

**THE RELATIONSHIP BETWEEN NON INTEREST
INCOME AND FINANCIAL PERFORMANCE OF
COMMERCIAL BANKS IN KENYA**

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DECLARATION

This research project is my original work and has not been presented to any other examination or institution of higher learning for examination or for any other purpose.

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This is to declare that this project has been submitted for examination with my approval as the University supervisor.

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DEDICATION

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ABBREVIATIONS

ATM	Automated Teller Machine
CAMEL	Capital Adequacy, Asset Quality, Management Efficiency, Earnings Ability and Liquidity
CAPM	Capital Asset Pricing Model
CAR	Capital Adequacy Ratio
CBK	Central bank of Kenya
CBR	Central Bank Rate
MPT	Modern Portfolio Theory
NIIR	Non-Interest Income to Revenue
NIM	Net Interest Margin
NNI	Net Interest Income
NNI	Non-Interest Income
NSF	Non Insufficient funds
PC	personal computers
PIN	Personal Identification Number
POS	point-of-sale
ROA	Return on Asset
ROE	Return on Equity
SPSS	Statistical packages for social sciences
SSA	Sub-Saharan Africa
TNII	Total Non-Interest Income
TOI	Total Operating Income

ABSTRACT

The objective of the study was to establish the relationship between the non-interest income and the financial performances of commercial banks in Kenya. Banks have a vital function in the economy. Traditionally banks have been thought of as firms which take deposits and make loans, and profit by the difference between the costs of the former and the earnings from the latter activities. Commercial banks in Kenya have experienced significant new competition and have lost valuable regulatory protection. Non-interest income have been used as a form of diversification due to the changing levels of competition, economical situations, and changes in technological innovation in the banking sector. Advances in information and communications technology (for example, the Internet and Automatic Telling Machines (ATMs), new intermediation technologies for processes like loan securitization and credit scoring, and the introduction and expansion of financial instruments and markets (high yield bonds, commercial paper, financial derivatives) all impacted on the levels and types of non-interest income at commercial banks. The study used a descriptive research design. The population of the study was 42 commercial banks operating between 2010-2014. The data was analyzed using SPSS version 20 and descriptive analysis, correlation analysis, ANOVA tables and regression analysis obtained. The study shows that there was a negative relationship between increase in non-interest income and financial performance occasioned by the variability in the ratio of non-interest income and net interest income. The p-values indicated significance levels of non-interest income in regression model though negative. The study concludes that non-interest income contributes positively to the financial performance of commercial banks though it diminishes ratio when compared with net interest income and volatility of returns. The study recommends that when numerous non-interest income activities are well managed, will lead to improved financial performance and mitigate banks against volatility of earning in long run. This may be attributed to stability of earning provision of product and services based on relationship banking.

Key words: Non-interest income, financial performance and central bank of Kenya.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Banks have a vital function in the economy. They have easy access to funds through collecting savers' money, issuing debt securities, or borrowing on the inter-bank markets. The funds collected are invested in short-term and long-term risky assets, which consist mainly of credits to various economic actors (individuals, companies and governments). Through centralizing any money surplus and injecting it back into the economy, large banks are the heart maintaining the blood supply of our modern capitalist societies. So, it is no surprise that they are subject to so much constraint and regulations (Striroh, 2006).

Traditionally banks have been thought of as firms which take deposits and make loans, and profit by the difference between the costs of the former and the earnings from the latter activities. The profitability of traditional banking activities such as business lending and raising deposits has diminished in recent years as described by (Abreu & Mendes, 2000). As a result, banks have increasingly turned to new, non-traditional financial activities as a way of maintaining their position as financial intermediaries. The changes are of importance for financial stability. The more unstable is a bank's (or any other firm's) earnings stream, the more risky the firm is concludes (Hoggarth et al., 1998).

Commercial banks in Kenya have experienced significant new competition and have lost valuable regulatory protection. One of the most significant changes in financial services sector over the past few years has been the appearance and development of banc-assurance concludes Kiganda (2014).

There is great potential for development and growth of banc-assurance in Kenya. Central Bank of Kenya financial liberalization and its association with the influx of new banks has led the banking system on a new corridor of performance due to the intensification of competition and the increase in offering new products and complex bank services (Oloo, 2010). Banking institutions have found banc-assurance to be an attractive and often profitable complement to their existing activities. Non-interest income have been used as a form of diversification due to the changing economic situations, levels of competition and changes in technological innovation around the world (Stiroh, 2004a)

1.1.1 Non-Interest Income

This is defined as revenue that banks earn from areas outside their lending operation or any income that bank earns from activities other than their core intermediation business (taking deposit and making loans) or from investment concludes (Khrawish, 2011). Examples of non-interest income include deposit and transaction fees, insufficient funds (NSF) fees, annual fees, monthly account service charges, inactivity fees, check and deposit slip fees, etc. Institutions charge fees that provide non-interest income as a way of generating revenue and ensuring liquidity in the event of increased default rates (Kaufman & Mote, 1994).

Fee income covers most income which is neither interest income nor bank charges. This includes a wide range of sources of income including fund management fees, loan arrangement fees, fees for advice, trust and custody fees, and commission on sales of third party financial products such as insurance (Brealey & Myers, 2011).

Non-interest income consists of Statement of comprehensive income line items;“net

fee and commission income”, “net insurance premium income”, “net insurance claims and benefits paid”, “changes in investment contracts and insurance contract liabilities”, “gains and losses from banking and trading activities”, “gains and losses from investment activities as well as other operating income” (Kaufman & Mote, 1994).

Advances in information and communications technology (for example, the Internet and Automatic Telling Machines (ATMs), new intermediation technologies for processes like loan securitization and credit scoring, and the introduction and expansion of financial instruments and markets (high yield bonds, commercial paper, financial derivatives) all impacted on the levels and types of non-interest income at commercial banks (Lown et al., 2000).

The consequences of noninterest income for the financial performance of commercial banks are not well understood. All else equal, an increase in noninterest income will improve earnings – but an increase in noninterest income seldom occurs without concomitant changes in interest income, variable inputs, fixed inputs, and/or financing structure found out (Short, 1979). As noninterest income trended up during the 1990s, it was generally believed that shifting banks’ income away from intermediation-based activities (in which bank income was subject to credit risk and interest rate risk), and toward fee-based financial products and services, would reduce banks’ income volatility (Hoggarth et al., 1998). Moreover, it was conventionally believed that expansion into new fee-based products and services reduced earnings volatility due to diversification effects.

According to Ritter & Udell (1996), this source of revenue has become more important in recent times as banks have shifted from traditional interest income to more non-traditional sources of revenue, known as non-interest or fee income. These sources of income have a great growth significant in non-interest income. There are various sources of non-interest income that have been discussed according to Ngugi (2003), who suggest that noninterest income is generated as a result of three information function of intermediation namely origination services and portfolio management.

Bank loans are relationship based and as a result have high switching costs, while most fee-based activities are not relationship based (Angbazo,1997).Thus, despite credit risk and fluctuations in interest rates, interest income from loans may be less volatile than non-interest income from fee-based activities. Within the context of an ongoing lending relationship, the main input needed to produce more loans is variable (interest expense); in contrast, the main input needed to produce more fee-based products is typically fixed or quasi- fixed (labor expense). Thus, fee-based activities may require greater operating leverage than lending activities, which makes bank earnings more vulnerable to declines in bank revenues (Williams and Prather, 2010).

Fee-based activities require banks to hold little or no fixed assets, so unlike interest-based activities like portfolio lending, fee-based activities like trust services, mutual fund sales, and cash management require little or no regulatory capital. Thus, fee-based activities likely employ greater financial leverage than lending activities reports CBK (2007). Using data from U.S. banks during the 1990s, the authors demonstrate

that three traditional streams of income from intermediation activities – interest from loans, interest from securities, and service charges from deposits – were all less volatile than income from fee-based activities (Stiroh and Rumble, 2006).

According to Ritter and Udell (1996), this source of revenue has become more important in recent times as banks have shifted from traditional interest income to more non-traditional sources of revenue, known as non-interest or fee income. These sources of income have a great growth significant in non-interest income. They are various sources of non-interest income that have been discussed according to Thygeson (1993), that suggest noninterest income is generated as a result of three information function of intermediation namely origination, services and portfolio management.

