Effects of Credit Risk Management on Performance of Banks in Nairobi, Kenya

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Abstract: **The purpose of study was to analyze the effects of credit risk management on performance of banks in Kenya. The specific objectives of the study was; the influence of management efficiency on bank performance in Kenya. This study was based on modern portfolio, capital asset pricing and liquidity preference theories. The research design adopted by the study was descriptive design where the target population consisted of 44 commercial; 28 local and 16 foreign. The study adopted a census survey since the population size was small. The self-administered questionnaires were used to collect data. Piloting was conducted to evaluate reliability and validity of the research instrument. Multiple regression was employed to test the significance of the dependent variables on the dependent variable to the others with aid of SPSS version 21. Additionally, secondary data in form of annual reports and financial statements from Central Bank of Kenya for the period 2011 to 2016 was used to supplement the primary data. The study established that management efficiency was also found to have significant positive effect on bank performance ($\beta=1.113$, $p<0.05$). From these finds the study concludes that the variable of critical importance in improving bank performance and recommends the management to focus on them. The study findings are expected to be beneficial to decision makers for implementation of credit risk management. The academia would also benefit from the finding of this data as it enriches the extant literature on credit risk management.**

Keywords: **Credit Risk Management, Management Efficiency.**

1. INTRODUCTION

The role of credit risk management in the banking industry has been revolutionized by the growth of credit risks in financial institutions globally and locally, and the rise of commercial economies have changed the. Jamaat and Asgari (2010) argue that banks invest enormous resources to credit risk management modeling. Skills in risk-focused supervision are repetitively being developed with continuous capacity building to supervisors (Kithinji 2010). Through risk-focused approach, the banking sector, and specifically the small banks are sensitized on the need to have formal and documented risk management frameworks (De Juan 1991). Sound risk management is both defensive mechanism and also an offensive defense for commercial banks and this largely dependents on the quality of leadership and governance. Jorion (2009) prefers recognized risk as less "risky" than the unidentified risk, implying that risk identification is a critical aspect in bank management. According to Yusuf (2003) all financial institutions are exposed to a diversity of risks such as interest rate risk, foreign exchange risk, political risk, market risk, liquidity risk, operational risk and credit risk In some instances, commercial banks and other financial institutions have approved decisions that are not vetted in light of risks associated leading to cases of loan defaults and nonperforming loans, massive extension of credit and directed lending. The Basel Committee (2000) argues that liberalized loaning, bad management of credit portfolio, insufficient evaluation of changing economies is the cause of many financial difficulties in financial institutions. Seppala (2000) notes that the more complex a risk type is, the more specialized, concentrated and controlled its management must be. Risk management refers to the employed by a firm to control financial risk exposures. The process of risk management

encompasses the fundamental steps of risk identification, risk analysis and assessment, risk audit monitoring, and control (Bikker and Metzmakers 2005). Credit risk is considered the most pronounced risk faced by commercial banks (Bis. Org; 2014) thus necessitating the evolution of new business models, business processes and new ways of credit risk management. This for instance has led to the banking sector underrating of credit and liquidity risk, inadequate liquidity buffers and excess credit growth. According to the Basel Accords (1999), a global regulation framework for financial institutions, credit risk is one of the three essential risks a bank or any other regulated financial institution has to face when functioning in the markets (the two other risks being market risk and operational risk). As the 2008 financial crisis demonstrated, a correct comprehension of credit risk and the ability to manage it are fundamental in today's world.

The worldwide credit crisis, which commenced in 2006 with sub-prime mortgages in the United States, has underscored the fundamental role credit decision in management of financial institutions. Unsound credit decisions has been linked to the problems faced by financial institutions. This shows that poor lending decisions, whether by a financial institution or a corporate, would in most occasions lead to significant losses. Ability to manage this risk is a key requirement for any lending decision. It should also be well understood by industrial and commercial firms that, in the course of their normal business, provide trade credit. While financial institutions have faced difficulties over the years for a multitude of reasons, the major causes of serious banking problems continue to be directly related to lax credit decisions, poor risk management or lack of attention to changes in economic environment. The goal of credit risk management is to maximize a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Banks should invest in consideration credit 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 (Kumbhakar and Lovell, 2003).

