margin of a firm similarly is a determinant of financial performance as enables a firm to reduce its exposure to the risks of conducting business. The capital is measured by offsetting obligations from the assets of a company (Adams and Buckle, 2003). A higher solvency margin shows the financial soundness of a company since it will be able to cater for unexpected losses without compromising overall performance. Companies performance may improve as Shiu (2004) observed that better risks are attracted to the more stable investors through a higher solvency margin. The lower the solvency risks of a firm, the better the financial performance expectations.

2.4 Review of Empirical Studies

A number of studies have been conducted, both locally and internationally, to establish not only this relationship, but the impact of capital on financial performance as well. On the

local scene, Kenya, a number of studies and authorities indicate that core capital and financial performance are positively correlated.

Kyalo (2002), in establishing the relationship between level of capitalization and efficiency among banks listed in the NSE found that highly capitalized banks are the least efficient and vice versa, which was the opposite of similar research conducted in the developed economies by Hughes et al., (1998) that indicated highly capitalized banks are the most efficient with the reverse being true. Ndungu (2003), in his study of quoted banks' profitability, found that sound asset and liability management had a significant influence on profitability.

Kiambi (2011), in a study conducted on the two variables, found that the two are positively related but weakly. A study done by Mwega (2009), did not establish any clear relationship between the two variables in the banking sector. According to Matu (2001), poor performance puts pressures on commercial banks to increase interest rates on loans to enable them reduce the losses associated with these loans. The CBK Bank Supervision Annual Report (2009) emphasized the role core capital and that it is key to financial soundness of commercial banks and the banking sector.

Wandeto (2005), study on the relationship between dividend changes and earnings, cash flows and capital structure for firms listed on the NSE found that leverage has a direct relationship with dividends. The nature of the relationship was inverse with the more the dividends paid the lesser the amount of debt to equity and vice versa. The scope of the study included listed banks. Munene (2006), objective of study was to ascertain whether there exist a relationship between profitability of a firm and sources of financing of these

firms quoted at the NSE. The results of his study revealed a weak positive relationship between the two variables with a conclusion that profitability on its own is a minor determinant of capital structure.

On the international front, Xuezhui and Dickson (2012) conducted a research on Tanzania's banking sector in 2012 and found that core capital's impact on profitability of a bank was of a negative nature. The study tried to establish the impact of liquidity, capital and assets on bank profitability. Whereas the study established that liquidity and assets positively affected profitability, it also found out that capital negatively affected profitability. Hutchinson and Cox (2006) investigated the relationship between bank capital and earnings among USA banks. The study scope was categorized into two periods, less regulated period and a more highly regulated period with the intention of determining the correlation between capital and profitability in these two periods. The results of the study showed that for both periods financial leverage and earnings had a positive relationship.

The concept of capital structure as used in Kenya not only refers to the appropriate mix of capital in terms of debt and equity but goes on to include the type of securities that are used to make up the equity and debt influenced by the outside context. In other words, the concept of capital structure aims at explaining the choices made between debt and equity finance and at the same time keeping in check both the ownership structure and debt structure. For this reason Fluck (1998) and Heinrich (2000) argued that capital structure also includes other aspects concerning how the debt and equity are structured and not only the mix of debt and equity. Njoroge (2001) examined the relationship between dividend payout and financial ratios. The results obtained were that the most significant variable in making dividend decisions is return on assets.

According to the Signaling Hypothesis (Acharya,1988) argues that given that the ‘insider information’ that managers has relating to the company’s future performance, if the managers hold stocks or options in their compensation packages the costs of signaling an expected improved performance will be less cheaper for a risky bank as compared to a safe bank by increasing today’s capital outlay. Stiroh (2000) also supports this argument by stating that when banks overcome entry barriers to the industry by raising their capital levels, they improve their performance by having gained access to profitable activities which include financial intermediation in the derivative markets.

