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

BY

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

OCTOBER 2012

DECLARATION

I, the undersigned declare that this is my original work and has not been submitted to any other college or university.

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DEDICATION

I dedicate this research project report to my family for their encouragement and support during the study.

ACKNOWLEDGEMENT

The successful completion of any task would be incomplete without mentioning the names of persons who helped to make it possible. I take this opportunity to express my gratitude in few words and respect to all those who helped me in the completion of this project. I express my sincere thanks and deep sense of gratitude to my supervisors Mr. Herick Ondigo and Mr. Duncan Elly for their encouragement, support and guidance to complete this project work successfully.

I convey my heartiest thanks to Mr. Hamza Rengwa, Manager, Kenya Commercial Bank, who kindly assisted me with the data to do this project work.

Finally, I express our sincere thanks and deep sense of gratitude to my parents and friends for giving timely advice in all the ways and in all aspects for the success of this project work.

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ABBREVIATIONS

CBK - Central Bank of Kenya

CEOs - Chief Executive Officers

CFOs - Chief Financial Officers

DCF - Discounting Factors

NPV - Net Present Value

NSE - Nairobi Stock Exchange

ROA - Return on Assets

ROCE - Return on Capital Employed

ROE - Return on Equity

ABSTRACT

This study sought to determine the relationship between Capital investments and financial performance among Commercial Banks in Kenya. The research methodology used was a Census survey design and the population of study was all Commercial Banks in Kenya. Secondary data collected was edited for accuracy, uniformity, consistency and completeness and arranged to enable coding and tabulation for final analysis. The study also used multiple linear regressions to analyse the data.

The study found out that a there is indeed a positive relationship between capital investments and financial performance. Various variables were used to explain financial performance namely profitability, return on investments, cash flows and other variables. Cash flows was the main variable explaining financial performance. Return on Capital Employed was the least explanatory variable since the relationship with financial performance was week. Return on assets ratio, return on investments ratio, cash ratio and gearing ratios were also considered in explaining the dependent variable. As a result, it was clear that most banks balance sheets contained a significant level of capital investments.

The study recommends that Commercial Banks should put more emphasis on investment and project appraisal for a proper cost benefit analysis and further research studies should be conducted on long-term and short term capital investments for the better option to be selected which maximizes the shareholders' value.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Capital investment in a live environment is crucially influenced by exposure to risk. While there are many risk analysis techniques that could be used to assist with investment appraisal for example; the incorporation of risk premiums in discount rates, simulation, sensitivity analysis, it is not often recognized that the most widely used method – net present value (NPV) and nearly all of its variants – will often lead to incorrect conclusions when exposure to risk is not correctly incorporated. When risk is properly accounted for, surprising results emerge in evaluating project viability and sensitivity with respect to risk.

In modern financial management, managers are required to allocate pre-determined capital among multiple projects to diversify corporate risk. In capital investment, therefore corporate risk management becomes critical when managers make investment allocation decisions. While the mean-variance approach is considered a cornerstone of the modern investment theory (Markowitz 1959) points out the importance of the downside risk measure in his seminal work.

1.1.1 Capital Investment

Capital investment decisions that involve the purchase of items such as land, machinery, buildings, or equipment are among the most important decisions undertaken by the

business manager. These decisions typically involve the commitment of large sums of money, and they will affect the business over a number of years. Furthermore, the funds to purchase a capital item must be paid out immediately, whereas the income or benefits accrue over time. Because the benefits are based on future events and the ability to foresee the future is imperfect, considerable effort should be made to evaluate investment alternatives as thoroughly as possible (Boehlje et al, 1986).

A key component of capital investment is Capital budgeting which is the process of analysing investment opportunities in long-term assets which are expected to produce benefits for more than one year (Peterson and Fabozzi, 2002). A central feature of any investment analysis is DCF, which takes into consideration the time value of money, is regarded as theoretically correct, and includes at least four different discounting models: NPV, IRR, modified internal rate of return (MIRR), and profitability index (PI) (Brigham and Ehrhardt, 2002). The estimates used to analyze capital investments are projections of future conditions. Therefore capital investments involve risk because of the uncertainties surrounding the key variables involved in the analysis. Consequently, the analyst making the investment calculations and management using these results for decision purposes must allow for a whole range of possible outcomes. Even the best estimates can go wrong as events unfold; yet the decisions have to be made ahead of time (Francis, 1991).

1.1.2 Financial Performance

The performance of business organizations is affected by their strategies and operations in market and non-market environments (Baron 2000). Sizable, long-term investments in

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tangible and intangible assets have long term consequences. An investment today will determine the firm's strategic position many years (Dayananda et al, 2002). They further state that these investments also have a considerable impact on the organization's future cash flows and the risk associated with those cash flows. A business' cost of capital provides both a benchmark to evaluate its performance and a discount rate for evaluating capital investments (Copeland et al., 2000). Inadequate evaluation and decision tools risk the possibility of applying scarce resources to areas, which promote a return less than the cost of capital.

The limitations on financial statements in explaining firm value underline the fact that the source of economic value is no longer the production of material goods, but the creation of intellectual capital. Intellectual capital includes human capital and structural capital wrapped up in customers, processes, databases, brands, and systems (Edvinsson and Malone, 1997), and has been playing an increasingly important role in creating corporate sustainable competitive advantages (Kaplan and Norton, 2004).

Financial measures are regarded as "lag" indicators of performance whereas Intellectual capital measures (like non-financial measures) are regarded as "lead" indicators since they are mainly intended to generate future earnings power (Kaplan and Norton, 2001) and (Canibano et al., 2000). While all future earnings are uncertain, it is greater for intellectual capital than for tangible assets. (Holland 2003) discusses that fund managers in forecasting their valuation of firms use financial information in Traditionally, firms relied on their tangible assets to drive their performance and firm-level strategy.

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The use of financial ratios for business analysis is common, and hence, almost cliché. Ratio analysis techniques can be considered a business analysis paradigm as "an established point of view" (Kuhn, 1996). Considering these facts, encouraging industry operators to apply the techniques of ratio analysis to assess their performance requires a simple framework that compresses a large amount of data into a small set of performance indicators. These performance indicators must include intangible, non-financial elements that are often critically important to operators (Mongiello and Harris, 2006).

1.1.3 Relationship between Capital Investments and Financial performance

It is usual that a manager has to allocate available capital among multiple risky projects. Thus, an optimal investment allocation strategy among these projects is critical in a corporate investment decision-making process. The performance of business organizations is affected by their strategies and operations in market and non-market environments (Baron 2000). Addressing the importance of non-financial dimensions of performance indicators, (Mongiello and Harris (2006) explained different goals and reporting mechanisms with the concept of a "hierarchical" structure or "structured network" among investors, top management, and unit operators.

Inadequate evaluation and decision tools risk the possibility of applying scarce resources to areas, which promote a return less than the cost of capital. This ultimately results in a destruction of value (Brigham et al., 1999). Moreover, appraisal systems that fail to apply resources to projects offering a return greater than the cost of capital result in an opportunity cost and potential loss of competitive position. Therefore, a reasonable

estimate of a firm's cost of capital is essential for good decision-making. In practice, however, this cost is difficult to estimate (Brigham et al., 1999).

1.1.4 Commercial Banks in Kenya

Commercial banks are licensed and regulated under the Banking Act. Cap 488 and Prudential Regulations issued there-under. There are 44 Commercial Banks in Kenya (CBK, 2010). The role of commercial banks in an economy cannot be emphasized more. As pointed out by (Scott & Timothy, 2006), commercial banks play an important role in facilitating economic growth. Banks deposits represent the most liquid form of money. On a micro economic level, commercial banks represent the primary source of credit to most small businesses and many individuals. (Omutunde, 2002), asserts that that a sound financial system will contain, predominantly, banks with adequate capital to withstand the most probable adverse shocks, and will have staff skilled in assessing conditions and coming up with solutions to manage liquidity, credit, market and other risks.

A process of financial liberalization was initiated in the 90s to make the banking system profitable, efficient, and resilient. The liberalization measures consisted of deregulation of entry, interest rates, and branch licensing, as well as encouragement to state owned banks to get listed on stock exchanges. With the liberalization came risks that banks needed to manage. It is therefore a suitable time to perform an analysis of the capital investment and financial performance among Commercial Banks in Kenya. The Basel-II norms, which include a move towards better risk management practices, also necessitate such a study (CBK, 2010).

1.2 Research Problem

In modern financial management, managers are required to allocate pre-determined capital among multiple projects to diversify corporate risk. It is usual that a manager has to allocate available capital among multiple risky projects. Thus, an optimal investment allocation strategy among these projects is critical in a corporate investment decision-making process. While the mean-variance approach is considered a cornerstone of the modern investment theory, (Markowitz, 1959) points out the importance of the downside risk measure in his seminal work. For typical economic agents including managers, downside risk is also more accurate to measure the uncertainty with respect to projects' payoff distributions since they are more concerned with the loss than with extra return.

It has been said that you must measure what you expect to manage and accomplish. Without measurement, you have no reference to work with and thus, you tend to operate in the dark (Matt et al., 2000). One-way of establishing references and managing the financial affairs of an organization is to use ratios. By applying ratios to a set of financial statements, we can better understand financial performance.

The traditional financial analyses associated with these capital investment decisions have been based on one of several payback methods that are based on local optimization. The increased efficiency at the capital markets requires that capital allocation within businesses becomes more efficient and it is, therefore, not possible for companies to allocate capital in an arbitrary and capricious way. With particular reference to small

businesses, which tend to be cash oriented, they are concerned with basic survival (Mebolugbe, 2002).

According to (Myers, 1984), industry sector can be determinant of firm's capital structure decisions, given that the nature and composition of assets influence financing needs, as well as firm's capacity to provide creditors with assets as collateral. Therefore, firms whose activities are based on tangible assets obtain debt more easily. On the contrary, firms whose activities are based on intangible assets associated with future growth opportunities experience more difficulty in obtaining credit. (Dayananda, et al 2002), did a study on Capital budgeting- Financial Appraisal of Investment Projects and financial performance.

