

**INFLUENCE OF CREDIT RISK MONITORING ON LENDING PERFORMANCE OF COMMERCIAL BANKS IN NAIROBI COUNTY, KENYA**

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**ABSTRACT**

Credit risk poses a significant exposure not only to the banks but also to the entire economy, which is evident in east Africa financial crises. This is because of the fact that the banking is a vital industry of any economy. There has been a dramatic loss in the banking industry and suddenly announced large losses due to credit exposures that turned sour. This emphasizes the importance of managing the credit risk within the banking sector. Lending is a very profitable activity of the bank since customer pays interest on the amount borrowed. But this profitable activity also has problems which arise as a result of delayance or default in loan repayments which can be so extended and interconnected. The general objective of this study was to evaluate the influence of credit risk monitoring on lending performance of commercial banks in Nairobi County, Kenya. This study used descriptive survey research design and the target population for this study was employees of the 42 commercial banks in operation in Kenya as at 1st January, 2018. Primary data was collected using questionnaires that have both structured and unstructured questions. The researcher analyzed the data using descriptive statistics and logistic regression analysis (binary) was used. The results of the study revealed that the combined effect of credit risks monitoring activities influenced bank lending performance positively. The study concludes that credit risk monitoring activities significantly influence the lending performance of commercial banks and this has affected the performance of the entire sector. The study recommended that KBA and CBK should make it a requirement that borrowers should be submitting reports regularly to the bank on changes in the value of collateral which was used to acquire loan.

**Keyword:** Credit Risk, Monitoring, Influence, Lending Performance, Commercial Banks

**INTRODUCTION**

In African countries, credit remains the primary source of revenue for any commercial bank as well as around the entire world (Altunbas, 2009). However, the probability of default borrowers' loan commitments has been an increasing concern for those banks particularly for unsecured bank loans. The credit risk poses a significant exposure not only to the banks (lenders) but also to the entire economy, which is evident in 2008 east Africa financial crises. This is because of the fact that the banking is a vital industry of any economy. This emphasizes the importance of

managing the credit risk within the banking sector. Banks grant loans to the customer with an expectation of receiving the capital together with an interest. A loan facility is considered to be performing if payment of both capital and interest are paid accordingly with agreed repayment terms.

Banks in Uganda are upgrading their credit risk control forecasting abilities to calculate risk in stressed lending market conditions. Additionally, regulators have been encouraging banks to monitor their credit risk very closely. The Central Bank of Uganda has imposed a number of regulations and acts (Ciborra, 2012). Directions are provided under Banking Act, to help banks better manage their credit risk. The act focuses on the maximum limitation of accommodation or credit facility so as to diversify the risk. Krestlow (2013) examined the impact of credit risk management on capital adequacy and banks financial performance. When banks grant loans, they expect the customers to repay the principal and interest on an agreed date. A credit facility is said to be performing if payment of both principal and interest are up to date in accordance with agreed repayment terms. The non-performing loans (NPLs) represent credits which the banks perceive as possible loss of funds due to loan defaults.

In Nairobi County, commercial banks have undergone rebranding in order to regain the lost credit market share which has occurred as a result of credit risk management issues. In particular, the events that have resulted from the above failures and scandals have now been put into a category of risk referred to as credit risk. Haneef (2012) conducted a research on the relationship between credit risk management and profitability in commercial banks in Kenya. The results and analysis revealed that management of credit risk has an effect on profitability in all the commercial banks analyzed.

#### **Statement of the Problem**

Lending is a very profitable activity of the bank since customer pays interest on the amount borrowed. But this profitable activity also has problems which arise as a result of delayance or default in loan repayments which can be so extended and interconnected. This means that for a bank to be successful and profitable, there must be a sound credit risk measures in place which will reduce borrowers default. Every commercial banks have put in place very good credit risk identification systems, credit risk measurement system, credit risk monitoring and credit risk control which should ensure that the borrower will be able to pay back the credit borrowed and also on time. To strengthen these measures, the Central bank introduced credit information sharing platform has enabled banks via reduced risk, to extend more credit to productive sectors boosting wealth and employment creation. The information sharing platform with credit reference bureaus was meant to support monitoring of all potential borrowers in order to reduce credit risk and the develop information capital as a new collateral technology in the market and reduce the information search costs and hence reduce the risks in lending by commercial banks (Business credit, 2009).

