THE IMPACT OF CAPITAL ADEQUACY ON THE FINANCIAL PERFORMANCE OF COMMERCIAL BANKS QUOTED AT THE NAIROBI STOCK EXCHANGE.

BY

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DECLARATION

This is my original work and has not been presented in any other university or college for examination purpose.

JUSTUS NZIOKI SUKA

Signature……………………
      Date………………………………

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

Signature……………….
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MR NG'ANG'A JAMES M

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DEDICATION

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ABSTRACT

This research project analyses the impact of capital adequacy on the financial performance of commercial banks quoted at the Nairobi Stock Exchange. Capital provides buffer against losses and thus it ensures safety and soundness of the financial institutions. It is necessary to ensure that the banks have sufficient capital. Capital regulations are therefore put in place to ensure that the banks meet the minimum capital requirements expected of them.

Many authors have postulated that capital adequacy has a great impact on the performance of financial institutions. This study provides evidence that supports the central bank's move to gradually raise the banks capital levels by 2012 and to tightly monitor their operations while at the same time remaining profitable. It therefore shows what impact capital adequacy has on the profitability of the banks.

The study relied on secondary data and thus annual reports of the commercial banks were used to provide the much needed information in the study. Ratios and percentages were used to analyze the data collected and regression analysis was used to give insight into the relationship between the variables involved.

The main finding in the study is that capital adequacy contributes positively to the profitability of commercial banks and therefore it is paramount for banks to have a sound capital base in order to remain competitive and maintain the confidence of its customers.

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LIST OF ABBREVIATIONS

BIS-Bank of International Settlement

CAMELS-Capital adequacy, Asset ratio, Management soundness, Earnings and

profitability, Liquidity and Sensitivity to market risk

CBK-Central Bank of Kenya

CIR-Cost income ratio

CMA-Capital Markets Authority

GDP-Gross Domestic Product

NSE- Nairobi stock Exchange

USA-United States of America

CHAPTER ONE

INTRODUCTION

1.1 Background.

A bank provides an intermediation function for funds received from customers. Failure of a bank would result into widespread impact affecting retail and institutional customers that could trigger multiplier impacts on the domestic and international Market. The importance of the banking role demands proper regulation in order to maintain customer confidence. An essential part of the regulatory framework involves bank capital which functions as a buffer against losses. Capital represents a source of funds to the bank a long with deposits and borrowing. An undercapitalized bank will find itself subjected to high excess costs during periods of tight money.

Banks are presently encountered with various types of financial and non financial risk in every kind of activity they undertake however if the risks are handled properly, they result into an opportunity for the banks. Business grows mainly by taking risks since the greater the risk, the higher the profits and hence the bank must strike a trade-off between the two. Risk is the potentiality that both the expected and unexpected events may have an adverse impact on a bank's capital and earnings. While the expected losses are generally taken care by a suitable pricing methodology, the unexpected losses, both on account of individual exposures and the whole portfolio in entirely are borne by the bank itself and hence taken care by the requisite capital. This therefore calls for adequate

capital adequacy requirements. A minimum amount of capital is required to ensure safety and soundness of the bank and also build trust and confidence of the customers.

Capital requirement is a bank regulation which sets a framework on how banks and depository institutions must handle their capital. The categorization of assets and capital is highly standardized so that it can be risk weighted. In an effort to promote efficiency in the banking industry, Bank of International Settlement issued a capital framework concept commonly known as the 1988 accord (Basel 1) then later Basel II designed as a framework for measurement of credit risk and establishment of minimum capital standard.

Capital adequacy determines the capacity of a bank in terms of meeting the time liabilities and other risks such as credit risk, operational risk, etc.It helps cushion the bank against potential losses and hence protects the interests of the bank's depositors and other lenders. Capital adequacy is determined by the use of Capital Adequacy Ratio (CAR) which is the amount of bank's core capital expressed as a percentage of its risk weighted assets. The core capital comprises of tier one capital which can absorb losses without the bank being required to cease trading and tier two capital which can absorb losses in the event of winding-up and so provides a lesser degree of protection to depositors. On the other hand, bank's assets have different risk profiles and therefore have different risk weighting. CAR adjusts for assets that are less risky by allowing banks to "discount" lower-risk assets.

Adequate capital requirements help lessen the chance that banks will become insolvent if sudden shocks occur. In line with the Finance Act 2008, the minimum statutory core

capital for banking institutions in Kenya as at 31st December, 2009 was Kenya shillings 350 million which will be adjusted to Kenya shillings 1 billion by 2012. Under section 7(1) of the Banking Act 2000, other minimum capital requirements are set as, 8% for gearing ratio, 8% for core capital to total risk weighted assets and 12% total capital to total risk weighted. These capital adequacy requirements are continuously monitored and reviewed from time to time by the CBK. Failure to comply leads to loss of license, liquidation or mergers of the commercial bank.

There are forty three (43) commercial banks in Kenya and out of these, nine of them are listed in the Nairobi Stock Exchange according to CMA annual report 2009 (refer to Appendix).These banks play a significant role in the Kenyan economy by mobilizing savings, taking deposits, lending money in the economy, undertaking money transfers and providing a host of other services derived from their wide range of financial expertise.

Financial performance is a subjective measure of how well a firm uses its assets from its primary mode of business to generate revenue. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Hales, 2005). Profitability was used to measure the financial performance of commercial banks.

Many studies conducted indicate that capital adequacy measures provide significant information regarding a firm's return while a few individual variables representing asset quality and earnings are informative. Size of the banks, capital adequacy ratio, asset quality and asset base are the components of capital adequacy that were used in the study to ascertain their impact on the financial performance of the banks quoted at the NSE.

1.2 Statement of the problem.

Capital (Equity and long term debt) represents a source of funds to the bank alongside deposits and borrowings. More importantly capital matters for the perceived riskiness of bank deposits. A bank with insufficient capital is more likely to turn insolvent in the face of adverse development on the asset side of its balance sheet than a sufficiently capitalized one. In view of this, capital adequacy ratio cannot be overemphasized.

Past studies argue that a capital adequacy requirement is effective in the sense that it improves the soundness and safety of the banking sector and consequently its profitability (Gilbert and Wheelock, 2007).In contrast other studies also reveal that there is an inverse relationship between the CIR and the banks profitability. Majnoni (2001) argued that the introduction of high capital requirements induce an aggregate slowdown or contraction of bank credit.

Most models used in the studies dealt with a single bank and concentrated on banks in other countries.A few studies focused on Kenya banking scenarios at a time when

efficiency was low among them. Mwega (2005) found that capital requirements help lessen the chances that banks will become insolvent if sudden shocks occur.

Today the Kenyan banking sector has registered a significant growth, statistics show that banks capital and reserves have increased and this is due to capital injection and retention of profits. In line with the Finance Act 2008, statutory core capital is expected to be Kshs.1 billion by 2012. Kenyan Banks have embraced new technology to add value to their products and also increase efficiency in their operations. This research sought to address the theoretical relationship between capital adequacy and financial performance evident in commercial banks quoted at the Nairobi Stock Exchange. Capital is an important managerial decision variable and the capital position of the wealth maximizing bank theoretically will affect its capital structure and the loan policy. This has implications on the performance of banks as financial intermediaries and hence for the allocation of real resources within the economy.