The following studies have been done locally. Kadondi (2002) and Maingi (2006) conducted studies on capital budgeting techniques used by companies listed at NSE. The study objective was to find out the capital budgeting techniques used in investment appraisal by corporations in Kenya and determine if those techniques used confirm the existing theory and practices of organisations in those developed states. Local studies conducted so far examine capital budgeting techniques employed by commercial banks. Njiru (2008) carried out a study and looked at the capital investment appraisal from the point of view of shareholder wealth maximization and wanted to find out the most commonly used capital investment appraisal techniques by commercial parastatals and also determine the factors that influence the choice of the technique used. Oyaro (2009) studied the capital budgeting techniques for insurance companies in Kenya. The research

reviewed that discounted cash flow methods used preferred to the simpler methods like internal rate of return and payback. The impact of capital budgeting techniques on the financial performance of courier companies in Kenya by (Jefwa chai 2011) which sought to determine the impact of capital budgeting techniques on financial performance of courier companies in Kenya.

Much of the early work on capital budgeting and capital budgeting techniques. There is therefore a gap as far as studying the relationship between capital Investments and financial performance among commercial banks in Kenya is concerned. It is evident from the above review that the relationship between capital Investments and financial performance among commercial banks has not been done fully. In addition, most of the studies conducted have been in developed countries and they are not conclusive. The study therefore will seek to answer the following research question: What is the relationship between capital Investments and financial performance of commercial banks in Kenya?

1.3 Research Objectives

    i) To determine the level of capital investments among commercial banks in Kenya.

    ii) To determine the relationship between capital investment and financial performance of commercial banks in Kenya.

1.4 Value of the Study

The study will help Commercial Banks' policymakers to have a clear understanding of how capital investment influences financial performance of the commercial banks.

The study will make multiple contributions to the literature on capital investment through investigation of optimal investment decisions in continuous-time downside risk-based capital investment system.

In addition study paves the road for further research on continuous-time downside risk in making investment decisions. Students interested in Finance as a subject will find it useful and build on the existing body of knowledge.

Finally the study will come in handy to support the Government and CBK as regulators in their quest to streamline operations in the banking sector putting in mind that the economy as a whole inches on how the banking sector performs. Inappropriate resource allocation can hinder growth in the economy. There is a contagion effect between banks performance and economic performance which have a direct impact on employment levels, economic growth, inflation levels etc.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter examines the literature on capital investment and financial performance among commercial Banks in Kenya. The goal of credit risk management is to maximise a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. The essence of managing risk is making good decisions. Correct decision making depends on accurate information and proper analysis. By conducting regular checkups on financial condition and performance. banks are more likely to treat causes rather than address only symptoms of problems.

2.2 Theoretical Review

The following theories are relevant in capital budgeting and are therefore discussed. These are the trade-off theory, the pecking-order theory, market timing theory, debt maturity, stakeholder theory, agency theory, financial economics approach and new institutional economics.

2.2.1 Financial Economics Approach

Financial economics approach to corporate risk management has so far been the most prolific in terms of both theoretical model extensions and empirical research. This approach builds upon classic Modigliani-Miller paradigm (Miller and Modigliani, 1958) which states conditions for irrelevance of financial structure for corporate value. This paradigm was later extended to the field of risk management. This approach stipulates

also that hedging leads to lower volatility of cash flow and therefore lower volatility of firm value. Rationales for corporate risk management were deduced from the irrelevance conditions and included: higher debt capacity (Miller and Modigliani, 1963), progressive tax rates, lower expected costs of bankruptcy (Smith and Stulz, 1985), securing internal financing (Froot et al., 1993), information asymmetries (Geczy et al., (1997) and comparative advantage in information (Stulz, 1996). The ultimate result of hedging, if it indeed is beneficial to the firm, should be higher value-a hedging premium.

Evidence to support the predictions of financial economics theory approach to risk management is poor. Although risk management does lead to lower variability of corporate value (Jin & Jorion, 2006), which is the main prerequisite for all other effects, there seems to be little proof of this being linked with benefits specified by the theory. One of the most widely cited papers by (Tufano, 1996) finds no evidence to support financial hypotheses, and concentrates on the influence of managerial preferences instead. On the other hand, the higher debt capacity hypothesis seems to be verified positively, as shown by (Faff and Nguyen, 2002), (Graham and Rogers, 2002) and (Guay, 1999).

2.2.2 Agency Theory

Agency theory extends the analysis of the firm to include separation of ownership am control, and managerial motivation. In the field of corporate risk management agency issue have been shown to influence managerial attitudes toward risk taking and hedging (Smiti and Stulz, 1985). Theory also explains a possible mismatch of interest between

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shareholder management and debt holders due to asymmetries in earning distribution, which can result in the firm taking too much risk or not engaging in positive net value projects (Mayers and Smith, 1987). Consequently, agency theory implies that defined hedging policies can have important influence on firm value (Fite and Pfleiderer, 1995). The latter hypotheses are associated with financing structure, and give predictions similar to financial theory. Managerial motivation factors in implementation of corporate risk management have been empirically investigated in a few studies with a negative effect (MacCrimmon and Wehrung, 1990); (Geczy et al., 1997). Notably, positive evidence was foui however by (Tufano 1996) in his analysis of the gold mining industry in the US. Financial policy hypotheses were tested in studies of the financial theory, since both theories give similar predictions in this respect. All in all, the bulk of empirical evidence seems to against agency theory hypotheses however. Agency theory provides strong support for hedging as a response to mismatch between managerial incentives and shareholder interests.

2.2.3 New Institutional Economics

A different perspective on risk management is offered by new institutional economics. The focus is shifted here to governance processes and socio-economic institutions that guide these processes, as explained by (Williamson, 1998). Although no empirical studies of new institutional economics approach to risk management have been carried out so far, the theory offers an alternative explanation of corporate behavior. Namely, it predicts that risk management practices may be determined by institutions or accepted practice within a market or industry. Moreover, the theory links security with specific assets purchase

(Williamson, 1987), which implies that risk management can be important in contracts which bind two sides without allowing diversification, such as large financing contract or close cooperation within a supply chain.

If institutional factors do play an important role in hedging, this should be observable in the data. First of all, there may be a difference between sectors. Secondly, hedging may be more popular in certain periods-in Poland one might venture a guess, that hedging should become more popular with years. A more concrete implication of this theory is that shareholders may be interested in attracting block ownership by reducing company risk. Here New Institutional Economics is similar in its predictions to agency theory. However this theory also suggests that firm practices may be influenced by the ownership structure in general.

2.2.4 Stakeholder Theory

Stakeholder theory, developed originally by (Freeman, 1984) as a managerial instrument, has since evolved into a theory of the firm with high explanatory potential. Stakeholder theory focuses explicitly on equilibrium of stakeholder interests as the main determinant of corporate policy. The most promising contribution to risk management is the extension of implicit contracts theory from employment to other contracts, including sales and financing (Cornell and Shapiro, 1987). Therefore stakeholder theory provides a new insight into possible rationale for risk management. However, it has not yet been tested directly. As stated by (Judge, 2006), investigations of financial distress hypothesis by

(Smith and Stulz, 1995) provide only indirect evidence of stakeholder theory as a rationale for risk management.

2.2.5 Trade-off theory

The trade-off theory as first developed by (Modigliani and Miller, 1963) argues that firms have optimal debt ratios based on the trade-off between the tax deductibility of interest expenses and the costs of financial distress. The findings of (Graham and Harvey, 2001) and (Brounen et al. 2004) are that most companies do have a target range, but only a few of them have a strict target. The trade-off theory of capital structure supposes that in order to maintain a target range, firms should be constantly rebalancing their target to keep up with stock price changes. However, observed target ratios may be changing over time even though firms do have a set range (Fisher et al., 1989). Transaction costs and fees for issuing debt affect the decisions of only half of the Chief Finance Officers when they choose the appropriate amount of debt for their firms. The practice of trade-off theory of capital structure is not widely used.

2.2.6 Pecking-order theory

The pecking-order theory argues that, because of information asymmetry, firms choose to use their retained earnings first to finance their investments (Myers, 1984); (Myers and Majluf, 1984). When internal financing does not suffice, firms issue debt first and equity last. In this model, firms do not have a set target ratio.

Having enough slack would allow firms to minimize the costs of information asymmetry associated with external financing. Studies show that majority of Chief Finance Officers appreciate financial flexibility, more so when the proportion of managerial ownership is higher. Most managers confirm that debts are issued when their internal funds are insufficient to fund their activities. Sometimes a firm's inability to obtain funds using debt affects their decisions to issue common stock. As in (Graham and Harvey, 2001), there is weak support for either the trade-off or the information asymmetry-based pecking-order theory of capital structure.

2.2.7 Market Timing Theory

(Loughran and Ritter, 1995) and (Spiess and Affleck-Graves, 1995) find that firms experience long-term underperformance in the period following equity issues. Moreover, (Stein, 1996) shows that managers can time the market to maximize existing shareholders' wealth. (Baker and Wurgler, 2002) expand the market timing theory to long-term capital structure. The theory they present states that "capital structure evolves as the cumulative outcome of past attempts to time the equity market

Market timing theory argues that managers do not rebalance their debt ratio, which implies that equity issues, during high market valuations, tend to have long-lasting effects on capital structure. However, some CFOs use debt when their equity was being undervalued by the market. (Graham and Harvey, 2001) argue that the relatively low support for many capital structure theories indicates that there is either a problem with the theories or that practitioners are ignoring them. It may be argued that no single theory is

good enough. and that these theories are complementary rather than competing (Chazi, 2009).

2.3 Concept of Capital Investment

Capital investment decisions that involve the purchase of items such as land. machinery, buildings, or equipment are among the most important decisions undertaken by the business manager .One of the issues associated with capital budgeting and investment is the cost of capital, which is defined as the rate of return required to compensate providers of those funds (Brigham and Houston, 2001). A business' cost of capital provides both a benchmark to evaluate its performance and a discount rate for evaluating capital investments (Copeland et al., 2000). Inadequate evaluation and decision tools risk the possibility of applying scarce resources to areas, which promote a return less than the cost of capital. This ultimately results in a destruction of value. Moreover, appraisal systems that fail to apply resources to projects offering a return greater than the cost of capital result in an opportunity cost and potential loss of competitive position. Therefore, a reasonable estimate of a firm's cost of capital is essential for good decision-making. In practice, however, this cost is difficult to estimate (Brigham et al., 1999).