Credit risk remains the leading source of complications among financial institutions globally. Financial institutions are awakening to the importance of credit risks within their operations. Consequently, the Basel Committee encourage banking supervisors globally to promote sound practices for managing credit risk. Although the principles contained in this paper are most clearly applicable to the business of lending, they should be applied to all activities where credit risk is present. Efficiency measurement is one aspect of investigating a firm's performance. According to Kumbhakar and Lovell, (2003) efficiency can be measured in three ways; maximization of output, minimization of cost, and maximization of profits. A firm is therefore regarded as technically efficient if it is able to obtain maximum outputs from given inputs or minimize inputs used in producing given outputs. The objective of producers here is to avoid waste (Kumbhakar and Lovell, 2003). According to Bleim (2001), many of regular banking crisis arise from enormous portfolios of bad loans. Dionne (2005) recognizes the importance of analyzing the risk of a particular loan as the risk of the whole portfolio. An effective Credit Risk Management (CRM) government thus requires well defined processes and approaches, for instance, technology to efficiently guard loans from exposures to risk. For most banks, loans remain the chief source of revenue derived from interest charged but at the same time, the largest and most common cause of credit risk. Nevertheless, other bases of credit risk emanates from the activities of a bank, covering the banking and trading book on and off the statement of financial position. Banks globally are increasingly faced with credit risk on their various financial instruments apart from the loans, including acceptances, foreign exchange transactions, financial futures interbank transactions, trade financing, , swaps, bonds, equities, options, as well as commitments and guarantees and the settlement of transactions. The government of Kenya, like most governments, has also started several projects regarding credit risk management, CRM. The Central Bank of Kenya (CBK) has the regulatory authority over commercial banks, micro-finance institutions and forex bureaus. As at December 2016, Kenya had 44 licensed commercial banks and one Mortgage Company; CBK, (2016). Out of the total 44 institutions, 28 are locally owned and 16 are foreign owned. Since 2005, commercial banks have progressively improved their risk management and control systems (CBK, 2010). This was following the issuance of the Risk Management Guidelines (RMG) in 2005 and the adoption of the Risk Based Supervision approach of financial institutions in 2005. However, it is not clear to what extent these approaches has impacted on profitability.

Morris (1987) presents one of the earliest studies on the relationship between non-performing loans and credit risk management. This study reports that banks with greater risk desire tend to record higher losses in terms of non-performing loans and provisions. Another study by Haneef et al (2012) concluded that non-performing loans increase due to inadequate risk management hence impacting negatively on the profitability of banks. The adoption of CRM may be successful through the experience of the large commercial banks in credit risk management policies adoption and

implementation and their joint efforts with the government, (Ochola 2010). However, such efforts can be affected by poor government policies, politics and other constraints faced by government organizations such as deficiency of resources, bureaucratic regulations and legislative constraints. This leads to the experience of government leaders in CRM that can also be researched. According to Central Bank Supervisory Report, (CBK, 2005), CBK has a priority initiative over commercial banks towards the application of various credit risk management methods such as credit limits, taking collateral, diversification, loan selling, syndicate loans, credit insurance and securitization and credit derivatives. The high levels of nonperforming eventually eats up the profits through provisions. However, despite the stringent controls and measures put in place by the commercial banks in Kenya some banks make losses attributed to credit risk management. Present day business environment focuses on customer on one hand and service provision on the other. It I therefore important for the services to be provided efficiently with a good understanding of the customer and service offering entities Cabinet Office (2004). The guiding principle in credit appraisal should be based on ability to meet repayment obligation can access credit; CBK Annual Supervision Report CBK (2000).