However, in Kenya commercial banks more than 50% of total risk elements in commercial banks are associated with credit risk alone hence managing credit risk monitoring activity for efficient lending performance has become the most crucial task. There have been consistent stream of

failures and scandals in the banking services which have served as a catalyst for anxiety about credit risk and this have affected the lending performance (Moti, et.al, 2012). In the year 2016, the commercial banks in Kenya experienced credit risks challenges where 3 commercial banks were put under statutory receivership. Due to this the Central Bank of Kenya (CBK) has introduced a new directive on the treatment of non-performing credits which has increased more pressure and has affected the banks' lending performance. The introduction of interest capping has worsened the situation and has exposed the commercial banks to more credit risks and all this have affected the lending performance of the commercial banks in Kenya. In line with this, there is need to evaluate the credit risk monitoring on lending performance in commercial banks since this have hindered the access to credit by large number of borrowers which has resulted to slow growth of the country's economy (CBK Report 31st March 2016).

#### **Specific Objectives**

To establish the influence of credit risk monitoring on lending performance of commercial banks in Nairobi County, Kenya.

#### **Research Hypothesis**

**Ho;** There is no significant relationship between credit risk monitoring on lending performance of commercial banks in Nairobi County, Kenya.

#### **Scope of the Study**

The study covered all the 42 commercial banks registered by Central Bank of Kenya focusing on branches in Nairobi County (CBK 2018). These banks consisted of banks located in Nairobi because major banks have their busiest and main branches in Nairobi and most of their headquarters are in Nairobi.

### **LITERATURE REVIEW**

#### **Arbitrage Pricing Theory (APT)**

A more interesting alternative to portfolio theory is the Arbitrage Pricing Theory (APT) of Ross (1976). Stephen Ross's APT approach moved away from the risk versus return relationship of the CAPM, and exploited the notion of pricing by arbitrage to its fullest possible extent. As Ross himself has noted, arbitrage-theoretic reasoning is not unique to his particular theory but is in fact the underlying logic and methodology of virtually all of finance theory. This theory subscribes to the fact that an estimate of the benefits of diversification would require that practitioners calculate the covariance of returns between every pair of assets.

Heffernan (2009) noted it is rarely successful to analyze portfolio risks by assessing the weighted sum of its components. Equity portfolios are far more diverse and enormously large for separate component assessment, and the correlation existing between the elements would make a calculation as such untrue. Rather, the portfolio's risk should be viewed as a single product's innate risk. The APT represents portfolio risk by a factor model that is linear, where returns are a sum of risk factor returns. Factors may range from macroeconomic to fundamental market indices weighted by sensitivities to changes in each factor.

Bikker & Van Leuvensteijn (2008) used this theory and noted that macroeconomic market factors may be economic factors (such as interest rates, inflation, GDP) financial factors (market

indices, yield curves, exchange rates) fundamentals (like price/earnings ratios, dividend yields), or statistical (e.g. principal component analysis, factor analysis). APT model calculates asset pricing using the different factors and assumes that in the case market pricing deviates from the price suggested by the model, arbitrageurs will make use of the imbalance and veer pricing back to equilibrium levels. At its simplest form, the arbitrage pricing model can have one factor only, the market portfolio factor and this form will give similar results to the CAPM.

Defusco et al (2007) used this theory and concluded that APT model is based on following assumptions: relationship between expected returns and risk-factors is linear; a quantity of securities is close to infinite; expectations of investors are identical; Stock markets are perfect (there are no transactions costs and competition is perfect); and finally, there are no arbitrage opportunities in the market among well-diversified portfolios. This theory therefore emphasizes on the portfolio investments but does not gives a clear approach for banks to manage loan risks.

#### **Credit Scoring Models**

Haron, Hin Hock (2007) in the inherent risk: credit and market risks, the regulatory challenge concluded that credit risk is considered as the most important of all risks. It is referred to the customer's inability or unwillingness to serve their debts, and constitutes a major source of loss not only on bank's profitability but also on the initial asset; the loss could be as much partial as total of any amount lent to the counterparty. Not performing the obligations of a contract is usually appeared to loans, swaps, options, and during settlement. Securities firms are faced with credit risk whenever they enter into a loan agreement, an OTC contract, or extend credit. The real risk from credit is the deviation of portfolio performance from its expected value. Accordingly, credit risk is diversifiable, but difficult to eliminate completely and that because it depends on a number of borrower-specific factors and of systemic risk outlined above. Credit risk is not easily transferred, and accurate estimates of loss are difficult to obtain.