Risk can be defined as the degree to which all possible cash benefits levels of an investment can vary. The greater the range of these possibilities, the greater the risk. This effort may not be necessary for all types of investments, however, because degrees of risk vary widely among business and financial investments. The risk involved in holding a government bond, for example, is very small indeed, because default on the interest

payments is extremely unlikely. Therefore, the range of possible benefits from the bond investment is narrowly focused on the contractual payments - in effect no range at all. In contrast, the risk of a business investment for a product or service is a function of the whole range of possible benefit levels that may go from very positive cash flows to negative loss conditions. The uncertainty surrounding these outcomes poses a challenge to the analyst and the decision maker (Francis, 1991). Risk can be adjusted by modifying the return standards to include a risk premium where warranted. In a sense, the reasoning behind this is quite simple the greater the risk, the higher the return desired from the investment (Helfert, 1987).

Few authors have addressed the role of operators from the perspective of capital investment and required return. Simply, operators' roles have been taken for granted at the receiving end of the spectrum in the corporate management information systems leaving them with no sense of autonomy (Turnbull, 2001). There has been a disconnected gap between operating managers and the formula-oriented practice of business management (Adler, 2006). If this trend continues, sensible business behavior will become distorted as operators are pushed to meet the requisite numbers instead of their customers' needs (Mintzberg, 1996).

Capital budgeting is a key component of capital investment and it is the process of analysing investment opportunities in long-term assets which are expected to produce benefits for more than one year (Peterson and Fabozzi, 2002). A central feature of any investment analysis is DCF, which takes into consideration the time value of money, is

regarded as theoretically correct, and includes at least four different discounting models: NPV, IRR, modified internal rate of return (MIRR), and profitability index (PI) (Brigham and Ehrhardt, 2002).

Both NPV and IRR are consistent with the goal of maximising a firm's value, use cash flows and consider cash flow timing. With NPV, the present value of future cash flows is generated and when compared with initial outflows, an investment project is seen as acceptable whenever a positive NPV is the outcome. IRR is a percentage rate that equates the present value of future cash inflows with the present value of its investment outlay. Finance theory asserts that NPV is the best method for evaluating capital investment projects. In a normal project, cash outflows are followed by annual cash inflows and under these circumstances, NPV and IRR lead to the same investment decisions.

Problems with the IRR technique occur in two cases and may lead to incorrect capital budgeting decisions. When project cash flows are abnormal this may lead to multiple IRR calculations, affecting both independent and mutually exclusive projects. When investment projects are mutually exclusive, scale and time differences may lead to incorrect investment decisions and this is a problem associated with the reinvestment rate assumption (Brigham and Ehrhardt, 2002).

Companies pay less attention to traditional capital budgeting techniques, (Carr and Tomkins', 1996) while others suggest that traditional appraisal techniques are no longer appropriate for intangible investments given the non-financial benefits and inter-related

cost complexity that exists (Irani et al., 1998). (Mouck, 2000) argues that "The traditional capital budgeting model is virtually useless for the high-tech, knowledge-based, increasing returns sectors of the economy". Increasingly, firms invest less in tangible assets, and more in research and development, training, marketing, software, and other intangibles. These are hard to justify using conventional capital budgeting tools (Irani et al., 1998).

2.4 Capital Investment and Financial Performance

Encouraging industry operators to apply the techniques of ratio analysis to assess their performance requires a simple framework that compresses a large amount of data into a small set of performance indicators. These performance indicators must include intangible, non-financial elements that are often critically important to operators (Mongiello and Harris, 2006).

A firm's intellectual capital, in a broad sense, is comprised of human capital and structural capital (Bontis, 1996). Human capital is employee-dependent, such as employees' competence, commitment, motivation and loyalty, etc. Although human capital is recognised as being the heart of creating intellectual capital, a distinctive feature of human capital is that it may disappear as employees exit (Bontis, 1999). In contrast, structural capital belongs to firms including innovative capital, relational capital, and organisational infrastructure, etc.

The essence of managing risk is making good decisions. Correct decision making depends on accurate information and proper analysis. Financial efficiency measures the intensity with which a business uses its assets to generate gross revenues and the effectiveness of production, purchasing, product pricing, and financing decisions (Dobbins, et al, 1986). They further comment that financial efficiency is measured by: Asset turnover ratio, Operating expense ratio, Depreciation expense ratio, Interest expense ratio and Net farm income ratio.

Financial Performance Measures

Profitability

Measures the extent to which a business generates a profit from the use of land, labor, management, and capital. It is measured by net farm income from operations (NFIFO), rate of return on farm assets (ROA), rate of return on farm equity (ROE) and operating profit margin (OPM) (Miller et al, 2001). Net revenues available from normal operations after fixed and variable expenses have been deducted and for accuracy, it is calculated on an accrual basis. Operating profit reflects ability to generate revenues and control costs. It is revenue available to compensate debt and equity capital.

Rate of return on assets

This is the net income generated by all assets, after labor has been compensated but before interest payments. It is the operating profitability per dollar of assets and allows comparison between different sizes and types of businesses (Miller et al, 2001).

Rate of return on equity

This is the return after all labor and interest expenses have been deducted from the earnings. It measures the return to the owner of the business for their capital investment and can be compared to alternative investments (Boehlje et al, 1999).

Liquidity (Cash flow)

According to (Dobbins et al, 2000), this is the ability of a farm business to meet financial obligations as they come due in the short term, without disrupting the normal operations of the business. It is measured by the Current ratio which is Current assets divided by the Current liabilities. It is a basic indicator of short-term debt servicing and/or cash flow capacity and also indicates the extent to which current assets, when liquidated, will cover current obligations.

Solvency

According to (Miller et al, 2001) solvency gauges the farm's ability to pay all financial obligations if all assets are sold and to continue viable operations after financial adversity. It is measured by Debt to asset ratio, Debt to equity ratio and Equity to asset ratio.

In evaluating the hypotheses of whether local or global capital investment viewpoints are more profitable, the standard financial measures are: net profit, return on investment, and cash flow. Net profit is an absolute measure of profit (or loss), but it is not relative to the investment that was made to obtain that level of profit (or loss). Return on investment is a

relative measure. It correlates the firm's investment to its level of earnings, but says nothing about the actual size of the profit (or loss). Cash flow refers to the amount of money available to meet the financial obligations of the company. When manufacturing firms make decisions that result in improvement to the financial measurements, the firm is obviously moving toward the goal of the firm. These results will be determined from a global view of the entire operation (Lloyd J. Taylor, 1998).

Banks have to comply with the controls applied by the Central Bank, these are currently mainly financial. The bank have however developed a number of non-financial measures, Some examples of the bank's non-financial measures are efficiency measures, such as turnaround time, loan processing time, counter service (customer queuing time), and customer complaints' processing time. Balanced Score Card was introduced by the bank's consultant in 2002, and has been implemented since January 2003, starting with the marketing department. It is still too early to assess the progress of the BSC implementation.

2.5 Measures of Performance

Commonly used financial ratios can be applied to evaluate the performances of operators and top management more accurately. Performance measurement is perhaps the most important, yet most misunderstood and most difficult, task in management accounting (Atkinson et al., 1995). (Neely, 1998) suggests that performance measurement "is the process of quantifying past action". Traditional accounting performance measurement employs financial techniques such as Return on Assets (ROA) and Return on Capital

Employed (ROCE). These have been criticised for being backward looking, unable to measure intangible resources and not suitable for assessing performance of investments in new technologies and markets which firms require to compete successfully in global markets (Bourne et al., 2000); (Amir and Lev, 1996).

In the early 1990s, various performance measurement frameworks were developed, to overcome the weaknesses of financial-only measures (Bourne et al., 2000). Such models place greater focus on intangible resources (Amir and Lev, 1996) such as key customers, internal processes and learning, (Simons, 1990). Commonly used models include Intangible Assets Monitor. (Edvinsson and Malone, 1997), and Skandia Navigator (Sveiby, 1997) which were particularly developed with intellectual capital in mind and the Balanced Scorecard (Kaplan and Norton, 1996); (Lipe and Salterio, 2000) which had a more general strategic focus.

The Balanced Scorecard (BSC), for example, considers relational capital (customer perspective), structural and human capital (innovation, learning, and internal perspectives) and the impact of Intellectual capital on shareholder goals (financial perspective) (Kaplan and Norton, 2004). (Lev, 2001) advocates the Value Chain Scoreboard, to be used by both management and investors, which seeks to report in a structured manner the impact of intangibles on corporate performance and valuation.

One of the issues associated with capital investment and budgeting is the cost of capital, which is defined as the rate of return required to compensate providers of those funds

(Brigham and Houston, 2001). A business' cost of capital provides both a benchmark to evaluate its performance and a discount rate for evaluating capital investments (Copeland et al., 2000). Inadequate evaluation and decision tools risk the possibility of applying scarce resources to areas, which promote a return less than the cost of capital. This ultimately results in a destruction of value. Moreover, appraisal systems that fail to apply resources to projects offering a return greater than the cost of capital result in an opportunity cost and potential loss of competitive position. Therefore, a reasonable estimate of a firm's cost of capital is essential for good decision-making. In practice, however, this cost is difficult to estimate (Brigham et al., 1999).

Risk management is one of main business activities of commercial banks (Saunders and Cornett, 2006). Credit risk, liquidity risk, off-balance sheet risk, foreign exchange risk and interest rate risk are some of the examples of risks inherent to the banking industry. Enhanced understanding of how risk effects financial performance may decrease the probability of insolvency and provide greater stability to a depository institution.

