FINANCIAL ASSET ALLOCATION AND THE FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF A MASTER OF BUSINESS ADMINISTRATION (MBA), UNIVERSITY OF NAIROBI

AUGUST, 2013

DECLARATION

Declaration of the Study

I declare that this research project is my original work and has never been presented to any other University for assessment or award of a degree.

Signature…….Date……

Simon Kisee Mayoli D61/63247/2010

This research project has been submitted with my authority as the university supervisor.

Signature……Date…….

Dr. Josiah Aduda

University of Nairobi, School of Business

DEDICATION

I dedicate this project to my wife Susan, child Cheryl and parents for their moral support during the period I undertook the project.

ACKNOWLEDGEMENT

I sincerely acknowledge the Almighty God for the knowledge and wisdom belongs to Him. He listened to my prayers during the time I pursued my Master of Business Administration (MBA). Were it not for His grace, nothing would have been achieved.

I am deeply indebted to my supervisor Dr. Josiah Aduda for his support and guidance during the time I was conducting my research. His input and direction greatly assisted me in coming up with this research project.

I wish to acknowledge the contribution of University of Nairobi fraternity especially the library staff, MBA coordination office and moderator to the success of this project.

I would like to convey my sincere appreciation to my senior at Bank of Baroda (K) Ltd Mr. David Kinuthia (Manager, Treasury Department) for his understanding and granting me permission to consult my supervisor on various occasions. I wish to further thank my colleagues in treasury department.

Lastly, I wish to convey my appreciation to my family, parents, brother and sisters for their moral support during the project period. My special thanks go to my father Mr. Alfred Mayoli and my mother Mrs. Josephine Mayoli. To all those I did not mention but were directly or indirectly involved in accomplishing my study I am deeply indebted.

ABSTRACT

The aim of this study was to establish the effect of financial assets allocation on the performance of commercial banks in Kenya. Cross-sectional and time series were combined between the financial years 2000 to 2012 to establish the relationship between financial asset allocation and profitability of commercial banks in Kenya. The researcher made use of secondary data on financial asset allocation, macro-economic factors and return on assets from 2000-2012. A regression analysis was conducted in order to be able to establish the relationship.

It can be concluded from the study that investments in securities offered the highest returns other factors held constant in the period under review, these securities are perceived to be high risk-high returns assets class. Investments in securities among commercial banks are very low representing less than 1% of asset allocation. Most banks are risks averse hence are not attracted by risky assets. In the period under review there was tremendous development of capital markets in Kenya. Advances represented the highest percentage of asset allocation at 51.90% to total assets among commercial banks in Kenya. High lending rates offered by commercial banks in Kenya have resulted to increase in non-performing loans and low economic growth.

The study recommends that the government through the Central Bank of Kenya should further deepen the financial market and incorporate derivatives this will not only ensure high returns liquid assets but also mitigate risk. Introduction of options in our financial market particularly stock market will enable commercial banks acquire high-returns and low risk assets. This will cushion commercial banks in low lending and government securities yields. In order for the commercial banks to lend at affordable rates and stimulate economic growth the study recommends an introduction of tax on lending at 5% above the Central Bank Rate.

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LIST OF ABBREVIATIONS

APT : Arbitrage Pricing Model

CAPM : Capital Asset Pricing Model

CMA : Capital market authority

GDP : Gross Domestic Product

MBA : Master of Business Administration

MPT : Modern Portfolio Theory

NSE : Nairobi stock exchange

ROA : Return on Assets

ROE : Return on Equity

SPSS : Statistical packages for social sciences

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

The role of financial system in any country is to aggregate capital from surplus source and allocates the resources to deficit units through formal and informal channels. Financial markets provide the mechanism that links surplus to finance deficits units with additional options. The financial system comprises of numerous commercial banks, non-bank financial institutions, a range of insurance companies, and a stock exchange (Faure, 1987).

Jao (1976) puts it, this role of money and finance in economic development has been examined by economists from different angle and in various degree of emphasis. In particular, the writings of Gurley and Shaw (1967) and Goldsmith (1969) stress the role of financial intermediation by both banks and non-bank in the savings investment process, where money, whether defined narrowly or broadly, forms a wide spectrum of financial assets in the portfolio of wealth-holders.

Treasury management is highly important part of corporate strategy, as it means implementing the philosophy of cash management at the treasury department. A direct link is established between treasury management and the concepts of liquidity and profitability. The treasury department ceases to be considered merely as a cost centre and becomes a profit centre, as for other departments, which implies an active, autonomous, independent concept of corporate liquidity management. (Journal of Money, investment and Banking-issue 20, (2011)

According to Wagacha (2001), capital markets are essential part of the financial sector of modern economies and more so for growing economies. They provide an avenue for alternative savings tools to savers, banks and non- bank sources of financing for enterprises. Thus, capital markets promote economic growth through enhanced savings mobilization. He concluded that a well-developed capital market promotes economic growth through increased savings mobilization, access to foreign savings, spreading of financial risks, help the government finance their deficits while reducing the fiscal pressures of debt redemption by the maturities of the securities, and a facilitating role in translating savings to investments.

1.1.1 Financial Asset Allocation

Reilly and Brown (1997), defines asset allocation as the process of deciding how to distribute an investor's wealth among different countries and asset classes for purposes of investment. This asset allocation is based on investor's policy statement and it contributes to the performance of an investment. A policy statement includes investor's goal/ objectives, constraints, and investment guidelines. They are developed to determine the overall investment strategy. It does not indicate specific securities to purchase and when they should be sold; they should provide guidelines as to the asset classes that should be included in the portfolio and the relative proportions of the investor's fund that should be invested in each class.

There are two types of asset allocation strategies namely: strategic and tactical asset allocation.

Strategic asset allocation refers to how portfolio funds will be divided given the treasury manager's long-term forecasts of expected returns, variance and covariance (Sharpe 1996). According to Loft house (2001), strategic weights should be set based on: capitalization where all investors should hold the same risky portfolio the market portfolio and should vary their holding of a risk- free asset to obtain the risk-return trade-off that they desire; or following the median manager that is doing what others are doing; or use of mean-variance optimization where an efficient frontier is calculated and then an efficient portfolio is chosen; or even asset- liability modeling in this the basic idea is to project the assets and liabilities of an institution to see how they might develop in relation to each other under a number of different conditions. Many treasury managers are therefore in the position that they manage assets that are intended to meet specific liabilities.

Tactical asset allocation on the other hand refers to how the funds are to be divided at any particular moment given the investors short-term forecasts. The decision determines what deviations based on current market valuations should be made from the strategic asset allocation. It will take place within ranges around the strategic weights (Loft house, 2001). Van Horne (1997) observes that the process of asset allocation allows for the formation of an efficient set and this allows the investment manager to invest in those securities that form the optimal portfolio. Reilly and Brown, (1997) also observe that financial asset allocation decisions determine to a great extent both the returns and the volatility of the portfolio.

The number of units that back the portfolio of securities held in the fund is fixed. The number of shares outstanding can be altered only through a new formal issue of the funds securities just like shares of a company listed on the stock exchange. Prices of closed end funds shares reflect the relative supply of and demand for shares. There can be a substantial difference between the net asset value and the per share value at which the closed end funds should actually trade (Jacob and Pettit, 1998). According to Jacob and Pettit, 1998 the funds continually issue and redeem shares at a price that reflect the net asset value of the portfolio held by the fund.

1.1.2 Financial Performance of Commercial Banks in Kenya

Commercial banks play a vital role in the economic resource allocation of countries. They channel funds from depositors to investors continuously. They can do so, if they generate necessary income to cover their operational cost they incur in the due course. In other words for sustainable intermediation function, banks need to be profitable. Beyond the intermediation function, the financial performance of banks has critical implications for economic growth of countries. Good financial performance rewards the shareholders for their investment. This, in turn, encourages additional investment and brings about economic growth. On the other hand, poor banking performance can lead to banking failure and crisis which have negative repercussions on the economic growth.

Thus, financial performance analysis of commercial banks has been of great interest to academic research since the Great Depression Intern the 1940's. In the last two decades studies have shown that commercial banks in Sub-Saharan Africa (SSA) are more

profitable than the rest of the world with an average Return on Assets (ROA) of 2 percent (Flamini et al., 2009).

The performance of commercial banks can be affected by internal and external factors (Al-Tamimi, 2010; Aburime, 2005). These factors can be classified into bank specific (internal) and macroeconomic variables. The internal factors are individual bank characteristics which affect the bank's performance. These factors are basically influenced by the internal decisions of management and board. The external factors are sector wide or country wide factors which are beyond the control of the company and affect the profitability of banks.

Despite the good overall financial performance of banks in Kenya, there are a couple of banks declaring losses (Oloo, 2011). Moreover, the current banking failures in the developed countries and the bailouts thereof motivated this study to evaluate the financial performance of banks in Kenya.

Thus, to take precautionary and mitigating measures, there is dire need to understand the performance of banks and its determinants.

Most studies conducted in relation to bank performances focused on sector-specific factors that affect the overall banking sector performances (Chantapong, 2005; Olweny and Shipho, 2011 and Heng et al., 2011). Nevertheless, there is a need to include the macroeconomic variables. Thus, this study has incorporated key macroeconomic variables (Inflation and GDP) in the analysis. Moreover, this study examined whether

ownership identity has influenced the relationship between bank performance and its determinants.

The determinants of bank performances can be classified into bank specific (internal) and macroeconomic (external) factors (Al-Tamimi, 2010; Aburime, 2005). These are stochastic variables that determine the output. Internal factors are individual bank characteristics which affect the banks performance. These factors are basically influenced by internal decisions of management and the board. The external factors are sector-wide or country-wide factors which are beyond the control of the company and affect the profitability of banks. The overall financial performance of banks in Kenya in the last two decade has been improving. However, this doesn't mean that all banks are profitable, there are banks declaring losses (Oloo, 2010). Studies have shown that bank specific and macroeconomic factors affect the performance of commercial banks (Flamini et al. 2009). In this regard, the study of Olweny and Shipho (2011) in Kenya focused on sector-specific factors that affect the performance of commercial banks. Yet, the effect of macroeconomic variables was not included.

Performance evaluation is concerned with two issues: (1) determining whether the treasury manager, added value by outperforming the established benchmark and (2) determining how the treasury manager achieved the calculated return. Did the treasury manager achieve the return by market timing, by buying undervalued stocks, by buying low capitalization stocks by overweighing specific industry? Performance evaluation

requires the determination of whether a treasury manager achieved superior performance by skill or luck (Bruno, S. 1999).

1.2 Statement of the Problem

Gitman and Joehnk (2002), defines investment management as the process of managing investment funds to achieve specific objectives. They observe that investment process emphasizes alternative investments and valuation assumptions.

Treasury managers of commercial banks can invest in foreign exchange derivatives or in financial assets. For the treasury managers to achieve their investment objectives, selection of the investment is by undertaking fundamental analysis on macro-economic and micro-economic factors. This will help determine the real worth of a firm at both present and in the future.

Several researches have been carried out on institutional investors where Mwobobia (2004) carried out a survey of factors that investment management companies consider when making investment decisions, Mugo (1999) studied factors that institutional investors consider when making investment in shares quoted at NSE, Gitu (2003) studied factors affecting the equity allocation decisions made by trustees and treasury managers of pension scheme portfolios in Kenya and Kamanda (2001) carried an empirical evaluation of equity portfolios held by insurance companies in Kenya. One of the common conclusions identified from all these researches is that before any investment decision factors identified in finance literature are considered. These factors range from economic, company, social to general factors. Mugo in her research

observed that the relevance of the factors is however different as insurance company and commercial banks consider company factors more important while retirement benefit schemes consider industry factors more relevant.

However, according to Loft house (2001), institutional investors should not be thought as homogeneous groups. Different types of institutional investors face different tax regimes, different regulatory constraints (such as solvency ratios for insurance companies and minimum funding requirements for pension funds) and different horizons. Van Horne (1997) observes that different financial instruments have different levels of risk and in order for them to compete for funds these instruments must provide different yields. Securities have different characteristics in default risk, marketability, taxability and embedded options, which account for the different levels of risk and hence different expected return for the investors.