2.5 Conceptual Framework

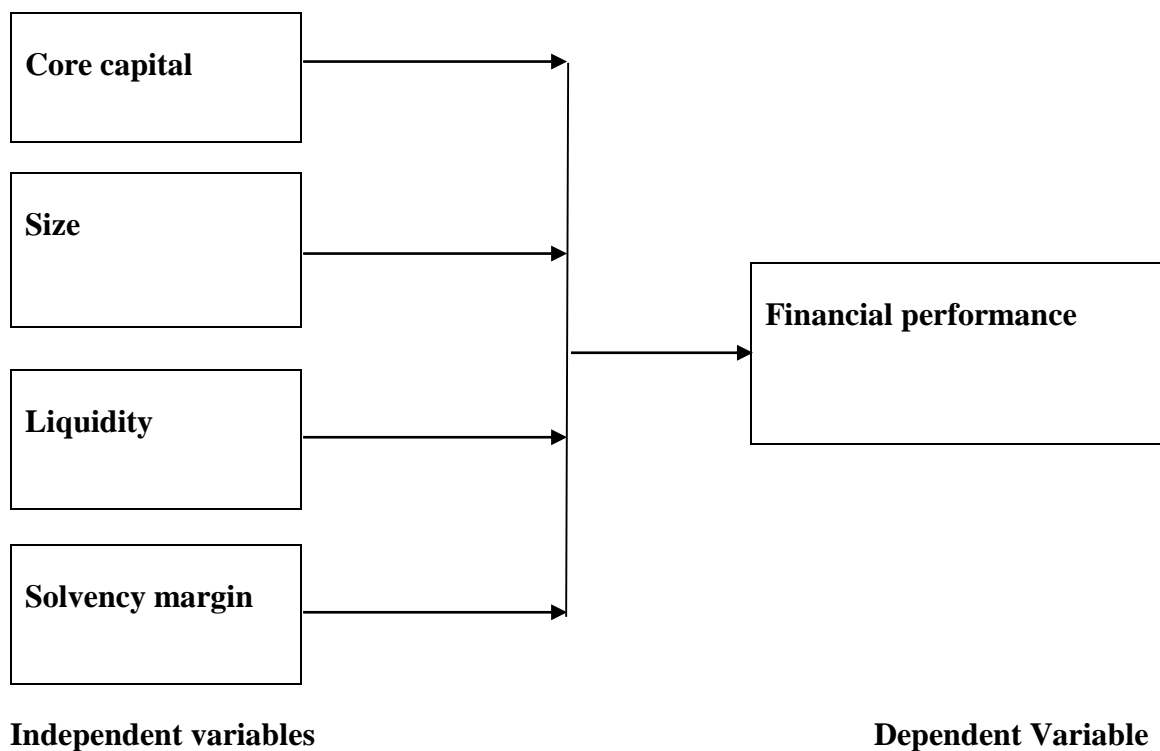


Figure 1 The relationship between core capital and financial performance

Core capital, size, liquidity and solvency margin will be the independent variables. Core capital will be measured by the permanent shareholder equity and retained earnings,

Liquidity given as cash, central bank reserves and government debt, firm size given by natural logarithm of bank loans and solvency margin as given by excess of assets over obligations. Financial performance will be the dependent variable that the study will seek to explain and it will be measured by return on assets (ROA).

2.6 Summary of the Literature Review

Titman & Wessels (1988) enumerated key attributes in determining capital structure. They include asset structure, growth, uniqueness, industry classification, size earnings and volatility. Profit is generally measured in shilling terms. Financial performance ratios show a company's overall efficiency and performance. Performance of Commercial bank is determined by both internal and external factors. In the banking industry a high leverage is proportional to higher returns but at a greater risk. It can be seen that there exists no concrete evidence on the effects of core capital on performance. The study seeks to address this gap by investigating the relationship between core capital and financial performance of commercial banks in Kenya.

Data compiled by the Central Bank of Kenya (CBK) will be utilised by the research project in seeking to determine this relationship. The CBK is presumed to have been conferred power and authority to access more and detailed data on the banks operation. It is the CBK that monitors financial operation in the state by regulating fiscal indiscipline thus ensures proper performance of economy following controlled possible inflation forces which may accrue.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter explains the overall methodology that was used in the study for gathering and analysing data in order to achieve the research objective. This includes the research design, target population of the study, data collection methods, research procedures and data analysis and presentation.

3.2 Research Design

This is the overall plan of conducting the study and it helps to answer the research questions and achieve the objective of the study. The research design, in this context therefore, entailed the collection of CBK Bank Supervision Annual Reports that covered the financial year 2011 to 2015. These reports contain massive data on commercial banks' financial positions and performances and it is from these reports that the relevant data (core capital and financial performance) was picked from for analysis.

This study used descriptive cross-sectional survey criteria. This research is of empirical nature because of the nature of data to be collected. The choice of this research design seeks to establish the relationship between the variables as well as determining the relationship between core capital and financial performance. Its advantage is that it is used to portray a situation or a group of people fully.

3.3 Population

According to Mugenda and Mugenda (2003) a population is a collection of individuals, cases or objects with observable characteristic which are common. Each population has a set of characteristics that make it different from others. A target population on the other

hand is that population that the researcher seeks to draw inferences by studying a sample from it. In this study, the target population will be 33 commercial banks out of the 43 commercial Banks in Kenya as at December 31st 2015. This target population will provide data that will enable the researcher answer the research questions raised on how core capital is related to commercial banks' financial performance.