2.6 Empirical Studies

A study was done by (Kadondi, 2002) about a survey of capital budgeting techniques used by companies listed at the NSE. The study objective was to find out the capital budgeting techniques used in investment appraisal by corporations in Kenya and determine if those techniques used confirm the existing theory and practices of organisations in those developed states. (Kyalo, 2002) did a study on capital allocation and efficiency of banking institutions in Kenya quoted at the NSE. (Maingi, 2011) did a

study on a survey of the factors that influence capital budgeting techniques among Commercial banks in Kenya which sought to show the most common budgeting techniques employed by Commercial banks especially in appraising investment projects. In addition, (Titus, 2011) did a study on the impact of capital budgeting techniques on the financial performance of courier companies in Kenya which indicated that most companies preferred the profitability index techniques than any of the other capital budgeting techniques followed by payback technique. Also, the study found a positive relationship between capital budgeting techniques and financial performance of the company. (Njiru 2008) carried out a study and looked at the capital investment appraisal from the point of view of shareholder wealth maximization and wanted to find out the most commonly used capital investment appraisal techniques by commercial parastatals and also determine the factors that influence the choice of the technique used. (Oyaro 2009) studied the capital budgeting techniques for insurance companies in Kenya. The research reviewed that discounted cash flow methods used preferred to the simpler methods like internal rate of return and payback. Finally, the relationship between Capital Budgeting Techniques and Financial Performance of Companies Listed at NSE was done by (Munyao, 2011).

Several studies have dealt with capital budgeting practices of firms worldwide. (Dayananda, et al 2002) Capital budgeting- Financial Appraisal of Investment Projects. More than a decade has passed since the most recent study. More current studies exist for Australia, the United Kingdom and United States (Arnold and Hatzopoulos, 2000); Burns and (Walker, 1997); (Farragher et al., 1999); (Graham and Harvey, 2001); (Ryan and

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Ryan, 2002); (Truong et al., 2008). (Pike, 1996) cautioned about survey comparison, which might be problematic due to differences in the method. There appeared to be a lower percentage of firms using NPV and more using IRR in Canada. In the other countries, in later years, there appeared to be an overall higher prevalence of both NPV and IRR.

2.6 Summary

In the Kenyan context, many publications throw light over capital budgeting and capital budgeting techniques strategies adopted by Commercial Banks in Kenya. However these studies don't depict any empirical relationship between capital investments versus financial performance. The purpose of this study is to study the correlation of capital investment and financial performance in Commercial Banks in Kenya applicable in Kenyan context. This study also establishes whether banks in Kenya use the strategies laid down by the regulator and other International bodies like the Basel Committee.

In summary all activities pursued by a company are inherently risky, although to a different degree. Decisions made at present will show their full consequences only in the future and are affected not only by the behavior of competitors, customers, suppliers, or regulators, but also by the state of nature. Even the best evaluated decisions can lead to losses in unforeseen circumstances. In capital investment, therefore, corporate risk management becomes critical when managers make investment allocation decisions. This risk is at the core of corporate activities and companies have to ensure that they can bear the risks they are facing and identify and adopt global best practices.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research design and methodology of the study; it highlights a full description of the research design, the research variables and provides a broad view of the description and selection of the population. The research instruments, data collection techniques and data analysis procedure have also been pointed out.

3.2 Research Design

A correlational research design was used in this study. This method attempted to explore relationships to make accurate predictions. It uses one set of subjects with two or more variables for each. In general, a correlational study is a quantitative method of research in which you have two or more quantitative variables from the same group of subjects and you are trying to determine if there is a relationship between the two variables. In this case, the relationship between capital investments and financial performance of all commercial banks was determined.

3.3 Target Population

The population of interest in this study was composed of all commercial banks between 2007 and 2011. Currently, there are 44 commercial banks (Appendix II) and it was possible to get reliable financial statements. Hence the population of the study was all commercial banks in Kenya.

3.4 Sample and Sampling Procedure

In order to obtain a representative sample from the population, a number of filters were applied. Observations of banks with anomalies such as negative values in their total assets, current assets, fixed assets, capital, cash flows, ratios, depreciation, the interest paid etc. were eliminated. In addition, only banks that had continuously traded over the period 2007 to 2011 were considered in the study and as such the number was scale down to 43 commercial banks. Further, observations of items from the balance sheet, and profit and loss accounts showing signs contrary to reasonable expectations were removed. Subject to the foregoing, the study was a census survey in which all the banks were studied, due to the manageable numbers involved.

3.5 Data Collection

Secondary data was used for carrying out the study. Data was collected from annual reports submitted to the CBK monthly by the banks. Annual reports of the banks were obtained between 2007 and 2011 which was study period. All the banks under study were continually in business between 2007 and 2011 and were included to ensure that the sampling frame is current and complete.

3.6 Data Analysis

Regression analysis was used to analyze the data that was collected. The research was both quantitative and qualitative in nature. Data was analyzed through the Statistical Package for Social Sciences (SPSS) package version 17. Data was analysed using descriptive statistics such as frequency tables and percentages. The analysis was on the

financial performance versus capital investment in Commercial Banks and ranked according to severity. To achieve the objectives of this study, models were developed using net profit, return on investments, cash flows and other unexplained variables as the independent variables and financial performance as dependent variable.

3.7 Models Specification

3.7.1 Conceptual Model

Financial performance=$f(X_1+X_2+X_3+X_0+e)$...................Eq (i)

Where X_1= Net profit (Profitability)

X_2= Return on investment

X_3= Cash flows

X_0= Other variables include financial efficiency

e = Random error term

NB: - Financial performance is the dependent variable whose value depends on the relationship between the independent variables, while capital investment discussed under Profitability (size of firm), Return on Investment (growth in assets), and Cash flows (Leverage) (and other variables are the independent variable(s).

3.7.2 Analytical Model

This was derived from the conceptual model depicted in equation (i) above

Financial performance= $\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 +$ Capital investments dummy + e

Where

X_1, = Net profit (Profitability) - Size of the banks

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X_2, = Return on investment (Growth in assets)

X_3, = Cash flows (Leverage)

X_0 = Other variables (Cash ratio, ROA, ROE, ROCE and gearing ratios)

e   = Random error term

βi = Coefficients of the variables

The above variables were measured as follows:-

Net profit (profitability) was measured using profitability ratios. Also, profit figures were taken from the financial statements especially the profit and loss accounts. Return on investments was measured using the return on investment ratios. Cash flows were measured using liquidity ratios like cash ratio and quick ratio. Also cash flow figures were gotten from financial statements like the cash flow statement. Financial performance was measured using the bank's profitability figures extracted from the financial statements, liquidity of the banks using liquidity ratios, that is cash ratios or quick ratios, and Return on Assets (ROA) and Return on Equity (ROE) ratios.

To analyze the relationship between capital investments and financial performance, inferential statistics were used. Specifically, multiple regression technique and correlation were used to establish whether a relationship exists or not. Parametric tests i.e. f test in Analysis of Variance (ANOVA) and t-test were used to measure statistical significance in the difference of mean ratios.

There were other explanatory variables other than capital investments that might play an important role in determining the financial and market performance for the firms. The

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study estimated the following simple regression to examine the effect of factors and capital investments on the Return on Equity. Return on assets, Return on Investments, profitability and cash flows of all banks in Kenya.

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 +$ Capital investments dummy $+ e$

Y= Financial performance

β_0 = Is the autonomous component, which is the performance that is not affected by the factors in question.

X_1 = Size of the banks under study (This can be shown as profitability/Income. Profitability can imply size since retained profits can be used to acquire more assets engage in capital investments)

Size is commonly identified by the market value of equity and the book value of assets. The study calculates the market price to book value Ratio.

X_2= Return on Investments (Growth in assets)

The research considers the growth in assets. Growth in assets = (assets of the current year /assets of the previous year) - 1. Growth can also be measured in terms of growth of increase in the return on investments. Growth in assets is however a better measure for the growth of the banks.

X_3 = Leverage (in the analytical model shown as cash flows) - Highly levered banks means debt has been acquired to finance capital investments. The return can be shown by the amount of cash inflows from the investments)

Leverage measures how much of the firm's total assets are financed by debt or equity. The most commonly leverage measures used are the debt / equity ratio and the debt / asset ratio. The study calculates leverage as Debt / Equity.

Capital investments dummy; it takes the value of zero (0) in the period before capital investments and the value of 1 in the period after capital investments.

e = is a random error term and takes care of other factors that affect financial operations which are not defined in the model.

β_1 β_2 β_3 =Beta values, provides the change in the outcome associated with a unit change in the predictor

In the regression analysis, we examine:

• $R2$; which – as a percentage represents the percentage of the variation in the outcome that can be explained by the model (Field 2003).

The F-test. This test is based on the ratio of the improvement due to the model and the difference between the model and the observed data. $F = MSM / MSR$. If the model is Good, then we expect the improvement in prediction due to the model to be large (greater than 1 at least) (Ibid.).

The t-statistic tests the null hypothesis that the value of ß is zero: therefore, if it is Significant we accept the hypothesis that ß value is significantly different from zero (Ibid.).

If the t-statistic is very large, then it is unlikely to have occurred by chance. As a general r ule, if this observed significance is less than 0.05, then the result reflects a genuine effect (Ibid.).

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Results and Findings

The general objective of the study was to establish the relationship between capital investments on one hand and financial performance on the other among commercial banks in Kenya.

4.2 General Information

The general information sought in the study included all the banks in each category i.e. Tier I and Tier II, market share, capital base, whether the banks' balance sheet contains capital investments in bonds, shares and subsidiaries among other investments, level of income, percentage return on investments, level of cash flows, other variables that explains financial performance and general risks that affect the banks operations.

4.2.1 Categories of banks, Level of Income and Market share

According to CBK bank supervision report 2011, there are 6 Tier one banks and 38 Tier II banks. It was easy to carry out a census survey on all the banks since the population was small. Data collection from the financial reports was done and regressed to get the results as discussed below. The key variables were profitability; return on investments and cash flows. Most of the banks i.e. 64% gross income lies below 10 billion while 36% lies above 10 billion. This indicates that the majority of the banks income is below Kenya shillings 10 billion.

Majority of the banks i.e. 74% according to the banking survey report 2011 have a market share of 0-3%, 8% of 4-7%, 16% of 8-11%, and 2% of between 12-15%.