The investigation of asset allocation decision by treasury managers and performance of commercial banks using data on the Kenyan industry is an area of very limited research activity. Jerop, 2007 in her study focused only on performance of unit trusts in Kenya and observed that equity fund being the most aggressive of the funds have a high risk commensurate with high returns. They are popular among unit trusts investors as they comprise over 50% of the total unit funds held.

The study therefore intends to assess financial asset allocation by treasury managers and whether their decision influences the performance of commercial banks profitability.

This researcher thus is feeling that no study has been carried out on the financial asset allocation by treasury managers and the performance of commercial banks in Kenya.

Therefore a research gap exists that need to be filled by doing a thorough survey on the asset allocation by treasury managers and the performance of commercial banks in Kenya. Traditionally stock holding, treasury managers hold stocks that beat the market portfolios by almost enough to cover their expenses and transaction costs. It's clear then that bank's treasury holding of cash and bonds, is presumably to maintain liquidity in the face of uncertain investor inflows and redemptions.

1.3 Objectives of the Study

i. The objective of this study is to establish the financial asset allocation by commercial banks in Kenya.
ii. The overall objective of this study is to evaluate the impact of financial asset allocation on the financial performance of commercial banks in Kenya.

1.4 Significance of the Study

The Bank shareholders and Management

The study will be useful to the shareholders as they will know whether treasury managers add value to their invested capital. They will establish whether commercial banks are riskier than the market index. The study will be of importance to management since they can tell the relationship between risk-adjusted returns and other risk factors.

Scholars and Researchers

The study will form a basis for further research to the academicians and other interested bodies .The scholars and researchers who would like to debate or carry out more studies on whether the financial asset allocation influence profitability of commercial banks based on the risk-return trade off.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature review is any research study which provides the scholarly background needed for the subject under study. The main purpose of literature review is to determine what has been done already related to the research problem being studied. A detailed knowledge of what has been done helps the researcher to: avoid unnecessary and unintentional duplication; form the framework within which the research findings are to be interpreted; and demonstrate his or her familiarity with the existing body of knowledge (Emory, 1985). This chapter begins by addressing the theories guiding this study, it then goes ahead to discuss asset allocation and performance of commercial banks.

2.2 Theoretical evidence

2.2.1 Arbitrage pricing theory

Arbitrage pricing theory is a general theory that entails asset allocation of asset and pricing that holds that the expected return of a financial asset can be modeled as a linear function of various macro-economic factors or theoretical market indices, where sensitivity to changes in each factor is represented by a factor-specific beta coefficient.

The model-derived rate of return will then be used to price the asset correctly - the asset price should equal the expected end of period price discounted at the rate implied by the model. If the price diverges, arbitrage should bring it back into line. The theory was proposed by the economist Stephen Ross in 1976. The APT was a revolutionary model

because it allows the user to adapt the model to the security being analyzed. And as with other pricing models, it helps the user decide whether a security is undervalued or overvalued and so he or she can profit from this information. APT is also very useful for building portfolios because it allows managers to test whether their portfolios are exposed to certain factors.

APT may be more customizable than CAPM, but it is also more difficult to apply because determining which factors influence a stock or portfolio takes a considerable amount of research. It can be virtually impossible to detect every influential factor much less determine how sensitive the security is to a particular factor. But getting "close enough" is often good enough; in fact studies find that four or five factors will usually explain most of a security's return: surprises in inflation, GNP, investor confidence and shifts in the yield curve.

2.2.2 The Pecking order theory

Pecking order theory starts with asymmetric information as treasury managers know more about their company's prospects, risks and value than outside investors. This is a vital theory that guides managers on asset allocation in regards to risk-return tradeoff. Asymmetric information affects the choice between internal and external financing and between the issue of debt or equity. There therefore exists a pecking order for the financing of new projects.

Asymmetric information favors the issue of debt over equity as the issue of debt signals the board's confidence that an investment is profitable and that the current stock price is undervalued (were stock price over-valued, the issue of equity would be favoured). The

issue of equity would signal a lack of confidence in the board and that they feel the share price is over-valued. An issue of equity would therefore lead to a drop in share price. This does not however apply to high-tech industries where the issue of equity is preferable due to the high cost of debt issue as assets are intangible.

2.2.3 Modern portfolio theory

Modern portfolio theory is a theory of finance that attempts to maximize portfolio expected return for a given amount of portfolio risk, or equivalently minimize risk for a given level of expected return, by carefully choosing the proportions of various assets.

More technically, modern portfolio theory model an asset return as a normally distributed function (or more generally as an elliptically distributed random variable), defines risk as the standard deviation of return, and models a portfolio as a weighted combination of assets, so that the return of a portfolio is the weighted combination of the assets' returns. By combining different assets whose returns are not perfectly positively correlated, MPT seeks to reduce the total variance of the portfolio return. MPT also assumes that investors are rational and markets are efficient.

2.3 Empirical Literature

Financial times (2000) present comparative data for 60 large pool schemes in Kenya, Europe and USA. The data revealed that in Kenya, 50.2% of the fund is invested in real estate compared to 7.0% in Europe. Equity only formed 11.8% of the fund in Kenya compared to 34.2% and 53.1% in Europe and USA respectively. Bonds and bills took up 16.3% of the Kenyan fund while they took up 12.6% and 22.7% of the European and American funds respectively. Offshore investments only formed 5.5% of the Kenyan fund compared to 26.5% and 11.1% of the European and USA funds respectively. The

treasury managers have a good reason for making such investment decision. The different proportions in the different countries could be due to the different factors in these countries. This study will therefore try to look at these factors that lead to such different asset allocation decisions by treasury managers.

This paper contributes to the existing literature in the following ways. It is the first to empirically assess the investment value of analyst recommendations using the calendar-time approach for the Kenya stock market. A second novel contribution is the application of the Black-Litterman asset allocation model to analyst recommendation data, and the evaluation of its performance in calendar-time. Thirdly, we extend prior calendar-time studies such as Barber, Lehavy, McNichols, and Trueman (2001) by accounting for transaction costs in a more precise way and through the examination of the effect of infrequent portfolio rebalancing and filtration of dated recommendations.

This study should be of interest to academics and practitioners alike. From an academic perspective, we assess the economic impact of analysts' recommendations using a realistic active-management model. This study tests conjointly the ability of analysts as a cohort to provide forecasts for clients, as well as the efficiency of the market.

Assessing the investment value of analyst recommendations is an ideal way to test whether it is possible to profit abnormally using publicly available information (as opposed to studies on corporate events), because security analyses are carried out with the explicit purpose of improving investment performance (Barber, Lehavy, McNichols,

and Trueman, 2001). From the practitioner's perspective, we assess the performance of a realistic trading strategy developed on the basis of analysts' recommendations. We also discuss potential issues in operating the Black-Litterman model when incorporating the information contained in these recommendations. Finally, brokers issuing the recommendations have a vested interest because they spend large amounts of resources to produce them with the intention of generating commissions.

An important issue for empirical research the time period for which a recommendation remains intact. Many analysts issue reiterations of existing recommendations if they believe that their information regarding the stock has not been incorporated into the prevailing price. Unlike with earnings forecasts, which are generally revised on a monthly basis, there is no set frequency with which recommendations are typically reiterated or changed. According to Green (2006), a plausible explanation for why trading strategies consisting of consensus recommendations perform poorly in some prior studies is because some recommendations from which the consensus is formed can be fairly stale. We apply an arbitrary 103-day cutoff on stale recommendations which is the median interval between the updating of analyst recommendations.

Barber, Lehavy, McNichols, and Trueman (2001) and Boni and Womack (2006) show that the majority of the value in recommendations is attained from the post-recommendation price drift, which lasts for only a few months. Therefore, we examine the impact of using, as part of a consensus, stock recommendations that have been initiated, reiterated, or revised less than 103 days earlier. It is arguable that we should not

use stocks with longer-term recommendations in the portfolio, as stale and dated recommendations may dilute the quality of the consensus. Consistent with Barber, Lehavy, McNichols, and Trueman (2001), we take the simple average of outstanding recommendations in calculating the consensus recommendation used in the portfolio constructions.

Elton, Gruber and Grossman (1986) finds consensus analyst recommendations outperform individual analyst recommendations in their predictive ability. Clemen's (1989) review of forecasting literature shows that simple averages of forecasts are the most robust.

Moon and Bates (June 1992) found that Maxwell Communication Corporation (MCC) will be reasonably profitable though heavily indebted after undertaking straightforward financial analysis. This will be after media speculation about fraudulent transactions and accounting deficiencies. The implication being that, unsuspecting shareholders were losing through no fault of their own, as it would not have been possible for them to predict any potential business failure from the given published accounting information. They concluded that all the information about the financial stability of MCC will be in the audited accounts, if the investors had bothered to analyze the accounts. Most times, financial statements do not disguise the true financial position of a company. Fundamental analysis involves in depth analysis of the firm's financial statements, which form the basis of investment decisions and there is a need therefore to know

whether financial position of a firm can be clearly deduced from the financial statements.

Fowler, Ross et al, (Oct 2007) found that for unit trusts available to New Zealand investors, asset allocation can explain a significant amount of the differences in return across time and between trusts. Across time, asset allocation accounts for about 80% of the variation in actual return. Between trusts, asset allocation explains about 60% of the variation in returns. From either perspective the choice of asset allocation is an important factor in explaining returns. Investors expect active managers to provide returns that exceed passive returns, after fees and expenses. Their results suggest that New Zealand investors might be better off with passive trusts as active managers contribute little after deducting their fees and transaction costs. This paper will determine whether the type of management chosen by the treasury managers in Kenya determine the performance of these funds.

Mugo (1999) observed that factors identified in finance literature are considered in investment decision by institutional investors at the NSE. However, the relevance of the factors is different as insurance companies and fund management companies consider company factors more important while Retirement Benefits Schemes consider industry factors more relevant. However institutional investors should not be looked at as homogeneous and therefore these findings cannot be generalized for Collective Investment Schemes.

Mwobobia (2004) concluded that factors that investment management companies consider across the board of investment instruments from the most important to the least are risk, return, and growth of capital, diversification, income stability and liquidity. The factors range from economic, company, social and geographical. Similarly, the factors influence investment instruments differently, for example, factors like inflation influence investment in government bonds more than it does in corporate bonds and stocks. However, investment management companies differ from unit trusts in the sense that they are closed-ended where the money invested is not changed for long periods.

Unit trusts on the other hand are open-ended as anyone can buy units for cancellation or liquidation by the managers. The study therefore seeks to identify these factors that treasury managers consider in asset allocation decisions particularly the commercial banks, as the two cannot be generalized. Omonyo, (2003) observed that risk and return are the key considerations in investment practices of Pension managers in Kenya. Current income is not their fund objective; however, the most predominant objective will be capital preservation. Pension schemes also differ from commercial bank investment schemes as they have a minimum funding requirement and they are established to invest funds to meet pension liabilities. That is they are invested with the expectation that they will be sufficient to pay pension entitlements when these are due.

2.4 Financial Asset allocation and Investment Management

It is widely agreed that asset allocation accounts for a large part of the variability in the return on a typical investor's portfolio. This is especially true if the overall portfolio is invested in multiple funds, each including a number of securities.

Asset allocation is generally defined as the allocation of an investor's portfolio among a number of "major" asset classes. Clearly such a generalization cannot be made operational without defining such classes.

Once a set of asset classes has been defined, it is important to determine the exposures of each component of an investor's overall portfolio to movements in their returns. Such information can be aggregated to determine the investor's overall effective asset mix. If it does not conform to the desired mix, appropriate alterations can then be made.

Once a procedure for measuring exposures to variations in returns of major asset classes is in place, it is possible to determine how effectively individual fund managers have performed their functions and the extent (if any) to which value has been added through active management. Finally, the effectiveness of the investor's overall asset allocation can be compared with that of one or more benchmark asset mixes.

An effective way to accomplish all these tasks is to use an asset class factor model. After describing the characteristics of such a model, we illustrate applications of a model with twelve asset classes to analyze the performance of a set of open-end mutual funds between 1985 and 1989.