1.3 Research Objectives.

The objective of this study was to investigate the relationship between the capital adequacy and the financial performance of commercial banks quoted at the Nairobi Stock Exchange. Specifically the study focused on the following objectives.

i) To assess the effect of capital adequacy ratio on the financial performance of commercial banks.

ii) To assess the implication of asset base on the financial performance of commercial banks.

iii) To determine the effect of bank's size on the financial performance of commercial banks.

iv) To determine the effect of asset quality on the financial performance of commercial banks.

1.4 Importance of the study.

Commercial banks play an important role to the economy of a country as they serve as an intermediation between the households and the economy sector (finance), therefore the best financial system is that which the mediator performs efficiently. The study will have the following importance in the banking sector

i) It will help in formulation of policies and strategies that will help in running the operations of commercial banks.

ii) It will also form a basis for further research on how other regulation indicators such as exchange rates, taxation impacts on the performance of commercial banks.

iii) It will also assist investors in choosing their investment portfolio.

iv) Finally it will be important to the researcher in understanding capital adequacy in the context of commercial banks performance.

1.5 Definition of key terms.

Capital Adequacy Ratio.

This measures the amount of a bank's core capital expressed as a percentage of its assets weighted credit exposures. CAR determines the capacity of the banks in terms of meeting the time liabilities and other risks such as credit risk, operating risk, e.t.c

$$CAR = \frac{\text{Tier 1 capital} + \text{Tier II capital}}{\text{Risk weighed Assets.}}$$

Reserve Ratio

This is a portion of depositors' balances that banks must have on hand as cash. It is the amount that the bank must hold (rather than lend out) out of the customers deposits

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This research focused on the effects of capital adequacy on the financial performance of commercial banks quoted at the Nairobi Stock Exchange. This chapter consists of a review of finance theories related to the study, literature as derived from research work by other researchers, some general literature to aid in further understanding the purpose and a summary.

2.2 Review of theories

Toft (1989) defined a bank as a system for providing a special kind of service connected directly or indirectly with finance. A commercial bank therefore is a bank of commerce or trade which is profit oriented and its main function is to accept deposits, lend money and transfer funds among banks, individuals and businesses (Deaton et al, 1994).

The commercial banks which currently number forty three(43) in Kenya (CBK Newsletter,2010) play a major significant role in the Kenyan economy by mobilizing savings, taking deposits, lending money in the economy, undertaking money transfers and providing a host of other services derived from their wide range of financial expertise.

Capital is essential and critical to the perpetual continuity of a bank as a going concern. Capital requirement is a bank regulation which sets a framework on how banks and depository institutions must handle their capital. Capital provides cushion that enables banks to continue to operate even if they suffer temporary losses.

Several theories have been put forward to explain variations in the performance of various financial institutions. These theories are: Agency theory, prospect theory, dividend relevance theories and capital structure theories.

2.2.1Agency theory

Agency theory defines the firm as a "nexus of contracts" between different resource suppliers. Two parties are central to agency theory; principals who supply capital and agents who manage the day today affairs of the firm. Since the interests of the agents are not necessarily those of the principal, the organization encounters agency costs. These costs consist the expenses of monitoring the behavior of agents, including budget restrictions, compensation practices (including stock options, bonuses and other incentives), and the loss of profits due to operating rules and restrictions on management. They also include bonding costs of the agents, and the costs of sub-optimal decisions, defined as decisions that are made in the best interest of agents rather than principals.

Agency theory argues that in the modern corporation, in which share ownership is widely held, managerial actions depart from those required to maximize shareholders returns (Berle and means 1932; Pratt and Zeckhauser 1985). Agency theory specifies

mechanisms which reduce agency loss, for instance incentive schemes for managers which reward them financially for maximizing shareholders interests.

2.2.2 Prospect theory

According to the prospect theory, an individual can rationally exhibit differing degrees of risk aversion over time depending on his position relative to target outcome. Decision makers will be risk seeking if they perceive themselves to be operating below target. Conversely, if they are operating above target they will be risk averse. For example, should banks management find itself operating below target, a profitable sale of appreciated securities can quickly add to the bottom line a practice commonly referred to as "gains trading". Earnings will improve only for the accounting period of the sale.

Profits can be augmented on a more lasting basis by increasing the loan portfolio through the provision of credit to higher risk borrowers, resulting in higher interest income per dollar invested. Generating the funds to finance these loans is also possible through liability management e.g. increasing the rate paid on certificates of deposit to attract new money. If management is operating above target then this does not need to occur. The further below target bank operates the greater the variability of rates of return.

2.2.3 Dividend Relevance theories.

The dividend relevance theories state that the choice of appropriate dividend policy affects the value of the firm e.g. Walter J E (1963) on his theory on dividend policy

argued that the relationship between the returns on investments, r and the cost of equity, ks, determine the optimal dividend or pay out policy. He argue that if r>ks the firm should retain all the earnings for re-investment whereas if r<ks the firm should distribute all the earnings as dividends for the shareholders are able to earn more if the earnings were paid out to them as dividends.

Ross (1977) on his incentive signaling theory on dividend policy argued that an increase in dividends was often accompanied by an increase in price of stocks, while a dividend cut generally led to a decrease in the stock prices. Ross suggested that managers can use capital structure as well as dividends to give signals concerning the firms' future prospects. Ross theory rest on the premise that signals with cash-based variables (either debt interest or dividend) can not be mimicked by unsuccessful firms because such firms do not have the future cash generating power to maintain the announced dividend or interest payment.

Tax differential theory by litizenberger R.H &Ramiswamy, K. (1979) argues that, differential tax on dividends and capital gains may result in yield tilt, i.e. dividend paying stocks will need to provide a higher expected before tax return than will non-divided paying stock of the same risk class. This is necessary to offset the effect on dividends. Accordingly, the higher the dividend yield on a stock, the greater it's before tax returns.

2.2.4 Capital structure theories

How and why firms choose between the various sources of capital has been a source of much debate in both developing and developed countries. The fundamental question asked is whether the debt-equity mix in a firm really matters.

The cost of capital declines and the value of the firm increases with leverage (gearing) up to a prudent debt level and after reaching the optimum point (minimum cost of capital or maximum value of the firm), average causes the cost of capital to increase and the value of the firm to decline (Solomon Ezra, 1959). The capital structure debate is dominated by two theories which are the trade-off theory and the pecking order theory.

The trade off theory rationalizes that firms maximize their value when the additional benefits (marginal benefits) that stem from debt (i.e. interest expense tax deductibility, the disciplinary role of debt, lower informational costs relative to equity) equal the marginal cost of debt (i.e. bankruptcy costs, agency costs between stake holders and bondholders).

The pecking order theory developed by Myers and Majluf (1984) posits that firms would prefer to finance new investments initially with retained earnings, then with debt and finally with equity. The theory predicts that firms would adopt their financing to minimize the associated costs and would prefer internal financing to external financing and to debt equity.