4.2.2 Capital base

Table 4.1 Capital base

Capital base	Number	Percentage (%)
Below 1 billion	11	25
1bln – 10 billion	25	58
Above 10 billion	7	17
Total	**43**	**100**

Source: Author (2012)

Figure 4.1 Capital base
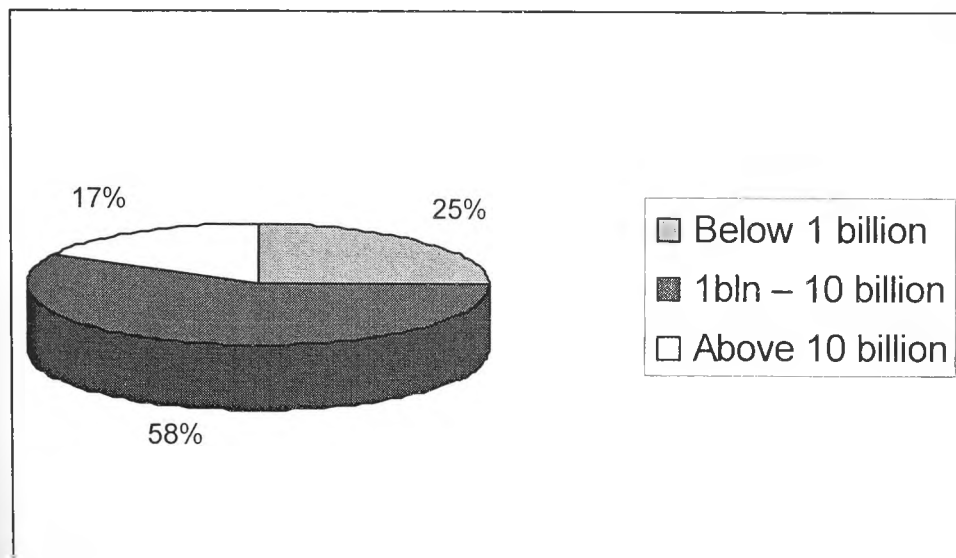
Source: Author (2012)

From the above 4.4 tables and figure 4.4, 58% of the banks have total capital of between Kenya shillings 1-10 billion, 25% below Kenya shillings 1 billion, while 17% above 10 billion shillings. This indicated that majority of the banks' capital base lies between 1-10 billion shillings.

4.2.3 Cash flows

The banks cash flow levels was essential in the study as most capital investments are measured by the level of initial cash outlays and the subsequent cash inflows over the lifetime of the project or investment.

Table 4.2 Cash flows

Level of cash flow	Number	Percentage (%)
Over 100 billion	0	0
1 billion- 100 billion	5	9
500M-1 billion	29	52
Below 500M	21	39
Total	55	100

Source: Author (2012)
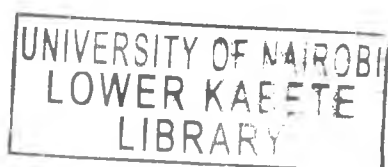
Figure 4.2 Cash flows
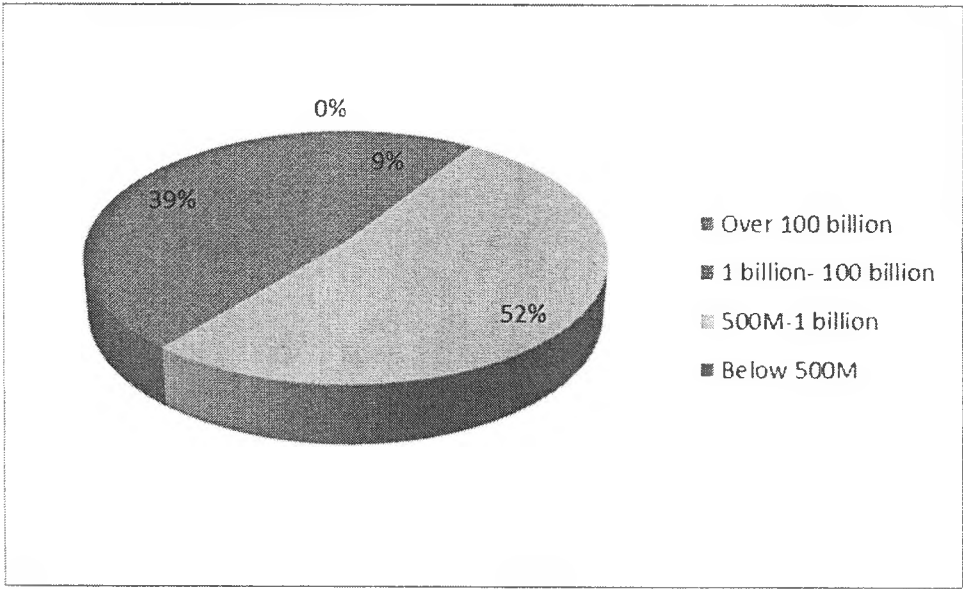
Source: Author (2012)

The table 4.2 and figure 4.2 indicates that none of the banks have cash flows of over 100 billion, 9% of between 1 billion to 100 billion, majority between 500M to billion at 52 % while 39% below 500M. This shows that majority of the banks cash flows lie between 500M to 1 billion. From the analysis, it serves to show that cash flows (liquidity) is a key indicator of financial performance as result of the capital invested.

4.2.4 Return on Investments

Table 4.3 Return on Investments

Return on investments (%)	Number	Percentage (%)
0-5	6	11
5-9	11	20
Above 10	38	69
Total	**43**	**100**

Source Author (2012)

Figure 4.3 Return on Investments
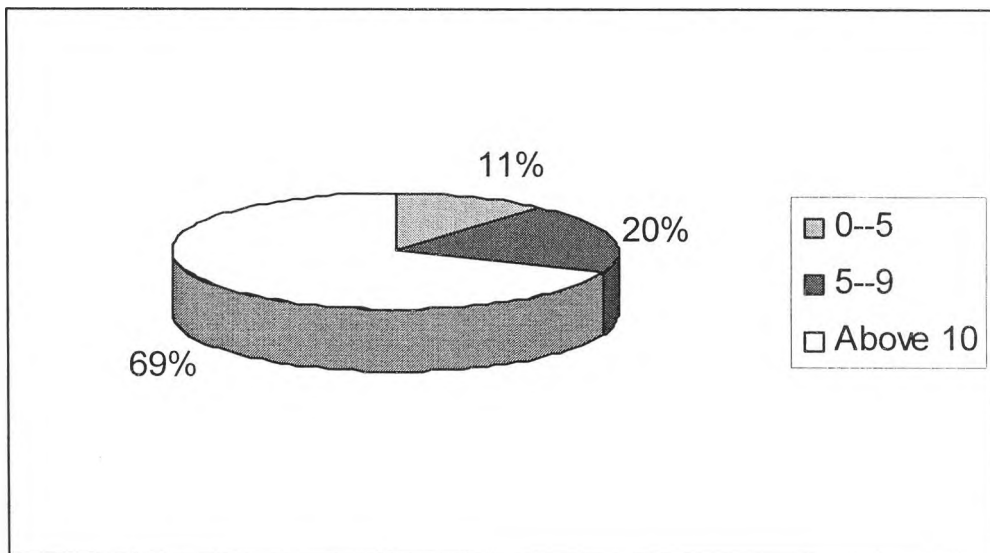
Source: Author (2012)

The above finding in table 4.3 and figure 4.3 shows the position of the respondent in the bank, 11% of the respondents were in the top management, and 20% of the respondents were in the middle level management while 69% were operational staff. This shows that majority of the respondents are operational staff.

4.2.5 Level of Capital Investments

Whether the banks undertakes capital investments.

Table 4.4 Level of Capital investments

Capital investments	Number	Percentage (%)
Yes	37	86
No	6	14
Total	**43**	**100**

Source Author (2012)

Figure 4.4 Level of Capital Investments
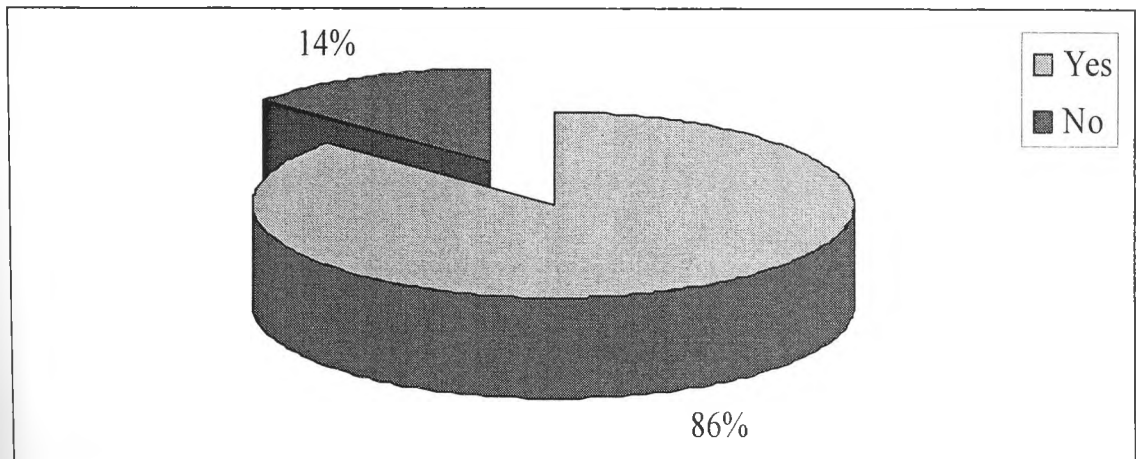
Source: Author (2012)

From table 4.4 and figure 4.4 above, 86% of the banks financial statements contains capital investments while 14% of the banks do not have but are in the process of acquiring some. This clearly shows that majority of the banks invest their capital in in other investments like capital investments.