ASSET CLASS FACTOR MODELS

Factor models are common in investment analysis. Equation (1) is a generic representation:

$$\tilde{R}_i = [b_{i1}\tilde{F}_1 + b_{i2}\tilde{F}_2 + \ldots + b_{in}\tilde{F}_n] + \tilde{e}_i \qquad (1)$$

R_i represents the return on asset i, F_{i1}represents the value of factor 1, F_{i2} the value of factor 2, F_{in} the value of the n'th (last) factor and e_i the "non-factor" component of the return on i. All these values are (potentially) unknown before-the-fact, as indicated by the tildes. The remaining values (b_{i1} through b_{in}) represent the sensitivities of R_i to factors F_{i1} through F_{in}.

A key assumption makes a model of this sort more than simply an exercise in data description: The non-factor return for one asset (e_i) is assumed to be uncorrelated with that of every other (e.g. e_j). In effect, the factors are the only sources of correlation among returns.

An asset class factor model can be considered a special case of the generic type. In such a model each factor represents the return on an asset class and the sensitivities (b_{ij} values) are required to sum to 1 (100%). In effect, the return on an asset i is represented as the return on a portfolio (shown by the sum of the terms in the bracketed expression) invested in the n asset classes plus a residual component (e_i). For expository convenience, the sum of the terms in the brackets can be termed the return attributable to *style* and the residual component (e_i) the return due to *selection.* Indeed, a key contribution of this approach is the separation of return into these two main components. Winter (1992)

According to Sharpe (1996), investment management is the process by which money is managed. It may be active or passive management, use implicit or explicit procedures

and, is relatively controlled or uncontrolled. Elton and Gruber (1997), observes that passive management involves holding securities for relatively long periods of time with small or infrequent changes. This implies a well-diversified portfolio with infrequent trading and market level risk and return expectations. The concentration therefore will be on less risky assets. Passive portfolio managers act as if the market is relatively efficient and for this reason the price of securities shows their intrinsic value, therefore there are no mispriced securities. However, their decisions are consistent with the acceptance of consensus estimates of risk and return. The portfolio they hold may be a surrogate for the market portfolio known as index fund, or they may be portfolio tailored to suit clients with different preferences. The paper will try to understand the type of investment management of portfolio practiced by treasury managers in Kenya and how this affects the performance of commercial banks.

According to Elton et al (1995), the simplest case of passive management is the index fund that is designed to replicate exactly a well-defined index of common stock, such as the 20-share index or S& P 500. The managers of the fund buy each share in the index in exactly the proportion it represents in the index. Although exact replication is the simplest technique for constructing an index fund, many index funds are not constructed this way. Treasury managers must face a series of decisions in designing their portfolio particularly bonds where a certain percentage is held as available for sale (AFS) or held to maturity (HTM). Other decisions involve a trade-off between accuracy in duplicating the index (called tracking error) and transaction costs .The passive approach is usually identified with buy and hold strategy. A buy and hold strategy means purchasing and

holding a security to maturity or redemption and then reinvesting cash proceeds in similar securities.

Active management on the other hand, according to Elton et al (1995), involves taking a position different from that which would be held in a passive portfolio, based on a forecast about the future and that the security markets are inefficient. There are two main approaches to active management: technical analysis and fundamental analysis. Loft house (2001), technical analysts look at past prices, believing that future trends can be deduced from the past, they also look at the behavior of various types of market participants, company directors and other insiders, sentiments and contrary opinion, and liquidity levels. Technical analysts are contrasted with fundamental analysts, who try to calculate the true underlying value of a stock by analyzing dividends, growth, interest rates and other factors. Treasury managers have to decide on the tools to use, to calculate the true underlying value of stock.

Some of the tools that the managers can use include charts where these can be done in a number of ways: Dow theory where the stock's price is thought to reflect everything that will be known by investors; moving average for markets, stocks, sectors, etc. for a variety of periods; support and resistance where managers argue that shares, markets etc. have psychological support and resistance levels. The idea is that the market will find it hard to, for example, rise through a resistance level but if it does, it can move ahead until a new resistance level is established; relative strength which is calculated for a stock to

show how it has been performing relative to its sector or to the market as a whole, or for a sector relative to the market (Loft house 2001).

Another tool is the smart money. If the treasury managers cannot decide how to invest, then copying somebody who knows what they are doing seems a reasonable tactic. They can achieve this through insider trading where certain types of non-public information is used by company directors in connection with a share transaction. It's widely believed that insider trading is a useful guide to forecasting the market's level. The justification for this is a belief that insiders act partly in response to general economic factors that impact their firms. If they react to such general information before it's widely known, they might provide a good guide to the market's likely direction. Another tool is the contrarian investment strategy. This involves going against the crowd (Loft house 2001). If the treasury managers on believe that the market is inefficient and they can exploit, this then they should make active bets.

Elton et al (1995) say that active managers can be classified into three groups: market timers, sector selectors, and security selectors. Market timers change the beta on the portfolio according to forecasts of how the market will do. They change the beta on the overall portfolio either by changing the beta on the equity portfolio or by the amount invested in short-term bonds. Security selection involves search for undervalued securities and the methods of forming these securities into optimum portfolios. Sector/ industry selection is like security selection, except that the unit of interest is an industry. Managers practicing in this type of analysis will rotate their portfolios overweighing/

under weighting sectors over time as they change forecasts of what sector is undervalued or overvalued.

According to Karanja, 2007 investment objective is one of the most important factors influencing portfolio choice amongst investment companies. The treasury managers of commercial banks should therefore understand the objectives of their investors as this will help in determining how to invest to ensure efficient diversification.

2.5 Commercial Bank Performance

Profit is the ultimate goal of commercial banks. All the strategies designed and activities performed thereof are meant to realize this grand objective. However, this does not mean that commercial banks have no other goals. Commercial banks could also have additional social and economic goals. However, the intention of this study is related to the first objective, profitability. To measure the profitability of commercial banks there are variety of ratios used of which Return on Asset, Return on Equity and Net Interest Margin are the major ones (Murthy and Sree, 2003; Alexandru et al., 2008).

2.5.1 Return on Equity

Return on Equity is a financial ratio that refers to how much profit a company earned compared to the total amount of shareholder equity invested or found on the balance sheet. Return on Equity is what the shareholders look in return for their investment. A business that has a high return on equity is more likely to be one that is capable of

generating cash internally. Thus, the higher the ROE the better the company is in terms of profit generation. It is further explained by Khrawish (2011) that ROE is the ratio of Net Income after Taxes divided by Total Equity Capital. It represents the rate of return earned on the funds invested in the bank by its stockholders. ROE reflects how effectively a bank management is using shareholders' funds. Thus, it can be deduced from the above statement that the better the ROE the more effective the management in utilizing the shareholders capital.

2.5.2 Return on Asset

ROA is also another major ratio that indicates the profitability of a bank. It is a ratio of Income to its total asset (Khrawish, 2011). It measures the ability of the bank management to generate income by utilizing company assets at their disposal. In other words, it shows how efficiently the resources of the company are used to generate the income. It further indicates the efficiency of the management of a company in generating net income from all the resources of the institution (Khrawish, 2011). Wen (2010), state that a higher ROA shows that the company is more efficient in using its resources.

2.6 Factors Considered by Investors

Key issues revolve around risk and return of the investment. However, there are other issues and factors that have a direct or indirect impact on the risk and return of an investment. Treasury managers must undertake analysis of macro and micro factors to select assets that are valuable currently and in the future.

2.6.1 Economic Factors

According to Gitman and Joehnk (2002), investment vehicles are heavily influenced by the state of the economy and economic events. The overall performance of the economy has a significant bearing on the performance and profitability of the company. A study of the economy should not only give an investor a grasp of the underlying nature of the economic environment but also enable them to assess the current state of the economy and formulate expectations about its future course. Taxation and government expenditure as well as monetary policies of the government provide the present and future investors with information of the investment environment. When the economy is growing, corporate earnings and in turn returns and capital gains increase (Bhalla 1997).

Elton et al (1995) say government fiscal policy for example taxes tend to be expansive when it encourages spending, when the government reduces tax and or increases the size of the budget. Similarly, monetary policy (money supply and interest rates) is said to be expansive when money is readily available and interest rates are relatively low. The treasury managers have to understand the government monetary and fiscal policies as the impact of these major forces filters through the system and affect several key dimensions of the economy. This will help them know which investment vehicle to buy and at what time.

Loft house (2001), observes that inflation expectations are formed on the basis of economic conditions and monetary policy. For example, a change of government may change the policy trade-off between growth and inflation. The anticipation or actual changes in the exchange rate also lead to inflation. Investment vehicles are influenced

differently by inflation. Investment vehicles whose values move with general price levels (stocks) have low purchasing power risk and are most profitable during periods of rising prices. Those that provide fixed returns have high purchasing power risk and they are most profitable during periods of low inflation. Purchasing power risk is the chance that changing price levels (inflation or deflation) will adversely affect investment return. The managers of different funds need to understand inflationary periods for them to know when to shift their kind of investment.

Mwobobia (2004) observed that investment in stock is influenced by economic factors such as inflation and tax rates, corporate bonds are influenced by the interest rates and inflation while tax rate is unimportant. Government bonds are influenced by interest and inflation rates. While the economic factors influencing investment in real assets were interest rates and inflation this is because investments in real assets are mostly financed through debt capital.

2.6.2 Industry Factors

Investors will want to keep an eye out for specific companies that appear well situated to take advantage of industry conditions. Growing industries provide an avenue for ideal investments because demand of the firm's output is anticipated to grow and profitability will be maintained in the event of increased competition with other industries. The stage of industry growth, the stability of the growth, the stability of the sales in the industry and the rate at which the industry is growing are important (Elton et al 1995).

Wakaguyu (1999) observed that retirement benefit schemes and fund management companies consider factors at play in the industry than in the company or in economic environment. They consider quality of management, change in investment trends, and safety of the principal capital, net profit margin and company growth in sales. Specific industry factors enhance a company performance. In understanding the industry the managers will actually know whether to change sectors or securities in order to increase the real worth of their companies.

2.6.3 Company Factors

Specific market and economic environment impacts positively and negatively on a company's performance for a short period of time, however, a firms own managerial capabilities will determine its performance over a long period of time. Ratio analysis highlights the direction the company is taking and its financial position. The nature of the company involves factors such as marketing influences, future company earning in terms of quantity and quality, market share, growth in sales and stability of sales, Gitman and Joehnk (2002). This therefore calls for careful scrutiny of the company's reports of account in order to get any information about the nature of any company that might help in making a viable decision.

Gitman and Joehnk (2002), argue that the firms operating characteristics influence operating efficiency and earnings of the company. Quality Management is important to investment success, in maintaining a competitive position of the company and to successfully run its affairs to produce profits. There is a need for treasury managers to

analyze the companies that they wish to invest in and in particular the quality of management, this will ensure that customers' funds are not committed to projects or even companies that will not do well. Wakaguyu 1999 observed that, insurance companies consider company factors more important than any other factors. They consider changes in share prices, safety of the principal capital, amount of capital, return in equity, amount of debt, changes in investment trends and operating efficiency

2.6.4. General Factors

Investment should be evaluated from a risk- return perspective. Markowitz (1959) observed that creation of an optimum investment portfolio is not simply a matter of combining a lot of unique individual securities that have desirable risk-return characteristics. The goal is to diversify or to invest in various assets to avoid failure. Diversification helps to spread the portfolio and reduce risk.

Markowitz set out a way of diversifying so that for any degree of risk, the investor got the best return possible or alternatively, for any return bore the lowest risk. Reducing total risk will increase expected cash flow thereby increasing the value of the firm. There is a need therefore to understand how securities are combined in order to minimize the risk of the unit holders and increase their value.

