EFFECTS OF INCOME DIVERSIFICATION ON
FINANCIAL PERFORMANCE OF COMMERCIAL BANKS LISTED AT
NAIROBI SECURITY EXCHANGE

BY

ABUBAKAR AHMED HASSAN

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DECLARATION

Declaration by Student

I hereby declare that this Research Project is my original work and has not previously , in part of in entirety, been presented to any other University towards the award of any degree.

Signature.. Date...

ABUBAKAR AHMED HASSAN

D61/79549/2015

Supervisors

This Research Project has been submitted for examination with our approval as the University supervisors.

Signature..Date...

MS. ZIPPORAH N ONSOMU

Department of Finance and Accounting,

School of Business, University of Nairobi.

Signature..Date...

DR FREDRICK OGILO

Department of Finance and Accounting,

School of Business, University of Nairobi.

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DEDICATION

I dedicate this research project to my niece, Areej Albeity, though young but was a source of inspiration, let it serve as an encouragement as you scale the height in academic.

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ABSTRACT

The aim of this study was to determine the effect of income diversification on financial performance of commercial banks listed at the Nairobi Securities Exchange. A descriptive research design was adopted. A census targeting the listed commercial banks at NSE from year 2012 to 2016 was conducted. Secondary data was collected from NSE, CBK's annual supervision report and the respective websites of the banks. Regression model was adopted to determine the effect of income diversification on financial performance. Herfindahl-Hirshman index was used to measure income diversification and three control variables were included, namely; size, capital adequacy and liquidity. The statistical significance of each independent variable was tested by performing a t-test at 5% level of significance. Significance of regression model was tested by performing an F-test at 5% significance level. The independent variables explanatory power was evaluated using the coefficient of determination, R^2. The study found that, income diversification was negatively related to financial performance. Results of t-test indicated that, the effect was not statistically significant. It also found that, size and capital adequacy had a positive effect which were statistically significant while liquidity had a negative impact on financial performance and was not statistically significant. The coefficient of determination for the regression was found to be 25.9%. This implied that, the independent variable explained only 25.9% of the changes in the dependent variable. The study concluded that, income diversification is a costly affair for commercial banks since it has a negative impact on financial performance. It also concluded that, size and capital adequacy had a positive impact on financial performance while liquidity had a negative impact. The limitation of this study which was brought by the cost and time constraint in this study is that it was carried on the listed commercial banks at the NSE. The data results may not be applicable to other financial firms as the focus in this study was on banks and this is because of the differences that are found between commercial banks and other financial firms. This study recommends that, commercial banks should not commit resources in diversifying their income because diversification appears to be a costly affair. Also investors should not be concerned about a banks' income diversification in selecting investment opportunities as diversification of income does not generate positive financial performance. Further, studies may consider the effects of diversification of income on performance of Islamic banks or the impact of geographical diversification on performance of commercial banks.

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LIST OF ABBREVIATIONS

CAR: Capital Adequacy Ratio

CBK: Central Bank of Kenya

HHI: Herfindahl-Hirshman index

LR: Liquidity Ratio

NSE: Nairobi Securities Exchange

ROA: Return on Assets

ROE: Return on Equity

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The continuous development of non interest earning activities identifies that the traditional interest earning ways are reducing in importance and therefore banks entering new markets therefore diversifying their income sources. Ebrahim and Hasan (2008) defined income diversification as the growth of banks into innovative products and services, contrary to the normal intermediation forms that they were using. Banks by expanding into new services and products are able to enter new markets and thus diversifying their incomes into new sources. Income diversification has become an important aspect, as banks are able to diversify the risks that they face while carrying their businesses and thus gaining competitive advantage over their competitors. Penrose (1959) referred to income diversification as the increase by a firm in its business lines regardless the lines are related or not. Banks therefore by increasing their business lines, are able to expand their income from the traditional net income to the non interest income.

The theories that this study anchors on are Portfolio Theory (Markowitz, 1952), Market Power Theory (Porter, 1980) and Resource Based Theory (Wernerfelt, 1984). According to Markowitz (1952), the basis of portfolio theory is risk reduction through diversification. Revenue from interest earning actions is mostly stable than those from non-interest bearing activities, therefore banks are able diversify their income by investing in different business portfolio and thus reducing the volatility for banks (Koponen, 2003). Resources Based View approach (Wernerfelt 1984) assumes that deliberate managerial efforts are undertaken by firms which is steered towards gaining a sustainable competitive advantage. Banks gaining competitive advantage over their competitors and controlling their resources helps them to enter into new markets and thus diversifying their income. The market power theory is based on the opinion of Porter (1980) of

setting strategies that will distinguish a firm's position in the environment from the positions of other competitors. Therefore market power theory prescribes diversification as an improvement tool of the profitability and financial performance of a firm.

The Kenyan banking sector consists of 43 commercial banks (Cytonn Investments report, 2016). Central bank of Kenya regulates all the banks and the Capital Markets Authority has further oversight over the listed banks licensing, regulation and supervision of all capital markets participants. The financial sector in Kenya's is mainly based on banks as the capital market is still regarded narrow and shallow (Ngugi *et al*, 2006). Financial intermediation depends heavily on commercial banks as it dominates the financial sector in Kenya (Kamau, 2009). Oloo (2009) depicted the Kenyan banking sector as the link that holds the economy of the country together. According to Cytonn Investments report (2017), income diversification has increased due to increased use of alternative channels , internet and agency banking, substitute banking channels such as mobile and network development strategies in Kenyan and in East African region, such as agency, cashless cards, mobile and internet banking use has also been increasing in recent times. Non-interest income is set to benefit from new programs such as mobile banking and bancassurance which will enhance the diversity of income.

1.1.1 Income Diversification
Ebrahim and Hasan (2008) defined income diversification as the growth into new income earning financial products and services other than the traditional intermediation services. This will make banks to diversify their incomes from interest income so they can be able to sustain their businesses in the long run. Indeed income diversification involves the combination or generation of income from distinct income generating activities (Baele, Jonghe, & Vennet, 2006). This basically involves the shift of reliance from the interest income sources associated

with traditional intermediation activities to innovative non-interest income earning activities (Doumpos, Gaganis, & Pasiouras, 2013). The innovative non-interest income earning activities helps the firm to diversify their risk and also perform better financially.

Income diversification helps in reducing the idiosyncratic risk which is the shocks that affect the net interest margins which arises from changes in the rates of lending (Lin, Chung, & Hsiehming, 2012). Lepetit, Rous, and Tarazi (2008) found that diversification of banks into fee-based services lowered the rates of lending, concluding that income diversification influences the interest rate margins and loan pricing which curbs bank earnings volatility. Income diversification also play a significant part in the reduction of banking crises, as they are able to depend on different sources of income rather than the traditional interest income. Tabak, Fazio and Cajueiro (2011) found that lending to a specific loan activity is another reason of crisis in banks in the last five years.

Stiroh and Rumble (2006) noted that income diversification is measured through Herfindahl-Hirschman Index (HHI) and the Entropy Index which explains the breakdown variations of net operating income into interest and non-interest income. HHI considers income diversification as a relative measure which exposes every source of income equally. It also assists in verifying and estimating the level of diversity and concentration of the sources of income in banks. The HHI measures the diversification of banks from interest income to non-interest income earning activities. A high Herfindahl-Hirschman Index (HHI) means that the bank is more focused and concentrated on a single source of income and thus becoming less diversified, while a small HHI index reflects that the bank is well diversified and focuses on both the net and non interest income.