4.2.6 Other Variables

Table 4.5 Other Variables

Other variables	Percentage (%)
Cash ratio	59
ROA	16
ROE	9
ROCE	2
Gearing ratios	14
Total	**100**

Source author (2012)

Figure 4.5 Other variables
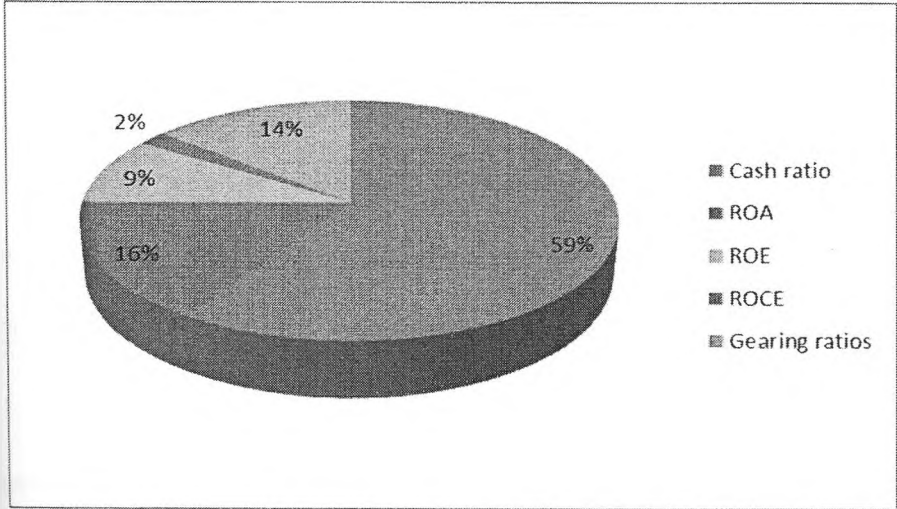
Source: Author (2012)

From table 4.5 and figure 4.5 above, the other variables that explain financial performance are Cash ratio at 59%, ROA at 16%, ROE at 9%, ROCE at 2% while

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gearing ratios at 14%. This indicates that Cash ratio explains financial performance more than the other variables while ROCE the least.

4.3 Descriptive Results

Descriptive results presented in table 4.6 reveal that the average Return on Investments (ROI) for the banks in the year 2006 was 16.49%. The average Return on Investments (ROI) for the banks in the year 2007 was 14.71%. The average Return on Investments (ROI) for the banks in the year 2008 was 15.55%. The average Return on Investments (ROI) for the banks in the year 2009 was 20.05%. The average Return on Investments (ROI) for the banks in the year 2010 was 20.72%. The overall Return on Investments (ROI) over the 5 year period was 20.72%.

Descriptive results presented in table 4.6 reveal that the average market to book value for the banks in the year 2006 was 3.1521. The average market to book value for the banks in the year 2007 was 1.9807. The average market to book value for the banks in the year 2008 was 1.4764. The average market to book value for the banks in the year 2009 was 1.7464. The average market to book value for the banks in the year 2010 was 1.0957. The overall average market to book value over the 5 year period was 1.8903.

Descriptive results presented in table 4.6 reveal that the average growth in assets for the banks in the year 2006 was 28.42%. The average growth in assets for the banks in the year 2007 was 31.13%. The average growth in assets for the banks in the year 2008 was 10.58%. The average growth in assets for the banks in the year 2009 was 26.65%. The

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average growth in assets for the banks in the year 2010 was -14.06%. The overall average growth in assets over the 5 year period was 16.54%.

Descriptive results presented in table 4.6 reveal that the average leverage for the banks in the year 2006 was 4.63. The average leverage for the banks in the year 2007 was 4.14. The average leverage for the banks in the year 2008 was 4.51. The average leverage for the banks in the year 2009 was 4.21. The average leverage for the banks in the year 2010 was 4.64. The overall average growth in assets over the 5 year period was 4.43.

Table 4.6 Descriptive Results

		N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
ROE	2006	16	.1649	.07414	.01981	.05	.32
	2007	16	.1471	.10269	.02745	-.08	.28
	2008	16	.1555	.08927	.02386	.00	.34
	2009	16	.2005	.10258	.02741	.01	.34
	2010	16	.2072	.07956	.02126	.05	.30
	Total	80	.1750	.09109	.01089	-.08	.34
Market price to book value	2006	16	3.1521	1.51820	.40576	.38	6.11
	2007	16	1.9807	1.00822	.26946	.53	3.78
	2008	16	1.4764	.78166	.20891	.44	3.15
	2009	16	1.7464	1.01648	.27167	.34	3.64
	2010	16	1.0957	.70289	.18786	.00	2.43
	Total	80	1.8903	1.23306	.14738	.00	6.11
Growth in current assets	2006	16	.2842	.34902	.09328	-.17	1.05
	2007	16	.3113	.42152	.11266	-.03	1.57
	2008	16	.1058	.17404	.04651	-.28	.28
	2009	16	.2665	.14833	.03964	.05	.61
	2010	16	-.1406	.49408	.13205	-.93	.37
	Total	80	.1654	.37583	.04492	-.93	1.57
Leverage	2006	16	4.6323	2.85757	.76372	.01	8.12
	2007	16	4.1375	2.80540	.74977	.01	8.07
	2008	16	4.5136	2.60894	.69727	.09	7.89
	2009	16	4.2052	2.25076	.60154	.05	7.15
	2010	16	4.6442	2.44038	.65222	.29	7.13
	Total	80	4.4265	2.53511	.30300	.01	8.12

A graphical representation of the trend for the average ROI is presented in figure 4.6 . The trend for the average ROI for the banks in the year 2006 indicated that there was a drop in the average ROE in the year 2007. However, an increase in the average ROE was observed in the year 2008. The highest rise in Average ROE was witnessed in the year 2010.

4.3.1 T-Test results

T-tests were conducted to test whether there were significant differences in the mean ROI before capital investments and after capital investments. Results in table 4.3 indicated that the mean ROI before Investments was 15.58% and the mean ROI after Investments was 20.39%. The difference between the two means was significant (-0.048%, p value =0.03).

T-tests were conducted to test whether there were significant differences in the mean market price to book value before capital investments and after capital investments. Results in table 4.3 indicated that the mean ROI before investments was 2.0231 and the mean market price to book value after investments was 1.4211. The difference between the two means was significant (0.78%, p value =0.01).

T-tests were conducted to test whether there were significant differences in the mean growth in assets before capital investments and after capital investments. Results in table 4.3 indicated that the mean growth in assets before investments was 23.38% and the

mean growth in assets after investments was 6.29%. The difference between the two means was insignificant (0.17%, p value =0.08).

T-tests were conducted to test whether there were significant differences in the mean leverage before investments and after investments. Results in table X indicated that the mean leverage before investments was 4.4278 and the mean leverage after investments was 4.4247. The difference between the two means was insignificant (0.00313%. p value =1).

Table 4.7: T-Test for capital investments versus financial performance

	Dummy	N	Mean	Std. Deviation	Std. Error Mean	Mean Difference	P value
ROI	Before Investments	42	.1558	.08756	.01351	-.04806	.030
	After Investments	28	.2039	.09014	.01704		
Market_price_to_book_value	Before Investments	42	2.2031	1.32349	.20422	.78202	.008
	After Investments	28	1.4211	.91932	.17373		.
Growth_in assets	Before Investments	42	.2338	.33627	.05189	.17082	.062
	After Investments	28	.0629	.41364	.07817		
Leverage	Before Investments	42	4.4278	2.69969	.41657	.00313	.996
	After Investments	28	4.4247	2.31442	.43738		

Regression analysis was conducted to empirically determine whether independent variables were a significant determinant of financial performance. Regression results in table 4.7 indicate the goodness of fit for the regression between independent variables

and dependent variable is satisfactory. An R squared of 0.52 indicates that 52% of the variances in ROI are explained by the variances in the independent variables. ANOVA results indicated that the overall model is significant. Thus implied that the independent variables did a good job at explaining financial performance.

4.4 Analytical Model

4.4.1 Correlation results

Correlation results in table 4.8 revealed that there was a positive and significant correlation between profitability, cash flows, return on investments and market price to book value averaged at ($r = 0.422$ and p value $= 0.000$). Results also indicate that the correlation between ROI and growth in assets was insignificant. The correlation between ROI, profitability, cash flows and leverage was positive and significant ($r = 0.448$ and p value $= 0.000$). The correlation between the variables under study and dummy was positive and significant ($r = 0.260$ and p value $= 0.03$)

Table 4.8: Correlation results

		Variables	Market price to book value	Growth In assets	Leverage	Dummy
Variables	Pearson Correlation	1	.422[**]	.011	.448[**]	.260[*]
	Sig. (2-tailed)		.000	.927	.000	.030
	N	70	70	70	70	70
Market_price_to_book_value	Pearson Correlation	.422[**]	1	.275[*]	.480[**]	-.313[**]
	Sig. (2-tailed)	.000		.021	.000	.008
	N	70	70	70	70	70
Growth In assets	Pearson Correlation	.011	.275[*]	1	.215	-.224
	Sig. (2-tailed)	.927	.021		.074	.062
	N	70	70	70	70	70
Leverage	Pearson Correlation	.448[**]	.480[**]	.215	1	.000
	Sig. (2-tailed)	.000	.000	.074		.996
	N	70	70	70	70	70
Dummy	Pearson Correlation	.260[*]	-.313[**]	-.224	.000	1
	Sig. (2-tailed)	.030	.008	.062	.996	
	N	70	70	70	70	70

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

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

4.4.2 The Model Results

Regression analysis was conducted to empirically determine whether variables under study were a significant determinant of the financial performance. Regression results in table 4.7 indicate the goodness of fit for the regression between independent variables and derivatives is satisfactory. An R squared of 0.52 indicates that 52% of the variances in the financial performance are explained by the variances in the independent variables.

Table 4.9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.631[a]	.52	.361	.07280

a. Predictors: (Constant), Dummy, Leverage, Growth_in assets,

Market_price_to_book_value

Anova statistics confirm these results since the reported probability was 0.000. The reported probability was less than the convectional probability of 0.05 (5%) significance level. Anova results indicated that the overall model is significant. This implied that the independent variables did a good job at explaining and predicting the financial performance among commercial banks in Kenya.

Table 4.10: ANOVA RESULTS

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.228	4	.057	10.759	.000[a]
	Residual	.344	65	.005		
	Total	.573	69			

a. Predictors: (Constant), Dummy, Leverage, Growth_in assets,

Market_price_to_book_value

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.228	4	.057	10.759	.000[a]
	Residual	.344	65	.005		
	Total	.573	69			

a. Predictors: (Constant), Dummy, Leverage, Growth_in assets,

Market_price_to_book_value

b. Dependent Variable: Financial performance

The relationship between market price to book value, leverage and dummy is positive and significant. (b1=0.033, p value 0.00, b3=0.009, p value 0.028, b4=0.070, p value 0.01) However, the relationship between growth in assets is negative and insignificant (b2= -0.019, p value, 0.438).