Total risk can be divided into systematic and unsystematic components. Systematic risk is the variability of return on stocks or portfolios associated with changes in return on the market as a whole. It's due to risk factors that affect the overall market, such as changes in the nation's economy or, tax reforms. They affect securities overall and

consequently, cannot be diversified away. On the other hand, unsystematic risk is the variability of return on stocks or portfolios not explained by general market movements. It is unique to a particular company or industry. It is independent of economic, political and other factors that affect all securities in a systematic manner. By diversification this kind of risk can be reduced or even eliminated if diversification is efficient (Van Horne 1997). In understanding factors that influence the different securities the treasury managers will know how to diversify their portfolios.

Return on the other hand is a key variable in the investment. It allows us to compare the actual or expected gains of various investments with the levels of return we need. The level of return achieved or expected from an investment depends on a variety of factors. The key factors are internal characteristics and external forces. Internal characteristics include characteristics such as the type of investment vehicle, the quality of management, and how the investment is financed and the customer base of the issuer. External factors include wars, political and international events.

Components of return come from periodic payments, such as dividends or interest and appreciation in value, the gain from selling an investment vehicle for more than its original purchase price. These two sources are called current income and capital gains or losses (Gitman and Joehnk, 2002).Omonyo, 2003 observed that risk and return are the key considerations in investment practices of pension treasury managers in Kenya. According to Gitman and Joehnk, 2002 the level of return achieved depends on investment factors, the managers therefore need to understand these factors for them to make forecasts on expected returns of different companies and investment vehicles.

According to Loft house (2001), this is the ability of assets to be converted into cash immediately at full market value in any quantities without making any price concessions. Some assets are more liquid than others. This can be assessed by the size of the issue. For example, the smaller the issue in the case of bonds the greater the redemption yields. Treasury managers must put the issue of liquidity into consideration, as their investors might want to redeem their issues. According to the analysts, what you would expect from the performance of a unit trust relative to the market is that they should outperform the market through diversification, if they have competent treasury managers. This means that in times of high performance, the unit trust funds will slightly lag behind in comparison to the market (all the relevant benchmarks). Equally, in times of market downturn as being experienced today, they will not come down as significantly as the market does (Daily Nation Pg 8 dated 26, 2009 Investment).

This normally tends to cushion an investor from drastic market downturns relative to the markets and possible high performance in times of good returns. When you average out over a relatively long-term perspective, you can post some decent gains in their investments. During times of indiscriminate and systematic market falls like now, it is difficult, if not impossible, for any manager to deliver positive returns on an equity fund as all shares across all counters fall at the same time. It is quite difficult to completely insulate them from the overall performance of the markets, since they are also subject to their cyclical movements (Daily Nation Page 8 dated 26, 2009 Investment). This paper therefore seeks to establish how the economic factors have influenced performance of the various funds over a period of seven years between 2001 and 2007.

2.7 Conclusion

Most surveyed results indicate that on average treasury have not been able to forecast share prices accurately enough to outperform a simple buy and hold policy. Additionally, there was, however, evidence of statistically significant inferior performance. These results hold even when management expenses are added back. The major finding as regards to the beta values was that none of the commercial banks examined provided volatility greater than that of the market. This is most likely because commercial banks invariably tend to invest in a wide spread of shares, and because they keep much of their funds in cash especially when the stock market is depressed.

For instance a study by Daniel (1997) which looked at characteristics based benchmark that is designed to measure whether mutual funds pick stocks that outperform simple mechanical strategy. The evidence presented in this paper suggests that the average mutual fund does, in fact, succeed, along this allocation dimension. However the amount by which it beats the mechanical strategy is fairly small and is approximately equal to the average management fee. Aggressive growth strategy funds which exhibit the highest performance, probably also generate the largest costs.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter begins by addressing the research design of the study. It then goes ahead and discusses the population, sample size and design. Methods of data collection and data analysis used are also discussed. Data to be collected is for the period 2000 to 2012.

3.2 Research Design

The study used the descriptive survey research design owing to its capability to address the objective of the study. Research design is the plan and structure of investigation so conceived as to obtain answers to research questions. The plan was the overall scheme or program of the research (Robson, 2002). Travers (1969) states that surveys are conducted to establish the nature of the existing situation or condition. In addition, if a researcher wishes to clarify understanding of a problem, then the exploratory research design is the right design (Saunders, 2003). Saunders further stated that causal or explanatory researches seek to establish a causal relationship between variables. It emphasizes on studying a situation or a problem in order to explain the relationship between variables. This explanatory study was based on secondary data obtained from published statements of accounts of commercial banks in Kenya. The survey design was chosen because it provided a means to contextually interpret and understand performance of commercial banks in Kenya compared to financial asset allocation and commercial bank performance.

3.3 Target Population

The population of study consisted of all the commercial banks in Kenya. There are forty three commercial banks in Kenya. All commercial banks in Kenya invest in advances, placements, equities, bonds and money market products including treasury bills, repurchase agreements, inter-bank overnight lending. The returns on assets and returns on equities were used in evaluating the financial performance of commercial banks in Kenya.

3.4 Sample Size

In this study all forty three commercial banks in Kenya were considered. The study entailed small sized, medium sized and large size commercial banks. These commercial banks invest mainly in advances and government treasury bonds. The Return on Assets will measured total income to its total assets. The Return on Equity measured net income after tax to total shareholders' equity capital.

3.5 Data Collection

Data collection procedures are the steps taken to ensure that the data collected captures the desired objective(s) of the study using the data collection instrument (Robson, 2002). The study utilized secondary data. Data on net asset value by commercial bank will be collected from published financial statements, Central Bank of Kenya, International Monetary Fund and World Bank database.

3.6 Model Formulation

To measure the profitability of commercial banks there are variety of ratios used of which Return on Asset, Return on Equity and Net Interest Margin are the major ones (Murthy and Sree, 2003; Alexandru et al., 2008). The model is based on asset class factor model by William F. Sharpe. The major dependent performance indicators used were Return on Asset and Return on Equity. The major determinants (independent variables) were advances, government securities, placements and cash balances by Central Bank of Kenya. The macroeconomic variables used as independent variables are GDP growth rate and average annual Inflation Rate.) In this study the following baseline model was used:

$$Y= \beta_o+\beta_1 CB_{it}+\beta_2 CBB_t +\beta_3 P_t+\beta_4 GS_t+ \beta_5 I_t + \beta_6 A_t+ \beta_7 GDP_t + \beta_8 AI_t +\epsilon_t$$

Where:

- Y = Performance of Bank expressed by ROA, ROE
- β_o = Intercept
- CB_t = Cash balances of Bank at time *t*
- CBB_t = Central Bank of Kenya balances of Bank at time *t*
- P_t = Placements of Bank at time *t*
- GS_t = Government securities of bank at t
- I_t =Investment in securities of Bank at time *t*
- A_t = Advances of Bank at time *t*
- GDP_t = Gross Domestic Product (GDP) at time *t*
- AI_t= Average annual inflation rate at time *t*
- ε_t = Error term where *t* time identifier

CHAPTER FOUR
DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the data analysis and interpretation of secondary data collected for the study whose main objective was to establish whether financial asset allocation influence the performance of commercial banks in Kenya. The data gathered was analyzed using statistical package for social sciences (SPSS) generating descriptive statistics. The researcher set out to establish the financial assets investments and the key measures of performance by the commercial banks in Kenya from the year 2000 to 2012.

Table 4.1

Financial Asset Allocation by Commercial Banks of Kenya Year 2000-2012

Years	Cash balance%	Central Bank of Kenya balances%	Placement%	Government Security%	Investments in securities%	Advances%	Other Assets%
2000	2.37	6.27	2.59	16.93	0.90	51.29	19.65
2001	2.17	6.48	1.95	22.14	1.20	49.89	16.17
2002	2.34	5.85	1.91	22.22	1.25	48.16	18.26
2003	1.88	4.73	2.39	27.73	0.88	46.67	15.72
2004	1.84	5.90	1.97	19.98	0.81	52.35	17.16
2005	2.07	5.71	6.13	20.49	0.30	52.90	12.40
2006	2.09	5.51	6.43	21.67	0.34	52.12	11.84
2007	2.41	5.46	6.49	21.48	0.32	51.64	12.20
2008	2.49	5.00	9.35	18.20	0.34	52.82	11.81
2009	2.19	4.65	4.33	23.88	0.54	52.60	11.83
2010	2.21	4.63	3.97	26.84	0.66	51.97	9.73
2011	2.14	4.63	5.62	15.29	0.66	56.66	15.00
2012	2.11	6.18	4.39	17.72	0.86	55.63	13.10

Source: Research data, 2012

Table 4.2

Macro-Economic Variables and Profitability Measures Year 2000-2012

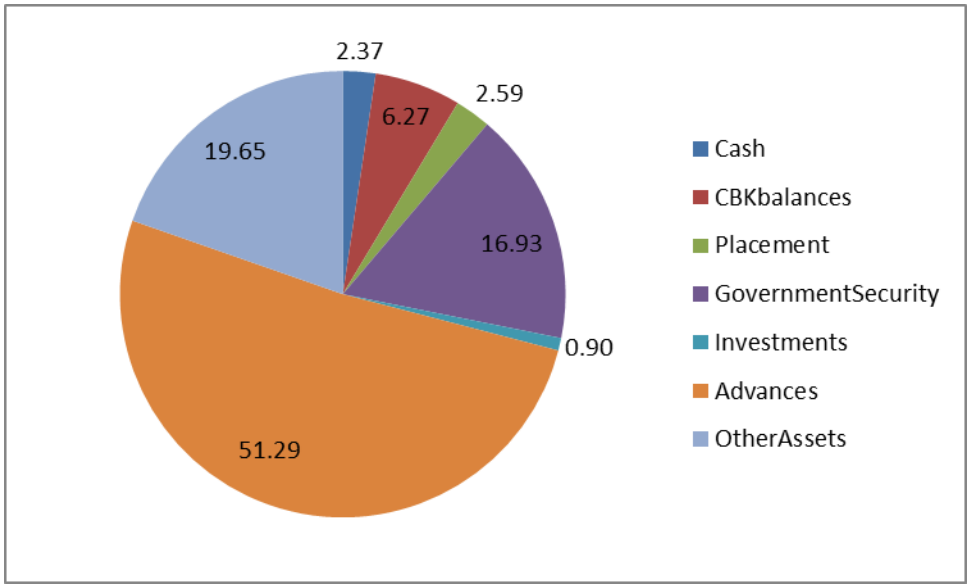
Years	GDP%	Average Inflation%	ROA%	ROE%
2000	0.60	9.97	0.60	5.20
2001	4.50	5.73	1.70	16.50
2002	0.60	1.97	1.00	11.10
2003	2.9O	9.80	2.30	23.70
2004	5.1	11.79	2.10	22.50
2005	5.91	9.87	2.40	23.90
2006	6.30	6.39	2.40	28.30
2007	7.00	4.27	2.70	28.00
2008	1.50	16.27	2.60	26.50
2009	2.70	9.24	2.60	25.00
2010	5.80	3.96	2.60	25.00
2011	4.40	14.02	3.80	28.20
2012	4.60	9.40	4.40	30.90

Source: Research data, 2012

4.2 Financial Asset Investments and the Performance Indicator Year 2000

The study sought to find the financial asset allocation by the commercial banks in Kenya in the financial year 2000. From the data analysis cash balances stood at 2.37%, Central bank of Kenya balance was 6.27%, placement was 2.59%, government securities stood at 16.93%, investments stood at 0.90%, advances was 51.29% accounting for the largest proportion and other assets 19.65%. In this year, the gross domestic product grew by 0.6% whereas the rate of average inflation was at 9.97%. The performance indicators were denoted by return on assets at 0.6% and return on equity at 5.2%.