Iqbal and Mirakhor (2007) in their study on why firms purchase property insurance and found that credit risk declines in the credit standing of an obligor of the issuer of a bond or stock. Such a possibility does not mean default, but it means that the probability of default increases because an upward move is needed of the required market yield to compensate the higher risk which brings a value decline. The decision making process of accepting or rejecting a client's credit by banks is commonly executed through Judgmental Techniques and/or Credit Scoring models. The Judgmental approach used by most banks and financial institution are based on 3c's, 4c's or 5C's which are character (reputation), capital (leverage), collateral, capacity (volatility of earnings) and condition. Credit scoring models are very useful for many practical applications especially in banks and financial institution. Credit scoring model is a system creditors used to assign credit applicant to either a —good credit one that is likely to repay financial obligations or —a bad credit one who has a high probability of defaulting on financial obligation (Aunon-Nerin, & Ehling, 2008).

Das, Kapadia, & Saita, (2007) conducted a study on Common failings: how corporate defaults are correlated and found that credit Scoring was used for other purposes such as aiding decision in approving personal applications. Although credit scoring model are widely used for loan

applications in financial and banking institutions, it can be used for other type of organizations such as insurance, real estate, telecommunication and recreational clubs for predicting late payments. Credit scoring was first introduced in the 1940s and over the years had evolved and developed significantly. In the 1960s, with the creation of credit cards, banks and other credit card issuers realized the advantages of credit scoring in the credit granting process.

### **Credit Risk Monitoring**

Credit monitoring is a serious threat to the lending performance of banks; therefore, various researchers have examined the effect of credit risk management on banks in varying dimensions. Ahmed, Takeda and Shawn (2011) in their study found that banks use monitoring of borrower's financial activities after credit is issued in order to ensure that loan is put in proper use which allows the borrower to be in a position to repay the principal and interest therefore accrued. This activity was found to reduce loan loss provision and has a significant positive influence on non-performing loans. Therefore, a decrease in loan loss provision indicates less credit risk and deterioration in the quality of loans consequently affecting bank performance adversely.

A study by Ahmad and Ariff (2007) found that credit monitoring is a key determinant of credit risk of commercial banks on emerging economy banking systems compared with the developed economies. The study found that regulation is important for banking systems that offer multi-products and services; management quality is critical in the cases of loan-dominant banks in emerging economies. An increase in loan loss provision is also considered to be a significant determinant of potential credit risk. The study further highlighted that credit risk in emerging economy banks is higher than that in developed economies.

Mathara (2007) conducted a study on specific areas of research were geared forward identifying the source of credit risk exposures in banks and strategies that the banks have adopted to monitor and mitigate against the credit risk exposures inherent in the operations of their business. To facilitate the attainment of the objectives of this study, questions were administered to credit risk managers and credit managers. From the study it was found that credit monitoring in banks use qualitative loan assessment methods to make credit granting decisions while liquidity runs on the borrowers' credit concentration and adverse trading by the borrowers were the main sources of credit risk among the banks in Kenya. In addition, most banks were found to use loan diversification, banks guarantee and bank covenants to mitigate against credit risk.

Felix and Claudine (2008) investigated the relationship between bank performance and credit risk management. It could be inferred from their results that return on equity (ROE) and return on assets (ROA) both measuring profitability were inversely related to the credit monitoring done by the financial institutions thereby leading to a decline in profitability. In their study 'credit risk management and profitability in commercial banks in Sweden. Juanjuann (2009) highlighted that commercial banks bank management regularly receives accurate and timely credit reports as internal method of credit monitoring and this has positive effect on lending performance of the institution. The analysis further indicated that the impact of timely credit reports on the financial performance is not the same on all (4) commercial banks sampled.

Further the results of the study were limited to banks sampled and were not generalized for all the commercial banks in Sweden. The researchers used regression model to do the empirical analysis. The data was collected from the sample banks annual report (2000 - 2008).

Kithinji (2010) assessed the effects of credit monitoring on the profitability of commercial banks in Kenya. Data on the amount of credit, level of non-performing loans and profits were collected for the period 2004 to 2008. The results revealed that the bulk of the profits of commercial banks are not influenced by the amount of credit and non-performing loans, therefore suggesting that other variables other than credit and non-performing loans impact on profits. Chen and Pan (2012) examined the credit risk efficiency of 34 Taiwanese commercial banks over the period 2005-2008. Their study used financial ratio to assess the credit risk and was analyzed using Data Envelopment Analysis (DEA) and found that banks reminds the borrowers when the next pay falls due and this communication is released early enough before the due date for timely payments. The results indicated that this reduces credit risks in bank and it was very efficient over the evaluated loan period.

