THE EFFECTS OF INCOME SOURCE DIVERSIFICATION ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

BY
Kaberia Fridah Muthoni

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DECLARATION

This research project is my original work and has not been presented for examination to any other university.

Signature...______________________________Date . . . .v1

KABERIA FRIDAH MUTHONI

D61/60110/2011

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

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DR. ADUDA JOSIAH O.
DEDICATION

I would like to dedicate this work to my dear father Atanasio Kaberia for his sacrifice to see me through school, my sister Pamela Kaberia for her motivation and encouragement and to my husband Kenneth Mwiti for his patience and perseverance during my study period.
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ABSTRACT

This paper attempts to find out the effect of diversifying income sources of Commercial Banks in Kenya during the financial period 2007 - 2011 on financial performance. The study predicts that the level of diversification has a positive impact on financial performance.

This study is significant because banks are facing stiff competition from Micro-Finance Institutions and other mobile money transfer services which was in the past a role for banks only. Financial distress in the past has caused many banks to collapse in the past which has impacted negatively on the entire economy of the nation. Commercial Banks have therefore had to diversify their income sources from traditional intermediation income generating activities to non-intermediation income generating activities.

The findings of this study conducted on 15 Commercial Banks in Kenya relied on secondary data from annual reports of the banks. Regression analysis was mainly used to reveal that commercial banks in Kenya are diversified in income source generating activities. If banks diversify their income generating activities, the problem of profitability and stiff competition in the industry will ease, hence improving financial performance.

The regression analysis conducted established that the independent variables have a positive strong correlation with the dependent variable. Each of the independent variables: interest income, fees and commissions on loans and advances, other fees and commissions, foreign exchange trading income and other non interest income contribute positively to financial performance of commercial banks.

It is also evident from the study that without the diversification of income sources by commercial banks in Kenya most of them would have struggled with their objectives of maximizing shareholders wealth or eventually collapsed.
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LIST OF ABBREVIATIONS

Central Bank of Kenya

Earnings before Interest and Tax

Kenya Bankers Association

Net Operating Income

Return on Assets

Return on Equity

Return on Revenues

Statistical Package for Social Sciences
CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Diversification is a portfolio strategy designed to reduce risk by combining various investments. Diversification benefitted from shifting into non-interest income in bank's revenue and reduced volatility of bank profits (Stiroh, 2004). In finance and investment planning, diversification improved cost efficiency through lower risk from diversification if it occurred; it lowered the required risk premiums on un-insured debt (Moon, 1996).

Income source diversification refers to commercial banks shifting their income sources into non-intermediation income generating activities as opposed to the traditional inter-mediation income generating activities. Banks have shifted their sales mix by diversifying in income sources. There are two main sources of income; interest income and non-interest income. Non-interest income components include fees and commissions on loans and advances, other fees and commissions, foreign exchange trading income, dividend income and other non-interest income. Non interest income increase bank franchise value and banks with higher non-interest income have higher market betas (Baele et al, 2007).

Financial performance is a measure of how sound financial health of a bank is and how is a guarantee to its depositors, shareholders, employees and the economy at large. Due to this fact, efforts have been made from time to time, to measure the financial position of each bank and manage it efficiently and effectively (Batiz-Lazo and Woldesenbet, 2006).

Financial institutions have been increasingly generating income from "off-balance sheet" business and fee income. Albertazzi and Gambacorta (2006) as cited by Uzhegova (2010) noted that decline in interest margins, had forced banks to explore alternative sources of revenues, leading to diversification into trading activities, other services and non-traditional financial operations. The concept of revenue diversifications followed the concept of portfolio theory which states that individuals can reduce firm-specific risk by diversifying their portfolios.
The relationship between income source diversification and financial performance remains a controversial one in both theory and empirical findings with positive, negative and even no relationship between the two being exemplified. Earlier studies showed mix results about the relationship between income source diversification and financial performance. Lepetit et al. (2008) also documented increased non interest income resulting in higher bank risk. By exploiting detailed income data, they concluded that increased risk is due to commission and fee activities for small banks rather than trading activity.

In a study of 43 nations, Laeven and Levine (2007) found that diversified financial conglomerates are less valuable than specialized financial institutions, indicating that diversification across lending and non-lending activities did not add value and was likely to increase agency costs. The recent evidence concluded that non interest income did not improve bank income risk-return characteristics, except in Europe. This is an important conclusion as De Young and Rice (2004) find that non interest income has grown in banking in the United States to contribute close to half of bank income. Further, large banks were more reliant upon non interest income than small banks, with the associated implications for systemic stability. They further found that 1 percent of all banks generate about 18 percent of all non interest income in the United States.

De Young and Roland (2001) suggested three reasons why non interest income increase income volatility. First, as bank loans were based on relationships, the switching cost associated with changing lenders was high, while fee based income had less of a relationship component. The switching cost reduced the volatility associated with interest margin income. Second, the main input to the lending process was interest expenditure, a variable cost. In the case of non interest income the main input was staff cost, which was mainly fixed, particularly in the short run, thus generating higher operating leverage and so higher potential risk. Finally, non interest income did not require high levels of fixed assets and thus had a lower level of required capital (particularly for activities like fund management and trust services), unlike lending activity, and hence had higher financial leverage resulting in higher risk.
The recent global financial crisis of 2007/2009 demonstrated the importance of bank performance both in national and international economies and the need to keep it under surveillance at all times. Arun and Turner (2004) argued that the importance of banks was more pronounced in developing countries because financial markets were usually underdeveloped, and banks were typically the only major source of finance for the majority of firms and were usually the main depository of economic savings (Athanasoglou et al, 2006).

1.1.1 Commercial Banks in Kenya
The Companies Act, the Banking Act, the Central Bank of Kenya Act and the various prudential guidelines issued by the Central Bank of Kenya (CBK), governs the Banking industry in Kenya according to publication by Pricewaterhouse Coopers. The banking sector was liberalized in 1995 and exchange controls lifted. According to CBK (2011) there are forty-three commercial banks. Thirty-five of the banks, most of which are small to medium sized, are locally owned. The industry is dominated by a few large banks most of which are foreign-owned, though some are partially locally owned. Six of the major banks are listed on the Nairobi Security Exchange.