Figure 4.1: Asset Allocation in Year 2000

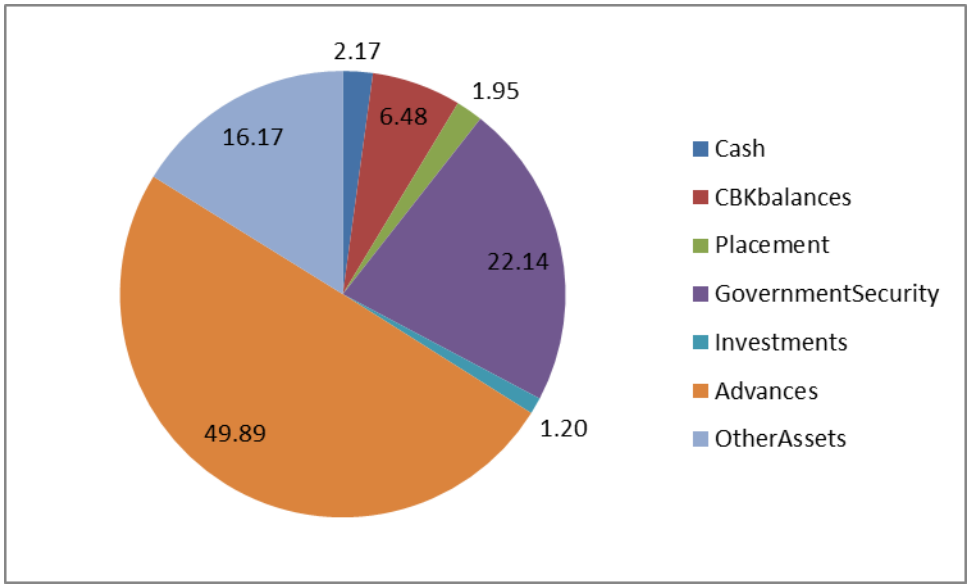


Source: Research data, 2012

4.3 Financial Asset allocation and the Performance Indicator Year 2001

The study sought to find the financial asset allocation by the commercial banks in Kenya in the financial year 2001. From the data analysis cash balances stood at 2.17%, Central bank of Kenya balance was at 6.48%, placement was at 1.95%, government securities stood at 22.14% an increase from year 2000 due to high rates of return, investments stood at 1.20% advances was at 49.89% a slight decline from the year 2000 and other assets at 16.17%. In this year, the gross domestic product grew by 4.5% whereas the rate of average inflation was at 5.73%. The performance indicators were denoted by return on assets at 1.7% and return on equity at 16.5 %.

Figure 4.2: Asset Allocation in Year 2001

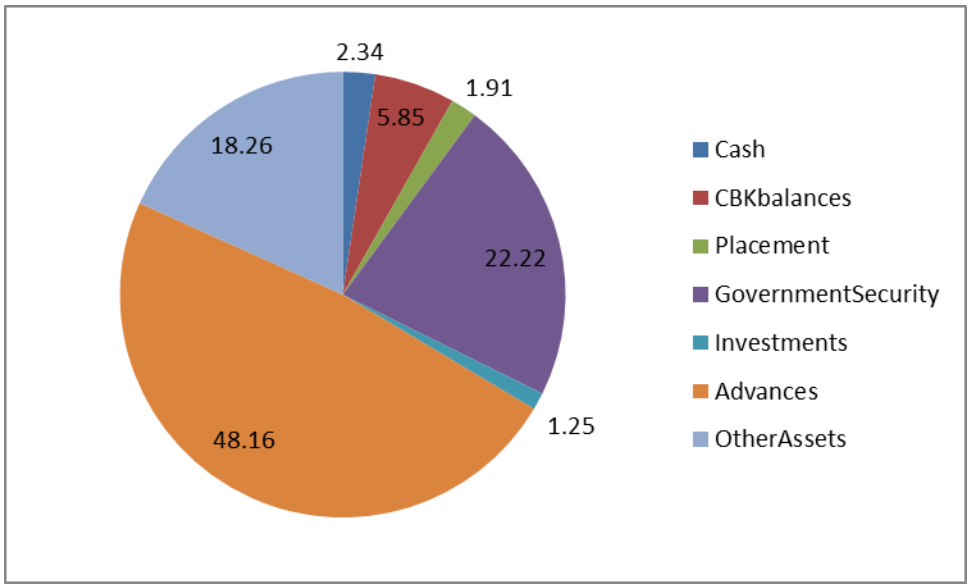


Source: Research data, 2012

4.4 Financial Asset allocation and the Performance Indicator Year 2002

The study sought to find the financial asset allocation by the commercial banks in Kenya in the year 2002. From the data analysis cash balances stood at 2.34%, Central bank of Kenya balance was at 5.85%, placement was at 1.91%, government securities stood at 22.22% owing to investors seeking higher interest rates compared to average inflation at 19.70%, investments stood at 1.25%, advances was at 48.16% a decline from year 2001 owing to high interest rate regime and other assets at 18.26%. In 2002, the gross domestic product grew by 0.6%. The performance indicators were denoted by return on assets at 1.00% and return on equity at 11.1 %.

Figure 4.3: Asset Allocation in Year 2002

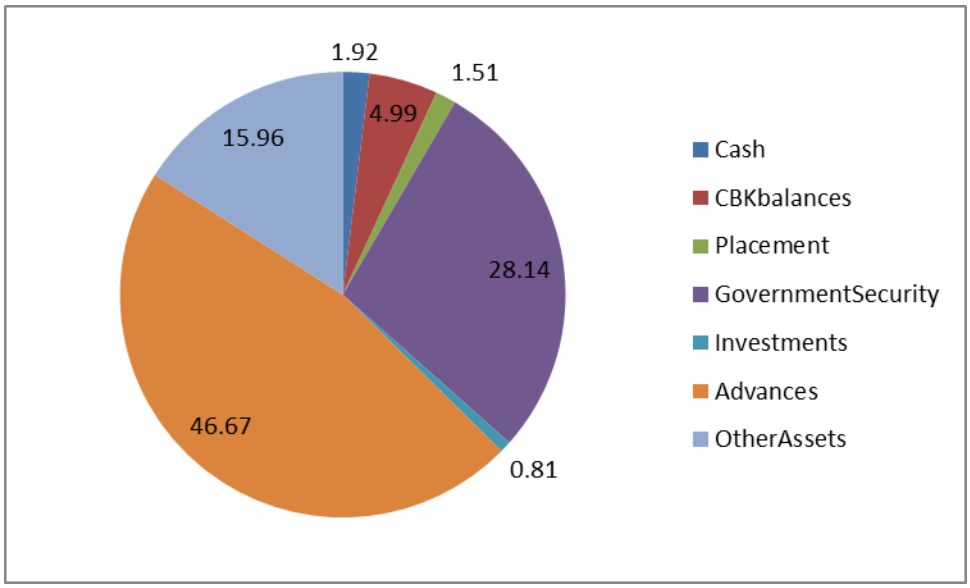


Source: Research data, 2012

4.5 Financial Asset allocation and the Performance Indicator Year 2003

The study sought to find the financial asset allocation by the commercial banks in Kenya in the financial year 2003. From the data analysis cash balances stood at 1.92%, Central bank of Kenya balance was at 4.99%, placement was at 1.51%, government securities stood at 28.14% an increase owing to operation automated system in bonds trading, investments stood at 0.81%, advance was at 46.67% a decline from the previous year owing to high lending rates charged by commercial banks and other assets at 15.96%. In this year, the gross domestic product grew by 2.9% whereas the rate of average inflation was at 9.8%. The performance indicators were denoted by return on assets at 2.3% and return on equity at 23.7 %.

Figure 4.4: Asset Allocation in Year 2003

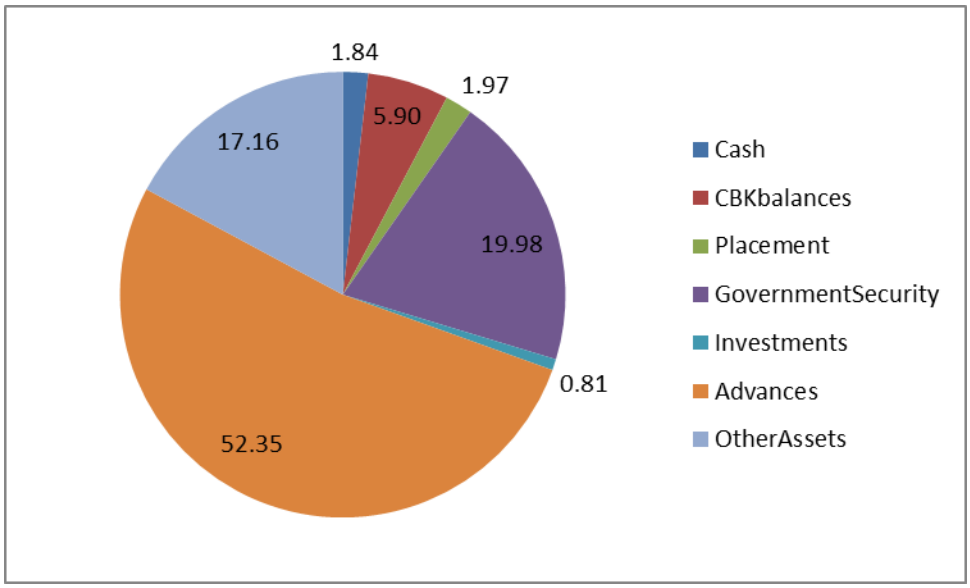


Source: Research data, 2012

4.6 Financial Asset allocation and the Performance Indicator Year 2004

The study sought to find the financial asset allocation by the commercial banks in Kenya in the year 2004. From the data analysis cash balances stood at 1.84%, Central bank of Kenya balance was at 5.90%, placement was at 1.97%, government securities stood at 19.98% a decline from 2003 owing to lower rate of return offered on government securities, investments stood at 0.81%, advances was at 52.35% an increase owing to demand from investors to finance various projects and other assets at 17.16%. The gross domestic product grew by 5.1% whereas the rate of average inflation was at 11.79%. The performance indicators were denoted by return on assets at 2.1% and return on equity at 22.5%.

Figure 4.5: Asset Allocation in Year 2004

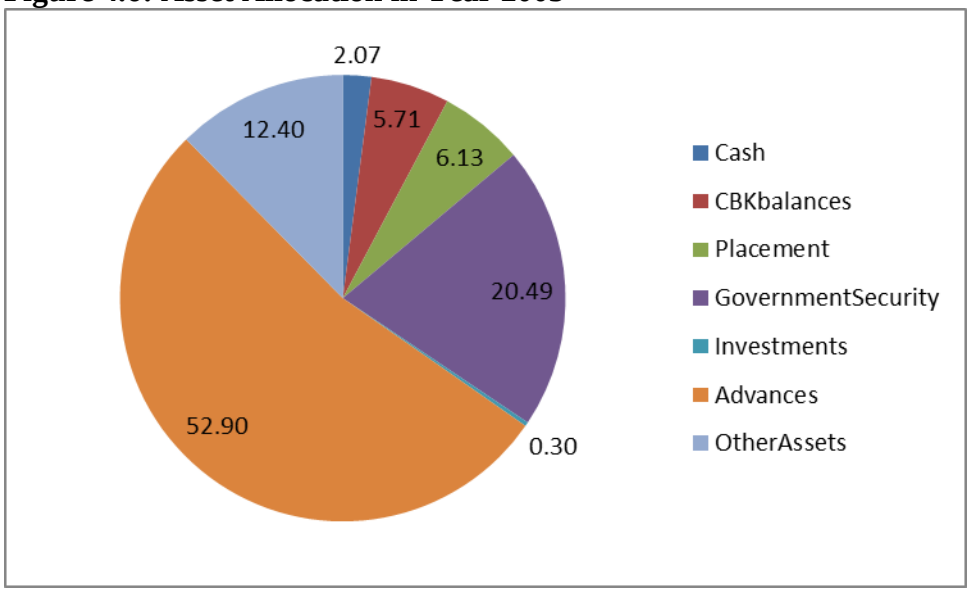


Source: Research data, 2012

4.7 Financial Asset allocation and the Performance Indicator Year 2005

The study sought to find the financial asset allocation by the commercial banks in Kenya in the financial year 2005. From the data analysis cash balances stood at 2.07%, Central bank of Kenya balance was at 5.71%, placement was at 6.13%, government securities stood at 20.49% increased slightly due to better returns, investments stood at 0.30%, advances was at 52.90% a slight decrease from the year 2004 and other assets at 12.40%. In this year, the gross domestic product grew by 5.91% whereas the rate of average inflation was at 9.87%. The performance indicators were denoted by return on assets at 2.4% and return on equity at 23.9 %.