1.1.2 Financial Performance

This refers to subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. The financial position and performance is affected by the operation decision when assets are used effectively to increase profit (Abreu and Mendes, 2000).

Operation decision indicates the effectiveness of the company management in making profit from asset. Therefore operational efficiency can be achieved by dividing sale or revenue with total assets (Saira et al., 2011). 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).

1.1.3 Non-Interest Income and Financial Performance

The consequences of noninterest income for the financial performance of commercial banks are not well understood as presented by Abreu and Mendes (2000).An increase in noninterest income will improve earnings but an increase in noninterest income seldom occurs without concomitant changes in interest income, variable inputs, fixed inputs, and/or financing structure (Smith and Wood, 2003). As noninterest income trended up during the 1990s, it was generally believed that shifting banks' income away from intermediation-based activities (in which bank income was subject to credit risk and interest rate risk), and toward fee-based financial products and services, would reduce banks' income volatility (Stiroh, 2004a). Moreover, it was conventionally believed that expansion into new fee-based products and services reduced earnings volatility via diversification effects. But recent empirical studies indicate that neither of these beliefs holds on average (Guru et al., 2002).

DeYoung and Roland (2001) suggests why noninterest income may increase the volatility of bank earnings. Most bank loans are relationship based and as a result have high switching costs, while most fee-based activities are not relationship based (Barry and Laurie, 2010). Within the context of an ongoing lending relationship, the main input needed to produce more loans is variable (interest expense); in contrast, the

main input needed to produce more fee-based products are typically fixed or quasi-fixed (labor expense). Thus, fee-based activities may require greater operating leverage lending activities, which makes Banks earning more vulnerable to decline in bank revenues as concluded by Bourke (1989).

Most fee-based activities require banks to hold little or no fixed assets, so unlike interest-based activities like portfolio lending, fee-based activities like trust services, mutual fund sales, and cash management require little or no regulatory capital. Thus, fee-based activities likely employ greater financial leverage than lending activities (Abreu and Mendes, 2000).

Stiroh (2004a) finds that increased focus on noninterest activities at U.S. commercial banks is associated with declines in risk-adjusted performance. Stiroh (2004b) finds potential diversification benefits within broad lines of banking business (for example diversifying across different types of loans, or diversifying across different sources of fee-based income), but finds little potential for diversification benefits across broad lines of banking business.

Staikouras and Wood (2004) investigated the diversification effects of noninterest income at banks in 15 different European countries. While they also conclude that noninterest income is more volatile than interest income over time, they find negative correlations between these two income streams, which leads them to conclude (in contrast to the U.S. studies) that noninterest income tends to stabilize bank earning (Molyneux and Thrnston , 1992). Structural and regulatory differences may explain why these findings for European banks are different from the findings

for U.S banks. Fee-based services are relatively new to many U.S. banks, and thousands of small community banks lack the size and expertise to engage in many of these activities (DeYoung and William, 2003). In contrast, universal banking has been the historic norm in many European banking systems and small community banks are less prevalent (Bilge, 2009). It is possible that this combination of experience, size, and expertise could allow the average European bank to better exploit the diversification. DeYoung and Rice (2004) shows that cost-efficient commercial banks generate more noninterest income, but do not explore the causal relationship between these variables.

1.1.4 Commercial Banks in Kenya

The Kenyan banking industry is one of the broadest and most developed in sub-Saharan Africa (SSA) with 44 financial institutions, comprising 43 commercial banks and one housing and mortgage company (CBK, 2011). The profitability of Kenya's banking industry in the recent past has been a subject of public interest and debate concludes (Kamau, 2012). Advances in information and communications technology (for example, the Internet and Automatic Telling Machines (ATMs), new intermediation technologies for processes like loan securitization and credit scoring, and the introduction and expansion of financial instruments and markets (high yield bonds, commercial paper, financial derivatives) all impacted on the levels and types of non-interest income at commercial banks, helped by the process of deregulation (Ngugi, 2003).

The conventional view of bank shareholders is that they can diversify away any increases in idiosyncratic risk associated with increased non-interest income. Shareholders may be concerned about bank total risk due to the impact upon foregone

investment and the need for active risk management by bank managers addressing information asymmetry and agency problems (Laeven and Levine, 2007). Likewise bank, total risk is important to bank regulators due to their concern about systemic risk and the potential for contagion to other banks within their regulatory ambit. Borrowers are also concerned about bank survival as they face information and agency costs in the event of bank failure requiring a change of borrowing relationship, the resulting switching costs reduce the intrinsic value of the bank-client relationship (Stiroh, 2004b).

1.2 Research Problem

Commercial Banks mainly depends on interest, but interest incomes have declined markedly due to CBK publication that directed commercial bank reduce interest lending rate, decrease of treasury bond and bills to as low as 2% leading to revenue declining at a higher rate (Kiganda, 2014). To curb these challenges, the central bank of Kenya released a legislation that allows commercial banks to contract third party retail networks as agents (Aduda et al., 2013).

Agency banking has enabled bank customers to access the basic banking services, for example, cash deposit, cash withdrawal and bank balance inquiry conveniently or what would be termed as within the comfort of their neighborhood (Aduda et al., 2013). But deregulation allowed banks to achieve the scale to use these new technologies more efficiently, and the increased competition induced by deregulation provided banks with the incentives to adopt and adapt these new technologies (Ngugi, 2003).

In the United States, for instance, when non-interest income trended up during the 1990s, commentators felt that it was due to falling overall income volatility occasioned by diversification of the average commercial bank across a larger number of product lines (DeYoung and Rice, 2004). Technological and competitive changes have encouraged banks to expand into nonbanking activities. While this type of income offers banks a degree of diversification, it is seen as less sustainable and of lower quality than interest income (Golin and Delhaise, 2013). While banks' main income source is interest income, noninterest revenue has become increasingly significant in recent years. Noninterest income includes bank fees, service charges, dividend income, securitization and trading profit/loss (Abreu and Mendes, 2000).

One of the important internal factors that can be picked from income statement that affects bank profitability is the amount of expenses incurred during the bank operations within a certain period of time (Bush and Kick, 2009). This is what is referred to as efficiency from the efficiency theory. Efficient management of bank resources has implications on its performance.

Degree of diversification is another internal factor that affects performance. The findings from various studies are varied. Dietrich and Wanzenried (2011) found a positive association between the degree of diversification and bank performance. Advances in information and communications technology (e.g., the Internet, ATMs), new intermediation technologies (for example loan securitizations, credit scoring), and the introduction and expansion of financial instruments and markets (high-yield bonds, commercial paper, financial derivatives) all have occurred in the absence of deregulation Thygeson (1993).

Banks can extract fee income from customers willing to pay a “convenience premium” for doing their banking at ATMs or over the Internet. The sharply drop in interest income have necessitated that bank should increase non interest and other income to compliment the interest income, these will enable banks to maintain earning stability and as well as increase profit flow (Stiroh, 2004a). Banks have responded to this phenomenon by shifting their product mix toward noninterest income by selling mutual funds and investment in money market / financial market or government securities (Stiroh, 2004b). Diversification across and within both interest and non-interest income activities and increased risk adjustment return consistent with studies in European and US (Short, 1979, VanOmmeren, 2011; Stiroh and Rumble, 2006).

In Kenya for the last two decade the banking sector has been improving. However, this doesn't mean that all banks are profitable, there are banks declaring losses while others were going into receivership (Oloo, 2010).Ngugi (2003) studied the determinants of interest rate spread in Kenya. Olweny and Shipho (2011) focused on sector-specific factors that affect the performance of commercial banks in Kenya. Aduda et al., (2013) studied the relationship between agency banking and financial performance of commercial banks. Yet, the relationship between non-interest income and the financial performance of commercial banks in Kenya has not been studied and in particular use ROE and ROA as independent variables. Thus, this study will be conducted with the intention of filling this gap.

1.3 Objective of the Study

The objective of the study is to establish the relationship between non-interest income and financial performance of Commercial Banks in Kenya.