Numerous past studies in this field have looked at general effects and relationships between risk management and profitability in commercial banks and other financial institutions (Githaiga (2013), Kithinji (2010), Achou (2008). The objective in these studies was to ascertain the effectiveness of credit risk management on profitability of commercial banks. On the other hand, risk management is focused on minimizing large losses arising from loans. The management needs to identify the risk, measure and quantify the risk then develop strategy to manage it. The worldwide financial industry transited into a new reporting regime; the IFRS 9 with effect from January 1st 2019 which has since necessitated the fundamental change is the recognition of credit risk losses. Hitherto, financial institutions used to recognize the risk at the point of default and not at the likelihood stage. Hereafter, they are now obliged to recognize it at both the beginning and during the loan's life cycle and make the necessary provisions in its books. Profitability of financial institutions indicates their competitiveness and the quality of management and would be reflected in the financial statements. Financial performance has been of key interest in business research because many entities exists for profits and wealth creation to its shareholders. Understanding the drivers of performance and profitability of commercial banks the research procedure and policy. Profitability of banks is measured by return on assets (Flamini et al., 2009; Oladele et al., 2012), return on equity (Saona, 2011) or the net interest margin (Naceur & Goaied, 2008; Naceut & Omran 2011; Sufian & Habibullah, 2009).

Financial institutions play a crucial role in the development growth of a nation. However, in the course of its operations, they are exposed to various risks which negate their ability to meet their objectives. Credit risk is the measure of the likelihood that a borrower will fail to repay part or whole of the borrowed funds and interest thereon. Credit management is one of the most important critical functions in a business enterprise which helps to mitigate extreme impacts of credit risks (Bikker and Metzmakers 2005). Credit risk management is critical for profitability and growth of a firm especially the financial institutions. Despite great efforts made by commercial banks, credit risk is still a challenge as evidenced by increasing marginal losses that arise when borrowers default. Whereas banks face varied challenges, the most prominent cause is directly or indirectly related credit risk management. Credit risk management seeks to optimize the risk-adjusted rate of return of an entity by keeping risk exposures within acceptable parameters. Banks are expected to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions (Haneef et al (2012). However, there have been complaints about inability to meet obligations, inadequate controls, and high rate of defaulters among others. The supervision report of the Central Bank of Kenya of 2013 CBK found the ratio of non-performing loans to gross loans to have risen to 5.2% from 4.7%. The trend was noted to have been sustained even in the succeeding year where it rose to 5.6% (CBK, 2013; CBK, 2015). Therefore need to examine how various components of credit risk management affects performance of financial information with view of finding solution for enhancing firm performance through effective credit risk management practices. Therefore, the purpose of this study was to examine the effects of the influence of management efficiency on banks' performance in Kenya.

2. MANAGEMENT EFFICIENCY

According to Bloor and Hunt (2011), financial systems plays a vital role in the direction of finance resources to their most productive utility in an economy, Additionally they assert that the systems provide facilities that make and settles financial transactions, links surplus economic units(savers) and deficit economic units(borrower) and manages risks and uncertainty through financial institutions. It is therefore important that these functions are well accomplished, so as to

trigger the growth of the economy through financial system stability, upon which, the financial system will be said to be efficient. Indicators such as poor quality financial services and products, high transaction costs, misallocation of resources and lack of receptiveness to customer needs depicts inefficiency in an organization. Therefore, the ability of a bank to generate revenue from a given amount of assets and to make profit from a given source of income is known as financial efficiency. Sowlati (2001), alludes that evaluation of performance and the measurement of efficiency is equally an important aspect in the management of financial institutions as it helps in the recognition and reduction of inherent wastages in the operations of an organization. Since efficiency describes how firms can realise the maximum amount of output from the least amounts of input, banks can therefore use efficiency to determine how they provide optimal combination of the set inputs and the financial services that they offer and since it is a measurable concept they can compute it using the ratio of total output to total input.