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1.1.2 Financial Performance

La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2002) defined financial performance as the level of business performance at a particular period of time, described in regards to its total profits and losses in that specific period. It can be described also as the subjective measurement of how a firm properly uses its assets and generates income or revenue from it. Profit making is the primary aspect for a business to grow, perform, maximize its wealth and sustain thus making it a priority for a firm to understand its financial performance. La Porta *et al*. (2002) found that for a company that focuses on social enlistment then corporate social responsibility is the first to be accounted.

Helen and Keasey (1999) noted that firm performance is measured periodically so as to formulate and understand the expectations of the investors regarding the potential future earning of firms, as it also gives a logical feedback on the performance of the company and whether it has realized its objectives and goals and finally it provides an adequate basis for bonus planning that helps the firm in achieving its overall goals and rewards for the proper decision making. It also acts as guidance in the future so that the firm can understand how to handle different financial situations in the most cost effective manner and also use the resources that are available to the optimum.

Financial performance of an organization can be measured through various methods such as the Net interest margin (NIM), the Return on assets (ROA) and the Return on equity (ROE). Net interest margin is described as the ratio of net interest income to total earnings assets (Gull et al., 2011). Khrawish (2011) defined ROA as the firm's profitability which is calculated as net income divided by total asset and is also another financial ratio that measures financial

performance. Khrawish (2011) also defined Return of equity as net income divided by total equity capital.

1.1.3 Income diversification and Financial Performance

Study findings from developed industries on impact of diversification of income on the bank's financial performance differ to a great extent. It decreases risk-return exchange in USA while it increases it in Europeans banks. DeYoung and Rice (2004) noted that non-interest income was negatively correlated to the financial performance of the risk-adjusted banks in USA. Stiroh (2004a) found that insolvency risk of a bank and non-interest income were positively correlated demonstrating the reality that the bank's insolvency risk increases with an increase in the diversification of income as he studied the United States banks from 1970's to 2001. Mercieca, Schaeck and Wolfe (2007) findings showed that the performance of risk adjusted banks and non-interest income was inversely related.

Busch and Kick (2009) found that diversification of income reduced performance of banks in European and German banking sector. Kamp, Pfingsten, and Porath (2007) noted that income diversification increased the financial performance of banks in German banking sector. Income diversification improves cost efficiency through the reduction of risk and also reduces the essential risk premiums on contingent claims and un-insured debt (Moon, 1996). Diversification of income increased the risk-adjusted returns while its profits reduced with the size of the bank (Chiarozza et al, 2007). Baele et al, (2007) concluded that income diversification helps in increasing the value of the franchise of banks positively while banks that diversify more tend to have better market betas and thus higher systematic risk.

1.1.4 Commercial banks in Kenya

Kamau (2009) noted that in Kenya, the financial sector is dominated by the commercial banks and as such the financial intermediation system is depending largely on commercial banks. They

play a very crucial part in helping to channel funds from depositors to investors in a continuous manner through the allocation and distribution of economic resources all over the country (Ongore & Kusa, 2013). The banking sector in Kenya consists of 43 commercial banks (Cytonn Investments report, 2016). Central bank of Kenya regulates all the banks and the Capital Markets Authority has further oversight over the listed banks licensing, regulation and supervision of all capital markets participants. Banks are needed to comply with certain prudential rules and regulations such as cash reserve ratios with the Central Bank and minimum liquidity ratios. The eleven listed commercial banks at the NSE are: Barclays Bank Limited, Standard Chartered Bank Limited, Co-operative Bank of Kenya Limited, Kenya Commercial Bank Limited, Equity Bank Limited, Diamond Trust Bank Kenya Limited, CFC Stanbic Holdings Limited, I&M Holdings Limited, National Bank of Kenya Limited, Housing Finance Limited and NIC Bank Limited.

The banking industry in Kenya experienced volatile profitability and interest rates margins in the last few years. The central bank raised the query in case there are other possible options of generating income other than interest-based income for the Kenyan banks (Central Bank of Kenya, 2007). Commercial banks are generating a large proportion of their net operating income from interest income (Laeven & Levine, 2007). Non-interest income in Kenyan banks is set to increase due to new forms of diversification such as banc-assurance and mobile banking. According to Cytonn Investments report (2017), income diversification has increased due to increased use of alternative channels , internet and agency banking, different banking channels such as branch network development strategy and mobile both the East African and Kenyan community in the region, such as internet banking, agency, cashless cards and mobile use has also been increasing.

1.2 Research Problem

Diversification of risk is a key concept in banking and thus making diversification of income an important issue for banks to achieve so as to reduce risk and have an advantage over their competitors. As non-intermediation activities expanded during the 1990s, banks had to generally shift their income from the traditional intermediation-based activities to the fee-based financial services and products as it would decrease the volatility of banks' income. DeYoung and Roland (2001) noted that income diversification increased earnings volatility due to high switching costs which was caused by the bank's loan which was relationship based. Secondly, lending activities may need lesser operating leverage than fee based activities, and thus making the earnings from banks much susceptible to decrease in bank revenues. Thirdly, lending activities use lesser financial leverage than fee-based activities. Stiroh (2004) noted that income diversification helped in reducing the over-reliance of banks on interest income and also reduction of risk adjusted returns and thus improving the financial performance.

Commercial banks charging unreasonable lending rates have raised several concerns in the debate of capping interest rates in Kenya (Kiweu, 2012). A large share of the commercial bank's operating income is generated from interest income but commercial banks tend to look for new ways so that they can raise their non interest earnings. The introduction and development of financial markets and instruments, advancements in new intermediation technologies and information and communications technology forced commercial banks to adopt and adapt to new ways in generating non-interest income. Most of these new technologies have helped in the growth of non-interest earnings over the interest earnings at banks, though interest earning is still higher than the non-interest income (Young et. al., 2003). The Kenyan banking sector had evidenced growth in 2016 in their deposits, products offering, assets, profitability, and thus

increasing diversification to other alternative channels, supported by favorable macroeconomic environment. Banks like KCB, Equity and Co-operative, for instance, generate 40 per cent of their operating income from non-interest income; therefore showing that commercial banks diversify their income (Cytonn Investments report, 2016).

Diversification of income in banks can be enhanced through foreign exchange earnings, government securities income, commissions and fees on advances and loans, sales and leasing of assets income (Cytonn Investments report, 2016). Amihud and Lev (1981) noted that agency costs may be high for banks that are highly diversified, as diversification may assist in reducing the personal risk that the firm encounters rather than value creation for the interest of the shareholders. Kiberia (2012) noted income diversification and profitability were positively correlated and therefore assisting in reducing the profitability problem and stiff competition that banks face and thus improving their financial performance. Kiweu (2012) noted that net interest earning and non-interest earning were positively correlated; a result that advocates that non-interest earning may not be an important factor in stabilizing the total operating income. The above studies show the connection between performance and diversification of banks but it appears to be no agreement with findings aiding both studies. In addition to the different result in the studies, majority of the documented empirical evidence regarding income diversification was on developed economies, with much less discussion and insight on the influence of diversification on the banking industry in developing economies. It is this knowledge gap that this study addressed hence the question: what is the effect of income diversification on financial performance of commercial banks listed on the Nairobi Securities Exchange?

1.3 Objective of the Study

To determine the effects of income diversification on financial performance of commercial banks listed in Nairobi Security Exchange in Kenya.

