

**EFFECT OF FINANCIAL RISK ON THE OVERALL
VALUE OF A MULTINATIONAL COMPANY: A CASE OF
KENYA COMMERCIAL BANK**

BY

ALLY, NAZIAN ADAM

**UNITED STATES INTERNATIONAL UNIVERSITY
AFRICA**

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**A Research Project Report Submitted to the Chandaria School
of Business in Partial Fulfilment of the Requirement for the
Degree of Masters in Business Administration (MBA)**

**UNITED STATES INTERNATIONAL UNIVERSITY
AFRICA**

SPRING 2018

STUDENT'S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution, or university other than the United States International University in Nairobi for academic credit.

Signed: _____

Date: _____

Ally, Nazian Adam (643073)

This project has been presented for examination with my approval as the appointed supervisor.

Signed: _____

Date: _____

Prof. Amos Njuguna

Signed: _____

Date: _____

Dean, Chandaria School of Business

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ABSTRACT

The purpose of this study was to determine the effect of financial risk on the overall value of the firm using the Kenya Commercial Bank as a case study. The study's objectives were to determine the effect of long term loans, credit risk and risk weighting on the overall value of the Kenya Commercial Bank.

A descriptive research was applied with secondary data obtained from the audited financial statements from the banks being the main source of data. Kenya Commercial Bank was the main firm of focus and 6 other banks were used for comparison and for variation purposes. The data obtained for the 7 banks was for the years 2015 and 2016.

The data was analyzed using descriptive analyses while regression and correlation analyses were used to draw statistical inferences.

The findings show that long term loans have a strong positive correlation with the overall value of the firm. This means that an increase or decrease on long term loan that a bank has would directly affect the firm's overall value.

Further findings indicate that default rates have a positive correlation with the overall value of the firm. This means that there is a significant relationship between default rates and the overall value of the firm. The increase in default rates between the years 2015 and 2016 led to an even stronger positive correlation between default rates and overall value of the firm.

The findings on the last research objective revealed that there is no significant relationship between risk weighting and the overall value of the firm. Meaning that, an increase or decrease of the capital adequacy ration has no significant impact on the overall value of the firm.

The study then concludes that the value of the firm is affected by the long term loans and the default rates. Risk weighting has no significant impact on the overall value of the firm based on the research done. It is therefore recommended that further should be carried out in different industries to establish and generalize the impact of financial risk on the value of a multinational.

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DEDICATION

The project is dedicated to my family for all their love and support and for all the trust they placed in me throughout my MBA program.

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LIST OF ABBREVIATIONS AND ACRONYMS

ADRs:	American Depositary Receipts
ANOVA:	Analysis of Variances
CESEE:	Central, Eastern and South-Eastern Europe
GDP:	Gross Domestic Product
IMF:	International Monetary Fund
IP:	Investment Portfolio
IR:	Interest (Lending) Rate
KCB:	Kenya Commercial Bank
LICs:	Low-Income Countries
LOA:	Banks Loan Advance
Lr:	Liquidity Ratio
NPLs:	Non-Performing Loans
NSE:	Nairobi Securities Exchange
PLC:	Public Limited Company
RRR:	Reserve Requirements Ratio
SPSS:	Statistical Package for Social Sciences
VD:	Volume Of Deposits

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Risk management function can be traced back after the Second World War. Historical milestones can be helpful to illustrate its evolution, the modern risk management started after 1955, since 1970s the concept of financial risk management has evolved considerably (Dionne, 2013). After the Second World War bigger companies that had diversified portfolios with physical assets began to develop self-assurance against risks, which intended to cover as effectively as insurers for various risks (Dionne, 2013).

The concept of risk management in the financial sector was revolutionized in the 1970s, this was the time when financial risk management became a priority for many organizations including banks, insurance agencies, and non-financial institutions being exposed to various price fluctuations such as risk related to interest rates, exchange rates, stock market returns, and prices of raw materials and commodities (Dionne, 2013). The revolution was brought by the major price fluctuation especially when prices of various commodities became volatile and fixed currency parities being dispersed. On the other hand, the risks of natural calamities also increased significantly. Historically, for the companies to protect themselves from these kind of financial risks, companies had to use balance sheets or liquidity reserves (Promoteia, 2016). In order to reduce the costs of hedging activities, the use derivatives then picked up.

The financial journey in Kenya goes back to the pre-colonial period whereby the first pioneering banks focused on financing international trade across Europe-South Africa to India axis (CBK, 2017). Later, the banks diversified to tap into opportunities for profitable banking being brought as a result of settlers community who mainly included farmers and the pioneer traders in the local economy to whom the banks provided deposit and credit facilities (CBK, 2017).

This began with Indian money lenders who operated quasi bank services in the early 18th century, though the first established bank was Jetha Lila Bankers of India, which had its establishment in Zanzibar by 1880. Then in 1889 the National Bank of India appointed the trade house of Smith Mackenzie to become their agent in Zanzibar, since they had a Mombasa branch in 1887 which was later taken by the Imperial British East Africa in 1888.

The National Bank of India established its own branch in Zanzibar in 1892, then opened a branch in Mombasa in 1896. The spread continued to the year 1904 when they opened a branch in Nairobi.

Kenya's commercial banks are now playing a critical role in ensuring Kenya's economy progress. In 1986, Kenya's financial sector experienced a crisis that resulted in 37 failed banks (Reynor, 2009). The crisis had loans in default at the center of the financial crisis and to protect the Commercial banks in the country from suffering a similar crisis, the parliament had to pass a series of regulations that will govern the banking industry, and the Central Bank of Kenya had to strengthen its key role (CBK, 2017).

Banks play a major role in the Kenyan economic development by mobilizing funds from savers and lending them to the borrowers in an efficient controlled manner. The lending market in the country has witnessed high competition as commercial banks seek to maximize their returns (Adan, 2012). Commercial banks are in a very risk exposed business. They render a lot of financial services and at the same face many financial risks. Throughout the years a lot of research has been done regarding financial risk in commercial banks.

Risk management in banking industry has been transformed over the years in an attempt to respond to the global financial crisis and various regulations emerging from financial crisis (Harle, Havas, & Samandari 2016). McKinsey & Company (2017) indicate that the expected changes in the risk operating function demonstrates the magnitude of what lies ahead. The research done by McKinsey & Company (2017) indicates that today about 50 percent of the functions staff or employees are dedicated to risk related operational procedures such as credit administration, while 15 percent are working in analytics Harle *et al.* (2016). McKinsey research suggests that by the year 2025 these numbers will be closer to 25 and 40 percent respectively. It is no doubt that no one can draw the blueprint of how bank's risk function would look like in 2025 or even predicting the forthcoming disruptions in terms of technological advances, macroeconomic trends and the new bank scandals that might emerge by then. But a few fundamental trends in the banking industry would permit a broad sketch on what is likely to happen, these trends include; broaden regulations, customer expectations are likely to be rising in line with change in technology, evolving technology and advanced analytics, new emerging risks, and continued pressures of cost savings both offer a broad perspective on how credit risks

might look in a near future (Harle *et al.* 2016).

Financial risk includes credit risk, liquidity risk, and market risks. According to Conford (2000), credit risk is the possibility that the actual return on investment or the loan extended will deviate from which was expected. The main goal of credit risk management is maximizing a bank's risk adjusted rate of return by maintaining the credit risk exposure within the accepted parameters set by the bank (Conford, 2000). Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Banks should consider the relationship between credit risk and other risks. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organization (Ahmad & Ariff, 2015).

Most of the credit problems tend to reveal basic weakness in the credit rating and monitoring processes. According to Ebnother and Vanini (2007), most of the credit problems would have been avoided or mitigated by strong internal credit assessment process with a basic due diligence as a substantial challenge facing financial institutions. For traditional bank lending, competitive pressures and the desire for growth create time constraints that interfere with basic due diligence. Globalization of credit markets increases the need for financial information based on sound accounting standard and timely macroeconomic and flow of funds data. When this information is not available or reliable, banks may dispense with financial and economic analysis and support credit decisions with simple indicators of quality, especially if they perceive a need to gain a competitive foothold in a rapidly growing market. Finally, banks may need new types of information, such as risk measurements, and more frequent information (Bank, 2017).

Kenya Commercial Bank being the main bank of research in this study is East Africa's oldest and largest commercial bank which started its operation in Zanzibar, Tanzania as a branch of the National Bank of India. This was in the year 1896, in 1904 operations were moved from Zanzibar to Nairobi, Kenya which is to date the headquarters of KCB (KCB, 2018). In the year 1970, the Kenyan government acquired shares in the bank and that is when the name was changed to what is known as KCB. In 1988 the government sold 20% of its shares at NSE through an IPO and the firm now had new shareholders. KCB started operating as a multinational in the year 1998, when it started its operations in Tanzania and they currently have 11 branches. In 2006, KCB entered what is now known as South

Sudan's market with 20 operating branches. In 2007, KCB further entered the Ugandan market and the following year Rwanda which has 14 operating branches. In 2011 KCB was the most profitable bank in the region, in 2012 KCB entered the Burundian market and doubled its share price. In 2015, KCB embraced technology and KCB –MPESA was launched (KCB, 2018).

1.2 Statement of the Problem

The aim of every banking institution is to operate profitably in order to maintain its stability and improve its growth and expansion. Saunders and Cornett (2010) stated that the very nature of the banking business is so sensitive because more than 85% of their liability is deposits from depositors (Saunders & Cornett, 2005). Banking sector in Kenya has faced various challenges that include non-performing loans and fluctuations of interest rate among others, which have threatened the bank stability. Many studies have been done on various elements of the financial risk including solvency risk, credit risk and risk weighting. Roslan and Karim (2010) highlighted the factors that lead to default of loans from the view of the borrower in developing countries. In the same manner Schicks (2013), conducted a study on the borrower related factors of bad loans in microfinance institutions in Ghana. The borrower related factors include the business activity the borrower engages in, amount borrowed, the gender of the borrower and the maturity period.

A study by Tang and Jiang, (2013), about the profitability of the banking sector, they found that both Bank specific as well as macro- economic factors are important determinants in performance of Banks. In conclusion the researchers argue that controlling bad debts through prudent credit risk management leads to a more efficient Bank and thus higher profitability.

According to Ahmad and Ariff (2015), most banks in economies such as Thailand, Indonesia, Malaysia, Japan and Mexico experienced high non- performing loans and significant increase in credit risk during financial and banking crises, which resulted in the closing down of several banks.

While the above research outcome provides valuable insights on Financial Risk Management, they have not introduced a clear effect of the financial risk on the overall value of the firm of Commercial Banks. Given the gap poised by the above empirical studies, and also considering some challenges faced by commercial banks in Kenya such as non-performing loans, effect of long term loans and effect of risk weighting, it was

important to conduct the study about the impact of the financial risk on the overall value of the firm.

1.3 General Objective

The study sought to determine the effect of financial risk on the overall value of the firm.

1.4 Specific Objectives

1.4.1 To determine the effect of longterm loans on the overall value of Kenya Commercial Bank.

1.4.2 To determine the effect of credit risk on the overall value of Kenya Commercial Bank.

1.4.3 To determinet the effect of risk weighing on the overall value of Kenya Commercial Bank.

1.5 Significance of the Study

The study will be useful to the following constituents:

1.5.1 Multinational Companies

The findings of this study would be important to various Multi-National Companies especially those in Kenya and would help them understand the influence of financial risk on the overall value of the firm.

1.5.2 Scholars

The findings of this study would be benefit scholars as it is a contribution to the body of knowledge in this broad and yet not fully exploited area of financial risk. This would help to enhance understanding and development of relevant theories as well as extensive areas of risk. The study will prove important in providing information to scholars and academicians especially those in the field of finance and banking who may wish to conduct further study on this subject area and other related aspect of this study.

1.6 Scope of the Study

This research focuses on multinational companies found in the banking industry which are listed in the Nairobi Securities Exchange. Six multinational companies were picked to assist this study however, the study's main focus was on Kenya Commercial bank. Kenya Commercial Bank is Kenyan bank with operations in seven countries in Africa, it is also listed in the Nairobi Securities Exchange. KCB was founded in 1896, and started operating

in other countries in 1997. So the company will give a clear picture of the effect of financial risk on the overall value of a multinational company.

1.7 Definition of Terms

1.7.1 Credit Risk

Credit risk refers to the uncertainty about counterparty's promise to honor a financial obligation (Connor, Goldberg, & Korajczyk, 2010).