In the study conducted by Kamau (2011), he emphasizes on the significant changes that has been witnessed in the banking industry in the past decade or so due to various factors that include; deregulation of financials systems, globalization and technological innovations advancements like internet and online banking as well as mobile phone banking. For that reason, for banks to improve on their economic performance, they must focus on their competition and efficiency. Both the development of various economies and their financial development greatly depend on how efficient and fully function a financial system is. Due to the underdeveloped and limited capital markets, the banking industry plays a great role in the intermediation process between investors and savers. According to Zuzana and Tomas (2010), measuring efficiency in the financial industry correlates with the effects of financial systems that are efficient, on both macroeconomic and microeconomic levels of an economy. They further alludes on how for commercial banks a standard view of efficiency measurement by ratio analysis can indeed be misleading since the cross- sectional differences in both the input and output as well as their prices are not well defined. In the paper done by Worthingnton (1998), he asserts that substantial control of the cost of inputs is in the hands of the management as opposed to the output side which is beyond their control. Financial industry has significant role in the development of various economies. For that reason, best financial systems are those that gather, quantify, limit and negotiate all risks associated with operations. Additionally the systems should incite the investors and savers by giving them a proportional compensation to the scale of risks incurred. Efficient financial intermediaries allow for mobilization and savings from different sources and allots it to more productive activities which in turn benefits both the investors and the economy at large (Gulden, Patillo and Christensen, 2007). Kofi (2013), in his study stipulates that the differences in performance of financial institution in a competitive business environment like the banking industry in Kenya can be ascribed to the different efficiency levels in the institutions. For that reason, competitions forces banks to reduce their operational costs hence increased cost of efficiency. On that account, banks that are cost efficient are likely to attain high levels of profit efficiency as competitive environments motivates financial institutions to enhance their efficiency by overall bank management, reduction of operation cost, providing new banking products and services and improving risk management (Denizer et al., 2000).

Kamau (2009), In his study on analysis of factors that influence efficiency and productivity of the banking sector in Kenya, where he used a sample of 40 commercial banks for period 1997-2006 in Kenya. Kamau stipulates in his findings that efficiency of banks owed by foreigners influenced the performance of the local banking industry, a finding ascribed to the fact that most foreign banks bring with them superior technical efficiency (know-how and technical capacity). Foreign banks obtrude competitive force on local banks since they receive liquidity and other support resources from their parent banks which have access to the global markets. Additionally, Kamau (2011), argued that in the period of the study, Efficiency of commercial banks in Kenya had not fallen below 40 percent. He further, alludes in the findings that foreign banks were more efficient that the local private banks and local private banks were more efficient than the local public banks as far as ownership structure and size is concerned, which implies that large banks were more efficient compared to medium and small size banks. From the study, it can be concluded that competition in banking industry is focused at efficiency levels maximization for improved performance. In the study by Wu (2005), he examined efficiency and productivity of banks for the period 1983-2001 in Australia and reported that during deregulation increased efficiency was witnessed.

Loukoianova (2008), in a study compares banks in Japan, US and Western Europe according to their specialization. Operational efficiency is measured using expense/income ratio, the measure expresses total operating cost as a percentage of operating income. In changing banks there are cost associated with the activity which include; cost for new delivery channels for the existing ones, cost of new products and all these cost can be linked to the income that they generate.