1.4 Value of the Study

From academic point of view, this study adds to the existing financial theories and it also presents additional evidence concerning effects of diversifying income on the financial performance of the listed commercial banks. Future researchers concerned about the relationship between diversification of income and firm's performance can utilize these findings as a basis for further research on the subject matter so that they can compare and see whether the results of this study and the earlier studies correspond to the study that they will carry. This research helps in adding to the existing body of knowledge regarding this topic.

In practice, it helps in the management of these commercial banks as it will offer guidance on how banks can diversify so that they can enhance the performance of the organization. It promotes the interpretation of how diversification affects the performance of commercial banks. As a result, bank managers will be able to adopt value enhancing strategies.

The findings of this study would give information and guidance to stakeholders and policy makers in the banking sector in inventing new diversification strategies which would enhance the overall financial performance of banks. The findings will also serve as a guide when making policies regarding diversification of income by commercial banks.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter examines theories that the study employed, empirical evidence of studies carried on effects of diversification of income on financial performance and the determinants of the same. The chapter also covers summary of the literature.

2.2 Theoretical Review

This section examined theoretical foundation where the following theories which the study anchors on have been discussed: Modern Portfolio Theory (Markowitz, 1952), Resource Based Theory (Wernefelt, 1984) and Market Power Theory (Porter, 1980).

2.2.1 Modern Portfolio Theory

Modern Portfolio Theory (MPT), a theory put forward by Markowitz (1952) is a finance theory which depends on the concept that investors who fear risk can create portfolios to maximize the returns that the investors expect depending on a certain degree of market risk and therefore underlining that, for an investor to achieve higher reward then risk is an essential part of it. The Modern Portfolio Theory, an upgrade upon the old investing models, is a significant improvement on the investment models of finance. It supports diversification of assets so as to evade both the market risk and the unique risks that affect specific type of companies. The theory (MPT) is a complex investment model that helps in classifying, estimating, and controlling both the type and rate of expected returns and risks and thus known as Portfolio Management Theory. Portfolio theory aids in quantifying the risk-return relationship and the hypothesis that investors will be reimbursed for accepting the risk.

Portfolio theory moved from the characteristic analysis of single investments to establishing the statistical correlation between the individual investments which make up the portfolio (Edwin

and Martins 1997). It is one of the important and significant theories which deal with investment and finance (Kaplan & Schoar, 2005). It is a mathematical model for constructing a portfolio of investments in a way that the returns that are expected is optimized for a certain rate of risk, known as variance. The likelihood of this to happen can be brought by the differences in the types of assets which often differ in value in contradicting manner (Markowitz, 1959). Higher volatility of returns is related to the increased dependence on non-interest revenue which is consistent with the portfolio theory, but a lesser volatility is associated with more highly diversified returns portfolio.

The modern portfolio theory is hinged to this study because by diversifying the income source, banks are able to optimize the expected return of the portfolio for a certain level of risk, or subsequently reducing the risk for a certain rate of expected return, by carefully selecting the dimensions of a variety of assets. While income from intermediation activities is likely to be more stable than those from non-intermediation activities, there could also be an advantage through diversification as it would reduce bank's volatility through the subsequent share of non-interest earnings in net operating income (Koponen, 2003). Therefore banks reliance non-intermediation business activities has increased as it would help them in generating trading revenue, fee revenue, and other forms of non-interest income. Portfolio risk is intended to be reduced by holding portfolio combinations that are not positively correlated.

2.2.2 Resource Based Theory

Resource Based approach was put forward by Wernerfelt (1984) and it assumes that deliberate managerial efforts are undertaken by firms so as to attain a sustainable competitive advantage over its competitors in the market. By attaining competitive advantage over their competitors, firms are able to diversify their business and enter into new markets and by diversifying their

businesses they tend to diversify their income leading to income diversification. Barney (1991) argues that diversification based on resource capabilities can cause economies of scope by sharing core competences and activities and thus becoming a factor in sustaining competitive advantage. Uniqueness or heterogeneity of resource is regarded as an essential situation for a resource bundle in gaining competitive advantage and thus diversifying their income. The argument is that if all the firms in a given market have similar resources, then no strategy will be applicable to one firm and fail to be applied to the competing companies in the market and thus making the resource based theory a significant aspect in the diversification of income (Cool & Dierickx, 2002).

The relevance of the resource based theory to this study is that it provides a way for improving a firm's financial performance and also suggests diversification by building on the resource capability to enter new markets or what is known as the sequential entry strategy (Wernerfelt, 1984). This diversification in resource capacities will lead the firm to diversify their incomes which is brought by entering into new markets. Therefore, positioning of resources of a firm is not only beneficial by generating entry barriers but by also directly aiding diversification in associated activities which offers cost benefits to the business and which will finally lead to diversification of the income earned.

2.2.3 Market Power Theory
Market power theory is based on Porter's (1980) view of strategically positioning the firm in its environment through a set of strategies that differentiates the position of a firm with its competitors. According to Shepherd (1970), Market Power Theory is anchored on the capability of a company to manipulate or influence the price, the nature or the quality of the product in the market place. According to this perspective, Caves (1981) and Miller (1973) noted that

diversification increased opportunities for reciprocal buying and predatory pricing and reduces competition of industries if a number of large conglomerates face one another in many markets. (Barney, 1991; 2002) noted that diversification is one of the significant strategies which aid firms in overcoming competition and gaining power in the market which assists them to access conglomerate powers. Montgomery (1994) named three ways in which companies can gain power in the market through diversification and these are: cross subsidizing by investing earnings from another market to reinforce predatory pricing in a different market; bilateral restraint of thorough rivalry among competitors and lastly reciprocal purchasing between components of multi-business companies that locks out small competition. Palich et al., (2000) also agreed that companies with power in the market can manage easily the prices of the market by cross subsidizing, giving discounts, engaging in reciprocal selling and buying as a form of preventing potential contender entering the business. Through this strategy, they overcome competition and thus earning profits which are above the average profits that the market offers. Therefore, this theory sees diversification as a device for improving the profits and performance of the firm.

The relevance of the market power theory to this study is that through diversification firms are able to enter into new markets and thus gaining competitive advantage over its competitors not only as a result of their specific standing in the market but also because of their standing in other different markets. This makes the firms to have different business lines and these lines will bring income to the firm which will be diversified in nature. Gribbin (1976) argued that, for a firm to attain conglomerate power, it must firstly have supremacy in its own market. This supremacy drives the company to go into new other markets through predatory strategies aided by its

resources, power and position in its present market. This will also propel the firm into new sources of income that they were not getting before and thus leading to income diversification.

2.3 Determinants of Financial Performance

This section discusses determinants of bank performances which include; size of the bank, capital adequacy, liquidity, real estate finance and level of inflation.

2.3.1 Size of the Bank

Size is an important factor in determining the financial performance of a firm. Bigger firms reflect improved profitability while smaller firms lack capacity to contend with bigger organization in this respect. Chi (2004) explained the relation and noted that the firm size drastically impacts both the financial performance and shareholders rights. Yi and Tzu (2005) noted that firm's size have no impact on financial performance of the organization. The correlation of size and financial performance are significant as an increase or a decrease in size will have a major impact on its financial performance (Vijayakumar & Tamizhselvan, 2010). Size also has an inverse relationship with financial performance as increase or decrease of a size of bank will inversely affect the financial performance of the bank (Hall, 1987). Size is not only considered as a measure of financial performance but also as an important moderator (Rauch et al. 2009).