1.7.2 Credit Risk Exposure

Credit Risk Exposure refers to the total amount one could lose if all third parties are relying upon fail to live up to their promises (Brown, 2017).

1.7.3 Financial Risk

Financial risk refers to the unexpected variability or volatility of returns and thus includes credit risk, liquidity risk, and market risks (Holton, 2004).

1.7.4 Liquidity Risk

Liquidity risk in commercial banks refers to the risk of being unable either to meet their obligations to depositors or to fund increases in assets as they fall due without incurring unacceptable costs or losses (Ismail, 2010).

1.7.5 Market Risk

Market risk refers to the risk to an institution resulting from movements in market prices, in particular, changes in interest rates, foreign exchange rates, and equity and commodity prices. Form of market risk also arises where banks accept financial instruments exposed to market price volatility as collateral for loans (Worzala, 1995).

1.7.6 Multinational Company

Multi-national company refers to a company with facilities and other in at least one country rather than in its home country. Such companies tend to have offices or factories in different countries and usually have a centralized head office coordinating global management (Robert, 2017).

1.8 Chapter Summary

This chapter has provided a focus into the background of the problem, the problem

statement, the purpose of the study, the research questions, and the importance of the study, the scope of the study and the definition of terms. In the next chapter, the researcher reviews the literature based on the effects of financial risk on the overall value of a MNC; a case of KCB and looks thereafter looks at the research methodology that will be adopted in chapter three. In chapter four the researcher will make a summary of the results and findings of the study. Lastly, in chapter five conclusions and recommendations of the study are provided.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

In this chapter the literature review is conducted based on the specific objectives. The review is aided at offering a recent, historical and significant research study on financial risks and reports that act as a basis for this study. The specific objectives of the study are to determine the effect of longterm loan on the overall value of the firm, to determine the effect of credit risk on the value of the firm and to establish the effect of risk weighing on the value of the firm.

2.2 Effect of Longterm Loan on Value of the Firm

2.2.1 Effect of Loan Portfolio Performance on Firm Value

Portfolio theory deals with the selection of portfolios that maximize expected returns consistent with the individual acceptable levels of risk. The theory provides a framework for specifying and measuring investment risk and to develop relationships between risk and expected returns. Its main basic assumption is that investors often want to maximize returns from their investments for a given level of risk. The full spectrum of investments must be considered because the returns from all these investments interact hence the relationship between the returns for assets in the portfolio is important (Reilly & Brown, 2011).

The basic portfolio model was developed by Harry Markowitz in the 1950s and early 1960s. Markowitz is considered the father of modern portfolio theory since he originated the portfolio model that underlies modern portfolio theory. He derived the expected rate of return for a portfolio of assets and the expected risk measure. Markowitz established that under reasonable assumptions, the variance (or standard deviation) of the expected rate of return was a meaningful measure of portfolio risk. From his model, the expected rate of return of a portfolio is the weighted average of the expected return for the individual assets in the portfolio.

Loan portfolio performance continues to attract attention of scholars and policy-makers due to the long reputable need for credible Microfinance institutions (MFIs). Some empirical evidence has shown that in most developing economies, MFIs have brought millions of citizens into cohesive financial institutions which are succeeding very well in providing financial services to its members for improving their standard of living (Collier, Katchova,

& Skees, 2011; Kumar & Golait, 2009; Moti *et al.*, 2012). In continuing with this service, Biekpe and Kiweu (2009) point out that loan portfolio performance of MFIs is critical.

With issues of over-indebtedness emerging among microfinance customers. Microfinance institutions aim at maximizing the return to a portfolio while keeping the risk within acceptable bound (Van der Maas, 2006). This maximization requires a balancing of high repayment rates, low arrear rates, low default rates as well as low portfolio at risk. Organizations suffer from poor credit allocation strategies and weak risk management practices according to Association of Microfinance Institutions Uganda (AMFIU), report (2014). Loan portfolios are the major asset of MFIs and various studies have been undertaken as regards to, for example, loan portfolio performance (González-Vega, 2003; Kropp & Katchova, 2011; Qinlan & Izumida, 2013).

On the other side, credit allocation has a responsibility of ensuring the distribution of loans to different portfolios. According to Mathur and Marcelin (2014), credit allocation is a process of how a bank divides its financial resources and other sources of credit to different processes, borrowers and projects. Overall, it is management's goal to optimize credit allocation so that it generates as much wealth as possible for its shareholders. In a market with perfect information, there exists an equilibrium point where both demand and supply for loans are satisfied (Ciaian, Falkowski, & Kancs, 2012). Furthermore, risk management enhances recovery rates of MFIs. Risk management is a cornerstone of prudent banking practice; undoubtedly all banks in the present-day volatile environment are facing a large number of risks such as credit risk, liquidity risk, foreign exchange risk, market risk and interest rate risk, among others risks which may threaten a bank's survival and success (Beresford- Smith & Thompson, 2007).

More formal empirical works estimate the supply equation of bank loans. The balance sheet variables commonly used in these studies are the ratio of non-performing loans to total loans, banks' capital adequacy ratio and firms' debt-asset ratio. Guido (2008) found that banks with a higher nonperforming loans ratio tend to increase loans to the construction industry while (Giné & Karlan, 2010) also found that non-performing loans to the real estate industry exert a significantly positive effect on loans granted to this industry. Tsuru (2001) found that the capital adequacy ratio had significantly negative effects on loans made to the real estate industry. Heilig, Young, and Williams (2012) argued that banks with a lower capital adequacy ratio tend to increase real estate loans.

The studies by Hibara (2002), Kobayashi , Saita, and Sekine (2002), and Peek and Rosengren (2005), are unique in that they used matched samples of individual firms and bank lenders' transactions. By examining the relationship between the non-performing loans ratio and the debt-asset ratio, Hibara (2002), found that banks with higher non-performing loans ratios tended to use less restraint in making loans to firms with high debt-asset ratios. Kobayashi *et al.* (2002) showed that beyond a certain point of debt-asset ratio, a rise in the debt-asset ratio corresponded with an increase in lending to firms in the construction and real estate industries.

Peek and Rosengren (2005) offer the most comprehensive micro study. They demonstrated that Japanese banks increased loans to less profitable firms in the 1990s. Moreover, they found that this was especially so for banks with balance sheet deterioration and loans to affiliated firms. Since listed firms' information constitutes the micro data, the evidence supporting the ever greening argument is confined to large firms, with no information concerning small or medium-sized firms included. It is worth noting that small or medium-sized firms are more dependent on bank loans, so investigation into how credit allocation is influenced by the balance sheet conditions of firms, as well as that of banks, is important.

Nkuah (2015) carried out a study on the effect of loan portfolio quality on the performance of banks in Ghana. The study employed panel regression techniques. Among various data techniques, fixed effect model was identified as the best technique based on Hausman test between fixed and random effect. The study population was made up of 10 Ghanaian universal banks. The data for the study was obtained from secondary source (2007 - 2013). The return on equity and net interest margin were used to proxy financial performance while loan portfolio profitability and loan loss provision/gross loan advances were used as proxies for loan portfolio quality. The findings of the study established that loan portfolio quality has significant effect on the financial performance of the selected Ghanaian universal banks.

Adamu, *et al* (2014) carried out a study on credit portfolio management in microfinance banks using the lending methodologies in Nigeria. They found out that the success of microfinance banks is dependent on the effective and efficient management of its credit portfolio. The risk portfolios proved to be the source of recurring problems and the cause of failure for many microfinance banks. George *et al*, (2013) carried out a study on the analysis of the loan portfolio management on organization profitability: a case of

commercial banks in Kenya using a descriptive survey. Their analysis was based on variables such as the profitability measures, interest expense, administrative cost, and asset value at the organizational level. They picked a sample at the management level. Using regression analysis, they found out that, the loan portfolio has a direct influence on the profitability of the banks whereas non-performing loans and the new loans have different impact on the profitability of the bank.

Githingi (2010) surveyed on operating efficiency and loan portfolio indicators usage by microfinance institutions found out that most microfinance institutions to a great extent used operating efficiency indicator as a credit risk management practice. Efficiency and productivity ratios are used to determine how well microfinance institutions streamline their credit operations. He also noted that microfinance institutions need to employ a combination of performance indicators such as profitability, operating efficiency and portfolio quality indicators to measure their overall performance. The benefit of examining micro data from firms and banks in the context of this study is that it enables us make clear estimates of the effects of balance sheet conditions of firms and banks on credit allocation.

2.2.2 Effect of Lender Diversification on Firm Value

Issues of financial regulation have led to a build up of competitive pressure in the lending market for commercial banks given lending as their core activity. As a result, driven by the need to maximize profit, banks are likely to pay great attention to lending rates that they charge. Lending rates on the other hand are highly depended on interest rates guided by the central bank which exposes bank earnings to sensitivity on changes in such rates. This raises the question on whether banks should diversify income sources to ease this pressure on lending rates and stabilize their income or focus on the traditional banking activity.

There is no consensus in the empirical literature on the benefits of income diversification on profitability in banking (Vallascas *et al.* 2011; Wolfe and Sanya, 2010; Pennathur *et al.*, 2012). While Mercieca *et al.* (2007) confirms absence of benefits of diversification for small European banks. Stiroh (2004) investigating if noninterest income is the answer for reducing over-reliance on interest income, finds that the shift to noninterest income for US banks is associated with higher risk and reduced risk-adjusted returns.

The theoretical case for income diversification seems to be supported by Markowitz portfolio theory and the conventional wisdom of seeking not to put all ones eggs in the

same basket. It has also been argued that combining different types of income earning activities – non-interest and interest earning assets – results in rebalancing of income away from interest income and may increase return and diversify risk (Gamra & Plihon, 2011). Nonetheless, the evidence that benefits of revenue diversification exist is quite mixed. For example, Wolfe and Sanya (2010) in their study of 226 listed banks in 11 emerging economies highlight the fact that revenue diversification by banks can create value. However, they warn that there are adverse effects in over-relying on non-interest income.

Despite the risk to ‘over diversify’ hypothesis, and overwhelming research evidence that tends to support zero gains for diversifying banks (Bush and Kick, 2009; Mercieca *et al.*, 2007; Berger *et al.*, 2010; Acharya *et al.*, 2006), the benefits of diversification cannot in some instances be overstated (Tabak *et al.*, 2011). These findings have important implications for Kenyan banks which may be trying to follow a diversification model away from traditional interest based income to fee income believed to be more stable.

The heavy focus on interest income has been debated for some time in Kenya. Questions abound on whether profitability of banks is driven by traditional lending activities or there are viable sources away from interest on loans. There is a push in a number of economies for banks to move their business from interest to fee earning activities such as investment banking and insurance services (Busch and kick, 2009). The Reserve Bank of India urged public sector banks to shift to noninterest income in 2002/2003, a move that has paid off in that Pennathur *et al.* (2012), studying ownership structures, finds that fee-based income significantly reduced risk. Researchers reveal that diversification benefit India’s public sector banks as well as greatly reducing default risk because as non-interest income increases banks shift from lending activities. Perhaps this strategy could be the answer to the fight in Kenyan credit market about high lending rates.

Diversification of income sources is said to comparatively yield to advantages since it can reduce the shocks to net interest margins (idiosyncratic risk) arising from adverse changes in lending rates (Lin *et al.*, 2012). Lepetit *et al.* (2008) finds that bank expansion into fee-based services leads to low lending rates, observing that diversification impacts on loan pricing and interest rate margins effectively curb volatility in bank earnings. This finding ties in well with the fact that it has been established lending to specific loan activities is one cause of banking crises in the last 5 years (Tabak *et al.*, 2011). Examples are Argentinean

financial crisis of 2001 and 2002 (cited in Bebczuk and Galindo, 2008), and Australian bank crisis over the years 1997-2003 (Tabak *et al.*, 2011)

Acharya *et al.* (2006), studying Italian banks, finds that diversification increases risk while in other cases it reduces bank performance like in the German banking sector and small European banks (Busch and Kick, 2009; Mercieca *et al.*, 2007). A number of research studies report negative side of diversification: Berger *et al.* (2010) states that diversification reduces bank performance in Chinese banking sector, but Kamp *et al.* (2007) finds neither of the arguments are true with regard to German banking sector. From prior research, there is evidently no consensus on the effect of income diversification on return and risk. Mercieca *et al.* (2007), in a study of 15 European countries for period 1997-2003, reports no direct benefits of diversification for small banks, while Baele *et al.* (2007) shows that in fact banks with high proportions of non-interest income have higher market betas and therefore higher systematic risk. However, Elsas *et al.* (2010) finds that diversification increases profitability and bank value.