The banks have come together under the Kenya Bankers Association (KBA), which serves as a lobby for the banks' interests and addresses issues affecting member institutions. The commercial banks and non-banking financial institutions offer corporate and retail banking services but a small number, mainly comprising the larger banks, offer other services including investment banking (Pricewaterhouse Coopers 2009, 2010).

The banking sector plays a very important role in the economy by facilitating the flow of money from depositors to borrowers. Licensing of financial institutions in Kenya is done by the Minister of Finance through CBK. Ideally, financial reforms and free market should spur the adoption of innovations that improve efficiency and provide a healthy balance between lending and deposit rates (Banking Act Cap 488, pp6 10-12).

Over the last few years, the banking sector in Kenya has continued to grow in assets, deposits, profitability and products offering. The growth has been mainly associated by an industry wide branch network expansion strategy both in Kenya and in the East African community region and automation of a large number of services and a move towards emphasis on the complex customer
needs rather than the off-the-shelf banking products. There is a lot of competition as a result of new entrants into the market and increased innovations. According to Ndung'u (2011) Kenya's experience on innovations in the banking sector has embraced a partnership approach.

Pricewaterhouse Coopers (2009) and CBK (2011) reported changes in the regulatory framework where liberalization exists, but the market continues to be restrictive. Declining interest margins due to customer pressure has led to mergers and reorganizations in the banking sector. The increased demand for non-traditional services including the automation of a large number of services, a move towards emphasis on the customer rather than the product, and introduction of non-traditional players who now offer financial services products calls for significant product and market development that should result in further consolidation and partnerships in the banking sector.

The environment in which financial services organizations operated was changing with different factors exerting influence in the organization. It was therefore important that organizations constantly scan the environment and were aware of what was happening. Johnson Scholes (2004) observed that uncertainty increased when environmental conditions were more complex and dynamic. The banking industry is transforming itself in unpredictable ways (Crane and Bodie, 2004).

1.2 Statement of the Problem

A research problem is the question that exists that leads to a need for the study because no answers were found within the literature reviewed, in theory, or in practice, Cresswell (2003). Financial liberalization of early 1990s in Kenya exposed the banking industry to many players in the industry hence leading to stiff competition and weakening of financial performance of many commercial banks as well as collapse of others. In order to mitigate this competition and improve on bank performance, commercial banks have diversified their income sources.

In recent years, deregulation and technological innovation had permitted almost all financial institutions to capture an increasing share of their income stream from non-interest sources. US commercial banks, for example, generated 42% of operating income from non-interest sources in 2004 compared to 32% in 1990 and 20% in1980. While part of the increase in non-interest
Income was due to diversification into lines of business such as investment banking, venture capital and insurance underwriting, growth in fee-paying and commission-paying services linked to traditional retail banking services had also been significant (DeYoung and Rice, 2004).

However, the shift towards non-interest income had not improved the risk-adjusted returns of US banks in recent years (Hirtle and Stroh, 2007). Clark et al. (2007) detected a recent shift in the strategic behaviour of US banks. A return to retail had occurred because retail business offered relatively stable returns that could help offset volatility in non-retail business. For banks, both in the US and elsewhere, several researchers had explored relationships between non-interest income and business strategies, market conditions, technological change and risk-adjusted financial performance.

The proponents of activity diversification argued that diversification provided a stable and less volatile income, economies of scope and scale, and the ability to leverage managerial efficiency across products (Choi and Kotrozo, 2006). Chiorazzo et al. (2008) noted that as a result of activity diversification, the economies of scale and scope caused through the joint production of financial activities led to increased efficiency of banking organizations. Product mix reduced total risks because income from fee-based activities was not correlated or at least perfectly correlated with income from fee-based activities and therefore diversification should stabilize operating income and give rise to a more stable stream of profits (Uzhegove, 2010).

Diversification made it cheaper for institutions to achieve credibility in their role as screeners or monitors of borrowers (Diamond et al. 1986). Claessens and Jansen (2000) argued that foreign banks usually brought with them better know-how and technical capacity, which then spilled over to the rest of the banking system. These imposed competitive pressure on domestic banks, thus increasing efficiency of financial intermediation and they provided more stability to the financial system because they were able to draw on liquidity resources from their parents' banks and provided access to the international markets.
On the other hand, corporate finance theory suggests that firms should focus in order to obtain the greatest possible benefit from management's expertise and to reduce the agency problems leaving investors to diversify on their own (Jensen (1986), Berger and Ofek (1996) and Denis et al (1997)- Delong (2001) found out that geographically focused bank mergers in the USA resulted in superior performance, while Stiroh and Rumble (2003) and Stiroh (2004) showed that a shift towards non-interest income did not offer large diversification benefits. Therefore there was need for more empirical evidence on the effects of diversification on bank's financial performance.

Mwega (2009) carried out a study to examine performance of the banking industry in Kenya over the last ten years and he concluded that the industry had improved tremendously as only two banks had been put under Central Bank of Kenya statutory management during that period compared to 37 banks failures during between 1986 and 1998. Kamau (2009) carried out a survey that showed that an increase in the degree of foreign ownership in Kenya is associated with reduction of cost inefficiencies, suggesting that the degree of foreign-owned banks influenced the performance of the local banking sector. Oloo (2009) described the banking sector as the bond that held the country's economy together. Sectors such as agricultural and manufacturing virtually depended on the banking sector for survival and growth.

Olweny and Shipho (2011) carried out a study to evaluate the effects of banking sectoral-factors on the profitability of commercial banks in Kenya. They concluded that the bank-specific factors are the most significant factors influencing profitability of commercial banks in Kenya. Profitable firms were the ones that strived to; improve their capital base and reduced operational costs. This study differs from the above studies because it aims at determining the impact of income source diversification on financial performance of commercial banks in Kenya. This study, to the researcher's knowledge, there were no studies that had been done to close the gap of knowledge in investigating the impact of income source diversification on financial performance of commercial banks in Kenya.
1.3 Objective of the Study

The objective of this study was to determine the effects of income source diversification on financial performance of commercial banks in Kenya.