Goddard et al. (2004) found a minor correlation between size and financial performance of a firm. Smirlock (1985) discovered a significant positive correlation between size of a bank and its financial performance whereby an increase or a decrease in size will positively affect the financial performance of banks. Bikker and Hu (2002) concur with the preceding study and noted that the lager the firm's size the better the financial performance due to the fact that the

cost of seeking capital is reduced considerably. Rauch et al. (2009) noted that rigorousness of effect of all the environmental aspects varies with the variation in the organization's size.

2.3.2 Capital Adequacy

Capital is a significant feature of banks that affects the income level in banks. Capital is the sum of own funds existing to sustain the bank's business and serve as a cushion in events of unfavorable circumstances (Athanasoglou et al., 2005). Beckmann (2007) noted that higher capital causes lower profits because firms with higher capital ratio are risk-averse, as they overlook possible investments which are risky and thus leading investors to ask for a lesser return in exchange of lesser risks. Capital of larger bank reduces the chance of distress and thus improving its financial performance (Diamond, 2000). Dang (2011) noted that capital suitability is judged according to its capital adequacy ratio (CAR), which demonstrates the core power of the firm to bear losses during financial crisis. It is also positively correlated to the firm's flexibility to catastrophes. It also directly affects the bank's profitability through determination of its development to uncertain but lucrative project or areas which yield profits (Sangmi and Nazir, 2010).

Studies noted that banks with higher capital levels have superior financial outcome than banks that have lower levels of capital at their disposal. Staikouras and Wood (2003) declared that there is a positive relationship between higher equity and financial performance in the European Union banks. Abreu and Mendes (2001) also identified a positive impact of the level of equity of a commercial bank on its financial performance. Goddard et al. (2004) agreed with the previous results of a positive correlation between capital adequacy ratio and earnings of bank.

2.3.3 Liquidity

Dang (2011) noted that sufficient liquidity level is related positively with the profitability and performance of a bank. However, Molu (2012) disregards liquidity as a measure of good performance since liquidity leads to less return and therefore affects other aspects of performance. The significance of liquidity and its effects on financial performance in business nowadays cannot be over accentuated (Apuoyo, 2010). Problem in liquidity administration is to realize preferred substitution involving liquidity and financial performance of a business (Nasr and Raheman, 2007). Business liquidity affects financial performance; liquidity problems may lead to losing customers to competitors and may cause the company to be wound up (Mwangi, Muathe and Kosimbei, 2014).

Chandra (2001) points that the high the liquidity the more powerful the financial performance of a bank, while according to other researchers such as Neto (2003), higher liquidity can be as unattractive as a lower liquidity, this is because the financial institutions may be retaining the surplus liquidity that would be used for future investments to boost returns and revenue. Arnold (2008) argues that retaining of cash may offer a number of rewards, such as, payments of expenses which occur on daily basis, such as taxes, salaries and materials, because of the uncertainty surrounding potential cash flows, therefore retaining of cash gives a firm a margin of safety for ultimate decline.

2.3.4 Real Estate Finance

Real estate financing is considered a diversification strategy which is found in some commercial banks and it is expected to reduce their risks of loss through non-performing loans especially the unsecured ones. This decline in risk is expected to result in enhanced financial performance of the commercial banks (Lipunga, 2014). Banks which offer mortgage loans have diversified

portfolios of mortgage loans which spread the risk in a form that it would have been impossible to spread that risk if it was an individual mortgage loan rather than in a portfolio.

Banks gain economies of scale due to their big number and size and have more capability in putting up loans, analyzing credit and collecting them compared to an individual; therefore lowering processing costs of loans and afterwards raising the accessibility to real estate loans. Borrowers have to put some deposits so they can be able to fund part of the cost of the property and thus financing the mortgages. This sequentially reduces the proportion of the non-performing loans to total loan portfolio of the bank (Kimeu, 2008).

2.3.5 Level of Inflation

The inflation rate in a country is also another macro-economic aspect that has been linked with the performance of commercial banks and some studies focused on establishing this relationship. It is noted that, high inflation rates lead to high interest rates on loans and thus lead to higher income to commercial banks. Perry (1992) noted that the impact of inflation on the performance of the bank would rely on whether the inflation is predicted or not predicted.

In an incident where an increase in the inflation rates is fully predicted and a change is made to the interest rates accordingly, then this leads to a positive influence on the financial performance of banks. On contrary, when an increase in the inflation rates is not predicted, it results in a position where the local borrowers are faced with cash flow problems and this can result in the termination of bank loan agreements in an early fashion thus causing loan losses for the giving commercial bank. The broad observation is that when commercial banks take a lot of time to change their interest rates after changes in the inflation rates, it leads to a position where the bank's operating costs may increase faster than the revenues of the bank. Hoggarth et al. (1998)

noted that high and variable inflation may result into difficulties in negotiations and in planning of loans.

2.4 Empirical Studies

Esho, Kofman and Sharpe (2005) investigated on the relationship between the earnings of credit unions and its pricing policy, risk and products mix on 198 Australian credit unions using a cross-sectional linear least squares regression analysis and six risk control measures. Results confirmed that greater dependence on non-intermediation earnings is linked with greater risk. Credit unions that have their revenues highly concentrated were also found to have increased rate of returns and risk. Furthermore, credit unions with lower percentage of revenues in interest on personal loan and with a greater percentage of total income in the shape of residential loans interest have considerably lesser returns and risk, thus making it uniform with modern portfolio theory. Nevertheless, credit unions which diversify by reducing the proportion of interest on personal loans and paired by an increase in the returns proportion of transaction fees on loans and deposits would reduce its returns and increase its risk. Most importantly the study revealed that diversification may enhance larger credit union's X-efficiencies if they are able to employ good managers.

Huang and Chen (2006) studied if the dependence on diverse sources of non-interest earnings affects the efficiency of banks. The study was carried on the domestic commercial banks in Taiwan, in year 1992 to 2004. It employed the Data Envelopment Analysis (DEA) to compute the cost efficiency of the banks. The banks were grouped into three sub-samples equally, according to the proportion of the non-interest and interest earnings to the net operating income. The Kruskal-Wallis pairwise comparison test was used so as to investigate if there were major disparities within the sub-sample groups. The result showed that efficiency of banks tended

toward severe contrary cases. The banks with intermediate proportion of interest and non-interest income to operating income were outperformed by those with high and low percentage. This implied that banks with high and low concentration in non-interest and interest earnings always operated with cost efficiency. Banks with middle percentage of interest and non-interest earnings to operating income, which have more diversified income sources, were less cost efficient.

Mercieca, Schaeck and Wolfe (2007) examined whether the change to non-interest earnings boosts performance of small credit unions in Europe. The study used 755 small banks as a sample from 1997 to 2003, the result portrayed an inverse correlation between non-interest earnings and bank performance while there is no absolute diversification gain across and within business lines. The results also showed that small banks that possess distinctive comparative advantage within their existing business lines can boost their performance by increasing their resources in those business lines.

Goddard, Mckillop, and Wilson (2008a) investigated the effect of diversifying revenue on the credit unions' financial performance in US from 1993–2004. The effect of switching through different strategies which changes the proportion of non-interest revenue was brought by an indirect contact influence that shows the influence of the firm's own level of diversification, a direct exposure impact and showing the diversity between non-interest and interest activities. The findings showed that; a direct and positive contact influence is overshadowed by a direct and negative contact influence for majority except the biggest credit unions, on both the unadjusted returns and risk-adjusted measures. This implied that small and big credit unions should have different diversification strategy and similarity of diversification strategies is not appropriate. They concluded that smaller credit unions must avoid diversification and sustain it by

functioning as a loan and savings institution, whereas larger credit unions should be continue to diversify and venture into new product and service opportunities around their core expertise.