A revisit to the same study by Stiroh and Rumble (2006) reports worsening riskreturn trade off on earnings gains caused by growth in a non-interest income, outweighed by the volatility increases, resulting in a non-commensurate increase in stock returns (Pennathur *et al.*, 2012). Similar studies have also found that diversification benefits from non-interest income tend to diminish with bank size; small banks with very small proportions of noninterest income recording significant gains. This study therefore seeks to establish the effects Lender Diversification on banks Value.

2.3 Effect of Credit Risk on Value of the Firm

2.3.1 Effect of Non Performing Loans on Value of the Firm

Non-performing loan are those loans that are not paid up as at when due. Caprio and Klingebiel (1996), suggest that non-performing loans are those loans that do not generate income for a relatively long period of time that is, the principal and or interest on these loans have been left unpaid after due the dates of repayments. Hennie (2003) argued that non-performing loans are loans that are not generating income. Mostly the banks make their profits from interest paid on loans granted to the deficit units of the economy. Yet some of the customers granted these loans fail to meet their contractual obligations of repaying the loans or even paying the interest element of the loan.

Rajan and Dhal (2003) research on Non-performing Loans and Terms of Credit of Public Sector Banks in India; they found that favourable macroeconomic conditions and financial factors such as banks size, cost of credit, credit maturity, and credit orientation have significant impact on the non-performing loans of Indian commercial banks. Jimenez and Saurina (2005) examine the Credit cycles, credit risk, and prudential regulation of Spanish banking sector from 1984 to 2003. The study provides evidence that non-performing loans are function of Gross Domestic Product (GDP) growth, high real interest rates and lenient credit terms. The study further revealed that disaster intolerance, herd behaviour and agency problems may entice bank managers to grant loans excessively without adequate analysis during boom periods may contribute to non-performing loans.

Joseph, Edson, Manuere, Clifford and Michael (2012) investigated the causes of non-performing loans in Zimbabwe. The research revealed that external factors are more prevalent in causing non-performing loans among Zimbabwean banks. The external factors which include natural disasters, government policies and the integrity of the borrowers have been identified as the major or predominant causes of non-performing loans in Zimbabwean banks. Similarly, Khalid (2012) examines the effects of loan quality on bank performance. Using the multiple regression models to analyze; the return on assets and profitability ratios as proxies for banks profitability between the periods of 2006-07 and 2010-11 were under consideration. The results support the hypothesis that the higher the quality of the loan processing activities before loan approval, the lower the non-value-added activities that is required to process problematic loans, and thus the higher the banking operating performance will be.

Abdullahi (2013) also investigated the efficiency of credit risk management on banks performance, also to determine if credit risk has effect on the profitability and examining the relationship between interest income and bad debt (non-performing loans) of Union Bank PLC. The research revealed that credit risk affect the performance of banks and for the banks to maintain high interest income, adequate attention should be given to credit risk management specifically the lending philosophy of banks. The study recommends that bank loans should be adequately reviewed from time to time to assess the level of risk and every loan should be secured with collateral.

Nir Klein (2013) in an International Monetary Fund (IMF) Working Paper investigates the non-performing loans (NPLs) in Central, Eastern and South-Eastern Europe (CESEE)

covering 1998–2011. The paper reveals that the NPLs level can be ascribed to both macroeconomic conditions and banks' specific factors, even though the banks' specific factors was found to have a relatively low explanatory effect on NPLs. It further reveal that NPLs were found to respond to macroeconomic conditions, such as GDP growth, unemployment, and inflation which means it affects the economic recovery of the region.

2.3.2 Effect of Credit Risk Measures on Value of the Firm

Acharya and Steffen (2013) provided empirical evidence that some European banks took advantage of the Standardised Approach risk weighting scheme by concentrating in zero risk-weight sovereign exposures of the Southern European periphery. On this point Acharya (2011) went on to say that the significance of the problem is clear in the Eurozone debt crisis during which the zero capital requirement on sovereign debt, issued by Eurozone countries, was not in line with the assessments of their riskiness at the time. Acharya *et al* (2014), using publicly available data, assessed the effectiveness of macro-prudential stress tests and concluded that the average risk weight of European banks appears completely uncorrelated with their actual risk, and that a risk-weight based approach for calculating capital requirements is not sufficient as there is a risk that risk will change; for example the risk of an increase in the credit risk over time of some currently safe asset classes such as residential mortgages or government bonds. They argued that the Standardised Approach risk weights are flawed measures of bank risks as they ignore the sub-additivity feature of portfolio risk and allow for arbitrage, i.e. cherry picking on one or two risky asset classes with a low risk-weight to meet minimum regulatory capital requirements, which does not necessarily reduce economic leverage. In fact the concentration in bank asset portfolios coupled with the underestimation of risk weights inevitably leads to excessive leverage.

Sonali and Amandou (2012) also questioned the credibility of the risk weights arguing that asset-risk measurement should be revised by regulators. Empirical evidence from their work suggests that although banks with lower risk weighted assets performed better (in terms of stock market returns) during US and European crises, for large banks investors paid less attention to risk weighted assets and rewarded instead better asset quality (lower NPLs). Their findings lead to the conclusion that risk weighted assets do not, in general, predict market measures of banks' riskiness. Evidence from the US in fact indicated that this relationship is negative after the 2008 crisis. According to the authors, this could result from the large increase in the market measures of risk, which reflect the volatility of a

bank's stock price, since the 2008 US crisis, while banks have not adjusted their risk weighted assets to account for the increased risk.

It is necessary to measure the credit risk. The purpose of the credit risk measurement is the quantification of potential losses from credit operation. The amount of losses is never known with certainty therefore it is necessary to estimate it. There are two basic approaches to define credit losses and thus to quantify the credit risk. The methods based on the absolute position in Credit risk this approach is also known as "default-mode". Each borrower may be found at the end of the risk horizon in only two states – default or success. Credit risk then arises from default of the debtor. Access to credit risk measurement through discrete models is typical for homogenous portfolio (mainly, banks' exposures to retail small clients with unified credit products). Among the known methods using discrete models can be classified CreditRisk, KMV model or CreditPortfolioView, (Vlachý, 2006).

These methods show the volume of balance sheet assets, which is exposed to credit risk. When selling the loan to the client, the credit risk or potential loss, represented the entire amount of the loan together with accrued interest and fees, and it is possible to correct if there is the existence of quality collateral. By using this method, bank do not constitute reserves and adjusting entries to the sold loans. The reserves will be started to form only when there is a breach of loan agreement terms by client as an expression of possible loss of credit.

The methods based on the expected rate of default on credit claims this approach is also known as "market-to-market". The debtor may be located in any from n-located rating grades including the failure in the end of the risk horizon. In this approach, the credit risk arises from the debtor transition to a lower rating grade. This approach uses the method of continuous models to credit risk measurement. It is characterized by the fact, that unlike the discrete models that operate on a system of only two options for situation of client – failure or success, there are multiple values, which the debtor can acquire. This approach is more suitable for nonhomogeneous files such as loans to large companies. Determination of individual risk categories are usually based on external credit ratings. Credit migration is then likely to transition from category to the second category. The differences between these two approaches for credit risk measurement are more than evident.

Methods based on absolute position have positive approach to the credit risk. They assume that the loan will be repaid on time and properly. Reserves and remedies are starting to be

created at the moment when the problem comes. In contrast, methods based on the expected rate of default are more realistic. Based on the assessment of the client's credit, each loan have a risk weight of defaults and the bank begins to form reserves and remedies. Individual risk weights are based on historical data and represent the relationship between the risk of default and its credit rating. In practice, the methods on the expected rate of default are more use because they faithfully served the image of credit risk which the bank exposed. These methods estimate the amount of expected losses but also the probability of the loss. Total risk amount (the amount of potential loss) is equal to the probability of default and the amount of loss. Each loan is included to the appropriate risk category and have its risk weighting.

Clark and Judge (2009) examined 412 of the largest non-financial firms in the UK as of the end of 1995. They examine whether or not firms hedge their foreign currency and/or foreign currency debt exposure. This distinction is important, as the former is generally used to hedge short-term exposures, while the latter is used to hedge long-term exposures, and they are complementary. The authors observe that firms using foreign currency hedges tend to have higher leverage and may thus be limited in their use of foreign currency debt hedges due to their long-term nature. Also, more liquid firms are able to manage their currency mix using swaps as opposed to debt. Their most important contribution, however, is to demonstrate that different foreign currency hedges make different contributions to firm value. When used alone, foreign currency derivatives seem to create a 14 per cent positive contribution to firm value, but there is no value premium for debt hedging. When both are used in concert, a 12 per cent value premium exists, but when firms are able to use foreign currency swaps in their hedging mix, these premiums more than double.

Belghitar *et al.* (2008) examined the same sample of firms as in the work by Clark and Judge (2009) to study the valuation and debt capacity effects for foreign currency and interest rate hedging. They find a significant positive relation between the hedging of these exposures and Tobin's q . The results are much stronger than prior studies of US firms, and the authors suggest that this is due to the inclusion of firms that use non-derivative hedging strategies in their samples. They also posit that the differences in results may be due to differences in bankruptcy codes that provide greater benefits to hedging in the UK. Additionally, they find that UK firms hedging interest rate risk are rewarded with higher values than those that hedge foreign currency risk, consistent with the results of Smithson and Simkins (2005).

Finally, based on debt capacity results and those from Tobin's q , the authors find that derivative hedging generates more value than non-derivative hedging and that derivative only hedging is generally superior to other types of hedging. In contrast, Khediri and Folus (2010) find a negative relationship between derivatives use and Tobin's q for a sample of 320 non-financial firms in France, but their study encompasses just one year of data (2001). Clark and Mefteh (2011) study the relationships among stock returns, exchange rate risk and foreign currency derivatives use in a sample of 176 large non-financial French firms. They demonstrate that foreign currency exposure is not homogeneous, as exposures differ with respect to the US dollar and cross-currency rates. While the use of foreign currency derivatives significantly reduces exposure to non-US dollar rate movement and USD depreciations, it does not have the same effect on US dollar appreciations.

Bartram *et al.* (2009) examine a large international sample of non-financial firms with respect to derivatives usage. Because their sample is larger with greater cross-sectional variability in virtually every variable, they conclude that their tests obtain greater statistical power. The authors examine the use of foreign exchange, interest rate and commodity price derivatives by over 7,000 global firms. Using the simultaneous equations approach that is popular in the literature to deal with the endogeneity problem, they find no evidence that non-financial firms use derivatives to lower the costs of financial distress, address the underinvestment problem and/or resolve agency conflicts between managers and shareholders, consistent with the theory presented by Morellec and Smith (2007).

Similarly, Allayannis *et al.* (2012) examine the effects of currency derivatives use on firm value for a sample of roughly 1,500 international firms that have cross-listed American Depository Receipts (ADRs). They find that the use of derivatives is strongly associated with high standards of corporate governance that lead to significant value premiums as well. The value premium does not appear in firms with weak corporate governance. In the same vein, Fauver and Naranjo (2010) find that firms with greater agency costs, monitoring problems and weaker corporate governance demonstrate a negative relation between the use of derivatives and Tobin's q . In their sample of 1,746 US firms, the valuation discount is 8.4 per cent. The authors apply several alternative specifications to account for endogeneity problems as well as sample selection biases.

Lel (2012) hypothesizes that "weakly governed firms use derivatives for managerial reasons and selective hedging on average, and strongly governed firms use derivatives for

other reasons” that are more related to RM theory. He examines roughly 1,000 international firms and uses proxies for both firm-level and country-level measures of corporate governance, finding similar results. Consistent with his hypothesis, he finds that strongly governed firms tend to use currency derivatives to reduce price exposure and reduce the costs of external financing, while the executives of weakly governed firms use derivatives for managerial reasons.