1.4 Importance of the Study.

There were few studies that were carried out in the field of effects of diversification on bank performance despite the fact that the issue of focus versus diversification had existed in corporate finance literature over a long period of time. The few studies which were undertaken had resulted into mixed results and inconclusive evidence. This study would be useful to scholars, regulators, shareholders, employees, managers, the regulator, and government.

To the scholar, the study would be a source of literature review and empirical reference which would provide grounds of further study to the scholar.

To the regulator, Central Bank of Kenya (CBK), to understand how better to mitigate the risks that engrossed the banking industry in Kenya. It would also provide a guide to remedial regulatory schemes and supervisory programme to support operations of financial institutions.

To the shareholders, the study would assist to increase their knowledge on deciding whether to diversify or focus to boost their overall wealth.

To the employees, the study would help them to assess the long term stability of the firm and their job security.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction
This section drew on literature in the area of diversification and focus. Secondary materials such as books, journals and articles which carry precious research work on the study topic were analyzed. The material was of importance to this study as it formed a basis for observation which would be made during the study in line with the study objective.

2.2 Theories on Diversification
This section looked into the theories on diversification. It looked at the different schools of thought of different scholars and how they viewed diversifications. The theories discussed here are; portfolio theory, agency theory, traditional banking theory and intermediation theory.

2.2.1 Portfolio Theory
Modern Portfolio Theory was introduced by Harry Markowitz with his paper "Portfolio Selection," which appeared in the 1952 Journal of Finance. Thirty-eight years later, he shared a Nobel Prize with Merton Miller and William Sharpe for what has become a broad theory for portfolio selection.

The theory of portfolio management describes the resulting risk and return of a combination of individual assets. A primary objective of the theory is to identify asset combinations that are efficient. Here, efficiency means the highest expected rate of return on an investment for a specific level of risk. The primary starting point for portfolio theory requires an assumption that investors are risk averse. This simply means that they will not consider a portfolio with more risk unless it is accompanied by a higher expected rate of return.

Modern portfolio theory was largely defined by the work of Markowitz (1952) in a series of articles published in the late 1950s. This theory was extended and refined by Sharpe (1963), Untner (1949), Tobin (1941) and others in the subsequent decades. Portfolio theory integrates the process of efficient portfolio formation to the pricing of individual assets. It explains that
some sources of risk associated with individual assets can be eliminated, or diversified away, by holding a proper combination of assets.

Prior to Markowitz's work, investors focused on assessing the risks and rewards of individual securities in constructing their portfolios. Standard investment advice was to identify those securities that offered the best opportunities for gain with the least risk and then construct a portfolio from these. Following this advice, an investor might conclude that railroad stocks all offered good risk-reward characteristics and compile a portfolio entirely from these. Intuitively, this would be foolish. Markowitz formalized this intuition. Detailing mathematics of diversification, he proposed that investors focus on selecting portfolios based on their overall risk-reward characteristics instead of merely compiling portfolios from securities that each individually has attractive risk-reward characteristics.

Portfolio theory provides a context for understanding the interactions of systematic risk and reward. It has shaped how institutional portfolios are managed and motivated the use of passive investment techniques. The mathematics of portfolio theory is used in financial risk management and was a theoretical precursor for today's value at risk measures.

2.2.2 Agency Theory

Agency theory explains how to best organize relationships in which one party determines the work, which another party undertakes (Eisenhardt, 1985). The theory argues that under conditions of incomplete information and uncertainty, which characterize most business settings, two agency problems arise: adverse selection and moral hazard. Adverse selection is the condition under which the principal cannot ascertain if the agent accurately represents his ability to do the work for which he is being paid. Moral hazard is the condition under which the principal cannot be sure if the agent has put forth maximal effort (Eisenhardt, 1989).

Banks play a role of delegated monitoring to solve the contracting problem between the borrowers and lenders. Because of the asymmetric information, moral hazard of borrowers will be caused after the contract, for the lenders will never know what's the real incentive of the borrowers, who may change their behavior after a loan has been made. Monitoring is necessary to ensure the behavior of the borrowers and the repayment of the loans. A major theory of the
I banking is that banks have advantages in this area. Diamond (1984) points out that to some extent monitoring is a public goods that no one has the incentive to provide, banks can be the most efficient way to conduct this task for two reasons: First banks have the economies of scale in monitoring. "Economies of scope are said to exist when two or more products can be jointly produced at a lower cost than if the same products are produced individually. Shelagh A Heffeman, 1996, the economies of scale in monitoring means banks can pool all of the loans together and monitor them with a lower cost and secondly banks have the ability to reduce the cost of monitoring by diversification.

The problems of adverse selection and moral hazard mean that fixed wage contracts are not always the optimal way to organize relationships between principals and agents (Jensen and Meckling, 1976). The provision of ownership rights reduces the incentive for agents' adverse selection and moral hazard since it makes their compensation dependent on their performance (Jensen, 1983).

The same as delegated monitoring, control have the same effect in solving the problem of moral hazard, banks conduct this role by making incentive contract with the borrowers to identify the share of the benefits and losses with the borrowers and enforcing the contract if the borrowers have no ability to fulfill them, which is always involving high costs

2.2.3 Traditional Banking Theory

The traditional theory of the banking firm emphasizes on factors that are given by David T.Llewellyn (1999). Information is very important in the financial system. Banks have comparative advantages in getting information than the other parties because banks hold account of their customers. When the firm doesn't want to disclose their information to the public, by holding and managing the customer accounts, banks can gain valuable information from them conveniently.

Bank plays the role of insurance by pooling all the deposit together to meet the liquidity needs of different depositors. This insurance services cannot be provided by the insurance company because of the risk is too low to meet the minimum standard of them. "Bank thus transform imperfectly marketable, long term assets into fully marketable, short-term liabilities, and in the
process provides its debt-holders with insurance against the contingency that they will be caught short by an unexpected liquidity shock" Dowd (1996). Banks play the role of agency by accepting the deposits and making loans; they solve a lot of problems of direct dealing with individuals and provide a convenient way to satisfy most of the customers' needs. Banks still have the advantages that were given by the subsidies. Regulation makes the banking industry are less competitive. The entry barriers are so high that the other institutions cannot provide the banking services easily. Banks have the monopoly position and the comparative advantages in providing the traditional services.