Goddard, Mckillop and Wilson (2008b) carried a study on a big sample of credit unions in US so as to classify the sources of differences in performance. Analysis of variance was used and was measured by both growth of assets and membership. The findings suggested that charter effects, state and common bond all make fairly little though statistically noteworthy additions in the clarification of the changes in performance growth. Findings of the study also showed that for large credit unions, increase in diversification and performance are positively related while it was negative for smaller CUs.

Barry and Laurie (2010) investigated the impact of non-interest income on bank's returns and risk. They found that income derived from non-interest income is riskier compared to those that were derived from the traditional sources. Though non-interest earning as a basis of diversification of revenue was found to be riskier than margin revenue but it offered gains to the stockholders of the banks by reducing bank exposure to interest incomes. Though it improves the bank's tradeoff of risk and return, these are of less significance to the bigger negative effect of poor asset quality on stockholder returns.

Kiweu (2012) used a sample consisting of 35 commercial banks in Kenya from 2000 – 2012 to investigate how income diversification and focus impact on the bank's performance (as measured by ROA and ROE). The study investigated whether income source diversification for Kenyan commercial banks leads to reduced individual bank and systematic risks and better earnings. The study found that income diversification from traditional banking has a few benefits, if any, to be expected. The importance of the growth of non-intermediation income did

not appear to entirely neutralize the raise in risk that originates from non-intermediation activities. The findings showed that non-interest and interest income were positively correlated, and thus suggesting that non-interest earning may be an inappropriate substitute to steady the total income.

Kiberia (2012) investigated the effects of income source diversification on financial performance of commercial banks in Kenya. The aim of the research was to establish the influence of income source diversification on performance of commercial banks. The findings showed that when commercial banks diversify their income generating activities then problems such as competition and profitability in the market will reduce drastically and thus improving the bank's financial performance. Intermediation income, non-intermediation income, fees on loans and advances and commission, foreign exchange trading earnings, other fees and commissions, and other earnings have a positive effect on bank's financial performance.

Otieno and Moronge (2014) studied the impact of product diversification on the bank's financial performance in Kenya. The aim of the research was to examine the impact of product diversification on the bank's financial performance in Kenya. The precise purpose was to find out how information flow, new markets, creativity and technology affect their performance financially. The results indicated that creativity, new markets, information flow and technology had an impact on financial performance. Creativity was noted to be an aspect with the utmost impact as its significant of coefficient was the highest.

Nguyen, Vinh vo and Nguyen (2015) carried a study on the effects of diversification of income on risks of banks in Vietnam, 32 Vietnamese domestic banks were sampled from 2005 – 2012 using the Panel regression model, random and fixed effects model with Hausman test robust check. The results found that a rise in the non-interest earnings will reduce the risk compared to

the ones with high interest earnings. In regards to the effects of size, the result was generally accurate for bigger banks compared to smaller banks. However, the effects of income diversification are not clearly established for small banks. The paper examined both the listed and unlisted banks. The findings showed that there is a positive correlation between diversification and risks in banking of these categories.

2.5 Conceptual Framework

The figure above shows the independent and dependent variables, where the income diversification of each bank was measured using the herfindahl-hirschman index, bank size was measured as the natural logarithm of the total assets, capital adequacy ratio as the total tier 1 capital divided by risk adjusted assets, liquidity as the loans divided by deposits and the financial performance of banks using Return on Equity (ROE).

INDEPENDENT   **CONTROL VARIABLE**   **DEPENDENT VARIABLE**

VARIABLE

```
┌──────────────────┐                                ┌──────────────┐
│     INCOME       │ ─────────────────────────────▶ │              │
│  DIVERSIFICATION │                                │              │
└──────────────────┘                                │              │
                                                    │              │
                     ┌──────────────────┐           │              │
                     │                  │           │  FINANCIAL   │
                     │       SIZE       │ ────────▶ │ PARFORMANCE  │
                     └──────────────────┘           │              │
                                                    │              │
                     ┌──────────────────┐           │              │
                     │ LIQUIDITY RATIO  │ ────────▶ │              │
                     └──────────────────┘           │              │
                                                    │              │
                     ┌──────────────────┐           │              │
                     │ CAPITAL ADEQUACY │ ────────▶ │              │
                     │      RATIO       │           │              │
                     └──────────────────┘           └──────────────┘
```
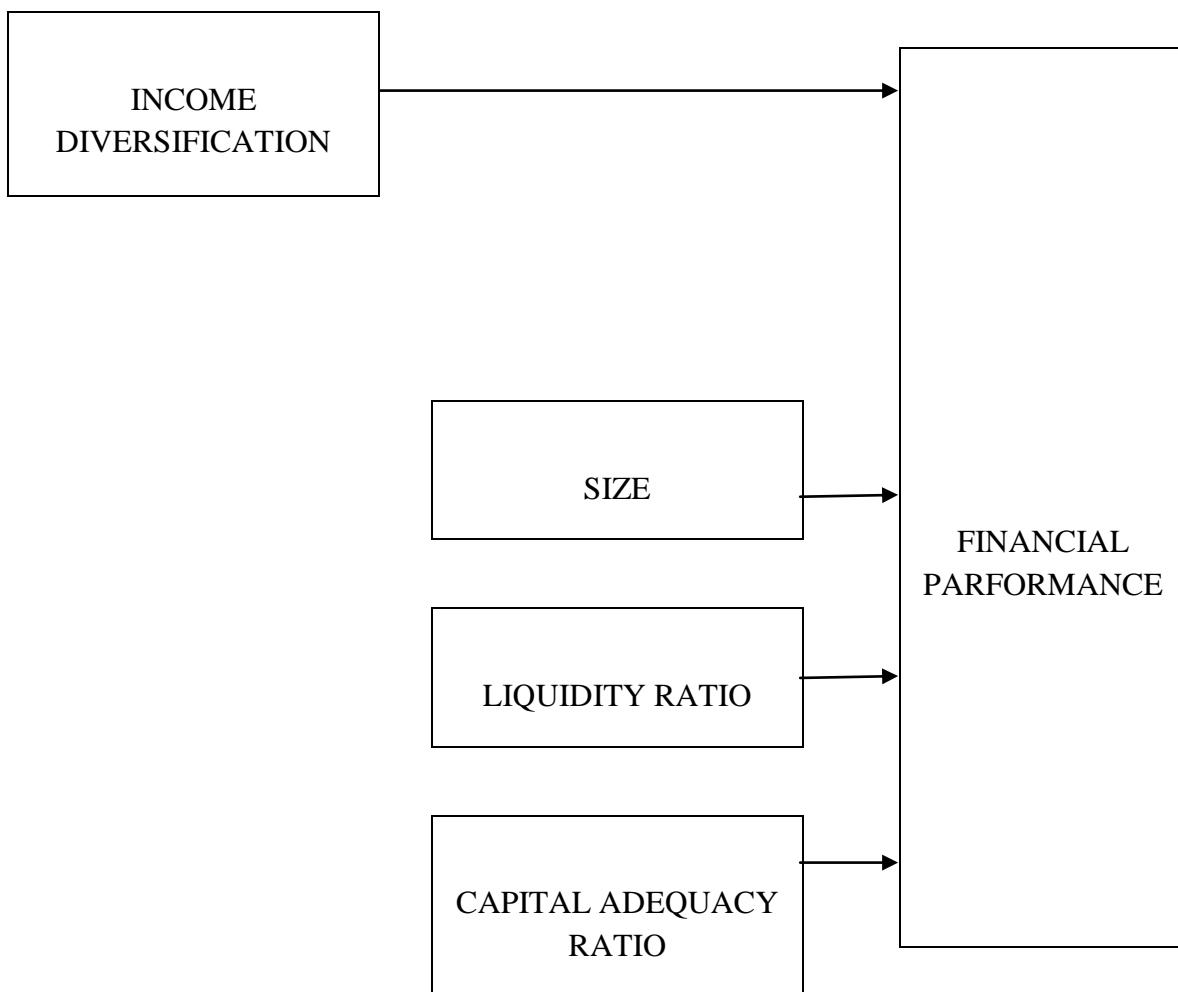
Source: Author (2017)

2.6 Summary of Literature Review

From the literature, effects of income diversification and financial performance had different results. A closer examination of these studies reveals variations on data sources, measures used on both variables: the dependent and independent and the countries that the researches were carried. The aforementioned empirical studies have demonstrated that there is a bond between diversification of income and financial performance, thus showing diversification of income affects the financial performance of banks.