Allayannis and Weston (2001) investigated whether the use of derivatives affects firm value in a large sample of US nonfinancial firms with exposure to exchange rates. The evidence suggests that there is a positive relation between firm value and the use of foreign currency derivatives. Using a sample of firms with American Depositary Receipts (ADRs), Allayannis *et al.* (2004) found a positive relation between the use of foreign currency derivatives and firm value for firms with good corporate governance (or in countries with overall good governance standards). Pramborg (2004) examined the value effect from different aspects of hedging activity and foreign operations, using a sample of Swedish firms over the period 1997 to 2001. A main finding is that there seems to be a positive value effect from hedging transaction exposure, but that translation exposure hedging does not add value. Bartram *et al.* (2004) examined whether the use of derivatives is associated with higher firm value in a sample of 7263 nonfinancial firms from 48 countries including the USA. They found positive valuation effects primarily for firms using interest rate derivatives.

2.4 Effect of Risk Weighting on Overall Value of the Firm

2.4.1 BASEL TWO Accord

Basel II is the second of the Basel Accords, which are recommendations on banking laws and regulations issued by the Basel Committee on Banking Supervision. Basel II, initially published in June 2004, was intended to create an international standard for banking regulators to control how much capital banks need to put aside to guard against the types of financial and operational risks banks (and the whole economy) face, (Weder & Wedow, 2002). One focus was to maintain sufficient consistency of regulations so that this does not become a source of competitive inequality amongst internationally active banks. Advocates of Basel II believed that such an international standard could help protect the 3 international financial system from the types of problems that might arise should a major bank or a series of banks collapse (Gordy, 2006).

In theory, Basel II attempted to accomplish this by setting up risk and capital management requirements designed to ensure that a bank has adequate capital for the risk the bank exposes itself to through its lending and investment practices. Generally speaking, these rules mean that the greater risk to which the bank is exposed, the greater the amount of capital the bank needs to hold to safeguard its solvency and overall economic stability (Taylor, 2006). Basel II aims at ensuring that capital allocation is more risk sensitive; enhance disclosure requirements which will allow market participants to assess the capital adequacy of an institution; ensuring that credit risk, operational risk and market risk are quantified based on data and formal techniques; attempting to align economic and regulatory capital more closely to reduce the scope for regulatory arbitrage (BIS, 2003).

Olokoyo (2011) study aimed to test and confirm the effectiveness of the common determinants of commercial banks lending behavior and how it affects the lending behavior of commercial banks in Nigeria. The model used was estimated using Nigerian commercial banks loan advance (LOA) and other determinants or variables such as their volume of deposits (Vd), their investment portfolio (Ip), interest (lending) rate (Ir), stipulated cash reserve requirements ratio (Rr) and their liquidity ratio (Lr) for the period; 1980 – 2005. The model hypothesizes that there is functional relationship between the dependent variable and the specified independent variables. From the regression analysis, the model was found to be significant and its estimators turned out as expected and it was discovered that commercial banks deposits have the greatest impacts on their lending behavior. The study then suggests that commercial banks should focus on mobilizing more deposits as this will enhance their lending performance and should formulate critical, realistic and comprehensive strategic and financial plans.

Berrosipide (2010) conducted a study and capital was determined to be a critical determinant of the linkage between financial conditions and real activity, and has received special attention in the recent financial crisis. Panel-regression techniques was used to study the lending of large bank holding companies and found small effects of capital on lending. VAR model was then used, and again modest effects of bank capital ratio changes on lending were found. These results were in marked contrast to estimates obtained using simple empirical relations between aggregate commercial-bank assets and leverage growth, which have recently been very influential in shaping forecasters' and policymakers' views regarding the effects of bank capital on loan growth.

Griffith-Jones (2006) conducted a study to examine the implementation of Basel II in low-income countries (LICs). The aim was to assess the low-income countries' views and concerns on Basel II, whether and how they intended to implement the new Basel Capital Accord, and the challenges they may face in doing so. The study discussed in particular the possible implications of Basel II implementation for competitiveness of LIC banking sectors and financial inclusion. Access to credit by the private sector, including SMEs is a particular important issue in the context of scaling up of aid to LICs. The study found that most LIC countries are adopting a very cautious approach towards Basel II. Their intentions are first to understand how Basel II works and to have a better grasp of their possible implications, in order to be able to adopt an informed decision on the issue. Such countries also feel they have previous tasks to complete within Basel I more generally within banking regulation before they tackle Basel II. The IMF and the Basel Committee say they share this caution and do not push LICs to adopt Basel II. However, there seems to be pressure from international consulting firms, rating agencies and others for countries to adopt Basel II.

Hakura (2011) investigated the impact of the new capital requirements introduced under the Basel II framework on bank lending rates and loan growth. Higher capital requirements, by raising banks' marginal cost of funding, lead to higher lending rates. The data presented in the paper suggested that large banks would on average need to increase their equity-to-asset ratio by 1.3 percentage points under the Basel III framework. Estimations indicate that this would lead large banks to increase their lending rates by 16 basis points, causing loan growth to decline by 1.3 percent in the long run.

2.4.2 Basel Framework

Although enhancing bank stability is one of the principal objectives of imposing the Basel Accords and its risk-based capital requirements, the evidence of the direct impact of the Basel Accords has been mixed. Looking at fifty countries, critics have found weak results that minimum capital requirements are positively related to the banking sector's stability. Furthermore, Latin America displays greater sensitivity of loan growth compared to other countries implementing Basel due to past losses in equity. Critics argue there is a modest positive correlation between minimum capital requirements and stability – associated with lower probability of crisis (Barajas, Chami, & Cosimano, 2005). Critics speculate that despite increased sensitivity to capital ratios, banks are not necessarily becoming more

sensitive to factors such as credit risk because it has only indirect impacts on the value of bank assets.

Although banks may receive more favorable ratings from the international rating agencies when they comply with the Basel Accords, the credibility of credit ratings as indicators of bank risk has diminished. In fact, it has been proposed that stronger compliance with the principles relating to improved supervision is actually associated with riskier banks (Demirguc-Kunt & Detragiache 2010). Joseph Stiglitz's criticisms of Basel go farther to include the potential discrimination against developing countries. Inadequate representation in the Basel Committee causes Basel's analysis and recommendations to appear incomplete and bias in various aspects. This causes a challenge for global acceptance of the recommended standards and in implementation by the non-inclusive countries, usually less financially advanced (Stiglitz 2010).

Stiglitz proposes that a more inclusive and appropriate representation in the Banks for International Settlements would allow for not only a fairer system but also in better implemented regulation, and thus a more stable global financial system. The notion of the banking system being self-regulated within each country is viewed as problematic. Stiglitz proposes that standard-setting activities should actually be reported to an international governmental body (Stiglitz, 2010).

Critics are concerned that Basel II may also cause credit to become more procyclical as loan supply becomes more sensitive to risk factors that fluctuate with business cycles (Barajas, Chami, & Casimano, 2005). Therefore, there may be poor assessment of Basel compliance since recorded laws and regulations may vary or not be reflective of the true state of the financial institutions of the country. Critics concluded that there has been no significant change in the sensitivity of loan growth to the nonperforming loan ratio. Additionally, it has been argued that the effect of Basel on Latin American countries does not depend on the individual country's financial development (Barajas, Chami, & Casimano, 2005).

There have also been counter argument, for instance Addressing the greater sensitivity to loan growth, there have already been three generations of the Basel Accords and 88 of 107 non-G10 countries have implemented them (Marshall, 2005). So although we may not be able to currently quantify the effect of the Basel Accords on bank stability in the short run, the creation of Basel has brought international attention to the negative effects of different

banking standards. The power of collective action brings legitimacy to the intended impacts of the Basel Accords. The positive impacts of the Basel Accords can be indirect. By opening up the conversation to include non-G10 countries, the international banking sector forms a unified front to work towards a common set of standards. Financial institutions are likely to invest and conduct transactions where Basel Accords are being implemented since it is assumed that investors can more easily circulate their capital.

Furthermore, using a multicountry bank analysis, critics found that after implementing the Basel regulations, Latin American banks in fact increased their capital and size of loan portfolios. As a result, banks held a capital-asset ratio 4 percent more than the world average, and a loan ratio that was percent over the world average (Barajas, Chami, & Casimano 2005). Therefore, the credibility of the Basel Accords needs to be evaluated in the long term, and not on an annual or short-term basis. Parallels have been made between the impacts of the Basel Accords and of the Washington Consensus. The Washington Consensus was criticized for too much contraction and applying general policies to countries where the policies may not be beneficial. The difference between the Washington Consensus and the Basel Accords lies in the legalities of implementation. The Basel Accords provide a variety of methods to calculate risk and capital. There have also been three generations of the Accords to address banking instrument advances and to further improve on the previous Accord.

Many studies have therefore addressed different aspects of the question of how Basel I has affected bank behavior and its effectiveness in raising capital ratios, as well as the components (numerator and denominator) through which these increases are brought about. In one prominent cross-country study, the Basel Committee on Banking and Supervision (Bank for International Settlements, 1999) surveyed the main empirical evidence available for the early adopters, the G-10 countries. It showed how capital ratios increased, generally by means of a combination of banks raising new capital and reducing risk-weighted assets; yet it also showed evidence of significant and growing regulatory arbitrage in which banks resorted to securitization to boost their capital ratios. This was particularly true in the United States, where capital markets are more developed and liquid. The relationship between securitization, regulatory capital ratios, and risk in Canada was further studied by Dionne and Harchaoui (2003).

Focusing on bank risk-taking, Konishi and Yasuda (2004) used risk measures based on bank stock prices in Japan to test the impact of Basel I adoption, and found that risk was reduced. A similar result was obtained by the Van Roy (2003) study of credit risk-taking among the G-10 countries. Finally, Chiuri *et al.* (2002), used the Peek and Rosengren framework to look at the impact of Basel I on credit growth in 16 emerging markets. They argue that the Capital Adequacy Ratio may have contributed to a credit crunch in countries that have experienced a financial crisis, and that this effect is greatest for those banks that are initially not well capitalized. Their results also support the procyclicality of the risk-based capital requirements. Understanding whether the minimum capital requirements put in place by Basel I contributed to credit slowdowns is important in and of itself but has particular relevance looking toward the future, as virtually all adopting countries are contemplating a move toward a second round of regulations, or Basel II. Recently, the Bank for International Settlements (BIS) promulgated regulations to enhance the effectiveness of the original Basel Accord, with the new regulations scheduled to be implemented in 2006. Countries are now scrambling to understand how the new accord will affect their banking and financial sectors, as well as what it will mean for their economies.⁶ It is important to note that the Basel II proposal, while containing several innovations over Basel I, still retains a heavy reliance on risk-based capital requirements. For instance, as Von Thadden (2004) points out, of the 163 pages of the Basel Committee's 2003 Consultative Paper on the new regulations, 132 pages are devoted to minimum capital requirements, or "Pillar 1

2.5 Chapter Summary

This chapter reviewed related literature in relation to the effect of financial risk on the overall value of the firm. The literature was classified into the three research objectives. The first section looked at determining the effect of solvency risk on the overall value of the firm. The second section looked at the effect of credit risk on the value of the firm. The third section looked at literature related to effect of risk weighing on the value of the firm. The next chapter covers the proposed research methodology to be used for the study.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter highlights how the research study will be led. It incorporates the research design used, the picked sample which prompts to the population and reasons with reference to why the population was picked. Data collection, analysis and presentation are likewise explained on in the part.

3.2 Research Design

According to Trochim (2005), research design provides the glue that holds the research project together. The design is used to structure the research and show how all of the major parts of the research project work together in an attempt to try and address the central research questions. This research study utilized inferential and descriptive statistic research design. This design will use regression and correlation to analyze the data. It will also use graphs and tables to assist in the analysis.

According to Creswell (2013), a research design is a framework that guides collection and the analysis of data. This type of research technique used describes the characteristics related to the subject population. This research used market capitalization as the dependent variable, whereas the effects of long term loans, non performing loans and total capital to risk weighted assets were used as the independent variables. After analyzing the relation between the dependent and independent variables the research provided appropriate recommendations.

3.3 Population and Sampling Design

3.3.1 Target Population

According to Mugenda and Mugenda (2003), population refers to an entire group of events, individuals or objects with a common observable features and characteristics (Mugenda & Mugenda, 2003).

A Population is the precise number of elements that is included in the research study. The target population for this study will be the Annual Financial Reports of 8 multinational commercial banks that are in line with the regulations of Central Bank of Kenya (CBK).

3.3.2 Sampling Design

A sample is a proportion of the population being examined through a research study. Thus, the sampling design refers to the definite procedure that the researchers used in selecting the items from the population that will form the sample. In this study no selection criteria were used (Grell, 2013).