1.4 Value of the Study

This study seeks to investigate the relationship between non-interest sources and financial performance of commercial banks in Kenya and the nature extent of the relationship. The study will enable individual bank to evaluate interest and noninterest income and the significant to its operation. To identify other forms of non-interest income the banks may venture into to mitigate the changing business environment and increase profitability.

The research will contribute to body of knowledge by documenting the contribution and relationship of interest and non-interest income to the banks and the profitability in financial institution. Bank manager's income and professional reputations are clearly linked to bank earnings and hence high instability or volatility of earning will fare poorly on their performance. The information will enable shareholder to know which banks are able to invest and mitigate the uncertainty of future income through diversification and hence maximize the returns. The conventional view of bank shareholders is that they can diversify away any increases in idiosyncratic risk associated with increased non-interest income.

Bank regulators are vested with the responsibility of protecting the payment systems and also protection of the customer from bank failure. This necessitate bank to lay down mechanism of measuring banks stability through its earning. Bank total risk is important to bank regulators due their concern about systemic risk and the potential for contagion to other banks within their regulatory ambit. Borrowers are also concerned about bank survival as they face information and agency costs in the event of bank failure requiring a change of borrowing relationship, the resulting switching costs reduce the intrinsic value of the bank-client relationship.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is devoted to reviewing literature relevant to the relationship between noninterest income and financial performance of commercial banks in Kenya. The main purpose of literature review is to determine what has been done already related to the research problem being studied. Relevant literature is presented and discussed under different sub-sections as outlined below. The section gives a review of theoretical and empirical literature.

2.2 Theoretical Review

This section provides the two theories that support the non-interest income and financial performance. These theories are Capital asset pricing model (CAPM) and Modern portfolio theory.

2.2.1 Capital Asset Pricing Model Theory

The Capital Asset Pricing Model (CAPM) of William Sharpe (1964) and John Lintner (1965) marks the birth of asset pricing theory (resulting in a Nobel Prize for Sharpe in 1990). CAPM is widely used in applications, such as estimating the cost of capital for firms and evaluating the performance of managed portfolios. The attraction of the CAPM is that it offers powerful and intuitively pleasing predictions about how to measure risk and the relation between expected return and risk (Hickman et al., 2002).

The capital asset pricing model (CAPM) is the most widely used measure of risk, beta, and alpha; it implies that the market portfolio is mean variance efficient and is thereby used to advocate for passive investment. Many academic studies empirically reject the CAPM. The authors illustrate through a reverse optimization method that the CAPM is consistent with the empirically observed return parameters and the market proxy portfolio weights (Brealey et al., 2011).

2.2.2 Modern Portfolio Theory

Modern Portfolio Theory is also popularly known as MPT model. The MPT of economic theory considers the return of an asset as a random variable and considers the portfolio as the weighted combination of assets. Hence the return of a portfolio, according to Modern Portfolio Theory, is defined as the weighted combination of the returns of the assets. The random variable taking the portfolio's return has an expected value and a variance also. According to this model, risk is defined as the standard deviation of the return of portfolio (Brealey et al., 2011).

According to Modern Portfolio Theory, a quadratic utility function describes the investor's risk and reward preference. This theory assumes that only the volatility and expected return of the portfolios matter to the investors. It has been seen that the investors are indifferent about the skew and kurtosis of the returns. In this theory the volatility is considered as the proxy for risk and the return is the expectation on the future (Hickman et al., 2002).

2.3 Determinants of Financial Performance of Commercial Banks

The determinants of bank performances can be classified into bank specific (internal) and macroeconomic (external) factors Al-Tamimi and Hassan (2010). 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 Naceur and Goaled (2008).

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). Olweny and Shipho (2011) focused on sector-specific factors that affect the performance of commercial banks in Kenya.

2.3.1 Bank Specific Factors/Internal Factors

The internal factors are specific variables which influence the profitability of specific bank. These factors are within the scope of the bank to manipulate them and that they differ from bank to bank. These include capital size, size of deposit liabilities, size and composition of credit portfolio, interest rate policy, labor productivity, and state of information technology, risk level, management quality, bank size, ownership and the like.

CAMEL framework often used by scholars to proxy the bank specific factors Dang (2011). CAMEL stands for Capital Adequacy, Asset Quality, Management Efficiency, Earnings Ability and Liquidity. Each of this are discussed below.

2.3.1.1 Capital Adequacy

Capital is one of the bank specific factors that influence the level of bank profitability. Capital is the amount of own fund available to support the bank's business and act as a buffer in case of adverse situation (Athanasoglou et al. 2005). Banks capital creates liquidity for the bank due to the fact that deposits are most fragile and prone to bank runs. Moreover, greater bank capital reduces the chance of distress Diamond and Raghuram (2000).

According to Dang (2011), the adequacy of capital is judged on the basis of capital adequacy ratio (CAR). Capital adequacy ratio shows the internal strength of the bank to withstand losses during crisis. Capital adequacy ratio is directly proportional to the resilience of the bank to crisis situations.

2.3.1.2 Asset Quality

The bank's asset is another bank specific variable that affects the profitability of a bank. The bank asset includes among others current asset, credit portfolio, fixed asset, and other investments. Often a growing asset (size) related to the age of the bank (Athanasoglou et al., 2005). Loan is the major asset of commercial banks from which they generate income. The quality of loan portfolio determines the profitability of banks Maundos and Solis (2009).

The loan portfolio quality has a direct bearing on bank profitability. The highest risk facing a bank is the losses derived from delinquent loans (Dang, 2011). Different types of financial ratios used to study the performances of banks by different scholars. It is the major concern of all commercial banks to keep the amount of

nonperforming loans to low level. This is so because high nonperforming loan affects the profitability of the bank. The lower the ratio the better the bank performing (Sangmi and Tabassum, 2010).

2.3.1.3 Management Efficiency

Management Efficiency is one of the key internal factors that determine the bank profitability. It is represented by different financial ratios like total asset growth, loan growth rate and earnings growth rate. Yet, it is one of the complexes subject to capture with financial ratios. Moreover, operational efficiency in managing the operating expenses is another dimension for management quality. The performance of management is often expressed qualitatively through subjective evaluation of management systems, organizational discipline, control systems, quality of staff, and others. Yet, some financial ratios of the financial statements act as a proxy for management efficiency (Athanasoglou et al., 2005).

The capability of the management to deploy its resources efficiently, income maximization, reducing operating costs can be measured by financial ratios. One of this ratios used to measure management quality is operating profit to income ratio (Ilhomovich, 2009; Sangmi and Tabassum, 2010). The higher the operating profits to total income (revenue) the more the efficient management is in terms of operational efficiency and income generation. The ratio of operating expenses to total asset is expected to be negatively associated with profitability. Management quality in this regard, determines the level of operating expenses and in turn affects profitability (Athanasoglou et al., 2005).

2.2.1.4 Liquidity Management

Liquidity is another factor that determines the level of bank performance. Liquidity refers to the ability of the bank to fulfill its obligations, mainly of depositors. According to Dang (2011) adequate level of liquidity is positively related with bank profitability. The most common financial ratios that reflect the liquidity position of a bank according to the above author are customer deposit to total asset and total loan to customer deposits.

For instance Ilhomovich (2009) used cash to deposit ratio to measure the liquidity level of banks in Malaysia. However, the study conducted in Malaysia found that liquidity level of banks has no relationship with the performances of banks Guru et al (2002). Over the past two decades, the banking industry has been transformed by sweeping deregulation, minimum capital requirements, and changes in ownership, rapid technological advances in information flows, communications infrastructure, and financial markets (Aduda et al., 2013)

2.2.1.5 Bank Size

Bank size accounts for economies and diseconomies of scale (Naceur and Goaid, 2008). Economics theory argues that if a firm is experiencing economies of scale, then larger firms will operate efficiently and provides their services at lower costs. Along with this argument, theory of banks suggests that a bank enjoys economies of scale up to a certain level, beyond which they start experiencing diseconomies of scale (Obamuyi, 2013).