Majority of the early studies were carried on USA, European and Asian banking sectors which are mostly developed economies compared to Kenya. Those studies also came up with different results and thus making this field open to more research work so that the results can be compared. Studies were also carried in Kenyan banking sector but there is a time gap which this research wants to fill for the period of 2012-2016 and Kenya being a developing country, more research is needed so that the effect of diversification of income on financial performance could be understood better.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the research design that was adopted in the study. It also discusses the population of the firms studied was obtained in addition to how the data used in the study was collected and analysed.

3.2 Research Design

The study adopted a descriptive research design which is defined as a design that is used when the researcher needs to depict specific behavior as it occurs in the environment (Greener, 2008). Zikmund (2003) notes that, the main quality of this design is that the variables cannot be controlled by the researcher as he can only describe what is occurring or has occurred. The design is deemed suitable since the main aim is to determine the possible relationship and explain how the issues support matters under study.

3.3 Target Population

The study population consisted of the 11 listed commercial banks on the Nairobi Securities Exchange for the years 2012 to 2016. This period was chosen because of the quick growth of non-intermediation activities in the banking sector. Capping of interest rates in this period also encourages banks to look at other sources of income and thus diversifying their incomes (Kiweu, 2012). According to the NSE, there are 11 listed commercial banks in Kenya as of 31st December 2016 and a census study was carried out.

3.4 Data Collection

Secondary data was adopted in the study which was obtained from audited financial statements of listed commercial banks in Kenya. The audited financial statements were acquired from each banks websites, NSE website and CBK supervisory data bank. The study used longitudinal approach to study the trend of diversification of income sources for 5 years. The specific data

collected for each bank was net operating income from net interest and noninterest sources, total assets, capital adequacy ratio and liquidity ratio.

3.5 Data Analysis

Data was analysed through multiple regression to determine the impact of diversification of income on financial performance. The relationship of the equation is a multiple linear where the financial performance was the dependent variable and Herfindahl-Hirschman Index was used to determine the diversification of income which was the independent variable. Total assets, capital adequacy ratio and banks liquidity ratio were the control variables. The equation is as shown;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where;

Y= Financial Performance

β_0 = constant term

$\beta_1 - \beta_4$ = Beta coefficients (Intercepts for independent variables);

X_1= Herfindahl- Hirschman Index

X_2 = Natural logarithm of size

X_3 = Liquidity ratio

X_4 = Capital adequacy ratio

ε = Error term.

The main measure of evidence of income diversification, accounted for difference in the net operating income breakdown into two groups: net interest earnings, NET, and non-interest earnings, NON. Using this formula, the study measured income diversification of the banks as:

Income Diversification $=1- (\ SH^2{}_{NET} + SH^2{}_{NON})$

Where:

SH_{NET} = proportion of net operating income from net interest bases

SH_{NON} = proportion of net operating income from non-interest bases, which was calculated as;

$$SH_{NET} = \frac{NET}{NON+NET} \qquad\qquad SH_{NON} = \frac{NON}{NON+NET}$$

Revenue diversification measured the level of diversification in a bank's net operating income. A greater rate shows a higher diversification mix: 0 reflects that all proceeds arrives from one source that is complete concentration and 0.5 shows an equal share between non-interest earnings and net interest earnings that is complete diversification. The average of these measures was then adopted to get a measure of the average diversification of income over a period of 5 years.

3.5.1 Operationalization of Variables

The variables used in this study were measured as follows:

VARIABLE	MEASURE	STUDY ADAPTED FROM
Financial performance	Return on equity	Khrawish (2011)
Income diversification	Herfindahl-Hirschman index	Morgan and Samolyk (2003)
Size	Natural logarithm of bank's total asset	Smirlock (1985) & Chi (2004)
Capital adequacy ratio	total tier 1 capital divided by risk adjusted assets	Athanasoglu (2005) & Beckmann (2007)
Liquidity ratio	Ratio of loans to deposits	Chandra (2001), Apuoyo (2010) & Molu (2012)

Source: Author (2017)

3.5.2 Significance Test

The statistical significance of each independent variable explaining financial performance was tested using student t-test at 5% level of significance. F-test evaluates the general significance of the regression model. The coefficient of determination, R^2 explained the variability of the overall regression model.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter focused on analysing of data collected and interpretations of the findings. Data was obtained from secondary source, financial statements of commercial banks was obtained from the websites of the respective banks. The study covered the listed commercial banks at Nairobi Securities exchange from 2012 to 2016. All 11 commercial banks were comprised in the study.

4.2 Descriptive Statistics

The following Table 4.1 reports the descriptive statistics of financial performance of the banks listed at the NSE:

Table 4.1: Summary of Descriptive Statistics
Descriptive Statistics

	Mean	Std. Deviation	N
ROE	.1873	.07504	55
HHI	.4018	.07703	55
SIZE	12.0552	.56573	55
L.R	.3781	.09834	55
C.A.R	.1643	.02277	55

Source: Author (2017)

As shown in Table 4.1, a panel data was obtained from 11 listed banks over a five year time period totaling to 55 observations that was analyzed in the study. The average performance as measured by ROE was 0.1873 with a standard deviation of 0.07504. Mean of income diversification was 0.4018 and a standard deviation of 0.07703, while size had an average of 12.0552 and a standard deviation of 0.56573, Liquidity ratio had a mean of 0.3781 and a standard deviation of 0.09834 and finally capital adequacy ratio had a mean of 0.1643 and a standard deviation of 0.02277.

4.3 Correlations

Table 4.2 expresses the outcome of correlation analysis on all the independent variables used in the study. This analysis was conducted to test how the independent variables were related to each other in order to ascertain the presence of multicollinearity.

Table 4.2: Correlation matrix

		ROE	HHI	SIZE	L.R	C.A.R
Pearson Correlation	ROE	1.000	.151	.471	-.001	.286
	HHI	.151	1.000	.559	.344	.197
	SIZE	.471	.559	1.000	.195	.148
	L.R	-.001	.344	.195	1.000	.310
	C.A.R	.286	.197	.148	.310	1.000
Sig. (1-tailed)	ROE	.	.135	.000	.498	.017
	HHI	.135	.	.000	.005	.074
	SIZE	.000	.000	.	.077	.141
	L.R	.498	.005	.077	.	.011
	C.A.R	.017	.074	.141	.011	.
N	ROE	55	55	55	55	55
	HHI	55	55	55	55	55
	SIZE	55	55	55	55	55
	L.R	55	55	55	55	55
	C.A.R	55	55	55	55	55

Source: Author (2017)

The findings in Table 4.2 showed that diversification of income, bank size, liquidity ratio and capital adequacy ratio were highly correlated. This shows that there was evidence of multicollinearity among the independent variables where one predictor variable can be used to predict the other which justifies their inclusion into the regression model as they are without transformation would lead to spurious regression results. These were therefore transformed using first differences before being entered into the regression equation for analysis.