3.3.2.1 Sampling Frame

According to Cooper and Schindler (2006), sampling frame can be defined as an exhaustive list of elements from which potential respondents will be drawn (Cooper & Schindler, 2006).

The sample frame consisted of 8 commercial banks' Annual Financial Reports published by the Central Bank of Kenya (CBK) as required by the law.

3.4 Data Collection Methods

This research study utilized secondary data source of information that was obtained from the Central Bank of Kenya (CBK), Nairobi Security Exchange and Kenya Commercial Bank which is the company being focused on.

3.5 Research Procedures

Secondary data and information were used in data collection, the researcher used published financial statements. A data collection sheet was then designed so that the researcher has a clear idea on what they are looking for. The data required based on the data collection sheet was then obtained from the Nairobi Security Exchange website, Central Bank of Kenya website and from the websites of the 8 banks used in this research. The information obtained from these websites was then transferred to an excel sheet.

Having arranged the data in the excel sheet, the researcher was able to export to Statistical Package for Social Sciences (SPSS) Version 22 to analyze the data. The researcher through the data in the excel sheet was also able to create various graphs that supported the findings of the research.

3.6 Data Analysis Method

Data Analysis system is the way toward bundling the gathered data; place it all together and organizing its principle parts in a way that the discoveries can be successfully and

effortlessly communicated (Kotrilk & Higgins, 2001). The nature of the data collected will be quantitative in nature and the Statistical Package for Social Sciences (SPSS) Version 22 was used to analyze the data. The study conducted descriptive statistics which included percentages, tables and graphs and inferential statistics which included correlation, and regression presented in the form of tables. Independent variables used in this study are long term loans, non-performing loans and total capital to risk weighted assets. Dependent variable is market capitalization.

$$Y = a + bX_1 + bX_2 + bX_3 + e$$

Where Y = Market Capitalization

a =Constant

bX₁= Long Term Loans

bX₂ = Non-Performing Loans

bX₃ = Total Capital to Risk Weighted Assets

e = Standard error

3.7 Chapter Summary

The chapter presented the research methodology. The chapter introduces the research design guiding the way the research will be conducted, highlights the target population, and presents the data collection tools that will be used to collect data, the research procedure and how data will be analyzed. The next chapter will be on the results and findings as far as the study is concerned.

CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

This chapter presented the results and findings of the study which was to determine the effect of financial risk on the overall value of a multinational company, A case of Kenya Commercial Bank. The results and findings were based on three specific research objectives namely; determining the effect of longterm loan on the overall value of the firm, determining the effect of credit risk on the value of the firm and to establish the effect of risk weighting on the overall value of the firm.

4.2 General Information

The purpose of this research was to determine the effect of credit risk on the value of multinationals. The specific objectives of this study were: determining the effect of solvency risk on the overall value of the firm, determining the effect of credit risk on the value of the firm and to establish the effect of risk weighting on the overall value of the firm. The study was a case of Kenya Commercial Bank as a multinational company, however other multinational banks listed in Nairobi Securities Exchange were used for comparison and to assess the effect of credit risk on the value of multinationals. Table 4.1 shows the multinational banks used in this research and the countries they operate

Table 4.1: MNC and their Countries of Operation

Banks	Countries they operate in;
KCB Group	Kenya, Tanzania, South Sudan, Uganda, Rwanda, Burundi and Ethiopia
Barclays Africa Group	South Africa, Botswana, Ghana, Kenya, Mauritius, Mozambique, Seychelles, South Africa, Tanzania , Uganda, Zambia, Namibia and Nigeria
Equity Group Holdings	Kenya, Uganda, South Sudan, Rwanda, Tanzania and Democratic Republic of Congo
I & M	Kenya, Tanzania, Rwanda and Mauritius
DTB	Kenya, Tanzania, Uganda, and Burundi
Standard Chartered Bank (Africa)	Angola, Botswana, Cameroon, Côte d'Ivoire, Egypt, Ghana, Kenya, Mauritius, Nigeria, Sierra Leone, South Africa, Tanzania, The Gambia, Uganda, Zambia and Zimbabwe
CFC Stanbic (Africa)	Angola, Botswana, DRC, Ghana, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Nigeria, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe

4.2.1 Value

The multinational banks used in this research for the years 2016 and 2015 had the following market capitalization which measures the value of the firms. KCB being the main focus of this study had a market capitalization of 120.7 in 2015 and in the year 2016 it had a market capitalization of 106.5. Equity Group Holding had the highest market capitalization in the year 2015 of 154.5 and in 2016 Equity Group Holdings still had the highest market capitalization despite the decrease in market capitalization from 154.5 to 124.5. CFC Stanbic on the other hand had the lowest market capitalization in both years 26.2 in 2015 and 24.9 in 2016.

Table 4.2: Market Capitalization

	Market Capitalization	
	2016	2015
Banks		
KCB Group	106.5	120.7
Barclays Africa Group	43.2	71.4
Equity Group Holdings	124.5	154.5
I & M	34.1	38.6
DTB	30.9	48.2
Standard Chartered Bank (Africa)	73.9	64.8
CFC Stanbic (Africa)	24.9	26.2

4.2.3 Long Term Loans

Figure 4.1 shows the long-term loans for the years 2016 and 2015. The non-dotted line indicating 2016 while the dotted line indicates 2015. Kenya Commercial Bank has had the highest number of long term loans Kshs. 324,284 Million in 2015 to Kshs 373,031 Million in 2016. This significant interest in long term loans translated to a 0.3% market share increase for Kenya Commercial Bank

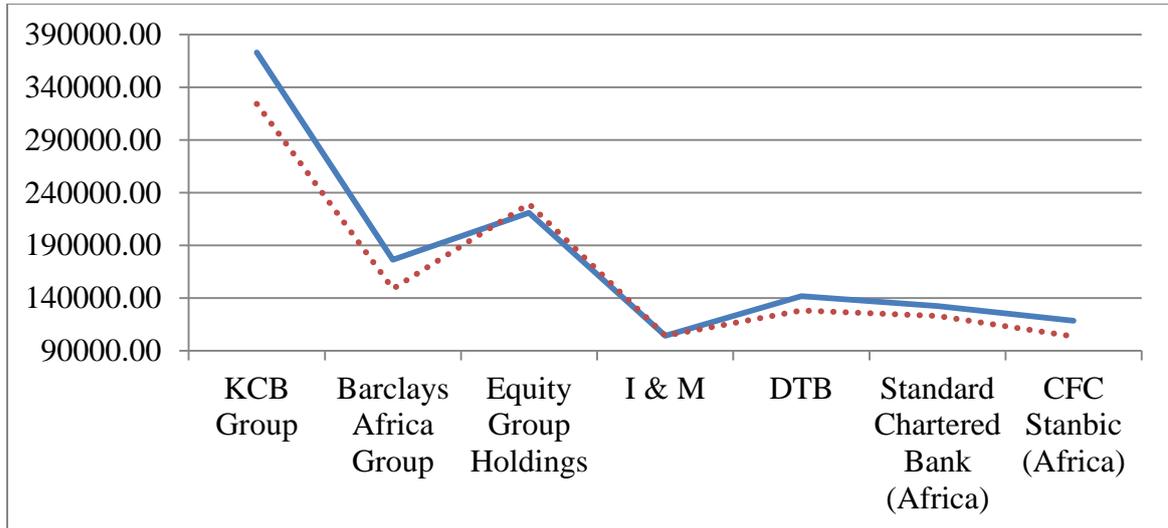


Figure 4. 1: Long Term Loans

4.2.4 Default Rates

Refer to figure 4.2 and figure 4.3 showing the change of long term loans and total assets of the banks listed in Nairobi Security exchange in relation to this study. Figure 4.2 shows non-performing loans the dotted line shows 2015 while the non-dotted line shows 2016.

A 53.49% increase in the non-performing loans by Barclays bank limited led to an increase of 7.60% increase in its total assets. CFC Stanbic Holdings had an increase of 30.73% in its non-performing loans with an increase of 3.18% of its total assets, I & M Bank maintained the same amount of its non-performing loans by 0% changes hence an increase of 27.84% in its total assets. Diamond Trust bank had an increase of 33.77% in non-performing loans causing a significant increase of 27.84% in its total assets. KCB Group had an increase of 31.92% in its non-performing loans leading to small increase of 7.92% in its total assets. Standard Chartered Bank had an increase of 2.26% in its non-performing loans leading to an increase of 6.89% in its total assets and Equity Bank Holdings indicated an increase of 55.78% in its non-performing loans posing an increase of 11.26% in its total assets.

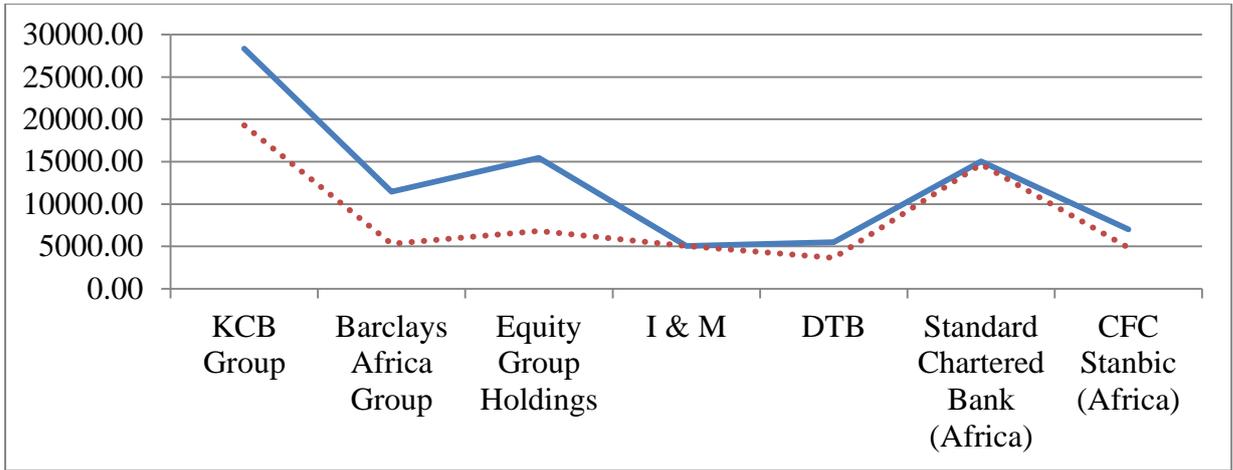


Figure 4.2: Non-Performing Loans

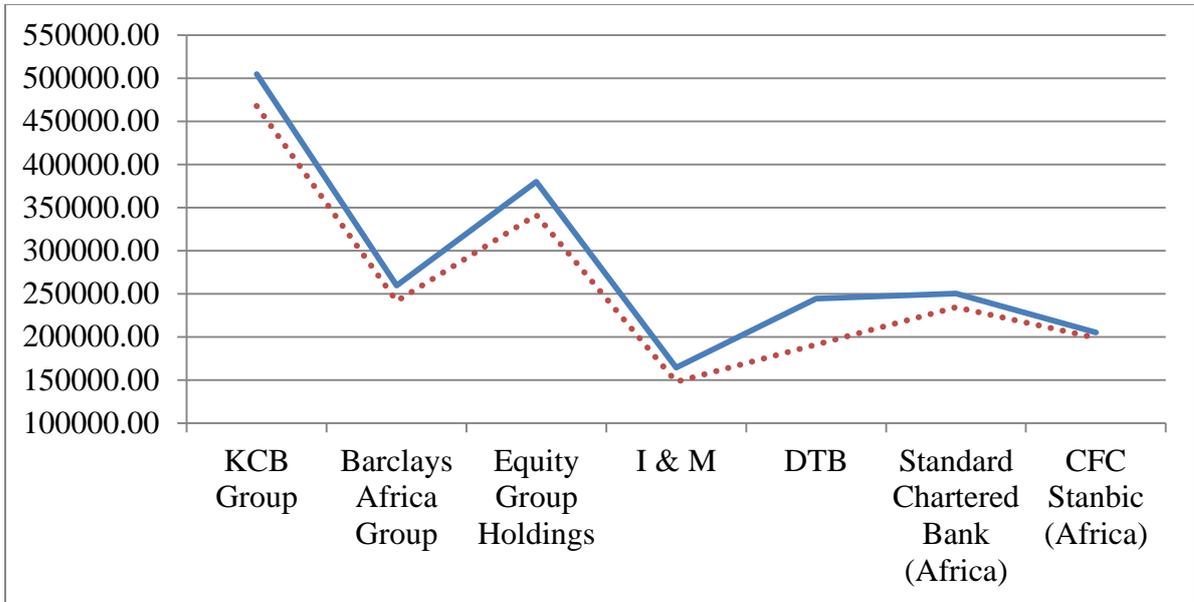


Figure 4.3: Total Assets

4.2.5 Credit Risk Exposure

The graphs below show the risk assets to core capital and total capital for the banks listed in Nairobi Securities Exchange. The regulator of Kenyan banking sector has set the minimum core capital to risk weighted assets and total capital risk weighted assets requirements to be 10.5% and 14.5% respectively as the new guidelines for commercial banks.