Banks in Kenya are currently under competitive pressure to enhance their efficiency and change banking service delivery into systems incorporating traditional branches, telephone banking and the Internet and automated tellers. In financial sector the size matters considerably, Small banks are constantly under competitive pressure as a result of supply of treasury bills drying up as sources of revenue. It is therefore, necessary for financial institutions to ascertain new loaning prospects and grow their client base so as to generate income. The paper stipulate that due to the limited nature of resources wastage is not an option, and as such financial institutions should be enhance their productivity so as to provide world class services in light of the limitations and entice more clients. Assessment of productivity of commercial banks has been advance from different scopes, like variant of ratio analysis, return on assets ratio and return on investment. Ultimately, financial ratios can determine the general monetary security of a banking institution as well as the working efficiency of its management. The term can also be used as the overall measure of an organizations' monetary health over a certain period of time, and can be used to compare related organizations across identical industry or sectors in accumulation. The concept of performance measurement shows that workforces can enhance the worth of an organization by; enhancing the future cash flows of the firm, by hastening the reception of those cash flows or by making them less risky. From the foregoing, management efficiency is an internal factor that determines the bank performance. Operational efficiency in managing operational expenses is a sign of management quality. Management efficiency is often qualitative expressed in terms of management systems, organization culture, control systems, quality of staff. In the measurement of efficiency the following three ways can be employed; maximization of output, minimization of cost, and maximization of profits. Generally, efficiency is categorized into two constituents (Kumbhakar and Lovell, 2003). An organization is considered as technically efficient if it is in a position to attain maximum outputs from given inputs or minimize inputs used in producing given outputs. The objective of producers here is to avoid waste.

Performance of banks can be indicated by the ability of those banks to produce sustainable profits.it is therefore vital that lenders protect their profits against unforeseen losses since its capital position is strengthened and future profitability is improved through investing the retained profits. Banks that are constantly making losses will eventually deplete their capital base, which risks the equity and debt holders in a bank. Therefore, it is vital that firms ensure that their return on equity (ROE) is greater than its cost of equity. ROE and Return on Assets, ROA, and ratios are commonly used in determining financial performance. ROE quality level is normally between 15% and 30% while for ROA it is at least at 1%. In the study by Wong et al., (2008) it is depicted that ROE can be used to measure efficiency of banks by illustrating to what extent financial institutions use the reinvested profits to generate new income. In accordance to Riksbank's Financial Stability Report (2002), profitability is normally defined by measurement of connecting profit to shareholder's equity. Moreover, Jensen Investment Management (2008), argued that ROE measures how earnings a firm can generate from the equity capital and as such provides a suitable gauge of profit generating efficiency. Additionally it is postulated that for a particular risk tool to be selected there must be an association between the tool and organizations' computations culture, the attitude that can be measured and are used by decision makers to display towards the use of models that manage risks. According to Mikes and Kaplan (2014), risks functions focus on various aspects which includes; managing risks that are performance based, measurement of extensive risks, qualitative discourse or the mobilizing professionals' thoughts on trends in risks. .Kaaya and Pastory (2013) in their study illustrated that lenders performance was negatively influenced by credit risk indicators. Ogboi [10], concluded that bank's financial performance had been affected by sound credit risk management and capital adequacy. Effective risk management is critical to any bank for achieving financial soundness. The indicator of NPLs had positive impact on banks profitability as measured by return on equity (ROE) and return on assets (ROA). According to the introduction of DuPont model, return on Equity (ROE) value the overall profitability of the fixed income per dollar of equity (Saunders & Marcia, 2011). ROE value the overall profitability of fixed income per shilling of equity. The shareholders of banks prefer higher ROE. However, increasing ROE demonstrates increasing risk for instance when total equity capital decreases relative to net income, ROE will have an increasing under the constant net income. A large drop in equity capital may result in violation of minimum regulatory capital requirement and therefore increase the risk of insolvency of the bank (Saunders &Marcia, 2011)

Net income produced per shilling of assets is normally determined by ROA. EM measures the dollar value assets funded with each shilling of equity capital (Saunders & Marcia, 2011, p. 24). If the EM ratio is high it infers that more debt (leverage) is used to fund assets by banks. In their study Saunders & Marcia (2011), asserts that ROE is influenced positively by high EM ratio and ROA. However, Managers should be concerned when they have high ROE. For example they further postulate that increasing EM has positive effect on ROE ratio while banks leverage is enhanced, which