Empirical results of the relationship between size and profitability are mixed, a risk approach to size suggest that through lower interest rates charged to borrowers, larger

banks would will earn low profits. However, if larger banks control big share of the market in a non-competitive environment, larger banks may earn higher profits through high lending rate, and low deposit rate.

2.3.2 External Factors/ Macroeconomic Factors

The macroeconomic policy stability, Gross Domestic Product, Inflation, Interest Rate and Political instability are also other macroeconomic variables that affect the performances of banks. For instance, the trend of GDP affects the demand for banks asset. During the declining GDP growth the demand for credit falls which in turn negatively affect the profitability of banks.

On the contrary, in a growing economy as expressed by positive GDP growth, the demand for credit is high due to the nature of business cycle. During boom the demand for credit is high compared to recession (Athanasoglou et al., 2005). The same authors state in relation to the Greek situation that the relationship between inflation level and banks profitability is remained to be debatable.

2.3.3 Ownership Identity and Financial Performance

The study of the relationship between ownership and performance is one of the key issues in corporate governance which has been the subject of ongoing debate in the corporate finance literature. The relationship between firm performance and ownership identity, if any, emanate from agency theory (Stiroh, 2006). This theory deals with owners and manager's relationship, which one way or the other refers to ownership and performance.

The management decision, in turn, is affected by the interests of the owners which is determined by their investment preferences and risk appetite. The Identity of ownership matters more than the concentration of ownership. This is so because ownership identity shows the behavior and interests of the owners (Ongore, 2011). According to Claessens et al., (2001) domestic banks' performance is superior compared to their foreign counterparts in developed countries.

2.4 Essence of Non-Interest Income

Diversification is the name given to the growth strategy where a business introduces new products in markets. This is an inherently more risk strategy because the business is moving into markets in which it has little or no experience Often there is a credibility focus in the communication to explain why the company enters new markets with new products Leaven and Leaven (2007).Several reasons as to why the bank invest in noninterest income these include;-

2.4.1 Technology and Automation

The banking sector's profit before tax increased by 20.5 percent from Ksh. 74.3 billion in December 2010 to Ksh. 89.5 billion in December 2011.The growth in profit was attributed to higher levels of revenue inflows from the growth in credit portfolio and fees on innovative products offered by institutions (CBK, 2011). Innovation in banking industry relates to new ways of doing financial business including online banking (E-Banking), phone banking (M-Banking), Agency Banking. Non-interest income is net income derived from fee-based banking services, such as E-Banking and Agency banking (Stiroh, 2004a).

Ngugi, (2012) sought to assess the effect of financial innovation on the financial performance of commercial banks as the key players in the banking sector over a time span of 4 years. The study noted that the financial industry in Kenya has underwent a wide range of transformation all aimed at improving financial performance of many financial institutions (Ratan, 2008). Yet in spite of that, the study holds that the relationship between financial innovation and financial performance is not always positive correlated because there are cases of negative correlation between the two being reported (Ngugi, 2012).

Banking industry deregulation removed a whole host of restrictions that had stunted the evolution of the banking industry, constrained the efficiency of financial product markets, and extended the lives of thousands of poorly run and/or suboptimal-sized commercial banks. Advances in information and communications technology (e.g., the Internet, ATMs), new intermediation technologies and the introduction and expansion of financial instruments and markets (Stiroh, 2004a).

2.4.2 Agency Banking

Agency banking refer to bank partnerships with non-banks, typically retail commercial outlets, ranging from lottery kiosks, pharmacies, post offices, construction goods stores, and so forth, to provide distribution outlets for financial services Kamau (2012). Agency banks offer normal banking services such as cash deposits and withdrawals, disbursement and repayment of loans, salary payments, pension payouts, transfer of funds and the issuing of mini bank statements, all through shared infrastructures conclude Kamau (2012). In addition, the agency network allows banks to reach new customers, who can open new accounts, perform credit and debit card applications and cheque book requests (Timothy et al., 2006).

Financial performance is the core of the Central Bank of Kenya's reform agenda to support Kenya's development blueprint, Vision 2030; over 70% of Kenyans lack access to formal financial services. Agent banking is governed by the Prudential Guideline on Agent Banking issued by the CBK in May 2010. CBK has since granted approval to 10 banks for the rolling out of their agency networks. As at second quarter of 2012, there were 10 commercial banks that had contracted 12,054 active agents facilitating over 18.7 million transactions valued at Ksh. 93.1 billion (CBK, 2012). This implies that agency banking is continuously improving leading to significance increased financial performance in those banks that have rolled up the service due to its convenience and efficiency in operation.

Owing to the successes of agency banking in Brazil, in Africa, agency banking is used to enhance greater performance across the continent. Agency banking was implemented in South Africa in 2005 after amendment of Bank Act giving banks green light to contract nonbank third parties to collect deposits, money due to the bank or applications for loans or advances, or to make payments to such clients on banks' behalf (Bold, 2011).

2.4.3 Less Subject to Business Cycle

Interest income is known to be affected by economic condition prevailing in a country example the financial crisis lead to downward trend in interest rate hence leading to decreased interest income. Whereas non-interest income is not highly affected by economic recession according to Thygerson (1993), he argued that noninterest income is less susceptible to economic recession which may lead to loan delinquencies and losses, its then to offset loss brought by interest income (Kerstein and Kozberg, 2013).

2.5 Empirical Studies

Generally, banks have two income streams namely interest based income and non-interest income. Academics have given a lot of attention to lending activity that generates interest income due to the link of this traditional activity to bank performance. Aduda et al., (2013) conducted a study to establish the relationship between Agency Banking and Financial Performance of Kenyan Commercial banks. Banking agents are equipped typically with a combination of point of sale (POS) card reader, barcode scanner to scan bills for bill payment transactions, mobile phone, Personal Identification Number (PIN) pads, and at times personal computers (PCs) with access to the bank's server via a personal dial-up or other viable data connection.

The nature of financial intermediation has changed significantly over the past two decades. In the last few years the Kenyan banking industry has experienced volatile interest rates margins and profitability. There is the view that Kenyan banks over emphasize this stream of income, but it is sensitive to changes in the CBR which is an exogenous factor for banks. To avoid high volatility in reported profits, banks need to refocus and engage in non-interest activities. This will also ease pressure on lending rates as banks don't have to raise lending rates to earn more, assuming that there is scope for cross-subsidy amongst the two income sources (Kiganda, 2014).

In recent years, there has been a sustained push by Kenyan banks towards regional expansion and the establishment of new business channels runs by subsidiaries. This creates a challenge of safeguarding the local banking system taking into account the risks associated with cross border banking activities including country risk. By

adopting a consolidated supervisory approach, CBK seeks to ensure that such risks are identified and adequately mitigated against (CBK, 2014).

In Kenya, the financial performance of commercial banks has been improving for the last two decades. 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 Shiphoo (2011) in Kenya focused on sector-specific factors that affect the performance of commercial banks. Banks today are the largest financial institutions around the world, with branches and subsidiaries throughout everyone's life. There are plenty of differentiations between types of banks. And much of this differentiation rests in the products and services that banks offer (Howells and Bain, 2008).

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). One of the major reasons behind high return in the region was investment in risky ventures. The other possible reason for the high profitability in commercial banking business in SSA is the existence of huge gap between the demand for bank service and the supply thereof. That means, in SSA the number of banks are few compared to the demand for the services; as a result there is less competition and banks charge high interest rates (Flamini et al., 2009).

This shift toward noninterest income has contributed to higher levels of bank revenue in recent years, but there is also a sense that it can lower the volatility of bank profit and revenue, and reduce risk Saunders and Water (1994). One potential channel is that noninterest income may be less dependent on overall business conditions than traditional interest income, so that an increased reliance on noninterest income reduces the cyclical variation in bank profits and revenue (Staikouras and Wood, 2004). Alternatively, expanded product lines and cross selling opportunities associated with growing noninterest income may offer traditional diversification benefits for a bank's revenue portfolio. If noninterest income and net interest income are negatively or only weakly correlated, for example, noninterest income may diversify bank revenue and improve the risk/return trade-off (Stiroh, 2004b).