Figure 4.6: Asset Allocation in Year 2005

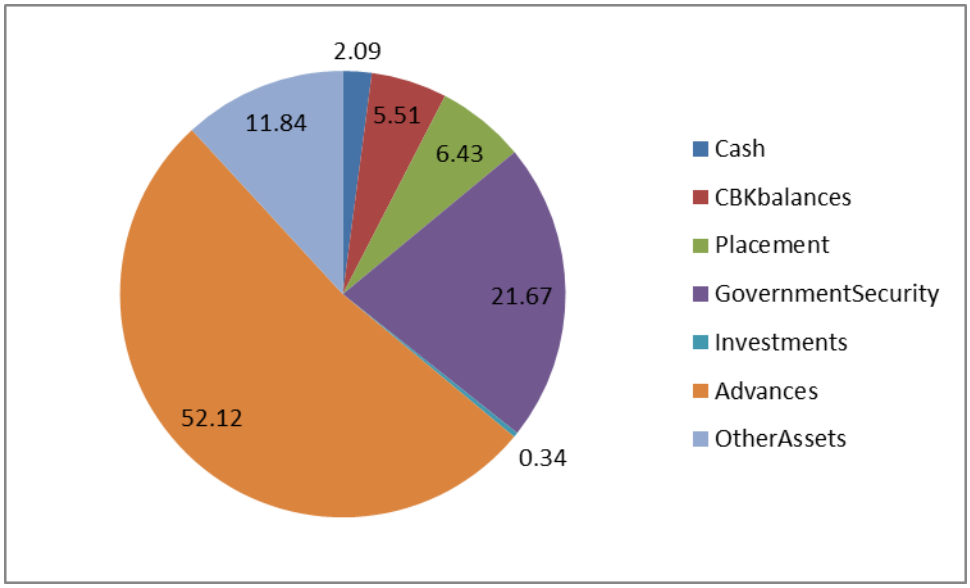


Source: Research data, 2012

4.8 Financial Asset allocation and the Performance Indicator Year 2006

The study sought to find the financial asset allocation by the commercial banks in Kenya in the financial year 2006. From the data analysis cash balances stood at 2.09%, Central bank of Kenya balance was at 5.51%, placement was at 6.43%, government securities stood at 21.67%, investments stood at 0.34%, advances was at 52.12% and other assets at 11.84%. In this year, the gross domestic product grew by 6.3% whereas the rate of average inflation was at 6.39%. The performance indicators were denoted by return on assets at 2.4% and return on equity at 28.3 %.

Figure 4.7: Asset Allocation in Year 2006

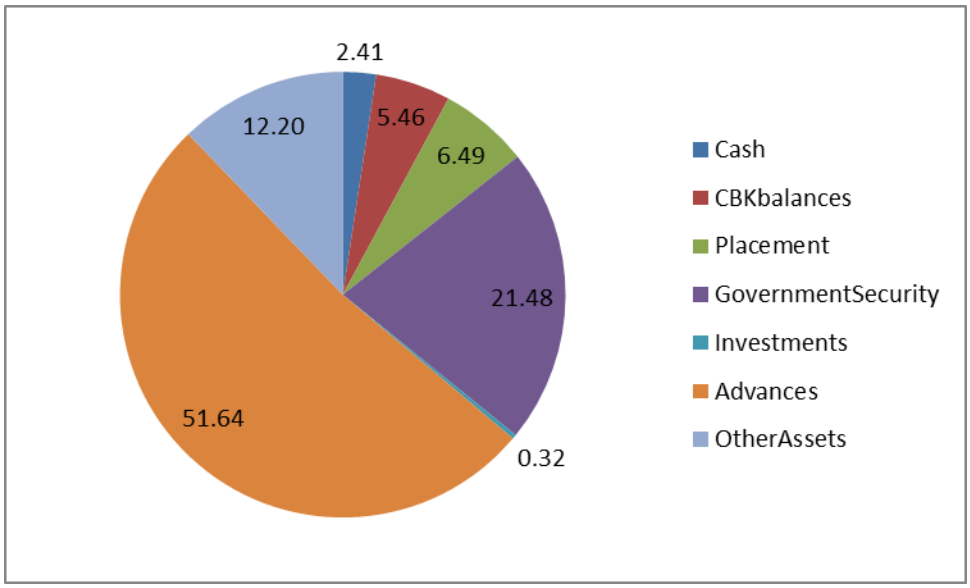


Source: Research data, 2012

4.9 Financial Asset allocation and the Performance Indicator Year 2007

The study sought to find the financial asset allocation by the commercial banks in Kenya in the financial year 2007. From the data analysis cash balances stood at 2.41%, Central bank of Kenya balance was at 5.46%, placement was at 6.49%. Government securities declined slightly owing to investor's election jitters to stand at 21.48%, investments stood at 0.32%, advances was at 51.64% a slight decline from year 2006 and other assets at 12.20%. In this year, the gross domestic product grew by 7.0% whereas the rate of average inflation was at 4.27%. The performance indicators were denoted by return on assets at 2.7% and return on equity at 28.0 %.

Figure 4.8: Asset Allocation in Year 2007

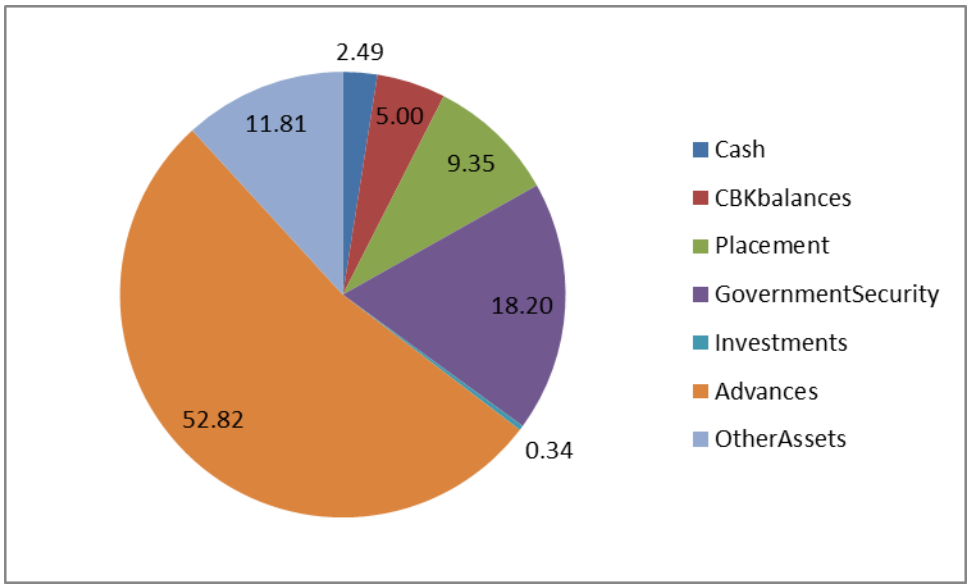


Source: Research data, 2012

4.10 Financial Asset allocation and the Performance Indicator Year 2008

The study sought to find the financial asset allocation by the commercial banks in Kenya in the financial year 2008. From the data analysis cash balances stood at 2.49%, Central bank of Kenya balance was at 5.00%, placement was at 9.35%, government securities stood at 18.20% a decline owing to low investors perception on the economy due post-election polls, investments stood at 0.34%, advances was at 52.82% increased marginal attributed by investor's recovery plans on their businesses and other assets at 11.81%. In this year, the gross domestic product grew by 1.5% whereas the rate of average inflation was at 16.27%. The performance indicators were denoted by return on assets at 2.6% and return on equity at 26.5 %.

Figure 4.9: Asset Allocation in Year 2008

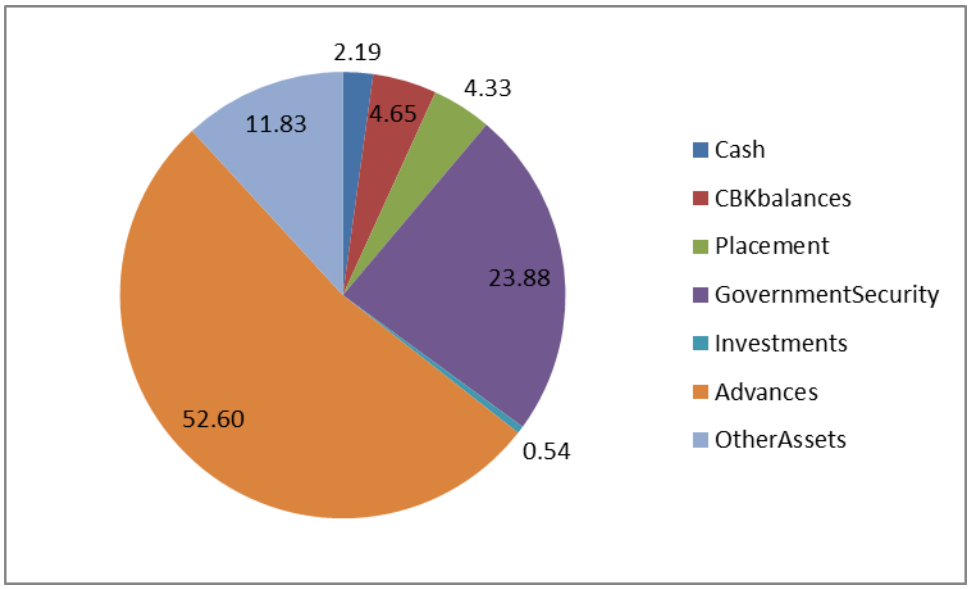


Source: Research data, 2012

4.11 Financial Asset allocation and the Performance Indicator Year 2009

The study sought to find the financial asset allocation by the commercial banks in Kenya in the financial year 2009. From the data analysis cash balances stood at 2.19%, Central bank of Kenya balance was at 4.65%, placement was at 4.33%, government securities stood at 23.88%, investments stood at 0.54%, advances was at 52.60% and other assets at 11.83%. In this year, the gross domestic product grew by 2.7% whereas the rate of average inflation was at 9.24%. The performance indicators were denoted by return on assets at 2.6% and return on equity at 25.0 %.

Figure 4.10: Asset Allocation in Year 2009

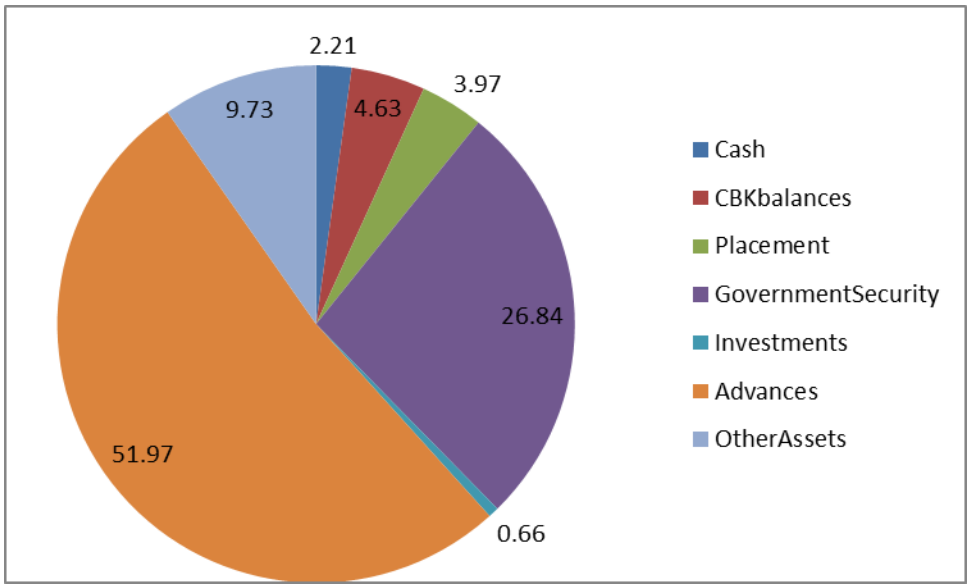


Source: Research data, 2012

4.12 Financial Asset allocation and the Performance Indicator Year 2010

The study sought to find the financial asset allocation by the commercial banks in Kenya in the financial year 2010. From the data analysis cash balances stood at 2.21%, Central bank of Kenya balance was at 4.63%, placement was at 3.97%, government securities stood at 26.84% an increase owing to investor's confidence on their economy, investments stood at 0.66%, advances was at 51.97% and other assets at 9.73%. In this year, the gross domestic product grew by 5.8% whereas the rate of average inflation was at 3.96%. The performance indicators were denoted by return on assets at 2.6% and return on equity at 25.0 %.