2.2.4 Intermediation Theory

Current intermediation theory states that in the traditional Arrow-Debreu model of resource allocation, firms and households interact through markets and financial intermediaries play no role. "When markets are perfect and complete, the allocation of resources is Pareto efficient and there is no scope for intermediaries to improve welfare."(Franklin & Anthony, 1996) Gurley and Shaw (1960) also pointed out in the absence of market imperfections; there would be little need for financial intermediaries.

When markets are perfect, intermediaries are redundant: they lose their function as soon as savers and investors have the perfect information to find each other directly, immediately and without any impediments and without costs. Therefore the imperfections of the markets give rise to the existence of the banks.

In the traditional Arrow-Debreu model of resource allocation, firms and households interact through markets and financial intermediaries play no role. When markets are perfect and complete, the allocation of resources is Pareto efficient and there is no scope for intermediaries to improve welfare. Moreover, the Modigliani-Miller theorem applied in this context asserts that financial structure does not matter: households can construct portfolios which offset any position taken by an intermediary and intermediation cannot create value. A traditional criticism of this standard market-based theory is that a large number of securities are needed for it to hold except in special cases.
However, the development of continuous time techniques for option pricing models and the extension of these ideas to general equilibrium theory have negated this criticism. Dynamic trading strategies allow markets to be effectively complete even though a limited number of securities exist. Gurley and Shaw (1960) and many subsequent authors have stressed the role of transaction costs. "Fixed costs of asset evaluation mean that intermediaries have an advantage over individuals because they allow such costs to be shared.

In terms of asymmetric information, Leland and Pyle (1977) first point out that financial intermediation can invest their asset in the area that they have special knowledge, and Diamond (1984) also state that financial intermediation can overcome the problem of asymmetric information by delegated monitoring.

2.3 Financial Performance Measures

Financial performance refers to measuring the results of a firm's policies and operations in monetary terms. These results are reflected in the firm's return on investment, return on assets and value added. Financial performance is one of the many different mathematical measures used to evaluate how well a company is using its resources to make profit. Common examples of financial performance include operating income, earnings before interest and taxes, net asset value. Financial performance is 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 through performing analytical reviews or to compare industries or sectors in aggregation or firm's performance across time.

Traditionally, the financial performance of banks and other financial institutions has been measured using a combination of conventional accounting measures and risk and return measures. Further analysis of financial performance has used methodologies such as financial ratio analysis, benchmarking, measuring performance against budget or a combination of these (Avkiran, 1995). Audited published financial statements have three sections; Balance Sheet, income statement and other Disclosures.
i gjmpiy stated, much of the current bank performance literature describes the objective of financial institutions as that of earning acceptable returns and minimizing the risks taken to earn this return (Hempel et al, 1986). There is a generally accepted relationship between risk and return that is, the higher the risk the higher the expected return. Therefore, traditional measures of bank performance have measured both risks and returns.

Barber and Lyon (1996) suggested using cash flow based performance measures rather than accounting measures such as return on book value of equity or assets. Besides profits, operating merging defines as operating cash flow divided by net sales can be used to measure financial performance. Operating cash flows are defined as earnings before interest, depreciation and amortization. Return on capital employed (ROCE) is defined as net income divided by sum of total equity and debt. Book-to-market is the ratio of book value of equity to market value of equity, which is the product of stock price per share and the number of stocks outstanding. Debt-to-Equity is the ratio of book value of total debt to book value of total equity.

Return on Revenues figure determines the profitability of a bank. It is the profits after all expenses and taxes are paid by the insurance company. It is measured by dividing the Net Operating Income (NOI) by the Total Revenues. Intrinsically, the difference between net income and revenue is expenses, such that an increasing ROR implies less expense for higher net income.

A corporation's ROR is useful in comparing profitability from year to year and evaluating its profitability performance, by comparing the net income and the revenue. When ROR decreases, it may indicate that expenses are rising. Conversely, when ROR increases, it may provide an indication that expenses are being handled efficiently.

\[
\text{Return on Revenues} = \frac{\text{Net Operating Income}}{\text{Total Revenues}}
\]

Return on Assets is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. This calculated by dividing a bank's annual earnings by its total assets. The assets of the company are
comprised of both debt and equity. Both of these types of financing are used to fund the operations of the company. The ROA figure gives investors an idea of how effectively the company is converting the money it has to invest into net income. The higher the ROA number, the better, because the bank is earning more money on less investment.

\[
\text{Return on Assets} = \frac{\text{Net Operating Income}}{\text{Total Assets}}
\]

Return on Equity (ROE) measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. The ROE is useful for comparing the profitability of a company to that of other firms in the same industry. It is the amount of net income returned as a percentage of shareholders equity.

\[
\text{Return on Equity} = \frac{\text{Net Operating Income}}{\text{Shareholders' Equity}}
\]

Investment Yield given as Average investment Assets divided by net investment income. The Average Investment Assets will be given by the opening Assets plus the closing assets divided by two, while the Net Investment Income will be given by the income received from investment assets (before taxes) such as bonds, stocks, mutual funds, loans and other investments (less related expenses). The higher the Investment Yield, the better the company is performing on its investments.

\[
\text{Investment Yield} = \frac{\text{Average Investment Assets}}{\text{Net Investment Income}}
\]

2.4 Empirical Evidence

Diversification benefits from shifting into non-interest income in USA banks (Stiroh, 2004) increases bank revenue and reduces volatility of bank profits. Diversification worsens the risk return trade off for USA banks (Rumble and Stiroh, 2006) and earnings gained from
diversification caused by growth in non-interest income and interest income were increasingly growing highly correlated over time in USA banks (De Young and Rice, 2004) and exists along with each other rather than replace each other.

fees and Commissions on loan and advances, commissions and foreign exchange trading income now accounts for over 40% of operating income in the U.S. commercial banking industry. This paper demonstrates a number of empirical links between bank noninterest income, business strategies, market conditions, technological change, and financial performance between 1989 and ~2001. Rice et al (2004) indicate that well-managed banks expand more slowly into noninterest activities, and that marginal increases in noninterest income are associated with poorer risk-return tradeoffs on average. These findings suggest that noninterest income is coexisting with, rather than replacing, interest income from the intermediation activities that remain banks' core financial services function.