Bush and Kick (2009) analyzed the impact of non-interest income on financial performance and the risk profile of banks, and the results showed that a strong engagement in fee-generating activities correlates with higher risk for commercial banks and higher risk-adjusted returns on equity and total assets. DeYoung and Rice (2004) indicated that non-interest income was generated by traditional and non-traditional activities, leading to higher bank profitability and risk associated with the increase in earnings volatility. Baele et al., (2007) examined European banks over the period 1989-2004 and used market-based measures of return potential and bank risk to find that diversification will increase banks' expected returns and systematic risk. Stiroh (2006) further showed that an increase of non-interest revenue did not lead to higher share of market returns but did cause increased market risk.

Mercieca et al., (2007) concluded that banks financial stability is negatively affected by a reliance on non-interest income, but shifting into non-interest income creates an inefficient trade-off between risk and return. Ramona and Thomas (2009) analyzed the impact of non-interest income on financial performance and the risk profile of German banks between 1995 and 2007, and the results showed that a strong engagement in fee-generating activities correlates with higher risk for commercial banks and higher risk-adjusted returns on equity and total assets.

The ability to reduce risk is obviously a topic of considerable importance for individual banks, as well as their regulators and supervisors. If noninterest income lowers the volatility of bank profits and reduces risk, for example, it might be reasonable to reduce capital requirements for banks with a diversified revenue portfolio and for supervisors to reallocate their scarce resources. Similarly, the costs of bank supervision are tied to the perceived riskiness of the institution, so banks have additional incentives to reduce risk. Managers with large equity interests in banks with franchise values have further incentives to reduce risk and maintain that value (Stiroh, 2004b).

Thygerson (1993) also argued that noninterest income is less susceptible to economic recession which may lead to loan delinquencies and losses, its then to offset loss brought by interest income. 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 (Michael and Yan, 2010).

2.6 Summary of Literature

From the literature, relationship between non-interest income and financial performance of commercial banks is not clear. Some of these studies show a positive correlation, others a negative correlation while others have shown no correlation at all. A closer examination of these studies reveals variations on data sources, measures used on both dependent and independent variables and control variables. The researchers have not been conclusive as to what is the relationship between non-interest income and the financial performance of commercial banks. The aforementioned empirical studies have demonstrated that there is a link between non-interest income and financial performance associated with diversification.

Most of the early studies attempting to identify the relationship between non-interest income and financial performance have focused risk adjustments and diversification as measure of relationship. These studies have not, however, demonstrated how a firm's financial performance would be affected by non-income. In recent years, noninterest income has become increasingly important. Noninterest income may be less stable than interest income, but does provide the bank with diversification of income streams. It is measured by the ratio non-interest income to total income generated by banks. Despite the various literature review carried they is no clear cut relationship to the impact of non-interest income with the financial performance of commercial bank, the empirical review carried out show conflicting result in such in different country similar research has been carried out.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter discusses the design and methodology that was applied during the research. It presents the research design that was used, target population, data collection and analysis.

3.2 Research Design

The study used the descriptive research design owing to its capability to address the objective of the study. Research design was the plan and structure of investigation so conceived as to obtain answers to research questions. Saunders and Walter (1994) 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 (Blumberg et al., 2008).

This explanatory study was based on secondary data obtained from published financial statements of commercial banks in Kenya. The research 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.

Descriptive research is a process of collecting data in order to test hypotheses or to answer questions concerning the current status of the subject in the study (Mugenda and Mugenda, 2003). This is a scientific approach that aims primarily at gathering

knowledge (descriptions and explanations) about the object of study but does not wish to modify the object. The target is to find out how things are, or how they have been.

3.3 Target Population

The target population was comprised of 43 commercial banks operating in Kenya and regulated by central bank of Kenya. The period of study covered was five years from January year 2010 to December 2014. The choice of five years was taken into consideration because of adequacy of data and it will be reasonable because of average ratios shift over time and also the availability of necessary data. Charter Bank which was on receivership for the five years period under the research was excluded (See Appendix I).

3.4 Data Collection

The study was based on secondary data obtained from published financial statements for all Commercial banks in Kenya. That data is, available in Commercial banks' website, CBK supervisory reports, banking survey 2014 and 2015 and Kenya banker's publications. The study selected 42 commercial banks out of 43 that were operating between 2010 and 2014 and did publish the statements of accounts.

3.5 Analytical Model

The performance indicator used was Return on Equity (ROE).

The regression model used in this study was as follows;

$$ROE = \beta_0 + \beta_1 * NIIr + \beta_2 * Lr + \beta_3 * AQR + \beta_4 * NLA + \beta_5 * Ia + \epsilon$$

ROE = Dependent Variable; Return on Equity (*ROE* is defined as net income divided

by total equity capital)

β_0 = Constant term

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = Regression coefficients

NIIr = Total noninterest income (TNII)/Total operating income (TOI)

Lr = Liquidity Ratio (Quick assets/Total liabilities)

AQr = Assets quality (Total Nonperforming loans /Total loans advances)

NLA = size of the bank (Natural Log of total assets)

Ia =Inflation (Yearly average rate)

ϵ = Error term

3.6 Data Analysis

Multiple linear regression analysis was used to establish the relationship. The strength of the relationship between non-interest income and financial performance will be tested using correlation coefficient and F-statistic. The analysis of quantitative data was carried out using SPSS Version 18 and presented in tables. T-tests was used to determine whether there was significant difference in financial performance when the non-interest income is high and vice versa.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents data analysis and interpretation. The objective of the study was to establish the relationship between non-interest income and financial performance of commercial banks in Kenya. The data was tabulated based on variables of study, as per the model presented in the previous chapter and the latest data in the market.

4.2 Descriptive Statistics of Data

Data was collected from the 42 out of 43 commercial banks in Kenya representing 97.7% of banking sector. Since inflation was the same across all banks, the variable was excluded in yearly regression model and was applied in the consolidated model of 2010-2014.

4.3 Research Findings

Table 4.1: Consolidated Descriptive Statistics of Banks 2010-2014

	N	Minimum	Maximum	Mean	Std. Deviation
ROE	210	-.91	.56	.1910	.18553
NII to TOTAL INCOME	210	.0181	.6812	.231246	.1162256
QUICK ASSET to TOTAL LIABILITY	210	.1014	1.0770	.439423	.1744262
LOG of ASSETS	210	2.2478	5.5763	4.393975	.5761417
TNPL to TLA	210	.0000	.9494	.078791	.1147673
INFLATION	210	.0387	.1398	.080155	.0353049
Valid N (listwise)	210				

Source: Research data

The above table represents the mean and standard deviation of different variables within the period of five years. ROE had a mean of 19.1% and a standard deviation of 18.5%. Inflation had a mean of 0.08(8%) and standard deviation of 3.5%. Logassets had a mean of 4.4 and standard deviation of 0.58. Ratio of Total noninterest income to total operating income had a mean of 0.23 (23%) and standard deviation of 0.116 (11.6%). Ratio of Total nonperforming loans to total loan advances had mean of 0.0787 (7.9%) and a standard deviation of 0.115 (11.5%). Quick assets to Total liability had mean of 0.439 (mean =43.9%, Std. Deviation=17.44%) indicating that the industry is more likely to meet unforeseeable deposit withdrawals. Therefore a higher ratio is more desirable. High standard deviation in ROE, NII to Total income, Quick asset to total liability, TNPL to TLA and inflation is an indication of outliers in the data. This is well explained by the individual banks performance. Example is the year 2010 when Giro bank had a ROE of 47.35% and UBA Kenya bank limited had a ROE of -15.54%.

4.3.1 Model Summary, Anova and Regression Analysis of Banks Year 2010

Table 4.2: Model summary 2010

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	.374 ^a	.140	.047	.16604	.140	1.506	4	37	.221	2.413

Source: Research data

a. Predictors: (Constant), log of assets, NII to total income, quick asset to total liability, TNPL to TLA

b. Dependent Variable: ROE

From the table above, R of 37.4% indicates the relationship between ROE and the independent variable but only 14% of the variation in ROE is explained by the model as indicated by the R-squared.