Figure 4.11: Asset Allocation in Year 2010



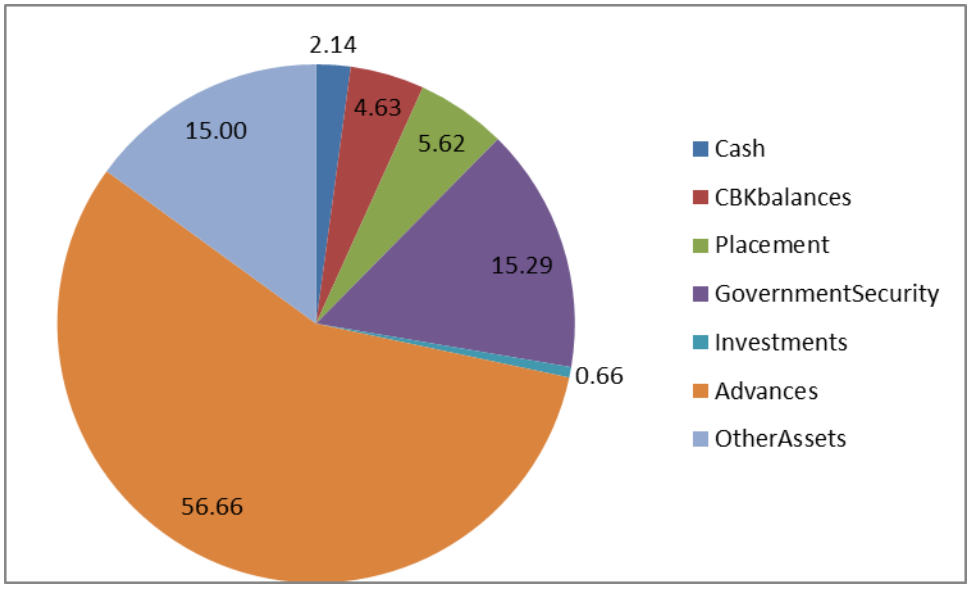
Source: Research data, 2012

4.13 Financial Asset allocation and the Performance Indicator Year 2011

The study sought to find the financial asset allocation by the commercial banks in Kenya in the financial year 2011. From the data analysis cash balances stood at 2.14%, Central bank of Kenya balance was at 4.63%, placement was at 5.62%, government securities stood at 15.29% a decline owing to inadequate liquidity owing to high interest rates and inflation, investments stood at 0.66%, advances was at 56.66% the highest during the period under review. The period was characterized by adverse exchange rates, low foreign participation in the financial market. Other assets stood at 15.00%. In this year, the gross domestic product grew by 4.4% whereas the rate of average inflation was at

14.02%. The performance indicators were denoted by return on assets at 3.8% and return on equity at 28.2 %.

Figure 4.12: Asset Allocation in Year 2011



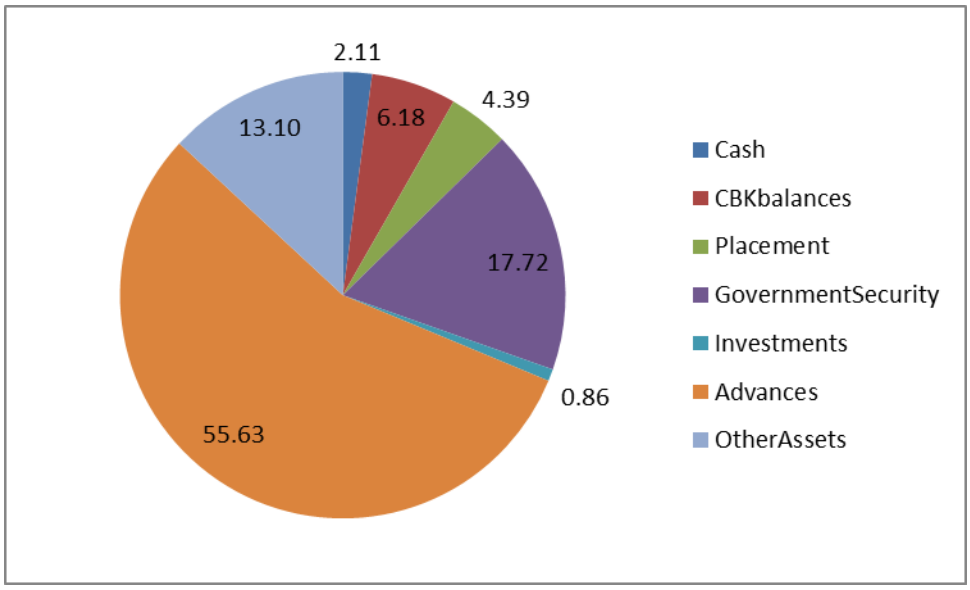
Source: Research data, 2012

4.14 Financial Asset allocation and the Performance Indicator Year 2012

The study sought to find the financial asset allocation by the commercial banks in Kenya in the financial year 2012. From the data analysis cash balances stood at 2.11%, Central bank of Kenya balance was at 6.18%, placement was at 4.39%, government securities stood at 17.72% a slight increase from 2011 owing to better macro-economic policies adopted by the Central Bank of Kenya, investments stood at 0.86%, advances was at 55.63% and other assets at 13.10%. In this year, the gross domestic product grew by

4.6% whereas the rate of average inflation was at 9.40%. The performance indicators were denoted by return on assets at 4.4% and return on equity at 30.9 %

Figure 4.13: Asset Allocation in Year 2012



Source: Research data, 2012

4.15 Regression Analysis

In order for the researcher to establish the relationship among the variables (independent), multiple regression analysis was conducted from table 4.15 above. The analysis applied the statistical package for the social sciences (SPSS) to compute the measurement of the multiple regressions for the study. The findings were as shown in the table 4.10 below.

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.916[a]	.839	.517	.69418	.839	2.602	8	4	.186	2.216

Source: Statistical data

Coefficient of determination explains the extent to which changes in the dependent variable (commercial banks performance) can be explained by the changes in the independent variables or the percentage of variation in the dependent variable that is explained by all the eight independent variables (Cash balance, central bank balance, placement, government securities, investments, advance, gross domestic product and inflation).

The correlation and the coefficient of determination of dependent variables (commercial banks performance) when all the eight variables are combined was measured and tested. From the findings 83.9% of commercial banks performance in Kenya was attributed to combination of the eight independent factors (cash balance, central bank balance, placement, government securities, investments, advance, gross domestic product and inflation) investigated in this study. A further 16.1% of commercial banks performance in Kenya is attributed to other factors not investigated in this study.

Table 4.4: Coefficient of determination

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	-14.783	14.568		-1.015	.368	-55.229	25.663					
Cash	-1.970	2.269	-.382	-.868	.434	-8.269	4.329	-.209	-.398	-.174	.208	4.808
CBK Balances	-.214	.528	-.144	-.405	.706	-1.679	1.252	-.362	-.198	-.081	.320	3.122
Placement	.441	.260	1.012	1.695	.165	-.281	1.163	.459	.647	.340	.113	8.841
Government Securities	.111	.150	.408	.741	.500	-.306	.529	-.200	.347	.149	.133	7.524
Investments	2.789	1.563	.904	1.784	.149	-1.551	7.130	-.389	.666	.358	.157	6.376
Advances	.309	.167	.824	1.847	.138	-.156	.774	.706	.678	.371	.203	4.937
GDP	.092	.210	.199	.440	.683	-.490	.675	.488	.215	.088	.197	5.066
Average Inflation	-.002	.112	-.007	-.016	.988	-.313	.310	.333	-.008	-.003	.190	5.274

Source: Statistical data

4.16 Summary of Interpretation and Findings

The study shows that during the period under review commercial banks in Kenya on average invested mainly in advances at 51.90%, government securities at 21.12%, other assets at 14.22%, Central bank of Kenya balances at 5.46%, placements at 4.43%, cash balances at 2.17% and investments in securities at 0.7%.

The study established that investments in securities offered the highest returns other factors held constant in the period under review, these securities are perceived to be high risk-high returns assets class. Investments in securities among commercial banks are very low representing less than 1% of asset allocation. In the period under review there was tremendous development of capital markets in Kenya. Advances represented the highest percentage of asset allocation at 51.90% to total assets among commercial banks in Kenya. High lending rates offered by commercial banks in Kenya have resulted to increase in non-performing loans and low economic growth.

The researcher conducted multiple regression analysis so as to determine the relationship between commercial banks performance in Kenya and independent variables. As per SPSS generated (table 4.17) the equation:

$(Y= \beta 0+\beta 1CB_t+\beta 2CBB_t +\beta 3P_t+\beta 4GS_t+ \beta 5\ I_t + \beta 6A_t+ \beta 7GDP_t + \beta 8\ AI_t +\epsilon)$

$ROA=-14.783-1.970\ CB_t\ -0.214CBB_t+0.441P_t+0.111GS_t+2.789I_t+0.309A_t+0.092GDP_t-0.002AI_t$

Where ROA is the dependent variable (Return on assets), CB_t is cash balance, CBB_t is Central Bank of Kenya balance, P_t is placement, GS_t is government securities, I_t is

investments, A_t is advance, GDP_t is gross domestic product and AI_t is inflation. ϵ represents error term but since the researcher used SPSS to analyze the data, the error term is zero.

Y=-14.783+-1.970+-0.214+0.441+0.111+2.789+0.309+0.092+-0.002

According to the regression equation established, taking all factors into account (cash balance, central bank balance, placement, government securities, investments, advance, gross domestic product and inflation) constant at zero, return on assets will be -14.783. The data findings analyzed also show that taking all other independent variable at zero, a unit increase in cash balance will lead to a 1.970 decrease in return on assets. A unit increase in central bank balance will lead to a0.214 decrease in return on assets. A unit increase in placements will lead to a 0.441 increase in return on assets. A unit increase in government securities will lead to a 0.111 increase in return on assets. A unit increase in investments in securities will lead to a 2.789 increase in return on assets. A unit increase in advances will lead to a 0.309 increase in return on assets. A unit increase in gross domestic product will lead to a 0.092 increase in return on assets. A unit increase in average inflation will lead to a 0.002 decrease in return on assets. At 5% level of significance and 95% confidence interval, cash balance had 0.434 level of significance, central bank balance had 0.706 level of significance, placement level had 0.165 level of significance, government securities had 0.500 level of significance, investments had 0.149 level of significance, and advances had 0.138 level of significance, gross domestic product had 0.683 level of significance and inflation had 0.988 level of significance. The t critical at 5% level of significance at k=9 degrees of freedom is 2.571. Since all t calculated values were below 2.571 then all variables were not significant in explaining

the performance of the commercial banks in Kenya, this is due to the fact that the study mainly concentrated on the asset allocation and not the proceeds of the assets inform of either interest income or dividend income. Therefore asset allocation is not directly linked to profitability instead incomes from the assets.

The gross domestic products posted mixed reactions from the year 2000 to the year 2012. Sound monetary policies were adopted in the year 2003 after change of government and its structures, this enabled steady growth of gross domestic product from the year 2003 up to 2007. At the end of 2007 Kenya experienced a major political crises decelerated its growth momentum. During 2008 gross domestic product stood at meager 1.5% and inflation peaked at levels of 16.27%. Inflation rates have posted mixed reactions from the year 2000 to 2012 mainly due to monetary policies adopted. The inflation rate in 2002 was the lowest at 1.97% while the highest was in 2008 at 16.27%. During high inflation periods the cost of borrowing also goes up and therefore there is minimal economic growth.