The theories can be presented as shown below on figure 2.0

Figure 2.0 : Theoretical structure

Independent variable   **Dependent variable**

```
┌─────────────────┐
│ Agency theory   │────────────────┐
└─────────────────┘                │
                                   │
                                   │        ┌──────────────────┐
┌─────────────────┐                │        │                  │
│ Prospect theory │────────────────┤───────▶│ Financial        │
└─────────────────┘                │        │ Performance      │
                                   │        │                  │
┌─────────────────┐                │        │                  │
│ Capital structure│───────────────┤        └──────────────────┘
│ theories        │                │
└─────────────────┘                │
                                   │
┌─────────────────┐                │
│ Dividend relevance│──────────────┘
│ Theories        │
└─────────────────┘
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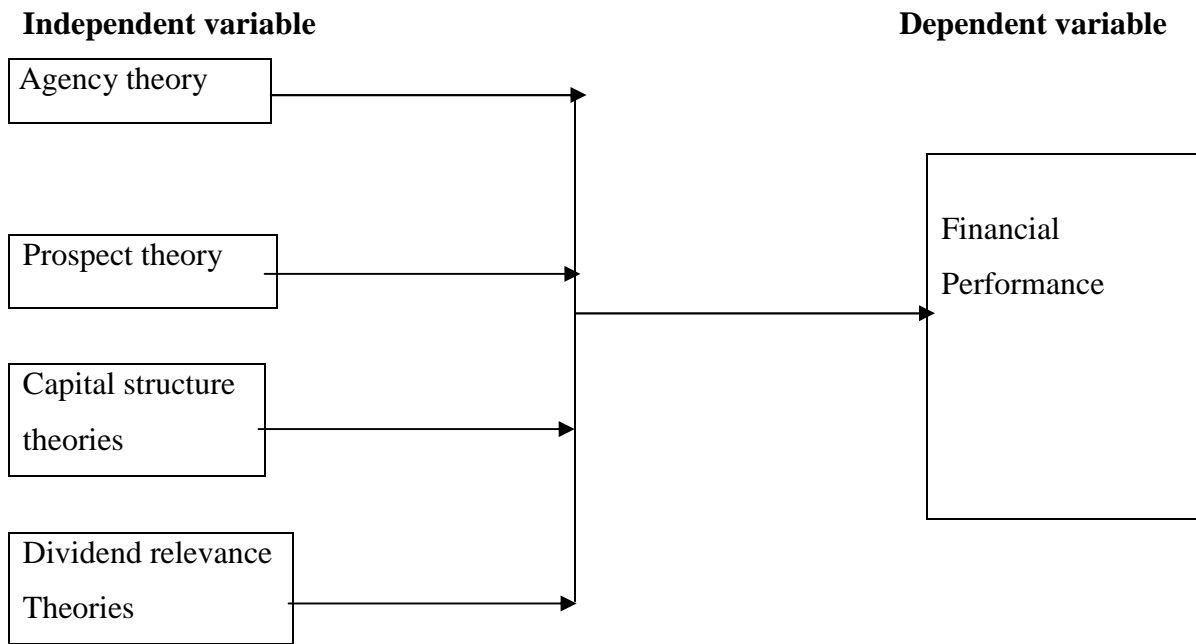
Source: Researcher (2011)

2.3 Empirical Literature Review

The research covered previous studies that had been done in Europe, Asia and USA on capital adequacy, and the financial performance of commercial banks and other financial institutions.

Kosmidon et al., (2005) investigated the impact of banks characteristics, macroeconomic conditions and financial market structure on banks net interest margin and return on average assets in the UK commercial banking industry over the period of 1995-2002. The results showed that capital strength was one of the main determinants of UK banks performance providing support to the argument that well capitalized banks face lower costs of going bankrupt which reduces cost of funding or that they have lower needs for external funding which results in higher profitability.

According to Attanasoglou et al., (2005) a bank with a sound capital position is able to pursue business opportunities more effectively and has more time and flexibility to deal with problems arising from unexpected losses thus achieving increased profitability. Naceur (2006) studied the effects of capital regulation on cost of intermediation and profitability. According to him, capital adequacy ratio contributed positively to banks profitability. White and Morrison (2001) argued that capital requirements ensure that banks have enough of their capital at stake. Bichsel and Blom (2005) supported this proposition arguing that these regulations help in reducing negative externalities (e.g. general loss of confidence in the banking system) in addition to boosting the GDP.

Cotter (1966) noted that where shareholders interests are controlling, capital is an important managerial decision variable and the capital position of the wealth maximizing bank theoretically will affect its capital structure and the loan policy. To the extent that capital does affect lending, it has implications for the performance of banks as financial intermediaries and hence for the allocation of real resources within the economy. Cotter (1966) concluded by pointing out that from this stand point, market determined capital position seemed preferable.

A study by Hassan (2001) examined the performance of Islamic banks during 1994-2001. Variety of internal and external banking characteristics were used to predict profitability and the result indicated that high capital lead to high profitability. A. breu (2002) found

that high capitalized banks face lower expected bankruptcy costs and thus lower funding costs resulting into better profitability.

In contrast, other studies argue that capital adequacy have negative effect on banks performance. Majnoni (2001) argued that the introduction of higher capital requirements induced an aggregate slowdown or contraction of bank credit. Bank credit being the major source of banks income implies that its contraction consequently affects negatively the banks performance.

Javapan and Tripe (2003) asserted that the proposition that there should be a negative relationship between a banks ratio of capital to assets and its return on equity may seem to be self evident as to not need empirical evidence. Kim and Santamero (1988) using a mean variance framework to compare the bank portfolio choice with and without solvency regulation show that capital requirements will introduce changes in the composition of the risky part of the banks portfolio in such a way that risk is increased and the profitability of failure may be higher.

Gordard (2004) investigated the profitability of European banks against the capital – Asset ratio and in his findings he concluded that a positive relationship exists between the profitability of the banks and capital-Asset ratio.

Mwega (2005) found that capital requirements help lessen the chances banks will become insolvent if sudden shocks occur. He noted that the higher the risk weighted capital adequacy ratio, the lower is the probability that commercial banks will be exposed to the

risk of insolvency and therefore a negative relationship exists between the risk weighted adequacy ratio and insolvency of commercial banks.

Haron (2004) measured the impact of some determinants of profitability and in his study he considered variables such as asset structure, inflation, deposit items, liquidity and money supply as some of the factors affecting profitability of the banks and capital-Asset ratio.

Demiurge-Kunt (1999) in their research on bank profitability found that there was a positive relationship between capitalization and profitability. They however found out there was a negative relationship between reserves and profitability.

Margarida and Mendes (2002) carried out a related study and in their findings they observed that those banks that were well capitalized faced lower expectancy costs and thus lower funding costs in addition to higher interest margins on assets. They also found that stiffer minimum capital adequacy ratios are associated with stronger revenue generation. In their conclusion, they pointed out that the health of a bank is cushioned by higher capital to Asset ratio.

Wanjohi and Mugure (2009) in their study on factors affecting the growth of SME's in rural Kenya focused on a number of profitability variables such as capital, interest rate, liquidity, asset base among others. They found out that the financial institutions with high capital base were more profitable than those with lower capital base relatively.