Table 4.3: Analysis of Variance 2010

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.166	4	.042	1.506	.221 ^b
	Residual	1.020	37	.028		
	Total	1.186	41			

Source: Research Data

a. Dependent Variable: ROE

b. Predictors: (Constant), log of assets, NII to total income, quick asset to total liability, TN TLA.

Test the hypothesis

H0: coefficients=0

H1: At least one of the coefficients is not zero; we use the ANOVA table.

From the ANOVA table, we fail to reject H0 and conclude that regression on full model is not significant since the p-value is greater than 0.05.(p=0.21).

Table 4.4: Regression Analysis 2010

Coefficients ^a									
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			
	B	Std. Error	Beta			Zero-order	Partial	Part	
1	(Constant)	-.264	.234		-1.127	.267			
	NII to TOTAL INCOME	-.159	.260	-.099	-.611	.545	-.068	-.100	-.093
	QUICK ASSET to TOTAL LIABILITY	.052	.144	.058	.363	.718	.040	.060	.055
	TNPL to TLA	.044	.199	.037	.223	.824	-.099	.037	.034
	LOG of ASSETS	.114	.049	.382	2.334	.025	.352	.358	.356

Source: Research data

a. Dependent Variable: ROE

b. Predictors: (Constant), log of assets, NII to total income, quick asset to total liability, TNPL to TLA.

From the table above, only LOG of ASSETS is significant in explaining the model.

The model Regression equation is year 2010:

$$\text{ROE} = -.264 - .159\text{NIIr} + 0.052 \text{Lr} + 0.044 \text{AQR} + .114 \text{NLA}$$

When all predictors are held constant, ROE = -.264. A unit increase in Non-Interest Income to Total Income leads to 15.9% reduction in ROE. A increase in Quick Assets to Total Liability leads to 5.2% increase in ROE. A unit increase in Total Non-Performing Loans to Total Loans Advances leads to 4.4% increase in ROE and a unit increase in LOG of Assets leads to 11.4% increase in ROE.

4.3.2 Model Summary, ANOVA and Regression for Banks Year 2011

Table 4.5: Model summary 2011

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	.458 ^a	.210	.190	.0211355	.210	10.630	1	40	.002	1.885

Source: Research Data

a. Dependent Variable: ROA

b. Predictors: (Constant), log of assets, NII to total income, quick asset to total liability, TNPL to TLA.

From the table above, only 21% variation in ROE that can be explained by the model as stipulated by the R-squared.

Table 4.6: Analysis of Variance 2011

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	.315	4	.079	6.975	.000 ^b
1 Residual	.418	37	.011		
Total	.734	41			

Source: Research data

a. Dependent Variable: ROE

b. Predictors: (Constant), LOG of ASSETS, NII to TOTAL INCOME, TNPL to TLA, QUICKY ASSETS to TOTAL LIABILITY.

Table 4.7: Regression Model 2011

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
	B	Std. Error	Beta			Zero-order	Partial	Part
(Constant)	.041	.148		.275	.785			
1 NII to TOTAL INCOME	-.202	.162	-.155	-1.246	.221	-.093	-.201	-.155
QUICK ASSET to TOTAL LIABILITY	-.253	.096	-.355	-2.646	.012	-.500	-.399	-.328
TNPL to TLA	-.144	.141	-.135	-1.020	.314	-.332	-.165	-.127
LOG of ASSETS	.078	.029	.368	2.681	.011	.525	.403	.333

Source: Research Data

a. Dependent Variable: ROE

b. Predictors: (Constant), log of assets, NII to total income, quick asset to total liability, TNPL to TLA.

In the regression model where ROE is the dependent variable and NII to Total Income, Quick Assets to Total Liability, TNPL to TLA, Log of Assets as the predictors, the significant predictors are Quick Assets to Total Liability and Log of ASSETS with significance levels 0.012 and 0.11 respectively.

The regression equation becomes:-

$$\text{ROE} = 0.041 - 0.202\text{NIIr} - 0.253\text{Lr} - 0.144\text{AQR} + 0.078\text{NLA}$$

When all predictors are held constant, ROE=.041. A unit increase in NII to TOTAL INCOME leads to 20.2% reduction in ROE. An increase in QUICK ASSETS to TOTAL LIABILITY leads to 25.3% decrease in ROE. A unit increase in TNPL to TLA leads to 14.4% reduction in ROE and a unit increase in LOG of ASSETS leads to 7.8% increase in ROE.

4.3.3 Descriptive Statistics, Model Summary, ANOVA and Regression Analysis of Banks year 2012

Table 4.8: Descriptive statistics 2012

Descriptive Statistics			
	Mean	Std. Deviation	N
ROE	.1540	.26686	42
NII to TOTAL INCOME	.195901	.0952551	42
QUICK ASSET to TOTAL LIABILITY	.466329	.1574978	42
TNPL to TLA	.079336	.1465401	42
LOG of ASSETS	4.417621	.5397887	42

Source: Research Data

Presence of outliers causes high standard deviation in ROE, NII to total income, and quick asset to total liability

Table 4.9: Model Summary 2012

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	.381 _a	.145	.052	.25977	.145	1.568	4	37	.203	1.240

Source: Research Data

a. Predictors: (Constant), LOG of ASSETS, NII to TOTAL INCOME, QUICK ASSET to TOTAL LIABILITY, TNPL to TLA

b. Dependent Variable: ROE

Table 4.9 above shows adjusted R² of 0.145 indicating that all independent variables taken together explain about 14.5% of the variations in ROE. Fitted model is not significant in predicting ROE as indicated by p-value.

Table 4.10: Analysis of Variance 2012

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.423	4	.106	1.568	.203 ^b
	Residual	2.497	37	.067		
	Total	2.920	41			

Source: Research Data

a. Dependent Variable: ROE

c. Predictors: (Constant), LOG of ASSETS, NII to Total Income, Quick Asset to Total Liability, TNPL to TLA.

Hypothesis

H0: Beta coefficients=0

H1: At least one coefficient in not equal to 0

From the ANOVA table, the p value =0.203>0.05 hence we fail to reject H0 and conclude that the regression model is not significant

Table 4.11: Regression analysis -2012

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.641	.452		-1.419	.164
	NII to TOTAL INCOME	-.138	.452	-.049	-.306	.762
	QUICK ASSET to TOTAL LIABILITY	-.039	.277	-.023	-.142	.888
	TNPL to TLA	.037	.313	.020	.119	.906
	LOG of ASSETS	.189	.089	.383	2.139	.039

Source: Research Data

a. Dependent Variable: ROE

b. Predictors: (Constant), LOG of ASSETS, NII to TOTAL INCOME, QUICK ASSET to TOTAL LIABILITY, TNPL to TLA.

From the T-test on individual coefficients, only LOG of ASSETS is significant in predicting the model (0.039<0.05). The Regression equation model for year 2012:

$$\text{ROE} = -.641 - .138\text{NIIr} + 0.036\text{Lr} + 0.037\text{AQR} + .189\text{NLA}$$

From the finding above, this implies that if LOG of ASSETS is held constant, ROE= -0.641 units. When LOG of ASSETS is increased by a unit, ROE increases by 18.9%. When total nonperforming loans to total loans advances increases by a unit, ROE increases by 3.7%. While the other predictor have a negative effect on ROE.

4.3.4 Model Summary, ANOVA and Regression Analysis of Banks Year 2013

Table 4.12: Model Summary 2013

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	.627 ^a	.393	.327	.12766	.393	5.977	4	37	.001	2.004

Source: Research Data

a. Dependent Variable: ROE

b. Predictors: (Constant), LOG of ASSETS, QUICK ASSET to TOTAL LIABILITY, NII to TOTAL INCOME, TNPL to TLA.

From the table above, 39.3% of variation can be explained by the model. Since the p-value is less than 0.05 (p=0.01), the model is significant.

Table 4.13: Analysis of Variance 2013

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.390	4	.097	5.977	.001 ^b
	Residual	.603	37	.016		
	Total	.993	41			

Source: Research Data

a. Dependent Variable: ROE

b. Predictors: (Constant), LOG of ASSETS, QUICK ASSET to TOTAL LIABILITY, NII to TOTAL INCOME, TNPL to TLA.

From the ANOVA table, at least one of the regression coefficients is significant as indicated by the p-value (p=0.01).