In general, empirical evidence related to the performance and diversification of US banks suggests that expansion into other non-interest income activities is associated with more volatile revenue streams that can offset the risk-spreading benefits of diversification (DeYoung and Rice, 2004b). Demsetz and Strahan (1997) find that while large banks were more diversified than small banks, they also held less capital and granted riskier loans. DeYoung and Roland (2001) find that relationship-based income streams, including interest on loans and securities and service charges on bank deposits, were more stable than non-interest income for large US banks. A shift towards fee-based activities was associated with increased income volatility and higher leverage, both of which imply greater profitability.

Acharya et al (2002) examined the effect of sectoral and industrial loan diversification on the performance of Italian banks. The results of this study were consistent with Winton's theory of deterioration in the effectiveness of banks' monitoring activities at high levels of risk Winton (1999). A diversification of banks assets is not guaranteed to result in a superior return performance or greater safety on the part of Italian banks.
Using annual bank level data of all Philippines commercial banks, Sufian and Chong (2008) found a positive relationship between total non-interest income divided by total assets, a proxy for income diversification and bank profitability. Uzhegova (2010) found empirical support of the idea that banks involved in diversification activities expect some benefits. On the other hand, Kotrozo and Choi (2006) found out that activity diversification tends to reduce performance compared to banks more focused in their activities. This is because it makes it more difficult for top management to monitor the behavior of the other branches. They further argued that the benefits of economies of scale or scope exist only to a point. The costs associated with a firm's increased complexity may overshadow the benefits of diversification.

Recent studies by Stiroh (2004a, 2006b), Stiroh and Rumble (2006) and Baele et al. (2007) use non-interest income to measure bank diversification away from traditional net interest income toward a wider range of financial services. Stiroh (2004a) studied both aggregate and bank-level data for United States banks between 1984 and 2001 and finds few benefits from non-interest income at either the aggregate or bank-level. He conclusions that the overall volatility of bank income has declined over the study period and attributes this to declining interest income volatility. Stiroh (2004a) also finds that the correlation between interest income and non-interest income has increased over the study period, thus reducing the benefits from diversification into non-traditional income sources. Further, risk adjusted returns are strongly negatively correlated with the share of income derived from non-interest sources, with trading income, in particular, associated with a decline in profit per risk unit.

The recent evidence concludes that non-interest income does not improve bank income risk-return characteristics, except in Europe. This is an important conclusion as De Young and Rice (2004) find that non-interest income has grown in banking in the United States to contribute close to half of bank income. Further, large banks are more reliant upon non-interest income than small banks, with the associated implications for systemic stability. They further find that 1 percent of all banks generate about 18 percent of all non-interest income in the United States.
Camau (2009) carried out a survey that showed that an increase in the degree of foreign ownership in Kenya is associated with reduction of cost inefficiencies, suggesting that the degree of foreign-owned banks influenced the performance of the local banking sector.

2.5 Conclusion

There are several theories and models that explain diversifications. Many studies have introduced various factors that shed light on key factors that make a difference in bank profits. These studies have however reported mixed results. There is general agreement that bank profitability is a function of internal and external factors. Koch (1995) observed that the performance differences between banks indicate differences in management philosophy as well as differences in the market served.

Athanasoglu et al, (2006) concurred and argued that profitability is a function of mainly internal factors that are influenced by a bank's management decisions and policy objectives such as the level of liquidity, provisioning policy, capital adequacy, expense management and bank size, and the external factors related to industrial structural factors such as ownership, market concentration and stock market development and other macroeconomic factors. Several models of the banking firm have been developed to deal with specific aspects of bank behavior but none is acceptable as descriptive for all bank behavior.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discussed the research methodology that would be used in conducting the study. It would focus on the research design, target population, data collection, and data analysis and presentation techniques. These were carefully chosen to ensure accuracy, reliability and validity in order to realize the objectives of the research.

3.2 Research Design

The research involved a census of commercial banks operating in Kenya. The method was chosen since it was more precise and accurate since it involved description of events in a carefully planned way (Babbie, 2004). The study adopted a descriptive approach in assessing the effects of income source diversification on performance. The descriptive design enabled the researcher to come up with descriptive statistics that assisted in better understanding the relationship between diversification and bank performance.

3.3 Population of the Study

The population of study consisted of all the commercial banks in Kenya. According to the Central Bank of Kenya (CBK 2011), there were 43 registered commercial banks in Kenya.

3.4 Sample

Ngechu (2004) underscored the importance of selecting a representative sample through making a sampling frame. Simple random sampling will be used to collect data from the population. A sample of fifteen banks was picked. This was because information collected from the fifteen would be a representative of the whole banking population.

3.5 Data Collection

The study made use of documentary secondary data. The data was from companies audited annual reports for the years 2007 to 2011 which was collected from the from the bank's websites.
3.6 Data Validity and Reliability

The information used in this study was compiled from reliable and credible sources justifying the completeness and accuracy of the data used. The data used could not remain the same since financial situations are dynamic but fully reflect the period during which the research was conducted.

3.7 Data Analysis

The analysis involved preparation of the collected data. This included coding, editing and cleaning of data in readiness for processing using Statistical Package for Social Sciences (SPSS). After collecting the data, the data was organized, coded, and analyzed using descriptive statistics. Descriptive statistics enabled meaningful description of the distribution of scores and data reduction with the use of means and standard deviation.

The study was descriptive in nature; therefore both quantitative analysis and inferential analysis was used as data analysis technique. The data collected was run through various models so as to clearly bring out the effects of change in income source diversification on bank financial performance. The results obtained from the models were presented in tables and figures to help in the analysis and ease with which the inferential statistics were drawn. Kamau (2009) carried out a survey using regression analysis on the impact of performance of the local banking sector on the degree of foreign ownership in Kenya.