Return on assets is a measure of probability attributed to total assets by commercial banks. Despite the steady growth of total assets over the period 2000 to 2012, there has been mixed reactions on the returns on assets from as low as 0.6% in 2000 to 4.4% in 2012.

According to Gitman and Joehnk (2002), investment vehicles are heavily influenced by the state of the economy and economic events. The overall performance of the economy has a significant bearing on the performance and profitability of the companies. This is similar to the investment pattern of commercial banks in Kenya during the period under

review, during high interests and inflation rates commercial banks invest heavily in government securities and advances owing to high interest yields provided.

Jerop, 2007 in her study focused on performance of unit trusts in Kenya and observed that equity fund being the most aggressive due to its high risk-high returns nature. They are popular among unit trusts investors as they comprise over 50% of the total unit funds held, these scenario portray similar findings with that of commercial banks in Kenya, in that investment is securities offered high returns. The only notable difference is that commercial banks in Kenya invest at an average of 0.7% in securities during the period under review whereas unit trusts in Kenya invest in securities at an average of 50% of total assets. Most banks are risks averse hence are not attracted by risky assets.

Omonyo, (2003) observed that risk and return are the key considerations in investment practices of Pension managers in Kenya; this is similar to commercial banks in Kenya. Commercial banks are risk averse and invest in short term assets owing to micro-economic changes. Current income is not their fund objective; however, the most predominant objective will be capital preservation. Pension schemes also differ from commercial bank as they have a minimum funding requirement and they are established to invest funds to meet pension liabilities. Their funds are invested with the expectation that they will be sufficient to pay pension entitlements when due. Pension fund managers invest in long term assets particularly long term bonds whereas commercial banks in Kenya invest in short term assets owing to liquidity sensitivity.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The objective of the study was to establish the financial asset allocation by commercial banks in Kenya. Eight determinants were identified which included cash balance, central bank balance, placement, government securities, investments, advance, gross domestic product and average inflation rate. The study used the annual report statements of all commercial banks in Kenya provided by the Central Bank of Kenya, covering a 13 years from the financial year 2000 to 2012. The gross domestic product and average inflation rates was obtained from Kenya National Bureau of statistics and World Bank reports.

The analysis shows that the total assets increased over the period. The cash balances maintained by commercial banks has been on a study increase from the year 2000 to 2012, this has been attributed to maintenance of sufficient liquidity levels and proper management of working capital. Central bank balance has had a steady increase from the year 2000 to 2012, this is due to fact that deposits across the banks have increased and therefore deposit protection fund and cash reserve ratio maintained by the central bank of Kenya surged. Placements are attributed to loans due from both local and international banks. In the period covered from 2000 to 2012 placements posted mixed reactions mainly due to liquidity levels in the market. Investments in government

securities by commercial banks has increased over the period from the 2000 to 2012, this has mainly be attributed to the introduction of automated trading system by the Nairobi stock exchange 2009. Investment in securities has had mixed reactions from the year 2000 to 2012, this has mainly been attributed to macro-economic and micro-economic factors particularly high inflation, high interest rates and lack of foreign participation in our securities market. Advances have been increase since the year 2000 to 2012, this is the core investment of commercial banks, and uptake of loans influences the growth of an economy particularly in low interest regime.

5.2 Conclusions

The eight independent variables (Cash balance, central bank balance, placement, government securities, investments, advance, gross domestic product and inflation) have an impact on the financial performance of commercial banks in Kenya. Investments in securities had the greatest impact on profitability with 2.789 despite posting low average allocation of 0.7% of investment to total assets over the period under review owing to its high risk high returns nature. Most Kenyan banks are risk averse.

This was followed by placements to both local and foreign at 0.44 representing a low average of 4.42% of investment to total assets over the period under review. In the third position is advance at 0.309, which is the core business of banking representing the highest average of 51.9% to total assets.

Most Kenyan commercial banks charge high lending rates to customers thereby receive high interest income. In the fourth position is investment in government securities at

0.111 at the second highest average of 21.12% to total assets. In the fifth position is gross domestic product at 0.092. In the sixth position is average inflation at -.002. In the seventh position is central bank of Kenya balance at -0.214. Finally in the eighth position is cash balances maintained by commercial banks at -1.970.

At 5% level of significance and 95% confidence interval, cash balance had 0.434 level of significance, central bank balance had 0.706 level of significance, placement level had 0.165 level of significance, government securities had 0.500 level of significance, investments had 0.149 level of significance, and advances had 0.138 level of significance, gross domestic product had 0.683 level of significance and inflation had 0.988 level of significance. The t critical at 5% level of significance at k=9 degrees of freedom is 2.571. Since all t calculated values were below 2.571 then all the variables individually are not significant in explaining the performance of the commercial banks in Kenya.

5.3 Policy Recommendation

From the findings of the study, the study recommends that central bank should formulate derivative markets and come up with diverse products in the Nairobi securities exchange to cushion commercial banks from adverse risk while investing in securities. This will ensure high returns-low risk securities investments by the commercial banks. The government through the central bank of Kenya, Nairobi securities exchange and capital markets authority should enhance financial deepening through introduction of diverse asset investments such as commodities trading, forward and futures trading.

The Central Bank of Kenya should pay interest to commercial banks on the funds they hold on their behalf, this mainly refers to deposit protection fund and cash reserve ratio. These funds should not sit idle at the Central Bank of Kenya coffers instead redeployed and earn some interest to commercial banks.

The government should institute appropriate laws that govern issuance of credit by commercial banks. Lending and deposit taking are the core functions of commercial banks. Commercial banks in Kenya charge very high interest rates on lending with very high spreads between the rates they pay depositors and the rates they lend its customers. In this view the government should introduce taxes on banks that charge 5% above the central bank rates. This will ensure affordable credit, reduced non-performing advances economic growth and in turn increase the allocation of advances in commercial banks investments portfolio. Loans/advances and deposits attribute to total business in banking fraternity.

The government should attract foreign direct investments through deepening the financial systems and ensuring the Kenya becomes cash lite country where paperless money is used across the board. This will reduce transaction cost, ensure an efficient financial system and spur economic growth. The introduction of national payment system will open up the financial market and increase financial products.

5.4 Limitation of the study

The study is based on historical data. The findings of the study may not be fully applicable at the time of the study as the operating environment has changed.

Some fundamental changes have taken place in the 2013/2014 budget including the reintroduction of capital gain tax negatively impacting investments in securities, widening the value added tax to include food items previously tax exempted and the anticipated issuance of euro bond in September 2013, this may reduce domestic borrowing thereby the government may reduce issuance of government securities such as bonds and bills.

The study focused on asset allocation and its effect on the performance, this may not provide a conclusive and accurate picture due to the fact that the yields on the assets were not factored. Interest and dividends attributed to these assets play a crucial role in determining profitability among the commercial banks in Kenya.

Time and resources were inadequate hence the researcher focused on assets allocation and its impact on profitability of commercial banks, a better picture would have been obtained had the researcher focused on the income attributed to each asset invested.

It may be quite challenging to compare the findings of this study with another industry; this is due to the fact that banking industry mainly dwells on lending and deposit taking as its core business.

The change of the constitution in Kenya and the introduction of county governments may have an impact on the asset allocation of commercial banks in Kenya in the near future. In this study it mainly dwelled on the central government system which may not be appropriate now that the county governments are in operation.

5.5 Suggestions for Further Research

There is need to carry out a comparative study with other countries commercial banks to establish the similarities and differences that exist as far as asset allocation and its impact on financial performance.

A study on financial asset allocation on the performance of non-banking financial institution would be suitable for comparison with the commercial bank institution.

A study that focuses on the yields attributed to assets and the performance of commercial banks in Kenya would be more meaningful and accurate to rank assets in order of the highest returns. This will assist treasury manager to allocate funds to assets that provide better yields.

The same study may be carried out after the introduction of futures commodities, swaps, forward market and county system of government in Kenya. This may be an interesting study to monitor if the asset allocation pattern would have changed.

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APPENDICES

APPENDIX 1: SUMMARY OF ASSETS BY COMMERCIAL BANKS IN KENYA (2000-2012)

Summary of Assets by Commercial Banks in Kenya (2000-2012)

	Cash (Ksh. Millions)	CBK balances (Ksh. Millions)	Placement (Ksh. Millions)	Government Security (Ksh. Millions)	Investments (Ksh. Millions)	Advances (Ksh. Millions)	Other Assets (Ksh. Millions)	Total Assets(Ksh. Millions)
2000	9,698.00	25,625.00	10,610.00	69,215.00	3,697.00	209,729.00	80,371.00	**408,945.00**
2001	8,833.00	26,355.00	7,925.00	90,057.00	4,880.00	202,925.00	65,754.00	**406,729.00**
2002	10,298.00	25,723.00	8,408.00	97,736.00	5,490.00	211,834.00	80,332.00	**439,821.00**
2003	9,373.00	24,292.00	7,334.00	137,030.00	3,948.00	227,298.00	77,749.00	**487,024.00**
2004	10,164.00	32,653.00	10,932.00	110,617.00	4,480.00	289,858.00	95,004.00	**553,708.00**
2005	12,753.00	35,241.00	37,797.00	126,366.00	1,824.00	326,243.00	76,478.00	**616,702.00**
2006	15,277.00	40,306.00	47,043.00	158,611.00	2,520.00	381,540.00	86,691.00	**731,988.00**
2007	22,379.00	50,765.00	60,313.00	199,582.00	2,938.00	479,680.00	113,290.00	**928,947.00**
2008	28,847.00	57,890.00	108,201.00	210,679.00	3,988.00	611,486.00	136,678.00	**1,157,769.00**
2009	28,795.00	61,129.00	56,934.00	314,269.00	7,047.00	692,140.00	155,623.00	**1,315,937.00**
2010	36,384.00	76,272.00	65,422.00	442,545.00	10,810.00	856,854.00	160,499.00	**1,648,786.00**
2011	42,583.00	92,135.00	111,806.00	304,123.00	13,033.00	1,126,788.00	298,378.00	**1,988,846.00**
2012	49,207.00	143,991.0 0	102,341.00	412,949.00	20,023.00	1,296,452.00	305,372.00	**2,330,335.00**

Source: Central Bank of Kenya, Annual Reports

APPENDIX 11: SUMMARY OF ASSETS ALLOCATIONS, MACRO-ECONOMIC VARIABLES AND PROFITABILITY MEASURES (2000-2012)

Summary of Assets Allocations, Macro-Economic Variables and Profitability Measures (2000-2012)

	Cash balance %	Central Bank of Kenya balances %	Placement %	Government Security%	Investments in securities%	Advances %	Other Assets %	GDP%	Average Inflation %	ROA %	ROE%
2000	2.37	6.27	2.59	16.93	0.90	51.29	19.65	0.60	9.97	0.60	5.20
2001	2.17	6.48	1.95	22.14	1.20	49.89	16.17	4.50	5.73	1.70	16.50
2002	2.34	5.85	1.91	22.22	1.25	48.16	18.26	0.60	1.97	1.00	11.10
2003	1.88	4.73	2.39	27.73	0.88	46.67	15.72	2.9O	9.80	2.30	23.70
2004	1.84	5.90	1.97	19.98	0.81	52.35	17.16	5.1	11.79	2.10	22.50
2005	2.07	5.71	6.13	20.49	0.30	52.90	12.40	5.91	9.87	2.40	23.90
2006	2.09	5.51	6.43	21.67	0.34	52.12	11.84	6.30	6.39	2.40	28.30
2007	2.41	5.46	6.49	21.48	0.32	51.64	12.20	7.00	4.27	2.70	28.00
2008	2.49	5.00	9.35	18.20	0.34	52.82	11.81	1.50	16.27	2.60	26.50
2009	2.19	4.65	4.33	23.88	0.54	52.60	11.83	2.70	9.24	2.60	25.00
2010	2.21	4.63	3.97	26.84	0.66	51.97	9.73	5.80	3.96	2.60	25.00
2011	2.14	4.63	5.62	15.29	0.66	56.66	15.00	4.40	14.02	3.80	28.20
2012	2.11	6.18	4.39	17.72	0.86	55.63	13.10	4.60	9.40	4.40	30.90

Source: Research data, 2012