4.2.6 Core Capital to Risk Weighted Assets

The dotted line in the graph below shows the year 2015 while the non-dotted line shows the year 2016. KCB in the year 2015 had a core capital to risk weighted asset of 13.90% while in the year 2016 it had an increase in the core capital to risk weighted asset of 16.90%.

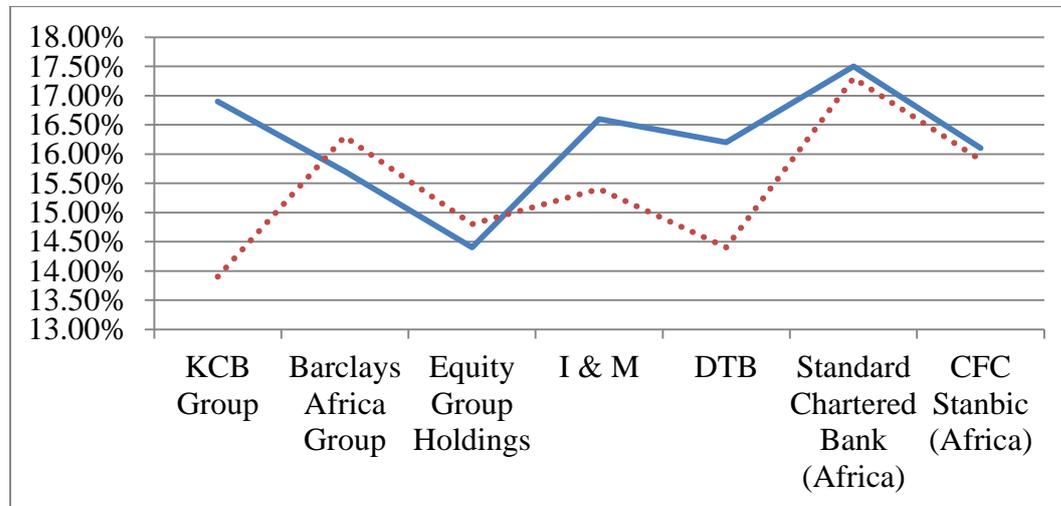


Figure 4.4: Core Capital to Risk Weighted Assets

4.2.7 Capital Adequacy Ratio

Capital adequacy ratio is the ratio used to determine the risk weighted sum of bank's assets. In the year 2016 Standard Chartered Bank had the highest total capital to risk weighted assets of 20.90% and in 2015 it also had the highest ratio of 21.70%. Equity Group Holdings on the other hand had the lowest total capital to risk weighted of 15.50% in the year 2016 and in 16.60% in the year 2015.

Figure 4.5 shows total capital to risk weighted assets for the years 2015 and 2016. The dotted line represents the year 2015 and the non-dotted line represents the year 2016.

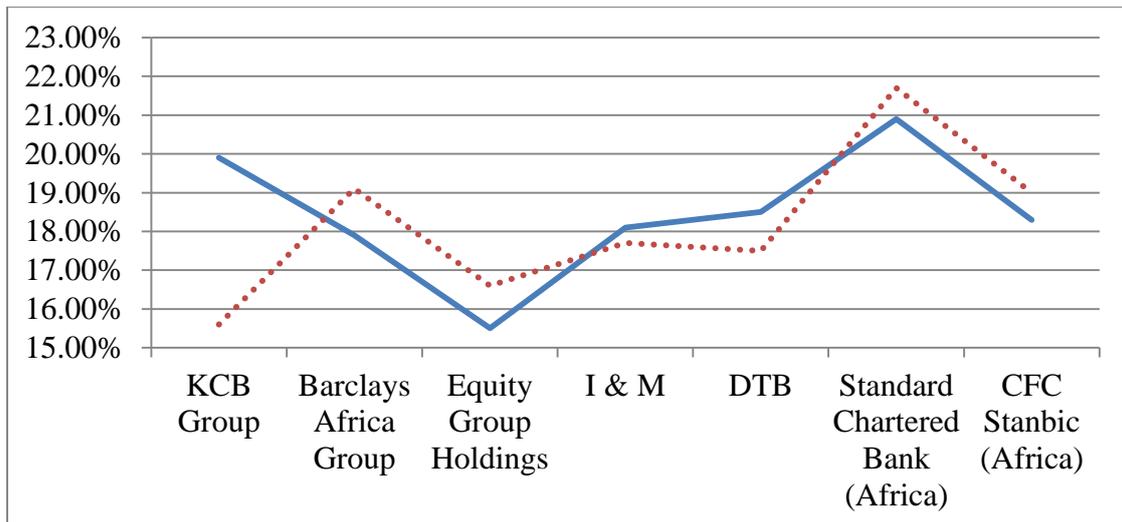


Figure 4.5: Total Capital to Risk Weighted Assets

4.3 Effects of Longterm loan on Firm Value

4.3.1 Correlational Analysis on Long-Term Loan 2016/2017

The researcher sought to establish the correlation analysis which was conducted to test the relationships between market capitalization and solvency risk. Correlation sought to show the nature of relationship between dependent and independent variables, while coefficient of determination showed the strength of the relationship the dependent variable was market capitalization while the independent variable was long-term loan. The findings showed there is a strong positive correlation between market capitalization and long-term loan ($r = 0.063$, P-value 0.729).

Table 4.3 Correlational Analysis on Long-Term Loan 2016/2017

Correlations			
		Market Capitalization	Long-Term Loan
Market Capitalization	Pearson Correlation	1	.729
	Sig. (2-tailed)		.063
	N	7	7
Long-Term Loan	Pearson Correlation	.729	1
	Sig. (2-tailed)	.063	
	N	7	7

4.3.2.1 Regression Analysis on Long-Term Loan 2016/2017

The study sought to investigate the effect of long term loan. The summary of the regression is shown in Tables 4.4, 4.5 and 4.6.

Table 4.4 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.729 ^a	.532	.438	29.82681
a. Predictors: (Constant), Long-Term Loan				

Table 4.5 ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5053.102	1	5053.102	5.680	.063 ^b
	Residual	4448.192	5	889.638		
	Total	9501.294	6			
a. Dependent Variable: Market Capitalization						
b. Predictors: (Constant), Long-Term Loan						

Table 4.6 Coefficients

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.233	26.190		.238	.821
	Long-Term Loan	.000	.000	.729	2.383	.063
a. Dependent Variable: Market Capitalization						

The regression analysis was conducted to establish the effect of solvency risk on market capitalization. R² was used as a statistical measure to predict how well the data fit the model. R² is used to explain the degree to which dependent variable change, adjusted R² is used to measure unbiased estimate of the population. From the findings in the Table 4.4 above, R was 0.729; this means that there was a strong positive relationship between the

dependent variable and the independent variable of the study. R² was found to be 0.532 which means 53.2% of variation of market capitalization can be explained by long-term loan, while the remaining 46.8% could be explained by other variables not under still study. From the analysis of variance (ANOVA) above, the sum of square for regression was 5053.102; the F-distribution is 6.608 which is greater than critical value for F (1, 6) = 5.680, p-value = 0.063 > 0.05. The study was therefore statistically insignificant as the significance was 0.063 and therefore was above the significance level of 0.05 one –tailed. ANOVA was used in the study to establish the relationship between the market capitalization of the firm value and the dependent variables which was the long-term loan. Since the significance is 0.063 which is greater than 0.05, therefore the regression model is statistically insignificant at 5% level. Unstandardized coefficients show how dependent variables vary with independent variables when other variables are held constant. From the model above, a unit increase in long-term loan will lead to an increase in market capitalization by 0.000 units. From the table above, the regression model become; ***Market capitalization= 6.233+ 0.000 Long-Term Loan.***

4.3.1.2 Correlational Analysis on Long-Term Loan 2015/2016

The study sought to establish the correlation analysis which was conducted to test the relationships between market capitalization and solvency risk. Correlation sought to show the nature of relationship between dependent and independent variables, while coefficient of determination showed the strength of the relationship the dependent variable was market capitalization while the independent variable was long-term loan. The findings show there is a strong positive correlation between market capitalization and long-term loan (r = 0.020, P-value 0.835).

Table 4.7 Correlational Analysis on Solvency Risk 2016/2017

Correlations			
		Market Capitalization	Long-Term Loan
Market Capitalization	Pearson Correlation	1	.835*
	Sig. (2-tailed)		.020
	N	7	7
Long-Term Loan	Pearson Correlation	.835*	1
	Sig. (2-tailed)	.020	
	N	7	7

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

4.3.2.2 Regression Analysis on Long-term Loan 2015/2016

The study sought to investigate the effect of long term loan. The summary of the regression is shown in Tables 4.8, 4.9 and 4.10.

Table 4.8 Model Summary 2015/2016

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.835 ^a	.697	.636	28.03388

a. Predictors: (Constant), Long-Term Loan

Table 4.9 ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9020.836	1	9020.836	11.478	.020 ^b
	Residual	3929.493	5	785.899		
	Total	12950.329	6			

a. Dependent Variable: Market Capitalization
b. Predictors: (Constant), Long-Term Loan

Table 4.10 Coefficients

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.537	25.465		-.139	.895
	Long-Term Loan	.000	.000	.835	3.388	.020

a. Dependent Variable: Market Capitalization

From the findings in the Table 4.8 above, R was 0.835; this means that there was a strong positive relationship between the dependent variable and the independent variable of the study. R² was found to be 0.697 which means 69.7% of variation of market capitalization can be explained by long-term loan, while the remaining 30.3% could be explained by other variables not under still study.

From the analysis of variance (ANOVA) Table 4.9 above, the sum of square for regression was 9020.836; the F-distribution is 6.608 which is less than critical value for F (1, 6) = 11.478, p-value = 0.020 < 0.05. The study was therefore statistically significant as the significance was 0.020 and therefore was below the significance level of 0.05 one-tailed. ANOVA was used in the study to establish the relationship between the market capitalization of the firm value and the dependent variables which was the long-term loan. Since the significance is 0.020 which is less than 0.05, therefore the regression model is statistically significant at 5% level. Unstandardized coefficients show how dependent variables vary with independent variables when other variables are held constant. From the model above, a unit increase in long-term loan will lead to an increase in market capitalization by 0.000 units. From the table above, the regression model become; ***Market capitalization = -3.537 + 0.000 Long-Term Loan***

4.4 Effects of Credit Risk on Value of the Firm

4.4.1.1 Correlational Analysis on Non-Performing 2016/2017

The study sought to establish the correlation analysis which was conducted to test the relationships between market capitalization and non-performing loan. Correlation sought to show the nature of relationship between dependent and independent variables, while coefficient of determination showed the strength of the relationship the dependent variable was market capitalization while the independent variable was non-performing loan. The

findings show there is a strong positive correlation between market capitalization and non-performing loan ($r = 0.030$, P-value 0.803).

Table 4.11 Correlational Analysis on Credit Risk 2016/2017

Correlations			
		Market Capitalization	Non-Performing Loan
Market Capitalization	Pearson Correlation	1	.803*
	Sig. (2-tailed)		.030
	N	7	7
Non-Performing Loan	Pearson Correlation	.803*	1
	Sig. (2-tailed)	.030	
	N	7	7

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

4.4.2.1 Regression Analysis on Credit Risk 2016/2017

The study sought to investigate the effect of Non-performing loan. The summary of the regression is shown in Tables 4.12, 4.13 and 4.14.