The under-mentioned model was used:

\[ Y = p_0 + p_1 \ln(X_1) + p_2 \ln(X_2) + p_3 \ln(X_3) + p_4 \ln(X_4) + p_5 \ln(X_5) + \varepsilon \]

Where:

- \( Y \) = Dependent variable, Financial Performance measures (NOI, EBIT, ROA and ROE);
- \( p_0 \) = Constant Term;
- \( p_1, p_2, p_3, p_4 \) and \( p_5 \) = Beta coefficients;
\[ \ln(X_i) = \text{Change in Interest Income (loans and advances, government securities, deposits)}; \]
\[ \ln(X_2) = \text{Change in Fees and commissions on loans and advances}; \]
\[ \ln(X_3) = \text{Change in other fees and commissions}; \]
\[ \ln(X_4) = \text{Change in foreign exchange trading income}; \]
\[ \ln(X_s) = \text{Change in other non-interest income}; \]
\[ 8 = \text{Error term} \]
4.1 Introduction

This chapter presents results and findings of the study based on the research objective. The study targeted 15 banks in collecting secondary data. The secondary data was collected from the banks websites and those that could not be obtained from the website; the researcher personally went to collect from the respective banks. Tables and graphs were used to present the data.

4.2 Descriptive Analysis

The descriptive analysis shows the mean and the standard deviation of the sources of income variables. Table 1 shows the summary statistics of variables included in the regression model. It represents variables of the 15 banks that operated continually during the period 2007 - 2011 and whose five year period under consideration is readily available.

4.3 Data Presentation

Table 4.1: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>.952a</td>
<td>.906</td>
<td>.172</td>
<td>.46316</td>
</tr>
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</table>

The correlation coefficient (R) which is a measure of the strength and direction of the linear relationship of the variables is 0.952 which indicates a positive strong relationship between the variables. The coefficient of determination ($R^2$) which is the prediction of future outcomes on the basis of the related information is 0.906 implying that of all the variations in financial Performance; 0.906 is attributed to the independent variables which show a positive strong
variables while the remaining 0.094 is explained by variables outside this study.

**figure 4.1 Interest Incomes on Bank Performance**

This is an indication that most profitability of commercial banks is derived from interest income and has a strong positive impact on bank performance as illustrated by the above graphical depiction with a mean of 8.8.
This is an indication that most profitability of commercial banks is derived from fees and commission on loans and advances which have a strong positive impact to a little extent on bank performance as illustrated by the above graphical depiction with a mean of 3.6.
This is an indication that other fees other than fees and commissions of loans and advances are not a major source of income for commercial banks with a little impact on bank performance as illustrated by the above graphical depiction with a mean of 2.
This is an indication that profitability of commercial banks is derived from gains from foreign exchange which have a strong positive impact to a little extent on bank performance as illustrated by the above graphical depiction with a mean of 3.25.
This is an indication that profitability of commercial banks is derived from gains from other non-interest sources which have a strong positive impact to some extent on bank performance as illustrated by the above graphical depiction with a mean of 4.47.
### Table 4.2: Coefficients of the regression equation

<table>
<thead>
<tr>
<th>Model</th>
<th>$R$</th>
<th>$R^2$</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>$0.952^3$</td>
<td>0.906</td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>8.083</td>
<td>1.916</td>
<td>4.219</td>
<td>0.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest Income ($X_1$)</td>
<td>-0.009</td>
<td>0.17</td>
<td>-0.015</td>
<td>-0.055</td>
<td>0.957</td>
<td></td>
</tr>
<tr>
<td>Fees ($X_2$)</td>
<td>1.158</td>
<td>0.508</td>
<td>0.534</td>
<td>2.278</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td>Other fees ($X_3$)</td>
<td>0.000</td>
<td>1.763</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Foreign Exch ($X_4$)</td>
<td>-0.322</td>
<td>0.443</td>
<td>-0.198</td>
<td>-0.727</td>
<td>0.48</td>
<td></td>
</tr>
<tr>
<td>Other non int ($X_5$)</td>
<td>-0.632</td>
<td>0.355</td>
<td>-0.443</td>
<td>-1.782</td>
<td>0.098</td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Research 2012

Predicators: (Constant), interest income, Fees, Other fees, Foreign Exchange, Other non Int.inc

Dependent Variable: Bank Performance

The study shows that there is a strong positive effect of income source diversification on financial performance. As depicted in table 4.2, the correlation coefficient ($R$) which is a measure of the strength and direction of the linear relationship of the variables is 0.952 which indicates a positive strong relationship between the variables. The coefficient of determination
(R²) which is the prediction of future outcomes on the basis of the related information is 0.906 implying that most of all the dependent variables are attributed to variations in bank profitability.

\[
Y = 8.083 - 0.09X_i + 1.158X_2 - 0.322X_4 - 0.632X_5
\]

Where:

Constant = 8.083, shows that if interest income, fees and commissions on loans and advances, other fees and commissions, foreign exchange trading income and other non-interest income = 0, then increase in the bank profitability would be 8.083.

-.009X_i: shows that one unit change in interest income results in .009 units increase in bank profitability.

1.158X_2: shows that one unit change in fees and commissions on loans and advances results in 1.158 units increase in bank performance.

-.322X_4; shows that one unit change in foreign exchange trading income results in .322 units increase in bank performance.

-.632X_5: shows that one unit change in other non-interest income results in .632 units increase in bank performance.

At 5% level of significance and 95% level of confidence, income interest had a .957 level of significance; fees and commissions on loans and advances showed a .04 level of significance, foreign exchange showed a .48 level of significance and hence income interest is the most significant factor.
4.4 Summary and Interpretation of Findings

The findings presented by the researcher are summarized and interpreted below on interest income, fees and commissions on loans and advances, other fees and commissions and gains on foreign exchange and this shows a positive strong relationship between the variables as indicated by the correlation coefficient (R) of 0.952 and the coefficient of determination ($R^2$) of 0.906.