3.4 Data collection

Cooper, (2008) defines data collection as factual information used as a basis for reasoning, discussion or calculation. The study used secondary data; the data covered the year 2011 to 2015 and was extracted from the CBK Bank Supervision Annual Reports. These CBK annual publications report commercial banks' summarized data on capital, profitability, liquidity, earnings, among other vital statistics, on the banks' financial performance and condition.

3.5 Data Analysis Procedure

This was done using the Statistical package for social sciences (SPSS) software version 21. Quantitatively, the researcher presented the information by use of tables and graphs. Various financial ratios were used to analyze the data since financial ratios summarize large quantities of data and can be used to perform a comparison of performance over time. Correlation Coefficient (r) was determined and used as a measure the strength and direction of the relationship between the dependent variable (Financial performance) and each of the Independent variables. Coefficient of determination (R square) was used to measure the proportion of variance in the dependent variable that can be explained by independent variables. F-test was used to test for the significance of the relationship between financial performance and each of the independent variables. The following regression model was

used:

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

Where: Y = Financial performance measured By Return on Assets, ROA

α = y intercept of the regression equation and measures the value of ROE when all other factors are zero

$\beta_1, \beta_2, \beta_3, \beta_4$, =are the slope of the regression

X_1 = Core capital of banks as measured by natural logarithm of permanent shareholder equity and retained earnings

X_2 =Liquidity, as given by Current Assets divided by Current Liabilities

X_3 =Size, as given by; Natural logarithm of sales

X_4 = Solvency margin, as given by, excess of assets over obligations

ε =error term

3.5.1 Tests of Significance

Correlation Coefficient (r) was determined and used to measure the strength and direction of the relationship between the dependent variable (Financial performance) and each of the Independent variables. Coefficient of determination (R square) was used to measure the proportion of variation in the dependent variable that was explained by independent variables.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter focused on the analysis of the collected data from the central bank of Kenya to establish the effect of core capital on the financial performance of commercial banks in Kenya. The results were analysed using descriptive statistics, tabulated and graphically presented as shown in the following sections.

4.2 Data Validity

The study looked for data that would be able to meet the objectives of the study. The data collected from CBK hand books was cross checked for errors to test the validity of the data sources. The research assumed a 95 percent confidence interval or 5 percent significance level (both leading to identical conclusions) for the data used. These values helped to verify the truth or the falsity of the data. Thus, the closer to 100 percent the confidence interval (and thus, the closer to 0 percent the significance level), the higher the accuracy of the data used and analysed is assumed to be.

4.3 Descriptive Statistics

The descriptive results of this study, measures of central tendency, the trends analysis including log of shareholders equity, liquidity ratio, log of sales, solvency ratio and return on asset is presented on this section. From the analysis of descriptive statistics the finding clearly reveals that return on assets has a mean of 0.0676 with a maximum of 0.39 and minimum of 0.00 and standard deviation of 0.06116, log of shareholders equity (core capital) has a weighed mean of 0.093 maximum of 0.46 and minimum of 0.00, log of

sales(Size) has a weighed mean of 7.2125 maximum of 11.25 and minimum of 3.95 and standard deviation of 1.21173 and liquidity ratio has a weighed mean 1.6797 maximum of 10.09 and minimum of 0.34 and standard deviation of 1.4592.

Table 1 Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	165	.00	.39	.0676	.06116
CORE CAPITAL	165	.00	.46	.0093	.03694
SIZE	165	3.95	11.25	7.2125	1.21173
LIQUIDITY	165	.34	10.09	1.6797	1.45925
SOLVENCY	165	.00	4.28	.6055	.37950
Valid N (listwise)	165				

4.4 Correlation Analysis

Correlation analysis is used to establish if there exists a relationship between two variables which lies between (-) strong negative correlation and (+) perfect positive correlation. Four variables were generated using SPSS log of shareholders and retained earnings, liquidity ratio, log of sales and solvency margin.