Kargi (2011) evaluated the impact of credit monitoring on the profitability of Nigerian banks. Financial ratios as measures of bank performance and credit risk were collected from the annual reports and accounts of sampled banks from 2004-2008 and analyzed using descriptive, correlation and regression techniques. The results revealed that credit risk management has a significant impact on the profitability of Nigerian banks. It concluded that banks' profitability is inversely influenced by the levels of loans and advances, non-performing loans and deposits thereby exposing them to great risk of illiquidity and distress.

Epure and Lafuente (2012) examined bank performance on credit monitoring in the presence of risk for Costa-Rican banking industry during 1998-2007. The results showed that there was continuous assessment of the new and existing credit borrowers during the life cycle of the loan and this resulted to lending performance improvements with a positive impact on the net interest margin. Al-Khouri (2011) assessed the impact of bank's specific risk characteristics, and the overall banking environment on the performance of 43 commercial banks operating in 6 of the Gulf Cooperation Council (GCC) countries over the period 1998-2008. Using fixed effect regression analysis, results showed that credit risk, liquidity risk and capital risk are the major factors that affect bank performance when profitability is measured by return on assets while the only risk that affects profitability when measured by return on equity is liquidity risk.

Koziol and Lawrenz (2009) about the bankruptcy and the failure of the risk. They claimed that regulation of the banking stuff matters a lot for meeting the efficient criteria of risk management. The essence of the study was Uncover situation when the Credit manager will take financing decision since there was dissatisfaction with the banks regulator on how monitoring of credit was done after issuing the loans. Because the major source of the earning for the bank is to lend the money. They introduce the continuous- time model where banks chose the deposit volume in order to trade off the benefits of earning deposit premiums against the costs that would occur at future capital structure adjustments. Major results suggested that the dynamic endogenous

financing decision introduced an important self-regulation mechanism due to the challenge with the monitoring of credit risk is that credit borrowers do not submit reports regularly to the bank on changes in the value of collateral which was used to secure the credit (Koziol & Lawrenz, 2009).

Bujerami (2011) aimed at recognizing the role of internal audit in credit risk management at the banking sector, internal audit function helps the senior management and board of directors in the process of identifying and assessing risks and response to it, through the provision of consulting and assurance services during the implementation of risk management process. The study results that there is no effective contribution to the internal audit function in the process of credit risk management in the Syrian public banks, and that to the all steps of the risk management process, the identify, evaluation, and risk response. The internal audit function contribute effectively in the process of risk management in the Syrian private banks, where they contribute to all steps of the risk management process, identify, evaluation, and risk response. There are significant differences in favor of the private sector between the responses of respondents from the public and private sectors with regard to the contribution of internal audit to identify and assess risks and respond to them. The researcher recommended that the necessity of activating the role of the internal audit functions in the process of risk management in the Syrian public banks to help them in the face of future financial crises. The necessity of public banks to the process of risk management has, and its substantial role in the face of the types of risks surrounding their work. The need for the public and private banks to conduct internal and external training, and continuing in the area of internal audit and risk management for the survival of their employees Informed of ongoing developments professional in these areas and any other areas related to internal audit.

Okan Veli (2007) has examined the credit risk monitoring process for the banking sector of the Northern Cyprus, and found that this practice carries a lot of significance for the banking sector. When examined retrospectively, it is observed that the monitoring credit risk had a determining effect on the banking crisis previously experienced in the country. Regarding the fundamental ratios, until the starting point of the crisis, though, there were steady increases in the credit risk of banking sector as a whole. However, following the crisis, it is observed that with the administrative, legal and financial measures taken, the risk dropped. Not only this situation has been determined with the credit risk ratios, but it has also been found out during the regulatory and supervisory stage of credits that no provision for loan losses had previously been allocated. However, the necessity for strengthening of banks, from the point of view of equity capital, which is seen as a safety valve, has been very apparent. Furthermore, necessary monitoring preparations of technological, administrative, know-how and qualified personnel should be made in accordance with Basel II framework.

Othman (2008) has analyzed the effect of using the techniques of credit risk monitoring on banks' value including: principles of good lending, market segmentation, credit portfolio diversification, credit insurance, monitoring credit strategies. It also explores the awareness of Jordanian banks of credit portfolio risk that leads ultimately to credit default in payment of obligations and its effect on the market value of the bank through returns to owners and stockholders. To assess the bank lending value, the researcher applies the measurement on the approximate equation of Tobin's. The study sample consists of eleven Jordanian commercial

banks during the years of 2001-2006. He focuses on finding the relation between the independent variables and the dependent variable through using Multiple Linear Regression, a questionnaire and the financial indicators depending on the financial statements of the banks.