4.4.1 Impact of Interest Income on Bank Performance

The correlation coefficient (R) which is a measure of the strength and direction of the linear relationship of the variables is 0.952 which indicates a positive strong relationship between interest income and financial performance. The coefficient of determination ($R^2$) which is the prediction of future outcomes on the basis of the related information is 0.906 implying that of all the variations in financial performance of the banks; 0.906 is attributed to interest income which shows a positive strong impact between the variables while the remaining 0.094 is explained by variables outside this study.

This is an indication that most profitability of commercial banks is derived from interest income and has a strong positive impact on profitability with a mean of 8.8.

The researcher's finding is similar to Mwega (2009) who carried out a study to examine performance of the banking industry in Kenya over the last ten years and he concluded that the industry had improved tremendously as only two banks had been put under Central Bank of Kenya statutory management during that period compared to 37 banks failures between 1986 and 1998 due to increasing sources of revenue.

4.4.2 Impact of Fees and Commissions on Loans and Advances on Bank Performance

The correlation coefficient (R) which is a measure of the strength and direction of the linear relationship of the variables is 0.952 which indicates a positive strong relationship between fees and commissions on loans and advances and financial performance. The coefficient of determination ($R^2$) which is the prediction of future outcomes on the basis of the related information is 0.906 implying that of all the variations in financial performance of the banks; 0-906 is attributed to Fees and commissions on loans and advances which shows a positive...
strong impact between the variables while the remaining 0.094 is explained by variables outside this study.

This is an indication that most profitability of commercial banks is derived from fees and commission on loans and advances which have a strong positive impact to a little extent on financial performance with a mean of 3.6.

4.4.3 Impact of Other Fees and Commissions on Bank Performance

The correlation coefficient (R) which is a measure of the strength and direction of the linear relationship of the variables is 0.952 which indicates a positive strong relationship other fees and commissions and financial performance. The coefficient of determination (R²) which is the prediction of future outcomes on the basis of the related information is 0.906 implying that of all the variations in financial performance of the banks; 0.906 is attributed to Fees and commissions on loans and advances which shows a positive strong impact between the variables while the remaining 0.094 is explained by variables outside this study.

This is an indication that other fees other than fees and commissions of loans and advances are not a major source of income for commercial banks with a little impact on financial performance with a mean of 2.

4.4.4 Impact of gains on Foreign Exchange on Bank Performance

The correlation coefficient (R) which is a measure of the strength and direction of the linear relationship of the variables is 0.952 which indicates a positive strong relationship between fees and commissions on loans and advances and financial performance. The coefficient of determination (R²) which is the prediction of future outcomes on the basis of the related information is 0.906 implying that of all the variations in financial performance of the banks; 0.906 is attributed to Fees and commissions on loans and advances which shows a positive strong impact between the variables while the remaining 0.094 is explained by variables outside this study.

This is an indication that profitability of commercial banks is derived from gains from foreign exchange which have a strong positive impact to a little extent on financial performance with a mean of 3.25.
4.4.5 Impact of Other non-interest income on Bank Performance

The correlation coefficient (R) which is a measure of the strength and direction of the linear relationship of the variables is 0.952 which indicates a positive strong relationship between other non-interest income and financial performance. The coefficient of determination (R²) which is the prediction of future outcomes on the basis of the related information is 0.906 implying that of all the variations in financial performance of the banks; 0.906 is attributed to other non-interest income which shows a positive strong impact between the variables while the remaining 0.094 is explained by variables outside this study.

This is an indication that profitability of commercial banks is derived from gains from other non-interest sources which have a strong positive impact to some extent on financial performance with a mean of 4.47.

The results are consistent with findings of Chiorrazzo et al (2008) who noted that as a result of activity diversification, the economies of scale and scope caused through the joint production of financial activities leads to increased efficiency of banking organizations.

The findings differ from Claessens and Jansen (2000) study who argued that foreign banks usually bring with them better know-how and technical capacity, which then spills over to the rest of the banking system. These impose competitive pressure on domestic banks, thus increasing efficiency of financial intermediation and they provide more stability to the financial system because they are able to draw on liquidity resources from their parents banks and provide access to the international markets.

From the conclusions drawn, it can be stated that financial variables which significantly influence the firm's financial performance in this research interest income, fees and commissions on loans and advances, other fees and commissions, gains on foreign exchange and other non-interest income. All the independent variables had a significant relationship individually with the financial performance.
CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The secondary data in this analysis covered a period of 5 years from 2007 to 2011. The population of study comprised of all commercial banks operating in Kenya during the study period. The study targeted 15 commercial banks in collecting data with regard to the impact of income source diversification on financial performance. Documentary secondary data was sought from the banks’ annual reports. The data was collected and analyzed using quantitative analysis.

The research involved the use of regression analysis with the sources of income; fees and commissions on loans and advances, other fees and commissions, foreign exchange trading income and other non-interest income being the dependent variables while the financial performance of the bank being the independent variable. R was used to determine the magnitude of the relationship between the dependent variables and the independent variable.

It was established from the study that diversified sources of income had positive strong impact on commercial bank financial performance. Interest income has a positive strong impact on financial performance whereas other sources of income to a little extent have a positive strong impact.

From the regression statistics revealed by the results of the coefficient correlation (R), fees and commissions on loans and advances, other fees and commissions, foreign exchange trading income and other non-interest income have a positive strong impact on financial performance of commercial banks in Kenya. This therefore satisfies that there are other factors that may contribute to financial performance such as government policies.

From the regression conducted it was established that the independent variables have a positive strong impact on the dependent variable. From the study, it was clear that diversifying into non-intermediation income generating activities increases the bank profitability.
5.2 Conclusions

This study analyzed different sources of income of commercial banks that operated in Kenya during the period of 2007-2011. By using Regression Model, the researcher identified the various sources of income which significantly influence the bank's financial performance to be interest income, fees and commissions on loans and advances, other fees and commissions, foreign exchange trading income and other non-interest income.

From the regression conducted specifically as revealed by the coefficient correlation (R), it was established that the independent variables have a positive strong impact on the dependent variable. On this basis of analysis, it can be concluded that increased diversification of income sources leads to increased profitability of commercial banks.

The above sources of income which significantly influence the firm's profitability in this research are consistent with many research findings carried out by other scholars as well as in practice in the context of commercial banks in Kenya.