ultimately causes solvency risk. DuPont Corporation has constantly promoted DuPont model as a vital performance measurement framework. This model is very useful when decomposing the diverse drivers of ROE. For that reason, investors are able to have their research concentrate on the different indicators of performance else evaluation of cursory. DuPont analysis states that ROE has three major financial metrics that drive it, these include; financial leverage, asset use efficiency and operating efficiency.to ascertain the leverage on finance banks observe the dynamics in the equity multiplier. Whereas total asset turnover is used to measure asset use efficiency and net income/profit divided by shareholders' equity is used to determine the operation efficiency of a firm. Ultimately, DuPont analysis contributes in identifying parts of a firm that are underperforming in case of an unsatisfactory ROE. Despite this model being created in the early 1990s, it is still utilized widely across the globe for financial analysis because of the sophistication of ROA being impacted by measures of profit and efficiency (Almazari 2012). The method asserts that the product of two ratios, total assets turnover and profit margin equals ROA. In his study Almazari further alludes that in the 1970s most of financial analysis shifted from ROA to ROE and for that reason, this study seeks to use the model in ascertaining the suitable indicators of profitability of commercial banks in Kenya.

According to Saunders & Marcia (2011) and Rudra (2009), in DuPont analysis ROE is decomposed in to ROA and multiplier of equity (assets/equity). ROA is further decomposed to net profit margin and total asset turnover. Consequently, income statements can be used to compute profit margin whereas assets in the balance sheet can be evaluated by total assets turnover. Equity multiplier on the other hand allows for liabilities and owners' equity to be evaluated (Alimazari, 2012). Hence, this model provides an efficient technique upon which financial analysts can use to evaluate performance of financial institutions by decomposing the regularly used measure of profits in organizations. Moreover, ROE is used in identifying the strengths and weaknesses of the banks' performance (Saunders & Marcia, 2011). Founded on DuPont system, this study prefers to pick ROE and ROA as the key indicators of performance.

Management of credit risk is critical in risk management of banks. They gather funds from firms or individual who have surplus and make them available to firms and individuals with deficit for development in order to earn income to increase profitability. Kinthinji (2010), in his research on impact of credit risk management on banks' profitability in Kenya, discovered that the most of the profits of commercial banks is actually influenced by other variables other than credit and NPLs. Thus financial institutions that wish to realise high profits should pay keen interest in other factors and bot on credit and NPLs. However, Muasya (2009), in his study did an analysis on the effects of NPLs on financial performance of banks in Kenya. The study comprised of a sample of 42 commercial banks and the results proved that NPLs do have significant effect on bank performance. Additionally the research discovered that underdeveloped credit culture, poor credit assessment, failed loan monitoring, lenient terms and conditions of credit, compromised integrity, stiff competition, misappropriation of funds, under/over funding by financial institutions, defaults which are willful contributes to causes of loan default. Nevertheless, the relationship between the size of a bank and charged interest rate as well as the type of ownership and cases of NPLs was not established by the study. Moreover, the researcher overlooked the major limitation of descriptive design which becomes a challenge when explaining phenomena that happen ultimately over a period of time, therefore, the study's results are only applicable to the study's frame.

Gakure et al. (2012) in their paper on credit risk management techniques on the performance of unsecured bank loans by commercial bank loans in Kenya. The paper targeted the management staff who work in commercial banks with a sample size of 39 respondents who were questioned using questionnaires, it was discovered that performance of unsecured loans is indeed greatly affected by risk identification. Consequently, the study also deduced that establishment of clear process of approving new loans and extending the existing ones is very vital when managing credits in financial institutions, Afriyie and Akotey (2013) in their paper on impact of credit risk management on profitability of rural and community banks in the Brong Ahafo Region of Ghana, where the employed ROE and ROA models as measures of profitability and NPLs and capital adequacy ratio (CAR) as credit risk management pointers of the 10 rural banks from 2006-2010 which were under study. From the study it was evident that there exist significant relationship between NPLs and the productivity of the rural banks which implied that despite the existence of huge loan loses the financial institution were still earning profits.it is therefore, evident from the results that the rural financial institution do not have credit risk management practices that are effective. The research was on rural banks which may not have organizational procedures or policies to deal with credit risk management. Abiola and Olausi (2014) examined the effects of credit risk management on the performance of commercial banks in Nigeria. Financial statements of seven commercial banking firms were used to evaluate for a period of 7 seven years (2005-2011) using longitudinal research design. The panel regression model was

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used in estimating the model. The research discovered that bank's financial profitability had been affected by credit risk management practice.