4.4 Effect of income diversification on the financial performance of commercial banks

To evaluate the impact of diversification on the bank's financial performance, Herfindahl-Hirschman Index (HHI) was regressed against financial performance. Three control variables, namely; bank size, liquidity and capital adequacy were included.

Table 4.3: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.737	.206		-3.579	.001
	HHI	-.158	.144	-.163	-1.100	.277
	SIZE	.073	.019	.548	3.876	.000
	L.R	-.106	.099	-.139	-1.072	.289
	C.A.R	.923	.409	.280	2.259	.028

 Source: Author (2017)

Table 4.3 above indicates the regression coefficients for the regression of financial performance on HHI, size, capital adequacy and liquidity. The regression model had a constant of -0.737 while HHI, size, liquidity and capital adequacy had coefficients of -0.158, 0.073, -0.106 and 0.923 respectively. The resulting regression equation was:

Y= -0.737- 0.158X_1+ 0.073X_2- 0.106X_3+ 0.923X_4

HHI had a regression coefficient of -0.158. This indicates that, diversification had a negative impact on financial performance which implies that the more diversification a commercial bank soughts; the resulting financial performance would be lower. The coefficient of HHI had a significance probability of 0.277; since the p-value is more than 0.05 then the effect of income diversification on financial performance was not statistically significant.

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Size had a coefficient of 0.073 with a significance probability of 0.000. This result indicated that size had a positive correlation with financial performance and its effect was statistically significant as p-value was less than 0.05. Liquidity had a coefficient of -0.106. This indicates negative impact on financial performance. Maintaining high liquidity ratios would result in declining the financial performance. Liquidity ratio had a significance probability of 0.289 and thus showing that its effect on financial performance was not statistically significant. Capital adequacy had a coefficient of 0.923 with a significance probability of 0.028. Thus capital adequacy ratio had a positive impact on financial performance, maintaining higher capital adequacy ratios served to raise the bank's financial performance. It had a significance probability of 0.028, since the p-value is less than 0.05, then the effect of capital adequacy ratio on financial performance is statistically significant.

Table 4.4.1: Model Summary

As reported in table 4.4 the regression equation was found to have an adjusted coefficient of determination R^2 of 0.259. This indicates that income diversification, size, liquidity ratio and capital adequacy ratio jointly explained just 25.9% of variation in the financial performance. The model therefore explains only 25.9% of the variation while the remaining variation is explained by other variables.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.560[a]	.314	.259	.06459

Source: Author (2017)

Table 4.4.2: Analysis of Variance

Table 4.5 indicates the results of analysis of variance. The F ratio for the regression was found to be 5.720 with a significance probability of 0.001. Since the p-value is less than 0.05 then the effect of income diversification, size, liquidity ratio and capital adequacy ratio on financial performance was statistically significant.

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.095	4	.024	5.720	.001[b]
1	Residual	.209	50	.004		
	Total	.304	54			

Source: Author (2017)

4.5 Discussion of Findings

The study investigated the effect of income diversification on the financial performance of listed commercial banks in Kenya. Income diversification was the independent variable in the study. The findings showed that income diversification had a weak negative correlation with the financial performance of listed commercial banks in Kenya. It implied that a high income diversification led to a low financial performance banks. This showed that focusing on income diversification was a costly affair for the banks as it reduced their financial performance. This agrees with the results of Kiweu (2012).

The study examined the effect bank's size on the financial performance of listed commercial banks in Kenya. The bank's size was used as a control variable in the study. Findings indicated that bank's size had a strong positive correlation with the financial performance of listed banks. It implied that an increase in one unit of bank's size will lead to an increase of 0.073 units in financial performance. Therefore size had a positive influence on the financial performance of the listed banks. This agrees with the results of Goddard et al. (2004).

The study also examined the effect of liquidity ratio on the financial performance of listed commercial banks in Kenya. Liquidity was also used as a control variable in the model. Results showed that liquidity had a weak negative correlation on the financial performance of listed commercial banks. Therefore this implied an increase in one unit in liquidity led to a 0.106 unit decrease in the financial performance of listed banks. This suggested that financial performance is negatively influenced by liquidity. This result is inconsistent with the findings of Dang (2011). The study also assessed the effect of capital adequacy ratio on the financial performance of listed commercial banks. Capital adequacy was also used as a control variable in the model. The findings showed that capital adequacy had a strong positive effect on the financial performance of listed commercial banks. Therefore an increase in one unit of capital adequacy ratio will lead to an increase of 0.923 units in financial performance. This implied that financial performance of listed commercial banks was positively influenced by the level of capital adequacy. This findings agree with the results of Sangmi and Nazir (2010).

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, a summary of findings, limitations, conclusions, suggestion for further research and recommendations are discussed.

5.2 Summary of the Findings

This study sought to establish the effect of income diversification on financial performance of commercial banks listed on the Nairobi securities exchange. The data collected was panel data of 11 listed banks for a period of five years totaling to 55 observations which was used in the study for analysis. The average performance as measured by ROE was 0.1873 and a standard deviation of 0.07504. The average income diversification was 0.4018 and a standard deviation of 0.07703, while average size was 12.0552 with a standard deviation of 0.56573, Liquidity ratio had an average of 0.3781 and a standard deviation of 0.09834 and finally capital adequacy ratio had an average of 0.1643 and a standard deviation of 0.02277.

The study found that income diversification had a negative effect on the financial performance of commercial banks and its effect was statistically insignificant. It was found that, the impact of size on financial performance was positive and its effect was statistically significant. Liquidity had a negative impact on financial performance and its effect was not statistically significant. Further, capital adequacy ratio had a positive influence on financial performance and its effect on financial performance was statistically significant.

The adjusted coefficient of determination R^2 was 0.259. Accordingly, income diversification, size, liquidity ratio and capital adequacy ratio explained 25.9% of the variation in financial performance of commercial bank while the other variation was explained by other factors.

Analysis of variance showed that, the F ratio for the regression was found to be 5.720 and had a significance probability of 0.001. This model was therefore good enough to explain how income diversification influences the performance of the listed banks in Kenya.

5.3   Conclusions

This study required to establish the impact of income diversification on financial performance of commercial banks listed on the Nairobi Securities Exchange. The result of regression indicated that diversification of income had a weak negative impact on financial performance and thus the higher the banks its income then the lower its financial performance. Thus, the study concludes that income diversification has a weak influence on the financial performance of listed commercial banks in Kenya.

The study assessed the impact of size on the financial performance of listed banks in Kenya. Findings indicated that size had a strong positive correlation with financial performance and therefore an increase in size will increase the financial performance of the bank. Therefore, the study found that size had a strong positive correlation on the financial performance of listed commercial banks in Kenya

The study examined the impact of liquidity on the financial performance of listed commercial banks in Kenya. The findings indicated that liquidity had a weak negative impact on financial performance and thus a higher liquidity ratio will lead to a lower financial performance of the bank. The study concluded that liquidity has a weak negative effect on the financial performance of listed commercial banks in Kenya.