The desire of the Kenyan banking industry is to embrace research and innovation, information technology in order to exploit the existing banking market which inevitably sustains and increases cost pressures. This is also expected to increase stringent advancements in the regulatory environment which enhances high risks hence putting a lot of pressure on the independent banks.

This study concludes that firms should diversify their income sources by increasing diversifying from the traditional intermediation generating activities to non-intermediation activities. This will reduce the problem of stiff competition in the industry and increase profitability of the banks.

Commercial banks are facing stiff competition and hence the need to diversify their sources of income as opposed to relying on traditional inter-mediation income generating activities.
5.3 Policy Recommendations

Commercial banks should strive to improve their capital base by either selling idle assets, reducing unnecessary operational costs and negotiating with long term lenders to convert their debt into equity in order to boost their profitability.

Statutory demands for a stronger capital base and solvency margins, demand for insurance which is also expected to rise. This has highlighted the importance of insurance in mitigating financial impact of catastrophes events; all this put together will see mergers as the only strategic option to the independent insurer in order to remain competitive and profitable in the long-run.

The fundamental aim of mergers and acquisitions is the generation of synergies that can foster corporate growth, increase market power, improve production efficiencies, and improve shareholders' wealth. Accordingly, mergers and acquisitions should constitute increased profitability. The synergies that come by as a result of the merger will alleviate the above mentioned challenges facing low profitability.

In this paper, we note that there are other determinants of profitability. This means that commercial banks should also focus on cost reduction exercise in order to benefit from diversification. If these are not pursued, then income diversification alone will not improve the financial performance of the banks.

Therefore it will be important for a firm's management to understand the relationship that exists between various sources of incomes and financial performance and the direction that they affect the level of profitability for effective management.

The causes of financial losses need some remedial measures. Most of the previous studies have emphasized on identifying the causes of financial distress by taking different measures to counter the causes. Banks should take measures like; increasing their cash flow from operating activities, reducing the payment of dividends and instead explore the use of other forms of paying dividends such as bonus or share repurchase, taking measures to increase the level of net cash flow in proportion to the dividends to be paid and also reducing the level of dividend payout.
5.4 Limitations of the Study
The findings of this study are only applicable to commercial banks in Kenya. It therefore means that they cannot be directly applicable to other regions with different geographical diversifications and sectors.

The use of regression analysis assumes that there is an assumption of linearity with the various models, these observations are independent of each other, homogeneity of variances exist which may not be the case.

During the period of study (2007-2011) elections were held in Kenya and this may have an impact on the financial performance of commercial banks of Kenya. Post election violence hit various major towns whose bank operations are important to the annual performance during (2007/2008). The findings may have been greatly affected during this period.

5.5 Suggestions for further research
The current study focused on Commercial Banks in Kenya. This excludes other industries, and future studies should consider other sectors such as insurance firms. A study should be carried out to find out if diversification of income sources affects the financial performance of insurance companies or other industries.

The research also investigated the financial performance of commercial banks excluding other financial institutions such as microfinance institutions. A research should be done other institutions in order to compare the findings.

The size of the bank influences the financial performance of the bank. However, this research only did not divide the different categories based on their balance sheet. The Central Bank of Kenya categorizes financial institutions into three tiers; Large, Medium and Small in terms of net assets. Further research should take into consideration the three tiers.

The effect of diversification on performance is not homogeneous across industries. Some industries are having more friendly environments for diversified firms than for focused firms. Therefore, there is need to further explore this possibility in other industries.
A researcher can conduct the study using non-financial measures of performance indicators which are increasingly becoming important in decision making and performance evaluation be considered in future studies.
REFERENCES


Williams, B & Rajaguru, G. (2007), "The chicken or the egg? The trade-off between bank non-interest income and net interest margins."

APPENDIX I is LIST OF COMMERCIAL BANKS IN KENYA

1. African Banking Corporation Ltd.
2. Bank of Africa Kenya Ltd.
3. Bank of Baroda (K) Ltd.
4. Bank of India
5. Barclays Bank of Kenya Ltd.
6. CFC Stanbic Bank Ltd.
7. Charterhouse Bank Ltd - under - statutory management
8. Chase Bank (K) Ltd.
9. Citibank N.A Kenya
10. Commercial Bank of Africa Ltd.
11. Consolidated Bank of Kenya Ltd.
12. Co-operative Bank of Kenya Ltd
13. Credit Bank Ltd.
15. Diamond Trust Bank (K) Ltd.
16. Dubai Bank Kenya Ltd.
17. Ecobank Kenya Ltd
18. Equatorial Commercial Bank Ltd.
19. Equity Bank Ltd.
20. Family Bank Ltd
21. Fidelity Commercial Bank Ltd
22. Fina Bank Ltd
23. First community Bank Limited
24. Giro Commercial Bank Ltd.
25. Guardian Bank Ltd
27. Habib Bank A.G Zurich
28. Habib Bank Ltd.
29. Imperial Bank Ltd
30.1 & M Bank Ltd
31. Jamii Bora Bank Ltd
32. Kenya Commercial Bank Ltd
33. K-Rep Bank Ltd
34. Middle East Bank (K) Ltd
35. National Bank of Kenya Ltd
36. NIC Bank Ltd
37. Oriental Commercial Bank Ltd
38. Paramount Universal Bank Ltd
39. Prime Bank Ltd
40. Standard Chartered Bank (K) Ltd
41. Trans-National Bank Ltd
42. UBA
43. Victoria Commercial Bank Ltd
## Sources of Income

<table>
<thead>
<tr>
<th>SOURCES OF INCOME</th>
<th>Interest Income</th>
<th>Fees and Commissions on loans and advances</th>
<th>Other Fees &amp; Commissions</th>
<th>Foreign Exchange trading income</th>
<th>Other non-interest income</th>
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<tr>
<td><strong>BANK NAME</strong></td>
<td><strong>Shs '000</strong></td>
<td><strong>Shs '000</strong></td>
<td><strong>Shs '000</strong></td>
<td><strong>Shs '000</strong></td>
<td><strong>Shs '000</strong></td>
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<td>1 Trans-national Plaza Bank Ltd</td>
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