Related studies concerning Interest earning assets (loans) were carried out in order to investigate their relationship with profitability. Various scholars came up with different findings regarding the same. Dermiurge-Kunt (1999) found out that the interest earning assets are the reason for low profit margins earned by banks and thus saw a negative relationship between the loans and banks profitability. Guru and Shamugan (1999) came up with different findings relationship between loans and banks profitability. They found out that loan as a component of assets contributes immensely to the profitability of banks. Margarida and Mendes (2000) also found that loans to asset ratio has a positive relationship with interest margins and profitability and found the relationship to be negative and statistically significant.

Ngugi (2001) conducted a study on interest rate spread in Kenya and found that commercial banks incorporate charges on intermediation services offered under uncertainty, and set the interest rate levels for deposits and loans. As a result he found a negative relationship on the interest rate spread and profitability of commercial banks. Other studies done on interest rate spread showed that potential savers are discouraged due to low returns on deposits and thus limits financing for potential borrowers (Ndung'u and Ngugi, 2000).

Diamond and Rajan (2000) on their study on theory of bank capital found that banks create liquidity because deposits are fragile and prone to runs. This is because uncertainty makes deposits fragile creating a role for outside bank capital. They also found that abrupt transition to higher capital requirements can lead to a bank run because maturing

deposits may exceed what the bank can pledge. Greater bank capital reduces the probability of financial distress but also reduces liquidity creation. Commercial banks essentially intermediate between the opposing liquidity needs of depositors and borrowers.

Nge'tich (2008) in his study on the effects of interest rate spread on the level of non-performing assets found out that interest rate spread affects non-performing assets in commercial banks as it increases the cost of loans charged to borrowers. This further decreases the profit margins of the banks.

Fabozi (1999) pointed out that the main function of a bank is to intermediate other parties in which process in which process they operate with an underlying mismatch between highly liquid liabilities on one side and less liquid and long term assets on the other side of the balance sheet

2.4 Improved standard for Capital Adequacy.

In view of the importance of capital to banks, Bank for International Settlement (BIS) issued a Capital framework concept commonly known as the 1988 accord (Basel I) .This system was designed as a framework for measurement of credit risk and established a minimum capital standard at 8%. Later the accord 1988 was revised to Basel II in 1999 as shown in fig 2.1 below. Basel II is a comprehensive agreement that establishes a spectrum of more risk sensitive capital allocation and incentive for improvement in the

quality of risk management at banks. Further it provides for a supervisory review process to ensure that banks maintain a level of capital commensurate to their risk profile and promote market discipline through disclosure requirement. This was achieved by adjusting capital requirements to credit risk and operational risk and introducing changes in calculation of capital to cover exposures to risks of losses caused by operational failures.

Figure 2.1 Basel II at a glance.

$$\text{Minimum Capital ratio} = 8 = \frac{\text{Capital (Tier1 + Tier II)}}{\text{Risk weighted Assets.}}$$

Market Risk	**Credit Risk**	**Operational Risk**
Risk of loss from on and off balance sheet positions from changes in market factors (interest rates exchange rates)	Risk of loss from default by debtors/counter policies.	Risk of loss directly or indirectly caused by weaknesses or failures in internal processes, human resources and systems and by external events.
No significant changes	Significant changes	Additional Risk

Source: Central Bank of Kenya (2009)

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2.5 Components of Capital Adequacy

Capital adequacy comprises of the following components; Asset quality, Capital adequacy ratio, asset base, and size of the bank. A framework of capital adequacy components is as shown in figure 2.2

2.5.1 Asset Quality.

Banks are required to classify assets according to soundness and to allocate loss reserves based on their evaluation of the quality of their assets. The assets are evaluated to measure the credit risk associated with them. The quality of assets particularly, loan assets and investments, would depend largely on the risk management system of the bank. Guru and Shamugan (1999) found out that the value of loan assets would depend on the realizable value of the collateral while investment assets would depend on the market value.

Bank managers are concerned with the quality of their loans since that provides earnings for the bank. Regulators require banks to reassess the loan or other assets and may require additional loss reserves to be set. Adequacy of internal controls and the loan policy are also evaluated. Ngugi (2001) found out that over concentrations of credits in certain loans or investment types or concentrations in geographic areas can lead to lower evaluations of asset quality. Reserve ratio was used to measure the quality of assets held by financial institutions.

2.5.2 Capital Adequacy Ratio

This measures the amount of a bank's core capital expressed as a percentage of its assets weighted credit exposures. White and Morrison (2001) argued that capital requirements ensure that banks have enough of their capital at stake. Sufficient CAR helps banks to absorb unanticipated shocks and also signal that the financial institution will continue to honor its obligations. Haron (2004) found out that capital adequacy ultimately determines how well financial institutions can cope with shocks to their balance sheets. Capital Adequacy ratio is thus used to determine the capacity of the financial institution in meeting time liabilities as well as other risks such as credit risk, operational risks etc.

2.5.3 Asset base.