Table 4.14: Regression Analysis 2013

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.202	.238		-.850	.401
1 NII to TOTAL INCOME	-.574	.207	-.390	-2.771	.009
QUICK ASSET to TOTAL LIABILITY	-.183	.131	-.193	-1.393	.172
TNPL to TLA	-.072	.407	-.030	-.178	.860
LOG of ASSETS	.140	.047	.486	2.998	.005

Source: Research Data

a. Dependent Variable: ROE

In testing the significance of coefficients by the t-test, NII to TOTAL INCOME and LOG of ASSETS were the only significant predictors.

The model regression equation for the year 2013:

$$\text{ROE} = -.202 -.574\text{NII} - 0.183\text{Lr} - 0.072 \text{AQR} + .140 \text{NLA}$$

ROE=-0.202 when NII to TOTAL INCOME and LOG of ASSETS were held constant. A unit increase in NII to TOTAL INCOME leads to 57.4% reduction in ROE, a unit increase in LOG of ASSETS leads to 14% increase in ROE.

4.3.5 Model Summary, ANOVA and Regression Analysis of Banks year 2014

Table 4.15: Model summary year 2014

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	.674 ^a	.455	.396	.13508	.455	7.708	4	37	.000	2.040

Source: Research Data

a. Dependent Variable: ROE

b. Predictors: (Constant), LOG of ASSETS, NII to TOTAL INCOME, QUICK ASSET to TOTAL LIABILITY, TNPL to TLA.

From the table above, 45.5% of variation is explained by the model. Fitted model is significant in predicting ROE.

Table 4.16: Analysis of Variance 2014

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.563	4	.141	7.708	.000 ^b
Residual	.675	37	.018		
Total	1.238	41			

Source: Research Data

a. Dependent Variable: ROE

b. Predictors: (Constant), LOG of ASSETS, NII to TOTAL INCOME, QUICK ASSET to TOTAL LIABILITY, TNPL to TLA

From the ANOVA table above, at least one of the Regression coefficients is significant as indicated by the p-value (p=0.00).

Table 4.17: Regression Analysis 2014

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.401	.249		-1.613	.115
1 NII to TOTAL INCOME	-.337	.193	-.230	-1.745	.089
QUICK ASSET to TOTAL LIABILITY	-.019	.142	-.020	-.136	.893
TNPL to TLA	-.462	.372	-.189	-1.239	.223
LOG of ASSETS	.158	.046	.504	3.466	.001

Source: Research Data

a. Dependent Variable: ROE

b. Predictors:(Constant), LOG of ASSETS,NII to TOTAL INCOME,QUICK ASSET to TOTAL LIABILITY, TNPL to TLA

The significant predictors are NII to TOTAL INCOME and LOG of ASSETS. The model regression equation for the year 2014:

$$\text{ROE} = -.401 - .337\text{NII} - 0.019\text{Lr} - 0.462\text{AQR} + .158\text{NLA}.$$

Therefore the model can be reduced to;

$$\text{ROE} = -0.401 - .337 \text{ NII} + .158 \text{ NLA}$$

ROE=-0.401 when NII to TOTAL INCOME and LOG of ASSETS were held constant. A unit increase in NII to TOTAL INCOME leads to 33.7% reduction in ROE, a unit increase in LOG of ASSETS leads to 15.8% increase in ROE.

4.3.6 Consolidated Data for Banks 2010-2014

Table 4.18: Model Summary 2010-2014

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	.459 ^a	.211	.192	.16680	.211	10.918	5	204	.000	1.689

Source: Research Data

a. Predictors: (Constant), INFLATION, QUICK ASSET to TOTAL LIABILITY, TNPL to TLA, NII to TOTAL INCOME, LOG of ASSETS

b. Dependent Variable: ROE

Table 4.18 above shows adjusted R² of 0.211 indicating that all independent variables taken together explain about 21.1% of the variations in ROE. Fitted model is significant in predicting ROE as indicated by p-value.

Table 4.19: Analysis of Variance 2010-2014

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.519	5	.304	10.918	.000 ^b
	Residual	5.675	204	.028		
	Total	7.194	209			

Source: Research Data

a. Dependent Variable: ROE

b. Predictors: (Constant), INFLATION, QUICK ASSETS to TOTAL LIABILITY, TNPL to TLA, NII to TOTALINCOME, LOG of ASSETS

From the ANOVA table, at least one of the regression coefficients is significant as indicated by the p-value (p=0.01).The overall model is significant as shown by Fstatistic of 10.918 with p<0.05.This implies that all the independent variables taken together can help predict the ROE.

Table 4.20: Regression Analysis 2010-2014

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.232	.118		-1.967	.051
1 NII to TOTAL INCOME	-.336	.103	-.211	-3.271	.001
QUICK ASSET to TOTAL LIABILITY	-.099	.069	-.093	-1.447	.150
TNPL to TLA	-.053	.109	-.033	-.491	.624
LOG of ASSETS	.127	.022	.396	5.662	.000
INFLATION	-.136	.331	-.026	-.411	.682

Source: Research Data

a. Dependent Variable: ROE

c. Predictors: (Constant), LOG of ASSETS, NII to TOTAL INCOME, QUICK

ASSET to TOTAL LIABILITY, TNPL to TLA.

The significant predictors are NII to TOTAL INCOME and LOG of ASSETS. The predicting equation therefore for consolidated period 2010-2014:

$$\text{ROE} = -.232 - .336\text{NII} - 0.099\text{Lr} - 0.053\text{A} + .127\text{NLA} - 0.136\text{Ia}$$

From the finding above table the study found out that holding ratio of NII to Total operating income, quick asset to total liability, total non-performing loans, log of assets and inflation at zero, ROE was -0.232. This also depicts that in the absence of independent variables the ROE will be negative.

Correlations matrix table for the overall model 2010-2014

From the table below, the entire variables have negative correlations with ROE except the log of assets. A correlation of 0.4 is a sign of positive relationship in the financial performances of the banking industry. As also noted total non-performing loans have a weak but a positive relationship with non-interest income to total income of 0.097. Log of assets have a positive relationship with non-interest income of 0.150.

Table 4.21: Correlations

	ROE	NII to TOTAL INCOME	QUICK ASSET to TOTAL LIABILITY	TNP L to TLA	LOG of ASSET S	INFLA TION
ROE	1					
NII to TOTAL INCOME	-.143	1				
QUICK ASSET to TOTAL LIABILITY	-.174	-.079	1			
TNPL to TLA	-.188	.097	-.002	1		
LOG of ASSETS	.400	.150	-.246	-.344	1	
INFLATION	-.016	-.158	.021	-.034	-.057	1

Source: Research Data

4.4 Summary of the Findings

Table 4.22: Summary of the findings

Year	Model
1. 2010	ROE= -.264-.159NIIr + 0.052 Lr +0.044 AQR+.114 NLA
2. 2011	ROE= 0.041-.202NIIr - 0.253 Lr -0.144 AQR+0.78NLA
3. 2012	ROE= -.641-.138NIIr + 0.036 Lr +0.037 AQR+.189 NLA
4. 2013	ROE= -.202 -.574NIIr -0.183Lr -0.072 AQR+.140 NLA
5. 2014	ROE= -.401 -.337NIIr -0.019Lr -0.462AQR+.158NLA
6. 2010-2014	ROE= -.232 -.336NIIr -0.099Lr -0.053AQR+.127NLA-0.136Ia

Source: Research Data

From the table above its clear that noninterest income has a negative signs from all the years and even the consolidated model. Liquidity ratio represented by the ratio of quick assets to total liability and asset quality represented by total non performing loans to total loans advances have a mixed relationship while the rest of variables except the log of assets have negative relationship. The consolidated models indicate that noninterest income and log of assets are significance as show by the p-value in the table of coefficients.

Similarly the ANOVA table of consolidated data indicate the model is significant as the p-value is less than 0.05.Although the coefficient is negative it cannot be

sufficiently concluded that the relationship is positive or negative. The ratio of non-interest income to net interest income may have contributed to the results at the bank level since different banks have different level of diversification with small banks having small percentage of non-interest income.