3. METHOD

The study adopted a descriptive research design.   This study employed a census survey of the 44 licensed commercial banks in the period 2011 to 2016. The 28 local commercial banks have headquarters while the 16 foreign banks have branches in Nairobi respectively. Credit managers of the banks were targeted. The study population being small, census was applied. The data collection instrument was questionnaire. The study's procedure of data collection was drop and pick method. Piloting was done for testing the validity and reliability of the study. Data was coded, edited and organized to bring a meaning to it and analyzed using descriptive and inferential statistics, which included a regression model and correlation analysis. Multiple regression analysis was used to establish the relationship between the independent variables and the dependent variable and the strength upon which the independent variables affected the dependent variable

4. DISCUSSION

The study sought to determine the influence of management efficiency on financial performance of commercial banks in Kenya. The findings are presented in a five point Likerts scale where SA=strongly agree, A=agree, N=neutral, D=disagree, SD=strongly disagree and T=total. Results from table 4.1 below on whether the bank assets have marginally increased revealed that 30.2 percent strongly agreed, 38.4 percent agreed, 14.3 percent were neutral, 11.7 percent disagreed whereas 5.4 percent of them strongly disagreed. We there cab conclude from the results that the bank assets have marginally increased.

Following closely on the issue of attitude was the question of the earnings growth rate grown marginally. The responses showed that 31.9 percent strongly agreed to the statement, 17.4 percent agreed, and 28.9 percent were neutral, 14.4 percent disagreed whereas 7.5 percent strongly disagreed to the statement. From these results we can conclude that the earnings growth rate grown marginally. The respondents were also asked whether bank's operating expenses are efficiently managed as all the resources are efficiently deployed. The responses showed that 18.1 percent strongly agreed to the statement, 42.8 percent agreed, and 30.7 percent were neutral, 8.4 percent disagreed while 0 percent of them strongly disagreed to the statement. It is therefore evident from the results that bank's operating expenses are efficiently managed as all the resources are efficiently deployed. The respondents were further asked whether the management recruits quality staff. The responses indicated that 6.2 percent strongly agreed to the statement, 53.8 percent agreed, 25.2 percent were neutral whereas 8.5 percent and 6.4 percent disagreed strongly and disagreed to the statement respectively. Hence, the conclusion that management recruits quality staff.

Table 4.1: Effect of Management Efficiency on Financial Performance of Commercial Banks in Kenya

Statements		SA	A	N	D	SD	T
The bank assets have marginally increased	%	30.2	38.4	14.3	11.9	5.4	100
The earnings growth rate grown marginally	%	31.9	17.4	28.9	14.4	7.5	100
Bank 's operating expenses are efficiently managed as all the resources are efficiently deployed	%	18.1	42.8	30.7	8.4	0	100
The management recruits quality staff	%	6.2	53.8	25.2	8.5	6.4	100

4.2 Inferential Statistics

4.2.1 Pearson Correlation

In establishing the strength of the relationship between the variables (independent and dependent) of the study. Pearson correlation coefficient was computed at 95 percent confidence interval (error margin of 0.05). Table 4.2 illustrates the findings of the study.

Table 4.2: Correlation Matrix

		Performance of commercial banks
Management efficiency	Pearson Correlation	.722**
	Sig. (2-tailed)	.000
	N	40

From Table 4.2 above, the p-value management efficiency was found to be 0.000 which is less than the significant level of 0.05, (p<0.05). The findings showed that Pearson Correlation coefficient (r-value) of 0.722, which represented a strong, positive relationship between management efficiency and performance of commercial banks in Nairobi, Kenya.