Table 4.11: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.048	.022		2.233	.029
	Market_price_to_book_value	.033	.009	.442	3.736	.000
	Growth_In _assets	-.019	.025	-.080	-.780	.438
	Leverage	.009	.004	.253	2.250	.028
	Dummy	.070	.019	.381	3.645	.001

a. Dependent Variable: Financial performance

Financial performance= 0.048+ 0.033Market Price to Book value -0.019Growth In

Assets + 0.009 Leverage + 0.070 Dummy

4.5 Summary and Interpretation of Findings

The information collected was from the financial statements and other journals and was mainly based on suggestions, opinions from market leaders and comments from CEOs of all the banks listed at the NSE about the banks performance. These were mainly as footnotes in the financial statements. From the analysis of the research, 100% of the banks were analyzed and relevant information on the subject of the study taken and tabulated. The data mainly centered on the following variables namely Net profit/profitability, return on assets, return on investments, cash flows. Other variables which affect the subject of study i.e. capital investments were also analyzed albeit to lesser extent. In conclusion, most banks income comes from other investments like Government bonds, floating notes, shares, treasury bills other than loans. These investments contributes largely to the banks income hence their proper analysis should be undertaken.

The study findings indicated that the average Return on Assets (ROA), ROE, income, cash flows and return on investments i.e. variables under study for the banks in the year 2006 was 4%. The same was 5.5% in the year 2007, 6% in the year 2008, 6.2% in the year 2009 and 7.5% in the year 2010. The overall Return on Assets (ROA), return on investments, cash flows and profitability over the 5 year period was 15.55%.

The findings further revealed that the average market to book value for the banks was 4 in the year 2006, 3.52 in the year 2007, in 2008 it was 2.63, 3.6523 in year 2009 and

5.976 in the year 2010. The overall average market to book value over the 5 year period was 2.657.

From the study it was also revealed that the average growth in assets for the banks in the year 2006 was 28.42%. The average growth in assets for the banks in the year 2007 was 31.13%. The average growth in assets for the banks in the year 2008 was 10.58%. The average growth in assets for the banks in the year 2009 was 26.65%. The average growth in assets for the banks in the year 2010 was 36%. The overall average growth in assets over the 5 year period was 16.54%.

In addition the findings revealed that the average capital investments for the banks in the year 2006 was Kenya shillings 600M. The average capital investments for the banks in the year 2007 and 2008 was Kenya shillings 500M and 1 billion respectively. The average capital investments for the banks in the year 2009 was 705M. The average capital investments for the banks in the year 2010 was 800M. The average growth in capital investments over the 5 year period was 15% translating into 500M.

From the findings, the trend for the average ROA, ROE and key profitability ratios for the banks was increasing. There was slight increase in the year 2007. The results indicated that there was a drop in the average ROA, ROE and key profitability ratios in the year 2008. However, an increase in the ratios was observed in the year 2009 and year 2010.

From the findings it was also revealed that a decrease in market price to book ratio was observed in year 2008 and 2009. However, a slight increase was observed in the year 2010. The same is to increase as we move forward. It was also revealed from the findings that a slight increase in average growth in assets ratio was observed in year 2008. However a decrease was observed in the year 2009 followed by an increase in the year 2010. Study findings further indicated that there was a sharp increase in the banks gross income from year 2007 to year 2010. This is attributed to the growth in capital investments. Most of the banks gross income (64%) was below Kenya shillings 10 billion averaging to about Kenya shillings 5.5 billion while 36% was over Kenya shillings 10 billion. The growth in gross income if projected to increase from year 2010 onwards.

The study further revealed that there was a positive and significant correlation between ROA, ROE, ROI, profitability ratios and other variables under study and market price to book value. This also implies that there is a positive relationship between capital investments and growth in the total banks assets. Results also indicate that the correlation between ROI and growth in assets was significant. The results further indicate that the correlation between cash flows and growth in assets was significant. The correlation between ROI and leverage was positive and significant (r=0.556 and p value =0.000).

In addition, Study findings further indicated that most banks' total capital lied between Kenya shillings 1-10 billion and was quite high between the years 2009-2010. The total capital base for the banks averaged at Kenya shillings 30 billion. There was an increasing trend in the capital to total assets for the banks from year 2006 to 2010 year 2010 being

the highest. This is attributed to the growth in the capital. Hence most banks total capital lies between Kenya shillings 1- 10 billion at 58%, then below Kenya shillings 1 billion at 25% and lastly above 10 billion at 17%. Capital is vital if any capital investments are to be undertaken hence banks with a huge capital base invest more than the ones with low capital base.

Regression analysis was conducted to empirically determine whether independent variables were a significant determinant of financial performance and growth in assets. Regression results in table 4.2 indicate the goodness of fit for the regression between independent variables and dependent variable is satisfactory. An R squared of 0.398 indicates that 39.8% of the variances in ROE are explained by the variances in the independent variables. ANOVA results indicated that the overall model is significant. This implies that the independent variables did a good job in explaining capital investments and in turn financial performance.

The relationship between market price to book value, leverage, return on investments, cash flows, profitability and dummy is positive and significant. ($b1=0.033$, p value 0.00, $b3=0.009$, p value 0.028, $b4=0.070$, p value 0.01) However, the relationship between growth in assets is negative and insignificant ($b2=-0.019$, p value, 0.438).

To investigate how capital investments affects profitability, the study found that 34% of the banks level of income comes from capital investments while 76% comes from interest income form loans given to customers. This clearly shows that there is a positive relationship between other investments and banks growth in the market. Much of the

expansion seen in the banks comes from capital investments in projects which form a big portion of their balance sheets. Profitability can also be measured by return on assets, return on equity and return on equity which are clearly shown in the banks statements of income.

This is a key ratio and forms the basis upon which banks can measure the return versus cost when undertaking capital investments. From the study all the banks returns on their investments increased significantly within the years under study. This directly shows that the financial performance of the banks increased over the years under study. Hence it serves to reignforce the fact that there is a positive relationship between capital investments and financial performance.

Liquidity of the banks is key to their operations. Without cash, a bank cannot operate. The day to day operations depend on the available cash. To undertake massive capital investments requires initial capital outlay. From the analysis using the banks cash flow statements during the years under study, the cash and cash equivalents increased. This serves to show that, as capital is invested, cash inflows are expected to increase over the subsequent years after the initial capital outlay or cash outflow.

Other variables were also analyzed namely return on assets, cash ratios, return on equity, gearing ratios, total assets among others. These other variables also explain the positive relationship between capital investments and financial performance albeit to a lesser extent.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Chapter one discussed the problem statement and the objectives of the study. The study aimed to investigate the relationship between capital investments and financial performance among commercial banks in Kenya.

Chapter two discussed the literature review and the various opinions of different people, the theories backing the study, the empirical studies supporting the research project and the actual empirical evidences that had been revealed by earlier researchers in this area.

Chapter three presented the research methodology which consists of the kind of research design the study has adopted, the population and the sampling size, in this case, all the banks in Kenya were studied, also the kind of data collected is covered in this area and the data analysis tools used in the project is also covered in this chapter.

Chapter four presented the findings. The general objective of the study was to establish the relationship between capital investments and financial performance among commercial banks in Kenya. This study focused on the use of simple financial indices as performance indicators. The following research questions guided the study: What is the current level of capital investments in a particular bank? What is the relationship between capital investments and financial performance? A census survey design was used for the study. The population comprised of all commercial banks in Kenya as at year

2010 which numbers to 44 although one bank was excluded due to non-trading hence the population was scaled down to 43 banks. Values corresponding to all the explanatory variables i.e. net profit (profitability) return on investments and cash flows were taken. The other variables like return on assets were also considered albeit to a lesser extent. The study used secondary data which was collected from the banks financial statements sent and compiled by the CBK. Data was analyzed and summarized in frequencies and percentages. Spearman's Rank Correlation Coefficient was used to determine the relationship between the study variables. The findings have been presented in tables and charts for easier interpretation.

All the banks financial statements analysed in this study showed that all banks undertake massive capital investments like government bonds, shares etc. which impact significantly on their income. Tier I banks exhibit more of capital investments than most Tier II banks may be due to huge capital base. 100% of the banks had carried out massive capital investments to a very great extent. This shows that much of the shareholders money go to capital investments while the deposits from clients go into loans. This shows that majority of the banks income comes from other investments other than interest income from the loans.

The above fact is reignforced by the increase in the return on investments ratio of the banks over the years. The banks have taken diversification to a level higher maybe to curb concentration risk. Another interesting fact is that most banks are turning global by opening subsidiaries in other countries within the region. This is termed as diaspora

banking. This also requires huge capital outlay. The returns as shown in the income statements are quite high. 70% of the Tier II banks have turned global while 100% of the Tier I banks have turned global.

Proper project appraisals, proper resource allocation, good use of the appraisal techniques especially NPV among other factors can help reduce adverse selection of projects and moral hazard and to a large or very large extent help increase a bank's profitability. On the other hand, access to centralized information on investments, can help to a small extent if at all on reducing the risks associated with investments hence increase on the return on investments.

5.2 Conclusions

The relationship between capital investments and financial performance of commercial banks is positive. This was clearly explained by a number of variables namely profitability, return on assets, return on investments, cash flows among others. The relationship between capital investments and level of income/profitability ranked highest followed by cash flows then return on investments. Other variables like return on assets were considered to a lesser extent. Each variable, however, have a strategic significance to the Commercial Banks performance and would be useful in explaining level of investments. A commercial bank would decide whether to increase or reduce level of capital investments by the use of the variables discussed in the preceding paragraphs. In addition, another way of adjusting for risk is to modify the return standards to include a risk premium where warranted. In a sense, the reasoning behind this is quite simple the

greater the risk, the higher the return desired from the investment. This approach is intuitively attractive to business decision makers, because the process parallels the way we think about personal investments.