In nut shell the increase in non-interest leads to increase in profits as the overall operating income increases and the ratios of non-interest income to net interest income changing interchangeably. The above regression equations indicate that the increasing non-interest income may bring diversification benefits in the banking sector in Kenya as indicated by the significance in the model.

The log of assets has shown to have a positive relationship with the financial performance as indicated by the six models presented in the table above. Hence the size of a bank as presented by the total assets may show how well the management has efficiently utilized the assets to create more wealth to the shareholders and hence increase in the shareholders fund.

The coefficients of non-interest income presented by the different models appear much more volatile than net interest income. The data also showed that in the year 2011 the inflation more than doubled hence lack of smooth fluctuations in the macroeconomic on bank revenue. It seems that the relative financial performance of banks is not important in explaining non –interest income in commercial banks in Kenya.

Non -interest income generate lower ratio to total income compared to the net interest income. Kenyan banks are aggressively taking advantage of the close relationships with depositors by encouraging them to undertake fee based services with a number

introducing bank assurance and investment banking. By taking up these product and services, the customers indicate intention to higher levels of personalized services.

The evidence suggests that non-interest income is significant determinant of the banking sector financial performance, as measured by both return in equity and assets. Hence it can be inferred that an increase in the level of non-interest income per ratio of income would automatically lead to higher variability in earnings.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introductions

The chapter presents the summary of key findings presented in chapter four, conclusions based on research findings and recommendations. It also highlights the limitations of the study and gives suggestions for further research.

5.2 Summary of the Findings

The researcher investigated the relationship between the non-interest income and the non-interest income on financial performance of commercial banks in Kenya between 2010-2014. From the findings, it's clear that banks with higher noninterest income to net interest income ratio exhibit higher return on equity and return on assets as it boost the income volatility. This in itself creates expansion in financial performance volatility as it is less affected by inflation. In the year 2014, the study found out that holding ratio of NII to Total operating income, quick asset to total liability, total non-performing loans, log of assets and inflation at zero, ROE was -0.232.

From the overall regression model equation, the study found out that holding ratio of NII to Total operating income, quick asset to total liability, total non-performing loans, log of assets and inflation at zero, ROE was -0.232. This also depicts that in the absence of independent variables the ROE will be negative. The study indicated a very consisted and positive relationship between the ROE and the log of assets. Liquidity ratio represented by the ratio of quick assets to total liability and asset quality represented by total non-performing loans to total loans advances have a

mixed relationship while the rest of variables except the log of assets have negative relationship.

The consolidated models indicate that noninterest income and log of assets are significance as show by the p-value in the table of coefficients. Similarly the ANOVA table of consolidated data indicates the model is significant as the p-value is less than 0.05. Although the coefficient is negative it cannot be sufficiently concluded that the relationship is positive or negative. The ratio of non-interest income to net interest income may have contributed to the results at the bank level since different banks have different level of diversification with small banks having small percentage of non-interest income.

5.3 Conclusion

The study investigated if there is relationship between the non-interest income and the financial performance of commercial banks in Kenya. Non-interest income broadly associated with non-core banking activities vis-a-vis interest income (broadly associated with core deposit taking and leading activity) is linked to higher financial performance across the banking sector in Kenya.

As ratios of non-interest income to net interest income trended upwards, it is perceived that banks are shifting from intermediation-based activities (in which banks are prone to credit and interest risk), and towards fee-based financial product and services, in attempt to reduce income volatility. The convectional believe that expansion into new fee-based product and services reduced income volatility through diversification, neither of these can beliefs holds in commercial banks in Kenya.

These regression results deny the belief that increasing non-interest income shares will improve profitability and hence shareholders returns.

The regressions equations indicate linear relationship, yet the huge elements of outliers distort the linearity of the whole equation. The log of assets confirms and holds key to the consistency in the relationship between the financial performances as indicated by the six regression models.

5.4 Recommendations

The study finds a negative non-significant relationship between the non-interest income and financial performance of commercial banks as indicated by the Anova table of different years and further recommends due to the increasing pressure from the Non-banking financial institutions and saving and credit societies, it's prudent for banks to increase the revenue generated by non-interest income to sustain the growth and performance. If a bank manages its assets and liability well such that it earns high income with the financial performance can be enhanced in different ways.

The study recommends there is need for the management of commercial banks to foster more non-interest income as it is evidence by the ratio of non-interest income to net interest income of the top commercial banks in the period under the study. This may be attributed by stability of cash flows and militate against the changes in the interest income.

5.5 Limitations of the Study

Due to the nature of study and time constraints the research was limited to only commercial banks in Kenya and the a period of five years i.e between 2010 and 2014. Although ROE was used as measure of bank performance, it suffers from major

drawback; it does not adjust for the bank's size thus making it difficult to compare how well a smaller bank is doing relative to big banks.

Shareholders focus on ROE of the company as indicator of performance since they are interested on their investments. If you are a shareholder, this gives you a quick understanding of the financial performance of the company. But this may have diverted the attention from the core fundamentals in the company performance and mostly through financial strategies. This may obscure a lot of potential weakness in organization.

Presence of outliers in the whole data set, decrease the size of the correlation coefficient. This is evident by large positive figure of ROE, non-performing loans and the negative figures in ROE. A case in point was UBA bank with the highest negative ROE during the period under the review while Imperial bank dominated the values of banks with highest ROE in the market under period under the review.

5.6 Suggestions for Further Research

The study sought to investigate the relationship between the noninterest income and the financial performance of commercial banks in Kenya. However the variables used were not fully exhaustive as the commercial banks' balance sheet has other components that affect the financial performance of commercial banks.

Further research could incorporate macro-economic variables i.e. GDP and exchange rates. Also a study focusing on the causes of commercial banks in Kenya i.e. Charterhouse, Dubai bank and recently Imperial bank all of which are under statutory management and ways of improving the financial performance. Since commercial

banks plays a big role in the economy of any country, furthers studies relating to the global economic downturn and the relationship to the banks performance can be useful and importance.

The scope of this research was to discuss relationship between non-interest Income and performance of commercial banks in Kenya, further research can be extended to cover the NBFIs (non-Banks financial Institutions) since they are in the process of becoming commercial banks. Since in 2010, the Central bank of Kenya had categorized the reporting of these commercial banks in four tiers (tiers i-iv) based on the size of the assets of the bank. Hence by use of these tiers banks of the same rank in terms of profitability and size can be homogeneous in their operations.

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APPENDICES

APPENDIX I: List of Commercial Banks in Kenya

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

Source: CBK *website, 2015*

APPENDIX II: Introduction Letter



UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
MBA PROGRAMME

Telephone: 020-2059162
Telegrams: "Varsity", Nairobi
Telex: 22095 Varsity

P.O. Box 30197
Nairobi, Kenya

DATE 6.10.2015

TO WHOM IT MAY CONCERN

The bearer of this letter STEPHEN GICHURE KABIRU

Registration No. DG1/71226/2014

is a bona fide continuing student in the Master of Business Administration (MBA) degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.



M
PATRICK NYABUTO
MBA ADMINISTRATOR
SCHOOL OF BUSINESS

APPENDIX III: Authorization Letter



BSD/GEN/16

6th November 2015

Mr. Stephen Kabiru
P.O. Box 102572-00100
Nairobi.

Email: kabirusteve2004@gmail.com

Dear Sir,

REQUEST FOR ACADEMIC RESEARCH WRITING DATA

Your letter dated 2nd November 2015 on the captioned subject matter refers.

We write to advise that the data on performance of commercial banks in Kenya is available in the Bank Supervision Annual Reports which can be accessed on the Central Bank of Kenya Website under the link: <https://www.centralbank.go.ke/index.php/bank-supervision-reports>. However, in respect to the data on non-interest income, this can be obtained directly from the individual banks. Alternatively, you can extract the data from the published disclosures by each bank at the Central Bank of Kenya, Bank Supervision Department.

For any clarification feel free to contact Mr. Amos Lupembe (email: LupembeATcentralbank.go.ke on telephone. +254-020-2863095).

Yours faithfully,

ALI MOHAMED ALI
FOR: DIRECTOR, BANK SUPERVISION