Asset base is the underlying assets giving value to a financial institution. Cotter (1966) found that these assets are used by banks as a guarantee that at least a portion of money lent can be recouped through the sale of the backed asset in the case that the loan cannot be repaid. The assets are classified as either current or non non-current assets and play a great role in influencing the financial performance of commercial banks. Both current and non-current assets were used to ascertain their influence on the banks financial performance

2.5.4 Size of the bank

The size of a bank is helpful because larger banks pay less due to the allocation of their fixed cost and also they are in a position to capture a large market share. According to Berryman (2002), lending to small businesses is riskier because of the strong negative correlation between the firm size and the probability of insolvency. Haron (2004) found out that the size of banks and the industrial structure of banking industry depend on factors including the degree of macro economic or cyclical uncertainty as well as the regulatory framework. The regulatory framework exerts pressure on banks to maintain a minimum level of safety or soundness. The indicator of size used in this study was loan growth of the commercial banks.

Figure 2.2 Components of capital adequacy

Independent Variables   **Dependent Variable**
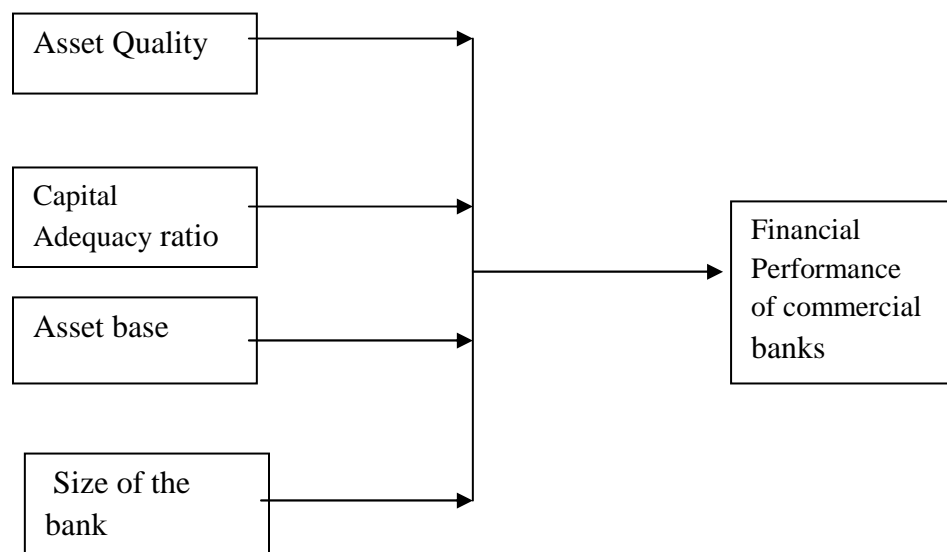
Source: Researcher (2011)

2.6 Assessing financial performance of commercial banks

A wide range of indicators are available for reporting by financial institutions. The most important are the macro prudential indicators broadly defined as indicators of the health and stability of the financial system that help countries to assess their banking systems vulnerability to crisis. These indicators are commonly known as the CAMELS framework. The use of the framework was recommended by the Basel committee on banking supervision and covers risk monitoring factors for evaluating the performance of banks. This framework involves the analysis of six groups of indicators reflecting the health of financial institutions and include; capital adequacy, Asset quality, management soundness, Earnings, Liquidity and sensitivity to market risk.

2.6.1 Capital Adequacy.

Capital base of financial institutions helps them in the absorption of unanticipated shocks. It also signals that the institution will continue to honor its obligations Capital is an important managerial decision variable and the capital position of the wealth maximizing bank theoretically will affect its capital structures and the loan policy. To the extent the capital does affect lending, it has implications for the performance of banks as financial intermediaries and hence for the allocation of real resources within the economy. Bichsel and Blom (2005) found that capital regulations help in reducing negative externalities (e.g. general loss of confidence in the banking system) in addition to boosting the GDP.A

minimum amount of capital is required to ensure safety and soundness of the bank and also build trust and confidence of the customers.

2.6.2 Asset Quality.

Asset quality determines the robustness of financial institutions against loss of value in the assets. According to Guru and Shamugan, 1999 asset quality is gauged in relation to the level and severity of non performing assets, adequacy of provision, recoveries, distribution of assets e.t.c. The assets are evaluated to measure the credit risk associated with them. The quality of assets particularly, loan assets and investments, would depend largely on the risk management system of the bank. The value of loan assets would depend on the realizable value of the collateral while investment assets would depend on the market value (Guru and Shamugan, 1999). Popular indicators are non performing loans to advances, loan default to total advances and recoveries to loan default ratios.

2.6.3 Management soundness.

Management is evaluated according to: technical competence, leadership, and administrative ability; compliance with banking regulations and statutes; ability to plan and respond to changing circumstances; adequacy of and compliance with internal policies; tendencies toward self-dealing; and demonstrated willingness to serve the legitimate needs of the community (Sundarajan and Errico, 2002).Sound management is a key pre-requisite for the strength, profitability and growth of any financial institution.

2.6.4 Earnings and Profitability.

Earnings and Profitability is the prime source of increase in capital base and is examined with regards to interest rate policies and adequacy of provisioning. It helps to support present and future operations of the institutions. More specifically earnings and profitability determine the capacity to absorb losses, finance operations, pay dividends and build adequate level of capital (Demiurge-Kunt, 1999).

2.6.5 Liquidity.

An adequate liquidity refers to a situation where an institution can obtain sufficient funds, either by increasing liabilities or by converting its assets quickly at reasonable cost (Diamond and Rajan, 2000). It's generally assessed in terms of total debt-to-asset ratio as mismatching gives rise to liquidity risk. Liquidity risk is a threat to the solvency of financial institutions. It arises when depositors of commercial banks seek to withdraw their money and the second type does when commitment holders want to exercise the commitments recorded off the balance sheet. Commercial banks have to borrow the additional funds or sell the assets at fire sale price to pay off the deposit liabilities. They become insolvent if sale price of the assets are not enough to meet the liability withdrawals.

The second type of liquidity risk arises when demand for unexpected loans can not be met due to the lack of the funds. Commercial banks can raise the funds by running down

their cash assets, borrowing additional funds in the money markets and selling off other assets at distressed price (Fabozi, 1999)

Both liability side liquidity risk (first type risk) and asset side liquidity risk (second type risk) affect the health of commercial banks adversely. But maintaining the high liquidity position to minimize such risks also adversely affects the profitability of financial institutions. Return on highly liquid assets is almost zero. Therefore, financial institutions should strike the tradeoff between liquidity position and profitability so that they could maintain their health sound (Diamond and Rajan, 2000).