Thus, investments in businesses subject to wide profit swings and competitive pressures would command a premium above the return standard, while with fairly predictable businesses a less-than-average return may be acceptable. The concept rests on the assumption that a diversified company can derive a range of standards that, in combination, represent an appropriate return to the shareholders and also fairly reflect the relative risk of the individual lines.

T-tests were conducted to test whether there were significant differences in the mean ROI before capital investments and after capital investments. Results in table 4.3 indicated that the mean ROI before Investments was 15.58% and the mean ROI after Investments was 20.39%. The difference between the two means was significant (-0.048%, p value =0.03).

T-tests were conducted to test whether there were significant differences in the mean market price to book value before capital investments and after capital investments. Results in table 4.3 indicated that the mean ROI before investments was 2.0231 and the mean market price to book value after investments was 1.4211. The difference between the two means was significant (0.78%, p value =0.01).

T-tests were conducted to test whether there were significant differences in the mean growth in assets before capital investments and after capital investments. Results in table 4.3 indicated that the mean growth in assets before investments was 23.38% and the mean growth in assets after investments was 6.29%. The difference between the two means was insignificant (0.17%, p value =0.08).

T-tests were conducted to test whether there were significant differences in the mean leverage before investments and after investments. Results in table X indicated that the mean leverage before investments was 4.4278 and the mean leverage after investments was 4.4247. The difference between the two means was insignificant (0.00313%, p value =1).

5.3 Policy Recommendations

The study presented recommendations for practice and for policy. The study recommended that capital investments among commercial banks should be continued and capital should be invested in projects that maximize returns. The governance structures need to be put in place so as to enhance returns at the stock exchange and in turn maximize returns to the commercial banks.

The study also suggest that despite concerns that capital investments among banks entail new market risks that need regulatory intervention, the profitability and generally performance of the banks has not changed so much. However, market risk does vary considerably across the banks. Therefore a better way of assessing the risks associated

with capital investments and how these risks affect the banking sector in general must be undertaken.

Our evidence suggests that capital investments does improve the performance of the banks in terms of their gross income. We recommend that this study be carried out further and the whole banking industry to be studied under two categories listed and not listed. This should also extend to other firms listed at the NSE and not just the banking industry. From a broader perspective, we note that there was a great improvement in most ratios like the ROI, ROA, ROE, profitability ratios among other variables that were considered in the study. Most items on the balance sheets shoed an increasing trend during the study period.

Policy makers should undertake to understand why capital investments among commercial banks is not as robust in Kenya as compared to other developed countries and what should be done to improve capital investments to maximize returns.

5.4 Limitations of the study

One of the limitations of the study is that capital investments is new in the banking industry in Kenya and is an ongoing process and most banks are introducing other ways of investing their capital to maximize returns. So there could be a lot of information about capital investments that was not captured in the study.

Another limitation relates to the operationalization of capital investments. The assumption is that all banks engage in capital investments which in the actual sense is not the case. To guarantee the consistency and availability of the data, the analysis is limited to the banking sector. Data are derived from the bank's annual reports sent to the CBK monthly.

Lastly, is on the type of research design used. This research was quantitative and failed to capture qualitative issues. Perhaps an interview with the bank officers on how they perceive the derivatives and its effects on the banks performance. Some hidden information would have been brought to the fore.

5.5 Suggestions for further study

The study suggests that another research be done on other independent variables that explains financial performance under capital investments and capital budgeting. All the aspects of capital investments in the banking sector should be studied so that better results can be obtained.

This study covers a shorter period. A study should be done covering a longer period say 10 years which may give different results than the one obtained in this study. Also, Commercial banks should put more emphasis on investment and project appraisal for a proper cost benefit analysis. Project appraisal is key in any capital investment process hence another study can be done on project appraisal and monitoring and control aspects.

In addition, the study also suggests that further studies should be conducted on long-term and short term capital investments for the better option to be selected which maximizes the shareholders' value.

The study also suggests that broader areas of study like the economy in general and a much bigger population be covered so that bigger and better results can be obtained on other variables that can explain whether there is a relationship between capital investments and financial performance or economic performance . This study was only limited to the banking sector.

In addition, the study suggests that the qualitative aspects must also be introduced so that first hand information can be obtained from the bankers and even management of the various banks. Questionnaires must be administered and one on one interview with bank officers be held so that the qualitative aspects can also be measured. This study centered more on quantitative aspects only and failed to capture the qualitative aspects.

Finally, capital investments among Kenyan banks should also be compared to other banks in the developed and un developed economies. Policy makers must come up with better policies governing capital investments.

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APPENDICES

APPENDIX I: Banking Sector Market Share

	Large Peer Group > 5%	Market size Index	Total Capital
1	Kenya Commercial Bank Ltd	14.52%	45,163
2	Equity Bank Ltd	9.98%	35,047
3	Barclays Bank of Kenya Ltd	8.90%	29,223
4	Co-operative Bank of Kenya Ltd	8.41%	20,972
5	Standard Chartered Bank (K) Ltd	7.74%	20,571
6	CFC Stanbic Bank Ltd	5.10%	1 0,150
	Medium Peer Group > 1% & < 5%		
7	I&M Bank Ltd	4.09%	1 3,856
8	Commercial Bank of Africa Ltd	3.98%	9,935
9	Citibank N.A.	3.96%	1 5,112
10	Diamond Trust Bank (K) Ltd	3.77%	1 0,366
11	NIC Bank Ltd	3.70%	9,900
12	National Bank of Kenya Ltd	3.59%	1 0,456
13	Bank of Baroda (K) Ltd	1.83%	4,936
14	Bank of Africa Kenya Ltd	1.70%	4,672
15	Prime Bank Ltd	1.64%	3,742
16	Chase Bank (K) Ltd.	1.49%	2,969
17	Housing Fin. Co. of Kenya Ltd.	1.48%	4,782
18	Family Bank Ltd	1.34%	3,324
19	Imperial Bank Ltd	1.27%	3,685
20	Bank of India	1.17%	3,378
21	Ecobank Kenya Ltd	1.02%	1,726
	Small Peer Group <1%		
22	Fina Bank Ltd	0.69%	1,536

23	Consolidated Bank of Kenya Ltd	0.68%	1,435
24	African Banking Corporation Ltd	0.63%	1,702
25	Gulf African Bank Ltd	0.60%	1,319
26	Giro Commercial Bank Ltd	0.60%	1,579
27	Equatorial Commercial Bank Ltd	0.57%	1,204
28	Fidelity Commercial Bank Ltd	0.50%	1,017
29	K-Rep Bank Ltd	0.47%	1,331
30	Development Bank of Kenya Ltd	0.46%	1,562
31	Trans-National Bank Ltd.	0.44%	1,743
32	Habib Bank A.G Zurich	0.44%	1,280
33	Guardian Bank Ltd	0.44%	1,065
34	First Community Bank Ltd	0.41%	837
35	Victoria Commercial Bank Ltd	0.40%	1,252
36	Habib Bank Ltd	0.32%	1,062
37	Oriental Commercial Bank Ltd	0.31%	1,290
38	Credit Bank Ltd	0.28%	958
39	Paramount Universal Bank Ltd	0.28%	1,026
40	Middle East Bank (K) Ltd	0.26%	1,100
41	Jamii Bora Bank Ltd	0.24%	1,527
42	UBA Kenya Bank Ltd	0.16%	728
43	Dubai Bank Kenya Ltd	0.15%	712
44	Charterhouse Bank Ltd	0.00%	-

Market share index is the composite of net assets, deposits, capital, number of loan accounts and number of deposit accounts

Source: (CBK 2011)

APPENDIX II: List of Commercial Banks in Kenya

1. African Banking Corporation, Nairobi

2. Bank of Africa Kenya, Nairobi

3. Bank of Baroda, Nairobi

4. Bank of India, Nairobi (foreign owned)

5. Barclays Bank of Kenya. Nairobi (listed on NSE)

6. CFC Stanbic Bank, Nairobi (listed on NSE)

7. Charterhouse Bank Ltd, Nairobi

8. Chase Bank Ltd, Nairobi

9. Citibank, Nairobi (foreign owned)

10. City Finance Bank, Nairobi

11. Co-operative Bank of Kenya, Nairobi

12. Commercial Bank of Africa, Nairobi

13. Consolidated Bank of Kenya Ltd, Nairobi (gov)

14. Credit Bank Ltd, Nairobi

15. Development Bank of Kenya, Nairobi

16. Diamond Trust Bank, Nairobi

17. Dubai Bank Kenya Ltd, Nairobi

18. Equatorial Commercial Bank Ltd, Nairobi

19. Equity Bank, Nairobi

20. Family Bank, Nairobi

21. Fidelity (Commercial) Bank Ltd, Nairobi

22. Fina Bank Ltd. Nairobi

23. First Community Bank Ltd, Nairobi

24. Giro Commercial Bank Ltd, Nairobi

25. Guardian Bank, Nairobi

26. Gulf African Bank Ltd, Nairobi

27. Habib Bank A.G. Zurich, Nairobi (foreign owned)

28. Habib Bank Ltd, Nairobi (foreign owned)

29. Housing Finance Co. Ltd, Nairobi (gov) (listed on NSE)

30. Imperial Bank, Nairobi

31. I&M Bank Ltd (former Investment & Mortgages Bank Ltd), Nairobi

32. K-Rep Bank Ltd, Nairobi

33. Kenya Commercial Bank Ltd, Nairobi (gov) (listed on NSE)

34. Middle East Bank, Nairobi

35. National Bank of Kenya, Nairobi (gov)

36. National Industrial Credit Bank Ltd (NIB Bank), Nairobi (listed on NSE)

37. Oriental Commercial Bank Ltd, Nairobi

38. Paramount Universal Bank Ltd, Nairobi

39. Prime Bank Ltd, Nairobi

40. Southern Credit Banking Corp. Ltd, Nairobi

41. Standard Chartered Bank , Nairobi (listed on NSE)

42. Trans-National Bank Ltd, Nairobi

43. UBA Kenya Bank Ltd., Nairobi

44. Victoria Commercial Bank Ltd, Nairobi

Source: (CBK, 2010)