The study also examined the impact of capital adequacy on the financial performance of listed banks in Kenya. Results indicated that capital adequacy had a strong positive impact on financial

performance and therefore a higher capital adequacy ratio will lead to higher financial performance of the bank. The study concluded that capital adequacy ratio had a strong positive effect on the financial performance of listed banks in Kenya.

The adjusted coefficient of determination, R^2, indicated that, income diversification, size, liquidity ratio and capital adequacy ratio only explained 25.9% in the variation of financial performance while the remaining was explained by other factors other than the named before. The results of F test indicated that, income diversification, size, liquidity ratio and capital adequacy ratio had a strong effect on financial performance thus indicating the model was good enough in determining the effect of income diversification on financial performance.

5.4   Recommendations

This study proposes that, banks should not commit resources in diversifying their income because diversification appears to affect their financial performance negatively. The study also recommends that the banks check on their liquidity ratios as the current ratios are negatively affecting financial performance. As such, lower liquidity ratios would be preferred to offer better financial performance for the listed banks in NSE. Size of the firm and capital adequacy ratio indicated that a higher rate in both helped commercial banks to perform much better financially and thus the study recommends banks to maintain or increase on those variables so as to perform better.

Further, the study recommends that Central Bank of Kenya should offer an atmosphere where the commercial banks process is not hampered with. For example, CBK should ensure steadiness of interest rates so as to encourage lending. Through enhanced lending, commercial banks are

able to gain commissions and fees as they form a significant portion of banks' non-interest earnings.

5.5 Limitations of the Study

The study was carried from 2012 to 2016, five years' time period due to the cost of obtaining the data and analyzing data for a longer period proved a challenge. In analyzing the effect of diversification of income on financial performance of listed commercial banks, an elongated duration would guarantee robustness of the results. The study was also carried on a single country due to time and resource limitations, therefore using broader sample would enable in getting wider understanding of the subject matter.

The other limitation which was brought by the cost and time constraint in this study is that it was carried on the listed commercial banks at the NSE. The data results may also not be applicable to other financial firms as the focus in this study was on banks and this because of the differences that are found between commercial banks and other financial firms. While it can offer important insights to other financial institutions, such conclusions should be approached with care given the variations in the way banks operate and the way other financial institutions operate. To eradicate this limitation, it may be significant to carry this study on other financial firms.

5.6 Suggestions for Further Research

Based on the findings, it suggested that future studies could investigate the correlation between diversification of income and financial performance using a combined methodology where data is collected from both the secondary and primary sources. This format may help to address issues that the secondary data has not accurately captured and therefore providing a better and clear idea on the issue studied. Further research may assess the impact of geographical diversification on the performance of commercial banks.

This study offers appropriate insight on the effects of diversification of income on the financial performance of the listed commercial banks which are conventional banks; future research could be carried on the effects of diversification of income on the financial performance of Islamic Banks in Kenya.

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APPENDICES

Appendix I: Listed Commercial Banks in Kenya

1. Barclays Bank (K) Limited

2. CFC Stanbic Holding Limited

3. I&M Holdings Limited

4. Diamond Trust Bank Kenya Limited

5. Housing Finance Co Limited

6. Kenya Commercial Bank Limited

7. National Bank of Kenya Limited

8. NIC Bank Limited

9. Standard Chartered Bank Limited

10. Equity Bank Limited

11. The Co-operative Bank of Kenya Limited

Source: NSE (2016)

Appendix II: Research Data

BANK	YEAR	ROE	HHI	SIZE	L.R	C.A.R
DTB	2012	0.21	0.34	11.46	0.38	0.177
DTB	2013	0.22	0.32	11.65	0.326	0.171
DTB	2014	0.16	0.31	11.86	0.356	0.168
DTB	2015	0.16	0.32	12.16	0.39	0.148
DTB	2016	0.17	0.30	12.41	0.502	0.185
BARCLAYS	2012	0.30	0.45	12.13	0.468	0.227
BARCLAYS	2013	0.24	0.44	12.24	0.42	0.157
BARCLAYS	2014	0.22	0.43	12.33	0.442	0.152
BARCLAYS	2015	0.21	0.43	12.39	0.341	0.157
BARCLAYS	2016	0.17	0.41	12.47	0.283	0.157
EQUITY	2012	0.26	0.42	12.28	0.46	0.199
EQUITY	2013	0.25	0.45	12.38	0.34	0.186
EQUITY	2014	0.27	0.46	12.53	0.304	0.148
EQUITY	2015	0.34	0.45	12.74	0.2910	0.146
EQUITY	2016	0.29	0.42	12.85	0.477	0.144
COOPERATIVE	2012	0.25	0.45	12.20	0.358	0.203
COOPERATIVE	2013	0.25	0.44	12.34	0.326	0.157
COOPERATIVE	2014	0.20	0.44	12.55	0.338	0.146
COOPERATIVE	2015	0.21	0.44	12.74	0.361	0.145
COOPERATIVE	2016	0.22	0.50	12.77	0.332	0.162
KCB	2012	0.21	0.40	12.63	0.359	0.213
KCB	2013	0.20	0.40	12.68	0.333	0.187
KCB	2014	0.22	0.45	12.84	0.313	0.171
KCB	2015	0.20	0.43	13.06	0.30	0.141
KCB	2016	0.24	0.39	13.13	0.303	0.169
NBK	2012	0.07	047	11.11	0.30	0.194
NBK	2013	0.09	0.44	11.43	0.42	0.171
NBK	2014	0.07	0.43	11.72	0.315	0.129

Appendix II: Research Data

NBK	2015	-0.11	0.44	11.74	0.307	0.13
NBK	2016	0.01	0.39	11.65	0.297	0.113
I & M	2012	0.20	0.45	11.42	0.3546	0.1698
I & M	2013	0.20	0.37	11.61	0.3402	0.1507
I & M	2014	0.26	0.42	11.83	0.3052	0.1577
I & M	2015	0.22	0.36	11.9	0.3350	0.1705
I & M	2016	0.20	0.35	12.01	0.3726	0.1664
H & F	2012	0.13	0.22	10.62	0.368	0.182
H & F	2013	0.14	0.19	10.75	0.3312	0.138
H & F	2014	0.14	0.25	11.01	0.3076	0.1112
H & F	2015	0.19	0.27	11.14	0.2804	0.1537
H & F	2016	0.10	0.15	11.13	0.2105	0.1537
CFC	2012	0.11	0.50	11.87	0.46	0.205
CFC	2013	0.16	0.50	12.10	0.679	0.1773
CFC	2014	0.15	0.50	12.11	0.414	0.1752
CFC	2015	0.13	0.50	12.25	0.737	0.159
CFC	2016	0.11	0.49	12.28	0.55	0.159
NIC	2012	0.19	0.44	11.53	0.3538	0.156
NIC	2013	0.19	0.41	11.63	0.2854	0.1482
NIC	2014	0.17	0.41	11.83	0.3308	0.1437
NIC	2015	0.24	0.40	11.96	0.298	0.1452
NIC	2016	0.14	0.36	11.99	0.3852	0.1722
STD CHARTERED	2012	0.26	0.44	12.18	0.39	0.16
STD CHARTERED	2013	0.26	0.42	12.30	0.38	0.17
STD CHARTERED	2014	0.26	0.43	12.31	0.46	0.16
STD CHARTERED	2015	0.15	0.40	12.36	0.5374	0.1753

| STD CHARTERED | 2016 | 0.20 | 0.41 | 12.43 | 0.5693 | 0.1751 |

Source: Bank Annual Reports (2012 – 2016)