2.6.6 Sensitivity to market risk.

The diversified nature of bank operations make them vulnerable to various kinds of financial risks, sensitivity analysis reflects institutions exposure to interest risk, foreign exchange volatility and equity price risk (Haron, 2004). Risk sensitivity is mostly evaluated in terms of management ability to maintain and control market risk.

2.7 Summary

This chapter has attempted to cover various financial theories that are relevant to this study. The researcher has covered the agency theory, prospects theory, capital structure theories and dividend relevance theories.

The second part of this chapter has covered the empirical literature review. Various scholars have made their contribution as far as this research is concerned. These studies have been conducted in Europe, Asia and USA. Other related studies have been carried in Kenya. Some of the studies show a positive relationship between capital adequacy and performance of commercial banks. We have seen that capital regulations should be upheld in the banking sector in order to ensure sound health of the financial institutions as well as reduce the negative externalities that arise in the absence of the regulations. We have also observed that high levels of capital lead to high profitability of the banks as high capital to asset ratio lowers expectancy costs and lowers the funding costs which lead to high profitability. On the other hand, some studies show a negative relationship between capital adequacy and profitability.

The third part of this chapter has explored general literature on minimum capital requirements that banks should hold to cushion them from market risks, credit risk and operational risks. It also covered financial performance aspects of commercial banks such as capital adequacy, asset quality, Management soundness, Earnings and profitability, Liquidity and sensitivity to market risk.

The chapter has also made an attempt at determining the capital adequacy indicators that were tested to find out their effects on the financial performance of commercial banks in the Kenyan market context. The indicators identified are size of the bank, Asset base, Capital Adequacy ratio and asset quality

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides a description of the procedures and methods that the researcher has used in carrying out the research .The research methodology was guided by the research objectives laid down in chapter one .It covers the study population, population sampling method, data collection methods and instruments and also data analysis and reporting methods.

3.2 Research design

The research design used was descriptive research design. It involves gathering data that describes events and then organizes, tabulates, depicts and describes the data collection (Glass and Hopkins, 1984).

3.3 Study Population

The unit of analysis under study was commercial banks quoted at the NSE. Nine commercial banks are quoted according to the CMA annual report 2009. (Refer to appendix)

3.4 Sample

Simple random technique was used to select the sample to be studied. To obtain the random sample, the researcher used the random number table to select numbers at random. Out of the commercial banks quoted at the NSE those that were selected through the random number table formed the sample that the researcher sought. The sample size can affect the generalization of results by the ratio of observation to independent variable (Hair et al, 1998). He pointed out that the desirable ratio should be 3 to 4 observations for each independent variable. However it is acceptable if the ratio is also as low as 5 to 1.
 The sample size that was used to provide an adequate representation of the population was 5. This was appropriate because the 9 quoted commercial banks have almost similar characteristics.

3.5 Data Collection

Secondary data was utilized as the source of data for the study. The data was acquired from the Kenya capital Market Authority Library, Internet and website of the quoted commercial banks quoted at the NSE .It provided information pertaining to the performance of the commercial banks.

3.6 Data Analysis and Reporting

Secondary data was used to calculate the performance ratios. Statistical package for social science (SPSS), Percentages and ratio were the main methods of analyzing the data.

Pearsons product moment correction method was performed before regression analysis in order to examine the contract validity. Contract validity deals with the use of instruments and measures that accurately measure and operationalise the constructs of interest in a study because most instruments and measures are not necessary as accurate as would be desired.

The aim of regression analysis was to summaries data as well as to quantity relationships among variables expressed via an equation for predicting typical values of one variable given the values of other variables. The research assumed a linear regression equation explaining the relationship between the independent and dependent variables as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \acute{\varepsilon}_1$$

Where;

y is the financial performance

X_1 is the asset base

X_2 is bank size

X_3 is capital adequacy ratio

X_4 is asset quality

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter gives the analysis of the collected data from the Capital markets Authority library on asset quality, capital adequacy, financial performance, bank size and asset base. The researcher conducted analysis of variances to determine the relationship between the variables where the results were then presented inform of tables.

4.2 Financial Performance of Banks under Study

Figure 4.1: CFC Bank
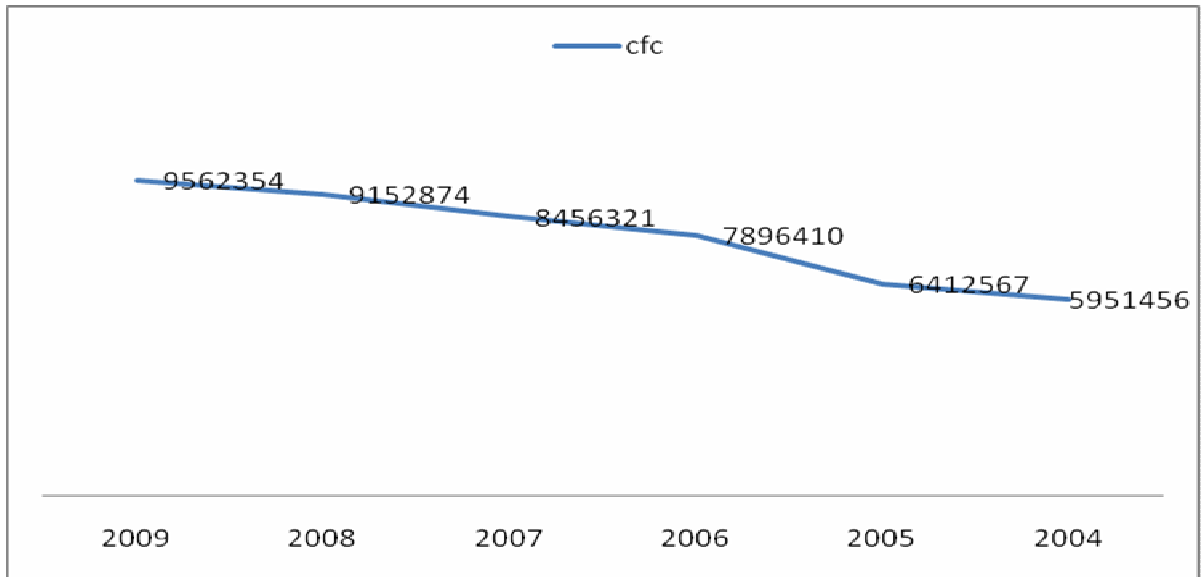
The performance of CFC bank increased steadily from 2004 to 2009 as shown in figure 2. The bank has had good and staedy financial increase in its reported profit before interest and tax from year 2004 to 2009.

Figure 4.2: KCB Bank
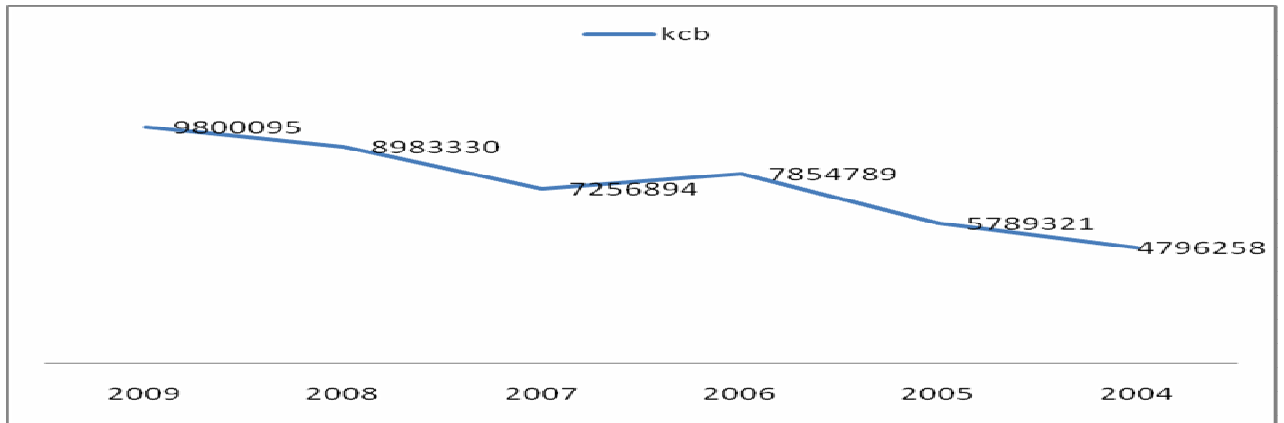
Figure 3 shows that the performance of KCB had been on the increase till year 2007 when it decreased from the previous year's performance which was then followed by a steady increase to 2009 in the reported profit before interest and tax.

Figure 4.3: National Bank
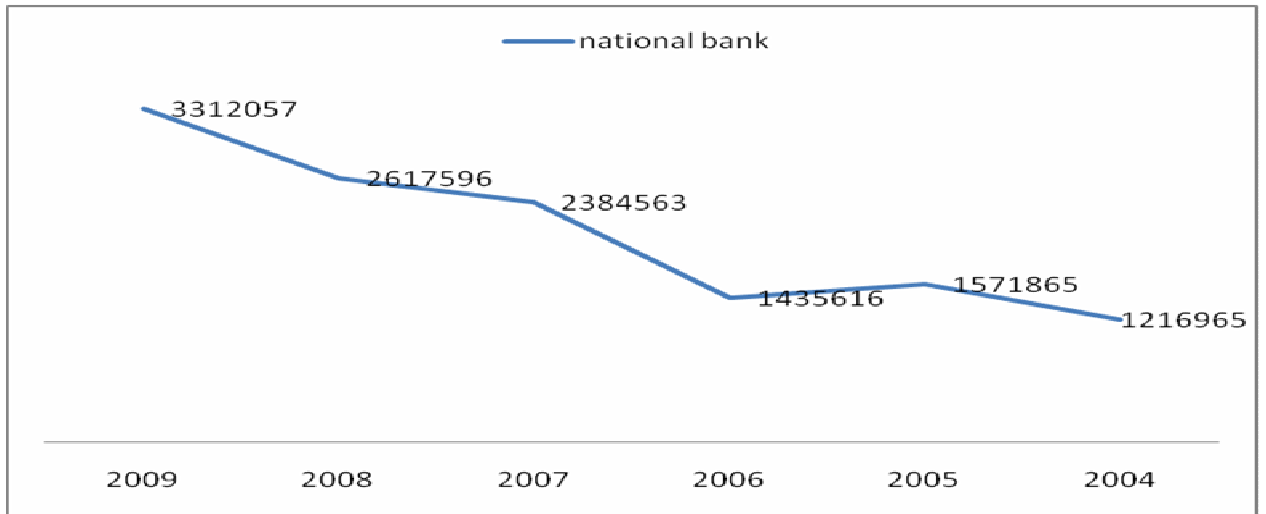