Table 4.12 Model Summary 2016/2017

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.803 ^a	.644	.573	25.99936

a. Predictors: (Constant), Non-Performing Loan

Table 4.13 ANOVA

ANOVA^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6121.461	1	6121.461	9.056	.030 ^b
	Residual	3379.833	5	675.967		
	Total	9501.294	6			

a. Dependent Variable: Market Capitalization
b. Predictors: (Constant), Non-Performing Loan

Table 4.14 Coefficients

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.501	19.038		.709	.510
	Non-Performing Loan	.004	.001	.803	3.009	.030

a. Dependent Variable: Market Capitalization

From the findings in the Table 4.12 above, R was 0.803; this means that there was a strong positive relationship between the dependent variable and the independent variable of the study. R² was found to be 0.644 which means 64.4% of variation of market capitalization can be explained by non-performing loan, while the remaining 35.6% could be explained by other variables not under still study.

From the analysis of variance (ANOVA) Table 4.13 above, the sum of square for regression was 6121.461; the F-distribution is 6.608 which is less than critical value for F (1, 6) = 9.056, p-value = 0.030 < 0.05. The study was therefore statistically significant as the significance was 0.030 and therefore was below the significance level of 0.05 one-tailed. ANOVA was used in the study to establish the relationship between the market capitalization of the firm value and the dependent variables which was the non-performing loan. Since the significance is 0.030 which is less than 0.05, therefore the regression model is statistically significant at 5% level. From the model above, a unit increase in non-performing loan will lead to an increase in market capitalization by 0.004 units. From the table above, the regression model become; *Market capitalization = 13.501 + .0004 Non-Performing Loan*

4.4.1.2 Correlational Analysis on Non-Performing Loan 2015/2016

The study sought to establish the correlation analysis which was conducted to test the relationships between market capitalization and non-performing loan. Correlation sought to show the nature of relationship between dependent and independent variables, while coefficient of determination showed the strength of the relationship the dependent variable was market capitalization while the independent variable was Non-performing loan. The findings show there is a strong positive correlation between market capitalization and non-performing loan (r = 0.320, P-value 0.443).

Table 4.15 Correlational Analysis on Non-Performing Loan

Correlations			
		Market Capitalization	Non-Performing Loan
Market Capitalization	Pearson Correlation	1	.443
	Sig. (2-tailed)		.320
	N	7	7
Non-Performing Loan	Pearson Correlation	.443	1
	Sig. (2-tailed)	.320	
	N	7	7

4.4.2.2 Regression Analysis on Credit Risk 2015/2016

The study sought to investigate the effect of Non-performing loan. The summary of the regression is shown in Tables 4.16, 4.17 and 4.18.

Table 4.16 Model Summary 2015/2016

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.443 ^a	.196	.035	45.62774
a. Predictors: (Constant), Non-Performing Loan				

Table 4.17 ANOVA

ANOVA^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2540.874	1	2540.874	1.220	.320 ^b
	Residual	10409.455	5	2081.891		
	Total	12950.329	6			
a. Dependent Variable: Market Capitalization						
b. Predictors: (Constant), Non-Performing Loan						

Table 4.18 Coefficients

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	45.649	31.610		1.444	.208
	Non-Performing Loan	.003	.003	.443	1.105	.320

a. Dependent Variable: Market Capitalization

From the findings in the Table 4.16 above, R was 0.445; this means that there was a strong positive relationship between the dependent variable and the independent variable of the study. R² was found to be 0.196 which means 19.6% of variation of market capitalization can be explained by non-performing loan, while the remaining 80.4% could be explained by other variables not under still study.

From the analysis of variance (ANOVA) Table 4.17 above, the sum of square for regression was 2540.874; the F-distribution is 6.608 which is greater than critical value for F (1, 6) = 1.220, p-value = 0.320 > 0.05. The study was therefore statistically insignificant as the significance was 0.320 and therefore was above the significance level of 0.05 one –tailed. ANOVA was used in the study to establish the relationship between the market capitalization of multinational and the dependent variables which was the non-performing loan. Since the significance is 0.320 which is greater than 0.05, therefore the regression model is statistically insignificant at 5% level. From the model above, a unit increase in non-performing loan will lead to an increase in market capitalization by 0.003 units. From the table above, the regression model become; ***Market capitalization = 45.649 + 0.003 Non-Performing Loan.***

4.5 Effects of Risk weighting on Value of Firm

4.5.1.1 Correlational Analysis on Risk weighting 2016/2017

The study sought to establish the correlation analysis which was conducted to test the relationships between market capitalization and total capital. Correlation sought to show the nature of relationship between dependent and independent variables, while coefficient of determination showed the strength of the relationship the dependent variable was market capitalization while the independent variable was total capital. The findings show there is

a weak negative correlation between market capitalization and total capital ($r = 0.725$, P-value -0.164).

Table 4.19 Correlational Analysis on Total Capital 2016/2017

Correlations			
		Market Capitalization	Total Capital
Market Capitalization	Pearson Correlation	1	-.164
	Sig. (2-tailed)		.725
	N	7	7
Total Capital	Pearson Correlation	-.164	1
	Sig. (2-tailed)	.725	
	N	7	7

4.5.2.1 Regressions Analysis on Risk weighting 2016/2017

The study sought to investigate the effect of Total Capital. The summary of the regression is shown in Tables 4.20, 4.21 and 4.22.

Table 4.20 Model Summary 2016/2017

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.164 ^a	.027	-.168	42.99917
a. Predictors: (Constant), Total Capital				

Table 4.21 ANOVA

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	256.653	1	256.653	.139	.725 ^b
	Residual	9244.642	5	1848.928		
	Total	9501.294	6			
a. Dependent Variable: Market Capitalization						
b. Predictors: (Constant), Total Capital						

Table 4.22 Coefficients

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	133.696	191.590		.698	.516
	Total Capital	-385.646	1035.084	-.164	-.373	.725

a. Dependent Variable: Market Capitalization

The findings in the Table 4.20 above, shows the R which is 0.167; this means that there was a weak positive relationship between the dependent variable and the independent variable of the study. R² was found to be 0.027 which means 2.7% of variation of market capitalization can be explained by total capital, while the remaining 97.3% could be explained by other variables not under still study.

The analysis of variance (ANOVA) Table 4.21 above, the sum of square for regression was 256.653; the F-distribution is 6.608 which is greater than critical value for F (1, 6) = 0.139, p-value = 0.725 > 0.05. The study was therefore statistically insignificant as the significance was 0.725 and therefore was above the significance level of 0.05 one –tailed. The significance is 0.725 which is greater than 0.05, therefore the regression model is statistically insignificant at 5% level. Unstandardized coefficients show how dependent variables vary with independent variables when other variables are held constant. From the model above, a unit increase in total capital will lead to an increase in market capitalization by 0.000 units. From the table above, the regression model become; ***Market capitalization = 133.696 + -385.646 Total Capital.***

4.5.1.2 Correlational Analysis on Credit Risk 2015/2016

The study sought to establish the correlation analysis which was conducted to test the relationships between market capitalization and total capital. Correlation sought to show the nature of relationship between dependent and independent variables, while coefficient of determination showed the strength of the relationship the dependent variable was market capitalization while the independent variable was total capital. The findings show there is a weak negative correlation between market capitalization and total capital (r = 0.234, P-value -0.518).

Table 4.23 Correlational Analysis on Credit Risk 2015/2016

Correlations			
		Market Capitalization	Total Capital
Market Capitalization	Pearson Correlation	1	-.518
	Sig. (2-tailed)		.234
	N	7	7
Total Capital	Pearson Correlation	-.518	1
	Sig. (2-tailed)	.234	
	N	7	7

4.5.2.1 Regressions Analysis on Risk weighting 2015/2016

The study sought to investigate the effect of Total Capital. The summary of the regression is shown in Tables 4.24, 4.25 and 4.26.

Table 4.24 Model Summary 2015/2016

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.518 ^a	.268	.121	43.54631
a. Predictors: (Constant), Total Capital				

Table 4.25 ANOVA

ANOVA^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3468.924	1	3468.924	1.829	.234 ^b
	Residual	9481.405	5	1896.281		
	Total	12950.329	6			
a. Dependent Variable: Market Capitalization						
b. Predictors: (Constant), Total Capital						

Table 4.26 Coefficients

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	294.506	163.189		1.805	.131
	Total Capital	-1208.444	893.471	-.518	-1.353	.234

a. Dependent Variable: Market Capitalization

The findings in the Table 4.24 above, shows the R which is 0.518; this means that there was a weak positive relationship between the dependent variable and the independent variable of the study. R² was found to be 0.268 which means 26.8% of variation of market capitalization can be explained by total capital, while the remaining 73.2% could be explained by other variables not under this study.

The analysis of variance (ANOVA) Table 4.25 above, the sum of square for regression was 3468.924; the F-distribution is 6.608 which is greater than critical value for F (1, 6) = 1.829, p-value = 0.234 > 0.05. The study was therefore statistically insignificant as the significance was 0.234 and therefore was above the significance level of 0.05 one –tailed. The significance is 0.234 which is greater than 0.05, therefore the regression model is statistically insignificant at 5% level. From the model above, a unit increase in total capital will lead to an increase in market capitalization by -1208.444 units. From the table above, the regression model become; ***Market capitalization = 294.506 + -1208.444 Total Capital.***

CHAPTER FIVE

5.0 DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

The purpose of this chapter is to discuss and summarize the findings of the study and finally give conclusions and recommendations for improvement or practice. Section 5.2 discusses the summary of findings, 5.3 entails the discussion, 5.4 covers conclusions of the study and 5.5 discusses the recommendations for further research.

5.2 Summary

This chapter presents the summary of the research findings. The purpose of this research was to assess the effect of financial risk on the value of a multinational: a case of Kenya Commercial Bank. The following were the specific objectives of this study: to determine the effect of solvency risk on the overall value of the firm, to determine the effect of credit risk on the value of the firm and to establish the effect of risk weighing on the value of the firm.

The study utilized secondary data that was obtained from Nairobi Security Exchange, Central Bank of Kenya and Kenya Commercial Bank which is the multinational being focused on in this research as at 31st December 2016. Hence, the study used a two year period of 2015 and 2016 for comparison and used a total of 6 other banks listed in Nairobi Security Exchange for comparison to assess the effect of financial risk. The firms used for the purpose of this research include: Barclays Bank Ltd, CFC Stanbic Holdings, I & M Holdings, Diamond Trust Bank, KCB Group, Standard Chartered Bank and Equity Group Holdings. The secondary data sources which were used in this study include; review of the firms' profiles involved, recommendation from previous studies, audited books of accounts, journals, books, internet as well as the newspapers. The secondary data used from the annual audited financial statements between 2015 and 2016 was keyed in to Microsoft Excel. Using the data in Microsoft excel, the researcher was able to calculate change in percentages in long term loans, change in percentages in default rates and capital adequacy ratio. All the quantitative information which was gathered and obtained for the purpose of this research was then coded and evaluated using descriptive statistics as stated in chapter three. Using the same information, a correlation and regression analysis were also conducted using the Statistical Package for Social Sciences (SPSS) so as to analyze the data and to assess how reliable the data collected is to the study.

The study used the market capitalization to establish the value of the firm. The seven firms listed in Nairobi Stock Exchange showed that firms normally have different market capitalization despite being in the same industry. Looking at the two years, the various firms analyzed had different market capitalizations, some with a slight increase while others had a slight decrease.

Looking at both years 2015/16 and 2016/17 the correlation done showed that there is a strong correlation between market capitalization and long-term loans. Indicating that, long term loans have a direct effect on the value of the firm. Regression for the year 2015/16 was 53.2% and for the year 2016/17 is 69.7%. The analyses conducted shows that the value of the company is affected by long term loans. In this case an increase or decrease in long term loans affects the value of a multinational company.

When looking at the correlation between credit risk and market capitalization in the year 2016/17 it was at 80.3% and regression for that year was 64.4%. However, in the year 2015/16 the correlation was 44.5% and regression was as low as 19.6%. The regression and correlation in 2015/16 was very low however in the following year the regression and correlation increased significantly indicating that there is a significant relationship between non-performing loans and the value of the firm and increase or decrease of non-performing loans affects the value of the firm.

Correlation between risk weighted assets and value of the firm, for the year 2016/17 is 16.7% and regression 2.7% which is very weak. And for the year 2015/16 the correlation was 51.8% and regression was 26.8%. This is still a weak relationship between total capital to risk weighted assets and the market capitalization. Indicating that total capital to risk weighted assets has very little impact on the value of the firm.