Table 2 Correlation Analysis

		ROA	CORE CAPITAL	SIZE	LIQUIDITY	SOLVENCY
ROA	Pearson Correlation	1	.475**	-.396**	.329**	-.339**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	165	165	165	165	165
CORE CAPITAL	Pearson Correlation	.475**	1	-.126	.012	-.059
	Sig. (2-tailed)	.000		.109	.880	.458
	N	165	165	165	165	165
SIZE	Pearson Correlation	-.396**	-.126	1	-.245**	.175*
	Sig. (2-tailed)	.000	.109		.001	.025
	N	165	165	165	165	165
LIQUIDIT Y	Pearson Correlation	.329**	.012	-.245**	1	-.344**
	Sig. (2-tailed)	.000	.880	.001		.000
	N	165	165	165	165	165
SOLVENC Y	Pearson Correlation	.339**	.059	.175*	.344**	1
	Sig. (2-tailed)	.000	.458	.025	.000	
	N	165	165	165	165	165

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

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

From the analysis of the correlation analysis, it was found that there exist a strong positive correlation between return on assets and core capital ($p= 0.475$, $p>0.05$). This implies that the shareholder's equity and retained earnings combined have significant influence on the commercial banks financial performance. The relationship between return on assets and size of commercial banks measured by log of sales was found to be strongly negative

($p = -.396$, $p > 0.05$). This implies that movement in sales has negative implications on the commercial banks financial performance. The study also showed that there exist a strong correlation between return on assets and liquidity ratio ($p = 0.329$, $p > 0.05$). This shows that liquidity position has significant influence on the financial performance of commercial banks. This study also found that there exist a strong positive correlation between return on assets and solvency margin ($p = .339$, $p > 0.05$).

4.5 Regression Analysis and Hypothesis Testing

Table 3 Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.654 ^a	.428	.412	.04699

a. Predictors: (Constant), SOLVENCY, CORE CAPITAL, SIZE, LIQUIDITY

Table 3 above indicates that there is an R^2 value of 42.8%. This value indicates that the four independent variables explain 42.8% of the variance in the commercial banks financial performance. It's very clear that these independent variables minimally influence to a large extent the banks financial performance.

Table 4 ANOVA analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.231	4	.058	26.196	.000 ^a
	Residual	.309	160	.002		
	Total	.540	164			

a. Predictors: (Constant), SOLVENCY, CORE CAPITAL, SIZE, LIQUIDITY

b. Dependent Variable: ROA

Given 5% level of significance, the numerator df =1 and denominator df =5, critical value 2.74, table 4 shows computed F value as 26.196. This confirms that overall the multiple regression model is statistically significant, in that it is a suitable prediction model for explaining how the selected independent variables affects the financial performance of commercial banks.

Table 5 Regression analysis

Model	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.157	.027		5.818	.000
CORE CAPITAL	.671	.102	.425	6.574	.000
SIZE	-.012	.003	-.248	-3.648	.000
LIQUIDITY	.007	.003	.180	2.576	.011
SOLVENCY	.031	.011	.201	2.939	.004

a. Dependent Variable: ROA

Using a significance level of 5%, any independent variable having a significant value greater than 5% is considered not statistically significant. This study found that core capital

which is shareholders equity and retained earnings, liquidity ratio, solvency margin and size of commercial banks as measured by log of sales are statistically significant. The finding also shows that core capital explains 67.1% of the total commercial banks financial performance. The general regression model is as follows $Y = 0.157 + 0.671X_1 - 0.012X_2 + 0.007X_3 + 0.31X_4$

4.6 Discussion of Research Findings

Data was collected from a total of 33 banks and multiple linear regression analysis conducted. The sample regression model used was $Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$ which was generated to determine the relationship between core capital and financial performance of commercial banks in Kenya. This showed a mathematical expression of the relationship between the dependent and independent variables whereby the return on assets was considered to be responding to changes in core capital, liquidity, size and solvency margin. These meant that when the values were plotted on a chart, a pattern could be seen and make predictions about the financial performance of commercial banks in Kenya. A mathematical relationship however does not mean that there is an actual relationship between the two variables. The ROA was the dependent variable while core capital, liquidity, size of banks and solvency margin was the explanatory variable. The constant α explained those changes occurring in the dependent variable that are not caused by changes occurring in the explanatory variable. The coefficient of change β was the change in the dependent variable in respect to a unit change in the explanatory variable.

The research study established that there existed a strong positive linear relationship between core capital and return on assets of commercial banks in Kenya. The other variables selected for the study, that is, size of banks, liquidity and solvency margin,

exhibited a strong negative correlation, a strong positive correlation and a strong positive correlation with return on assets respectively. The coefficient of correlation, R-Squared, was used to further show the strength of this relationship between the dependent and independent variables. This degree of association showed moderate linearity between the two variables, at 42.8%. This implies that the independent variables are significant predictors of financial performance of commercial banks in Kenya.

The research findings showed that the deriving model is statistically significant. This is primarily showed by the statistical parameter, the F stat. The model is fit at 95% level of confidence since the F-value is 26.196. The F-stat is a ratio that evaluates the explained portion of the dependent variable in relation to the unexplained portion. The higher the F value, the more significant the deriving model is. The significance F showed this as well. At 5% significance level, the significance F (0.0001) was less than the significance level (0.05) implying that the model was statistically significant.