National bank has had an increasing performance since 2004-2005 which then showed which then showed a decrease in 2006 then followed by a steady rise in reported profit before interest and tax.

Figure 4.4: NIC Bank
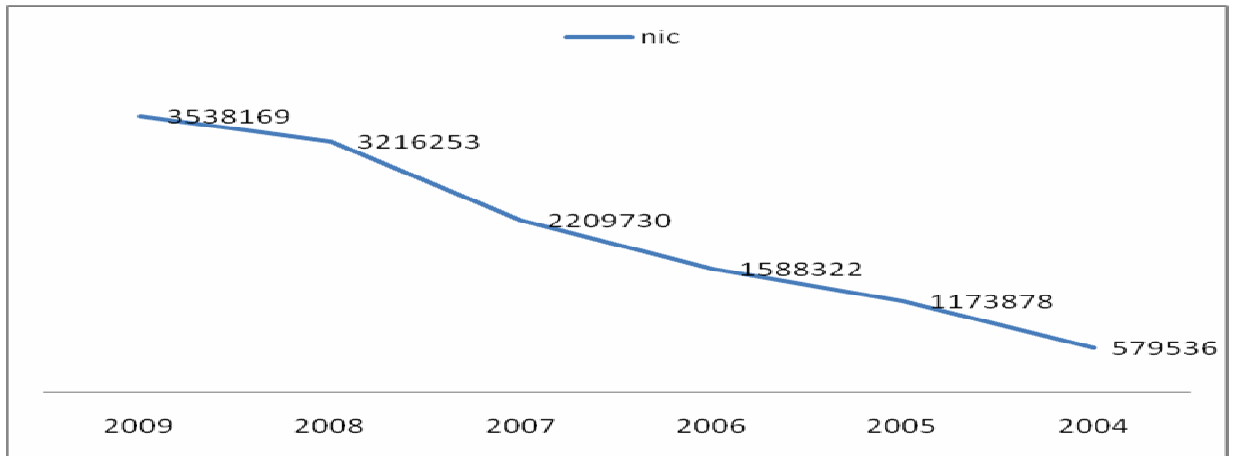
Figure 5 shows that NIC bank has had a steady financial performance since 2004-2009 that has seen the bank increase in its reported profit before interest and tax.

Figure 4.5: Equity
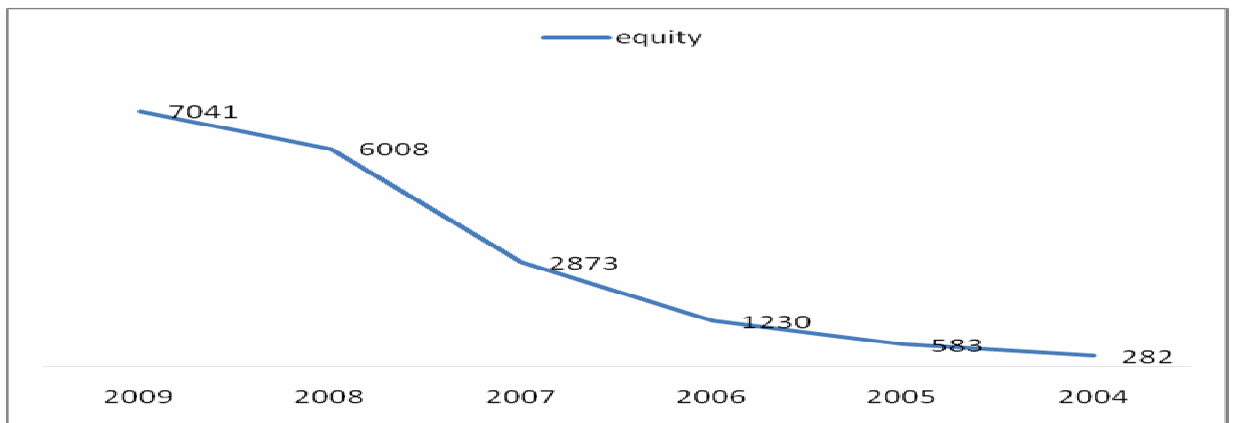
The results in figure 6 shows that equity bank has been growing in its reported profit before interest and tax since 2004 to 2009. The results illustrates that the growth rate between 2007-2009 is much higher that the growth rate between 2004-2006.

4.3 Objective 1:To assess the effect of capital adequacy ratio on the financial performance of commercial banks

Table 1: Effect of capital adequacy ratio on the financial performance of commercial banks

|			df	R Square	F	p
Equity bank	financial performance capital adequacy	Between (Combined) Groups	3	.215	.916	.627
		Within Groups	1			
		Total	4			
NIC bank	financial performance capital adequacy	Between (Combined) Groups	3	.298	1.004	.608
		Within Groups	1			
		Total	4			
National bank	financial performance capital adequacy	Between (Combined) Groups	3	.235	1.034	.602
		Within Groups	1			
		Total	4			
Kenya commercial bank	financial performance capital adequacy	Between (Combined) Groups	3	.254	.857	.641
		Within Groups	1			
		Total	4			
CFC bank	financial performance capital adequacy	Between (Combined) Groups	3	.247	.724	.675
		Within Groups	1			
		Total	4			

The p values are all positive and above 0.05 meaning that capital adequacy affect financial performance positively and the effect is significant (p>.05). The R^2 is a measure of how much the variability in the outcome is accounted for by the predictors so in table 2, capital adequacy influences financial performance by 21.5% in Equity, 29.8% in NIC, 23.5% in National Bank, 25.4% in KCB and 24.7% in CFC bank.

4.4 Objective 2: To assess the implication of asset base on financial performance of commercial banks.

Table 2: The implication of asset base on financial performance of commercial banks.

			df	R Square	F	p
Equity bank	financial performance asset base	Between (Combined) Groups	3	.116	.816	.152
		Within Groups	1			
		Total	4			
NIC bank	financial performance asset base	Between (Combined) Groups	3	.198	0.004	.108
		Within Groups	1			
		Total	4			
National bank	financial performance asset base	Between (Combined) Groups	3	.137	0.037	.090
		Within Groups	1			
		Total	4			
Kenya commercial bank	financial performance asset base	Between (Combined) Groups	3	.105	.057	.076
		Within Groups	1			
		Total	4			
CFC bank	financial performance asset base	Between (Combined) Groups	3	.149	.705	.152
		Within Groups	1			
		Total	4			

The implication of assets base on the financial performance across commercial banks is significant in all banks ($p > .05$). The findings in table 3 shows that asset base influences financial performance positively as indicated by the positive significant values where the influence is by 11.6% in Equity, 19.8% in NIC, 13.7% in National Bank, 10.5% in KCB and 14.9% in CFC bank.

4.5 Objective 3: To determine the effect of bank's size on the financial performance of commercial banks.

Table 3: Effect of bank's size on the financial performance of commercial banks.

			df	R Square	F	p
Equity bank	financial performance banks size	Between Groups (Combined)	3	.312	1.806	.652
		Within Groups	1			
		Total	4			
NIC bank	financial performance banks size	Between Groups (Combined)	3	.321	0.704	.707
		Within Groups	1			
		Total	4			
National bank	financial performance banks size	Between Groups (Combined)	3	.367	0.137	.090
		Within Groups	1			
		Total	4			
Kenya commercial bank	financial performance banks size	Between Groups (Combined)	3	.302	1.053	.477
		Within Groups	1			
		Total	4			
CFC bank	financial performance banks size	Between Groups (Combined)	3	.345	.905	.955
		Within Groups	1			
		Total	4			

The implication of banks size on the financial performance across commercial banks is significant in all banks (p>.05). The findings in table 4, shows that bank size influences financial performance positively as indicated by the positive significant values where the

influence is by 31.2% in Equity, 32.1% in NIC, 36.6% in National Bank, 30.2% in KCB and 34.5% in CFC bank.

4.6 Objective 3: To determine the effect of asset quality on the financial performance of commercial banks.

Table 4: Effect of asset quality on the financial performance of commercial banks.

			df	R Square	F	P
Equity bank	financial performance asset quality	Between (Combined) Groups	3	.208	0.807	.764
		Within Groups	1			
		Total	4			
NIC bank	financial performance asset quality	Between (Combined) Groups	3	.279	0.458	.890
		Within Groups	1			
		Total	4			
National bank	financial performance asset quality	Between (Combined) Groups	3	.296	0.694	.723
		Within Groups	1			
		Total	4			
Kenya commercial bank	financial performance asset quality	Between (Combined) Groups	3	.218	0.921	.543
		Within Groups	1			
		Total	4			
CFC bank	financial performance asset quality	Between (Combined) Groups	3	.237	.345	.648
		Within Groups	1			
		Total	4			

The implication of asset quality on the financial performance across commercial banks is significant in all banks (p>.05). The findings in table 5, shows that asset quality

influences financial performance positively as indicated by the positive significant values where the influence is by 20.8% in Equity, 27.9% in NIC, 29.6% in National Bank, 21.8% in KCB and 23.7% in CFC bank.

4.7 Regression Equation

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.680[a]	.729	.704	1862

a. Predictors: (Constant), asset quality, asset base, bank size, capital adequacy ratio

Column labeled R are the values of multiple correlation coefficient between the predictors and the outcome, therefore, the simple correlation between asset base, bank size, capital adequacy ratio and asset quality is positive (0.680). The next column gives R^2 which is a measure of how much the variability in the outcome is accounted for by the predictors. For the first model, its value is 0.729 which means that asset base, bank size, capital adequacy ratio and asset quality is positive accounts for 72.9% of the level of variability in financial performance in the selected banks.

Table 6: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.2897	.000		.000	.234
	asset base	.178	.000	4.226	.000	.452