From Table 4.2 above, the p-value loan defaulters was found to be 0.000 which is less than the significant level of 0.05, (p<0.05). The finding showed that Pearson Correlation coefficient (r-value) of 0.687, which represented a strong, positive relationship between loan defaulters and performance of commercial banks in Nairobi, Kenya.

4.2.2 Multiple Linear Regression

95 percent confidence interval (0.05 margin error) was used to show the multiple linear relationships between the variables (independent and dependent) of the study.

4.2.2.1 Coefficient of Determination (R^2)

In Table 4.3 below it is showed that the coefficient of correlation (R) is positive 0.561. Which implies that there is a positive correlation between credit risk management and performance of commercial banks in Nairobi County, Kenya. The coefficient of determination (R Square) shows that 28.7% of performance of commercial banks in Nairobi County, Kenya is influenced by the credit risk management. The adjusted R^2 however, indicates that 25.3% of performance of commercial banks in Nairobi County, Kenya is influenced by the credit risk management leaving 74.7% to be influenced by other factors that were not captured in this study

Table 4.3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.561[a]	.287	.253	9.20118

a. Predictors: (Constant), management efficiency

4.2.2.2 Analysis of Variance (ANOVA).

The p-value is 0.000 which is < 0.05 shows that the model is statistically significant in predicting how credit risk management affects performance of commercial banks in Nairobi County, Kenya. The results also indicate that the independent variables are predictors of the dependent variable as shown in Table 4.4.

Table 4.4: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	617.032	1	237.311	33.172	.000[b]
1	Residual	1476.232	39	15.964		
	Total	2093.000	40			

4.2.2.3 Regression Coefficients

From the Coefficients table (Table 4.5) the regression model can be derived as follows:

$$Y = 47.034 + 1.113X_3$$

The results in table 4.5 indicate that all the independent variables have a significant positive effect on performance of commercial banks in Nairobi County, Kenya. Management efficiency was an influential variable is with a regression coefficient of 1.113 (p-value = 0.000. According to this model when all the independent variables values are zero, performance of commercial banks in Nairobi County, Kenya will have a score of 47.034.

Table 4.5: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	47.034	2.628		64.214	.000
Management efficiency	1.113	.189	.812	6.324	.000

4.2.3 Hypotheses Testing

Ho$_1$:   Management efficiency does not have a significant effect on performance of commercial banks in Nairobi County, Kenya.

From Table 4.5 above management efficiency (β = 1.113) was found to be positively related performance of commercial banks in Nairobi County, Kenya. From the analysis of t-test, the t -value was found to be 6.324 and the ρ -value 0.000. Statistically, this null hypothesis was rejected because $\rho<0.05$. Thus, the alternative hypothesis was accepted and it deduced that management efficiency affects performance of commercial banks in Nairobi County, Kenya

5. CONCLUSION AND RECOMMENDATION

Based on the findings, the study concluded that Management efficiency (β = 1.113) was found to be positively related performance of commercial banks in Nairobi County, Kenya. From t-test analysis, the t -value was found to be 6.324 and the ρ -value 0.000. Statistically, this null hypothesis was rejected because $\rho<0.05$. Thus, the study accepted the alternative hypothesis and it concluded that management efficiency affects performance of commercial banks in Nairobi County, Kenya.

Based on the findings, the study recommended the following; the study recommends that the management of commercial banks should ensure that debts due can be paid within the next 12 months to reflect the credit risk strategy reflects. The bank has adequate cash and equivalents to meet demand any time and that cash and cash equivalents, capital ratio and deposit ratio positive increase in liquidity leading to an increase in profitability of commercial banks. The management should make sure that banks requirements such as liquidity are met since such a large proportion of their liabilities are payable on demand (deposits) but typically the more liquid an asset is, the less it yields to enhances commercial banks performance. The management should work in an effective and efficient way to meet their concern of having a wealthy firm by taking into consideration the debt asset, debt equity ratio and long term debt which is correlated with return on capital employed, net profit and gross profit margin, return on equity and asset. The management of commercial banks should reassess their capital structure to improve the firm's market performance.

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