CHAPTER FIVE: SUMMARY, FINDINGS AND RECOMMENDATIONS

5.1 Introduction

The chapter summarizes the findings of chapter four and also gives the conclusions and recommendations of the study based on the objective of the study. The study limitations and suggestions for further research have also been presented.

5.2 Summary of Findings

The objective of this study was to establish the effect of core capital on the financial performance of commercial banks in Kenya. From the analysis of descriptive statistics the finding clearly reveals that return on assets has a mean of 0.0676 with a maximum of 0.39 and minimum of 0.00 and standard deviation of 0.06116, log of shareholders equity (core capital) has a weighed mean of 0.093 maximum of 0.46 and minimum of 0.00, log of sales(Size) has a weighed mean of 7.2125 maximum of 11.25 and minimum of 3.95 and standard deviation of 1.21173 and liquidity ratio has a weighed mean 1.6797 maximum of 10.09 and minimum of 0.34 and standard deviation of 1.4592.

From correlation analysis, it was found that there exist a positive correlation between return on assets and shareholders' equity and retained earnings (proxy for core capital). Return on assets was also found to have a strong correlation with current ratio (proxy for liquidity). The study also showed that there exist a negative correlation between return on assets and log of sales (proxy for bank size) and a positive correlation between return on assets and solvency margin which is excess of assets over obligations.

5.3 Conclusion

This study concludes that the independent variables selected for this study influence to a large extent the financial performance of commercial banks. It is therefore sufficient to conclude that these variables significantly influence financial performance movement given they explain almost half of changes in return on assets. This confirms that overall the multiple regression model is statistically significant, in that it is a suitable prediction model for explaining how the selected independent variables affects the financial performance of commercial banks. This study also found that shareholders equity and retained earnings (proxy for core capital), liquidity ratio, size as measured by log of sales and solvency margin are statistically significant.

5.4 Recommendations

Core capital, liquidity, bank size and solvency margin were used in the research study to determine their relationship with financial performance of commercial banks in Kenya. With 42.8 percent explanatory power on financial performance, the findings of this study have an implication on all stakeholders in the banking industry in Kenya. The findings of the research study found out that there was a positive linear correlation between the independent variables and financial performance and thus policy makers should come with a way of boosting the independent variables to keep bank's performance at a high level.

The shareholders of commercial banks need to ensure that their banks are well-capitalized since it has been shown that capital influences financial performance. The shareholders also need to ensure that management efficiently uses capital since capital influences the level of performance. The Government and the Central Bank also need to take keen interest on the capital base of commercial banks. With the instability in the overall global economy,

profitable commercial banks are more stable and are in a better position to withstand market shocks than banks with low profitability.

Banks are at the very core of the Kenyan economy. They borrow funds from sectors with surplus and channel these funds to the sectors with need, thus supporting investment and economic growth. A bank's level of core capital is therefore a key factor that can influence the financial performance of banks. This capital may enable the banks to collect more deposits and lend more to the public and thus be in a position to earn higher revenues and make higher profits. Stringent regulations should thus be set by the Treasury to foster a stable and more competitive banking sector. It is therefore this study's strong recommendation that commercial banks in Kenya should be adequately or well-capitalized to guarantee financial stability over time.

5.5 Limitations of the Study

The findings of this research study may not be applicable to all commercial banks but can be a relevant reference point for banks in developing economies because of the similarities in the challenges faced with Kenyan banks.

This study applied secondary data in meeting its mandate. A review of the same case using primary data sources involving the experts in the banking industry might bring out different outcomes. The researcher decided to use secondary data because it is information from combined effort by experts to the public. Time and finance were also other limiting factors. It was time consuming to get the financial statements of banks and the time allocated for the research project was limited.

5.6 Suggestions for Further Research

The study concentrated on the last five years since it was the most recent data available. Future studies may use one bank and a range of many years e.g. from 1970 to date and this can be helpful to confirm or disapprove the findings of this study. Future studies could use other variables not used in this study to explain commercial banks financial performance. Other causes of change in financial performance may be explained by this approach. A similar research study may be done on all financial institutions as well; including those that are not banks e.g. SACCOs, DTMFIs, and FOREX bureaus so as to establish whether this relationship holds true on all financial institutions. Further studies may be carried out on the research study on the commercial banks that are quoted on the Nairobi Securities Exchange or on any of the NSE segments, such as the NSE 20-Share index to confirm or disapprove the research findings.

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