	bank size	3.7617	.000	1.545	.000	.765
	capital adequacy ratio	-1439869.515	.000	-5.009	.000	.435
	asset quality	4.3267	.000	3.108	.000	.653

a. Dependent Variable: financial performance

$$\mathcal{Y} = \beta_0 + \beta_1 \mathcal{X}_1 + \beta_2 \mathcal{X}_2 + \beta_3 \mathcal{X}_3 + \beta_4 \mathcal{X}_4 + \acute{\varepsilon}_1$$

Performance = -2.2897 + .178asset base + 3.7617bank size + -1439869.515capital adequacy ratio + 4.3267asset quality.

Unstandardized coefficient B shows the values of numbers in linear regression equation, the constant term is -2.289E7 and the coefficient of the variables under study as indicated above. The significant values are all above 0.05 meaning that the researcher is 95% confidence in the result of the study (p>.05).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter gives the summary, conclusion and recommendation based on the findings of the study in chapter four. This chapter gives the summary of the findings in reflection of the literature review and a comparisons of the researchers own findings and the findings in the literature review.

5.2 Summary

According to the research findings, a sound financial system is indispensable for a healthy and vibrant institutional economy. The banking sector constitutes a predominant component of financial services industry and the performance of any country is dependent on the performance of banks to a large extent. Banking institution in our country has been assigned a significant role in the financing process of planned economic growth.

Adequacy of capital, portion of borrowings as compared to deposits and credit to deposit ratio represent the soundness of a bank as reported by the significant values in the results of the analysis. According to the findings, capital base of financial institutions facilitates depositors in forming their risk perception about the institutions. Also, it is the key

parameter for financial managers to maintain adequate levels of capitalization. Moreover, besides absorbing unanticipated shocks, it signals that the institution will continue to honor its obligations, a finding that is supported by Haron (2004) in his findings that capital adequacy ultimately determines how well financial institutions can cope with shocks to their balance sheets. Thus, it is useful to track capital-adequacy ratios that take. A sound capital base strengthens confidence of depositors. This ratio is used to protect depositors and promote the stability and efficiency of financial systems around the world.

Most bankers and examiners will agree with the study results that the single greatest risk in banking is the risk of loan losses. This is because loans typically comprise a majority of the assets in most banks. It's not hard to imagine an entire year's worth of earnings being completely eliminated because of one or two large loans being charged off; this finding is in line with that of Saunders and Cornett (2004), that since the exposure to risk is so vast in banking industry, examiners spend a significant amount of time assessing asset quality, primarily loan quality, at almost every examination. Given the size of the exposure, the directorate should spend a significant amount of time assessing this risk as well, in formulating loan policies, attending loan committee meetings, reading credit reviews, and reviewing various management reports on the condition of the loan portfolio to control the institutional performance.

Over the past few decades, the worldwide banking industry has undergone strong consolidation. As a result, the number of banks has fallen sharply. At the same time, the size of the largest banks has increased substantially, both in absolute figures and relative

to the size of smaller banks thus prompting the researcher to assess the relationship between bank size and financial performance of banks in Kenya.

Size affects the efficiency of banks. This research indicates that both the bank size and the asset base positively affect the financial performance of commercial banks, a finding that is similar to the one of Demiurge-Kunt (1999). In addition, the research also shows that the levels of the asset base for the existence of scale economies are higher due to economic development and market liberalization (Ngugi (2001). It has also been proved that in this new competitive environment, large banks will survive. Small banks could only survive if they specialized in a few of their activities (Fabozi (1999).

5.3 Conclusion

This paper describes the relationship between asset quality and banks performance, the relationship between capital adequacy and the financial performance, the relationship between bank size and asset base to the performance of commercial banks in the country. The main findings are that the entire named variable influences the bank performance positively and to a greater extent as shown in chapter four. However, the researcher assumed that only those four factors are the main ones that influence the performance of commercial banks in the country. Some of the findings of the study are that greater bank capital reduces the probability of financial distress but also reduces liquidity creation. Commercial banks essentially intermediate between the opposing liquidity needs of depositors and borrowers.

5.4 Limitations of the study

The study concentrated only on those commercial banks quoted in the Nairobi Stock Exchange because there was readily available information from CMA library leaving out the other banks which are not quoted in the Nairobi Stock Exchange.

The period covered during the study was also limited thus the study concentrated only on the data from the year 2004 to 2009.

The study did not cover the macro economic variables such as exchange rates which influence the financial performance of commercial banks.

5.5 Recommendations

1. Further study should be conducted to determine other factors influencing the banks performance such as exchange rates and taxation.
2. There should be a wide capital base in the banks to strengthen confidence of depositors

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APPENDIX

CMA ANNUAL REPORT 2009

COMMERCIAL BANKS QUOTED IN THE NAIROBI STOCK EXCHANGE

Barclays Bank Ltd

C.F.C Stanbic Holdings Ltd

Diamond Trust Bank Kenya Ltd

Equity Bank Ltd

Kenya Commercial Bank Ltd

National Bank of Kenya Ltd

NIC Bank Ltd

Standard Chartered Bank Ltd

Cooperative Bank of Kenya Ltd.