5.3 Discussion

5.3.1 Effect of Long-Term Loans on the Overall Value of Firm.

The study revealed that the use of market capitalization is used to determine the value of the firm. Every multinational firm in the banking industry has its own rate of market capitalization. The empirical studies have proved that there is indeed a strong relationship between long term loans and the overall value of the firm.

Rose and Hudgins (2008) discussed on how bank loans are important long-term financing sources in many countries. The data obtained and analyzed from the seven firms show the relevance of the discussion. Mathur and Marcelin (2014), further discussed on how credit allocation plays a big role in ensuring that credit allocation is optimized to ensure that the shareholders; wealth is maximized hence increasing the value of the firm. From the analysis done, there was a very strong relation between long term loans and the overall value of the firm.

In both years 2015/16 and 2016/17 for the firms listed in Nairobi Security Exchange there was a strong positive relation between the long-term loans of the firms and the value of the firm. Wolfe and Sanya (2010) in their study discussed that revenue diversification by banks can create value. When banks take long term loans, the revenue they obtain from the investments they make using the long-term loans created and increases value of the firm. The study done has proven the strong relationship that exists between long term loans and the value of the firm. Meaning a decrease or increase in longterm loans has a similar increase or decrease effect on the value of the firm.

Simon and Robert (2013) stated that theory of loan portfolio management describes the resulting risk and return of combination of individual assets. A primary objective of the theory is to identify asset combination that are most efficient. The strong effect that longterm loan has on the value of the firm indicates a firm has to ensure that they have the right combination of assets to ensure they minimize the risk and to maintain and increase the value of the firm. It is important that risk associated with the loan such as interest risk and inflation is well managed and well taken care of and this is where portfolio performance loan management comes in.

Regarding loan diversification, Mercieca *et al.* (2007) in their findings found that there is no direct benefit of diversification, Baele *et al.* (2007), also discussed that the higher the proportions leads to a higher systematic risk. However, Elsas *et al.* (2010) showed that diversification of loan increases profitability and the bank value. The banks used for research in this study have loan diversification some to a little extent while some to a large extent. When a bank has diversified loans, it increases its bank value, but even if it does not the value of the firm is still affected by the longterm loans that a bank has.

Longterm loans have an element of risk to them and they have a great impact on the value of the firm based on the findings. There are many risks involved when getting a loan,

interest risk, inflation risk, political risk, solvency risk. In regard to the value of the firm, a firm that takes loans and diversifies their loan portfolio very well are most likely going to increase the value of the firm. So, for a multinational like KCB, the value of the firm can be reduced or increased based on the longterm loans they have taken. In the year 2016/17 the amount of longterm loans for the 7 banks was higher than the amount in 2015/16. The increase in longterm loan amounts resulted to an increase in the strong positive relation of longterm loans and the overall value of the bank.

5.3.2 Effect of Credit Risk Exposure on the Overall Value of Firm

A regression and correlation analysis of the study, revealed that between the two variables market capitalization and non-performing loans there is a strong positive correlation. The default rates increased from 2015 to 2016 and hence increasing the correlation between non-performing loans and market capitalization. The value of the firm is then affected by the non-performing loans of a multinational company.

Abdullahi (2013) discussed how credit risk has an effect on profitability of the firm. This study's findings concluded that credit risk has an effect on not only the profitability of the firm but on the overall value of the firm. Furthermore, Abdullahi (2013) study showed that loans need to be reviewed and assessed from time to time to know the level of risk and that every loan has to be secured by a collateral to avoid defaulting. Non-performing loans have a great impact on the firm, in this case and increase in non-performing loans also increases the correlation between credit risk of the firm and market capitalization.

According to Kroszner (2002), the non-performing loans can be treated as undesirable outputs or costs to a loaning bank, which decreases the bank's performance. The non-performing loans have an impact on the firm's operations as stated by Kroszner (2002). The non-performing loans therefore, impact the firm's operations and the value of the firm. Bank loans to borrowers are important to the firm since they make money from the interest charges. However, the loans have to be paid back to ensure smooth operations of the firm.

According to Nir Klein (2013), discussed that non-performing loans are affected by macroeconomic conditions and banks' specific factors, though bank specific factors were found to have a significantly low impact on the non-performing loans. According to the working paper it was found that mostly macroeconomic conditions such as gross domestic product growth, unemployment and inflation had a very big impact on the non-performing

loans of a firm. Therefore, the increase of non-performing loans of the seven multinational companies used in this research between 2015 and 2016 is as a result of the microeconomic conditions of the countries they operate in. Kenya Commercial Bank had an increase in non-performing loans from 2015 to 2016 indicating that there were macroeconomic factors in the countries they operate in that resulted to increased non-performing loans. Firms come up with various ways to deal with credit risk. The market in general faces a lot of risks, systematic and unsystematic risks. The firm may be able to do away with unsystematic risk, but they cannot do away with systematic risk since it affects the entire market.

Afriyie and Akotey (2012), indicate that credit risk situation of a bank can be worsened by inadequate institutional capacity, inefficient credit guidelines, inefficient board of directors, low capital adequacy ratios and liquidity, because of government interference and lack of proper supervision by the central bank. Credit risk from the discussion then affects the value of the firm. Firms that suffer from very high credit risk tend to have poor credit guidelines and supervisors of credit, no proper background on the borrower is done this then increases the risk. Banks with clear guidelines, clear contracts tend to reduce their credit risk exposure. A multinational like Kenya Commercial Bank stands to lose a lot if they do not manage their credit risk well.

5.3.3 Effect of Risk Weighting on Overall Value of the Firm

The findings of the study showed that the relationship between credit risk exposure and overall value of the firm very weak. Capital adequacy ratio was used to determine the effect of financial risk to the overall value of the firm. According to Hyun and Rhee (2011) they define capital adequacy ratio as the ratio of capital to the risk weighted sum of bank's assets.

Von Thadden (2004) points out, on how the new Basel regulations still are heavily devoted to minimum capital requirements, risk-based regulations. However, the findings of this study clearly show how there is a weak relation between risk weighing and the overall value of the firm. The firm's value may not be affected by risk weighing nevertheless, other firm's aspects are still affected by risk weighing therefore, the need of the Basel regulations. Chiuri *et al.* (2002) discussed how capital adequacy ratio has contributed to a credit crunch in countries that have experienced financial crisis especially for banks that were not well capitalized. This then shows that, even though there is no positive relationship between risk weighing and the overall value of the firm, risk weighting still affects great chunk of the

businesses' operations. And when a firm's day to day activities is interrupted and there is no immediate action taken then it affects the bank in the long run.

Basel II attempted to set up risk and capital management requirements to ensure that a bank has adequate capital for the risk the bank exposes itself to. This national bank governing also ensure that every bank does not go below the required amount, this is to protect the bank itself, the depositors and the financial system. The risk does not affect the market capitalization of the bank since all firms in the banking industry face the same risks and they are heavily governed by the policies such that the risk affects other aspects of their firms. Risk weighing affects the operations of the firm leading to a firm facing risks like solvency risk, credit risk if the risk is not well managed. Many LIC are yet to completely embrace Basel II because they are still trying to understand the regulations according to Griffith-Jones (2006).

The rate at which the firm has their capital adequacy ratio does not matter, whether it is below the required rate or above the required rate it does not impact the value of the firm. A minimum rate of the capital adequacy ratio has been developed by the Central Bank of Kenya to ensure that banks are able to absorb a reasonable level of losses before declared bankrupt. This ratio plays an important role in protecting the depositor and also to ensure that there is stability and efficiency in the financial system.

5.4 Conclusions

5.4.1 Effect of Long-Term Loans on the Overall Value of Firm.

The study concludes that there is a significant relationship between longterm loans and the overall value of a multinational company. An increase in longterm loans increases the value of the firm.

5.4.2 Effect of Credit Risk on the Overall value of the firm

Based on the findings of the study, the correlation between credit risk and the value of the firm is positive. Such that an increase or decrease of the credit risk has a direct effect on the value of the firm.

5.4.3 Effect of Total Risk on the Overall Value of Firm

The study concluded that there is no significant relationship between credit risk exposure and the overall value of the firms. Total capital to risk weighted assets was used to

determine the rate of credit risk exposure. The correlation model indicated that the capital adequacy ratio does not affect the overall value of the multinational.

5.5 Suggestions

5.5.1 Suggestion on Improvement

5.5.1.1 Effect of Long-Term Loans on the Overall Value of Firm.

Based on the findings, it is important for a firm to have good financial management. The financial risks have a great effect on the value of the firm. Therefore, more studies on financial risk management have to be done in relation to this study.

5.5.1.2 Effect of Credit Risk on the Overall value of the firm

The study suggest that more than one variable should be used and added in the regression model so as to build on the results of this research. The study used market capitalization as the dependent variable and long-term loans, default rates and credit risk exposures' rates as independent variables. Other independent variables should be introduced to the study to the study to enable a deeper understanding in the variations between various indicators and the overall value of the firm.

5.5.1.3 Effect of Total Risk on the Overall Value of Firm

The multinational firms used in this research operate in the banking industry. The banking insustry in every country is heavily regulated so as to protect the depositors and the financial system in general. The overall value of the firm can as well be affected by the various policies set by the national banks. A further study on how government policies affect the value of the firm can shade more light on this research.

5.5.2 Suggestions for Further Research

The study recommends that more research should be done on other variables that affect the value of the multinational firm. This study was carried out on Kenya Commercial Bank as a multinational in the banking industry however, further research can be carried out on other industries that affect the value of multinationals. The findings can be then be generalized in the study is conducted across industries in determining the effect of financial risk on the overall value of the firm. The study recommends that data should be obtained for a period of ten years to get more insights on the study topic.

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APPENDICES

APPENDIX I : ALL DATA

	Total Assets (Kshs M)		Percentage (%)
	2016	2015	Total Assets
BANKS			
KCB Group	504777.60	467741.00	7.92%
Barclays Africa Group	259498.22	241153.00	7.60%
Equity Group Holdings	379749.00	341329.00	11.26%
I & M	164116.12	147846.00	11.00%
DTB	244123.82	190948.00	27.84%
Standard Chartered Bank (Africa)	250274.11	234131.00	6.89%
CFC Stanbic (Africa)	204895.16	198578.00	3.18%

	Long-term Loans (Kshs M)		Percentage (%)
	2016	2015	
BANKS			
KCB Group	373031.00	324284.00	15.03%
Barclays Africa Group	176349.00	148846.00	18.48%
Equity Group Holdings	221039.00	229394.00	3.64%
I & M	104302.00	104302.00	0.00%
DTB	141702.00	128266.00	10.48%
Standard Chartered Bank (Africa)	132497.00	122905.00	7.80%
CFC Stanbic (Africa)	118483.00	103535.00	14.44%

	Profit (Kshs M)		Percent (%)
	2016	2015	Profit
Bank			
KCB Group	28482.00	23445.00	21.48%
Barclays Africa Group	10440.00	12074.00	13.53%
Equity Group Holdings	22778.00	22388.00	1.74%
I & M	8651.00	8367.00	3.39%
DTB	8876.00	7055.00	25.81%
Standard Chartered Bank (Africa)	12764.00	8974.00	42.23%
CFC Stanbic (Africa)	6910.00	7077.00	2.30%

	Non-Performing loans (Kshs M)		Percent (%)
	2016	2015	NPL
Bank			
KCB Group	28333.00	19289.00	31.92%
Barclays Africa Group	11472.00	5336.00	53.49%
Equity Group Holdings	15457.00	6832.00	55.78%
I & M	5072.00	5072.00	0.00%
DTB	5520.00	3656.00	33.77%
Standard Chartered Bank (Africa)	15038.00	14698.00	2.26%
CFC Stanbic (Africa)	7013.00	4858.00	30.73%

	Core Capital to RWA		Total Capital to RWA	
	2016	2015	2016	2015
KCB Group	16.90%	13.90%	19.90%	15.60%
Barclays Africa Group	15.70%	16.30%	17.90%	19.10%
Equity Group Holdings	14.40%	14.80%	15.50%	16.60%
I & M	16.60%	15.40%	18.10%	17.70%
DTB	16.20%	14.40%	18.50%	17.50%
Standard Chartered Bank (Africa)	17.50%	17.30%	20.90%	21.70%
CFC Stanbic (Africa)	16.10%	15.90%	18.30%	19.00%