The researcher has shown the presence of a positive effect between the bank lending value and credit risk monitoring. He also studied the importance of maintaining the quality and components of the credit portfolio and containing its risks within accepted levels to establish the bank's lending value. In conclusion, the researcher asserts the necessity of using credit risk monitoring by Jordanian commercial banks to decrease portfolio credit risk and default risk in order to ensure acceptable returns for owners and stockholders. The researcher recommended that dependence on the principles of good lending when awarding credit, in addition to the work of monitoring and periodic review.

### RESEARCH METHODOLOGY

The target population for this study was at two levels. The first target population was at institutional level where the study targeted the 42 licensed commercial banks in Kenya.

The second level of target population was employees of the 42 commercial banks in operation in Kenya as at 1<sup>st</sup> January, 2018. The main reason for choosing all the employees is because in the current financial market dynamics all the employees are responsible for to facilitate lending in their respective banks and have higher level of appreciation on how credit risks measurements affects lending performance. These banks consisted of all the banks located in Nairobi because major banks have their busiest and main branches in Nairobi and most of their headquarters are in Nairobi. The target population was 1260 employees (KBA, 2018).

**Table 1: Target Population**

<b>Cadres</b>	<b>No. of. Employees</b>
Credit Managers	42
Other Levels	1218
<b>Total</b>	<b>1260</b>

**Source: Kenya Bankers Association, (2018)**

The sample size was determined by use of the following Slovin's formula;

$$n = \frac{N}{1 + Ne^2}$$

n = Number of samples N = Total population e = Error tolerance

This was done with a confidence level of 95% and at 0.05 level of significance. In this case the target population being 1260 less the 42 credit managers who were purposively selected.

The sample size was:

$$\begin{aligned} n &= \frac{N}{1 + Ne^2} \\ &= \frac{1218}{1 + (1218 \times 0.05^2)} \\ &\sim 301 \text{ respondents} \end{aligned}$$



**Table 2: Sample Size**

<b>Cadres</b>	<b>No. of. Employees</b>
Credit Managers	42
Other Levels	301
<b>Total</b>	<b>343</b>

**Source: Author (2018)**

Primary data was collected using questionnaires that have both structured and unstructured questions. The questionnaire contained a likert scale types of questions where the respondents were required to indicate their level of agreement with statements that expressed a favorable or unfavorable attitude towards a concept being measured. The researcher analyzed the data using descriptive statistics including frequency distribution tables, percentages and measures of central tendency such as mean and standard deviations. In addition to this, advance statistical techniques were considered particularly measures of variations such as logistic regression analysis (binary) was used to establish relationships among variables and to provide a detailed description of the data and also to classify features and construct statistical models in an attempt to explain what was achieved. The results were presented in tables, pie charts and graphs and they were accompanied by relevant explanations

Thus, the logit model was specified as follows;

$$(Y_i) L_i = \text{Ln} \left[ \frac{P}{1 - P} \right] = \beta_0 + \beta_1 X_1 + \mu$$

**RESULTS AND DISCUSSION**

The researcher issued 343 questionnaires to the respondents. Only 272 questionnaires were returned which accounted for 79% return rate. The reasons for this response rate was attributed to some of the respondents who were issued with the questionnaires returned questionnaires in time and there were well filled while very few who did not respond at all and others whose items were not filled. However, the response rate is considered adequate given the recommendations by Saunders, Lewis and Thornhill (2007) who suggested a 30-40% response is adequate, Sekaran (2010) who document 30%, and Hager, et.al, (2008) recommend 50%. Based on these assertions, this implies that the response rate for this study was adequate.

**Credit Risk Monitoring**

The study sought to investigate the how credit risk monitoring influences lending performance of the commercial banks. This is important because some risks are inherent and they need to be monitored so that the bank's lending is not affected.

**Banks Officials Supervises and Monitors the Borrowers Activities**

The study investigated whether banks officials supervises and monitors the borrowers' activities after credit is granted to them. The responses are as indicated in table 3

**Table 3: Banks Officials Supervises and Monitors the Borrowers Activities**

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Responses	Frequency	Percent
Strongly Disagree	64	23.5
Disagree	143	52.6
Neutral	8	2.9
Agree	53	19.5
Strongly Agree	4	1.5
Total	272	100.0

**Source; Survey Data (2018)**

The results indicated that 76.1% of the respondents disagreed that banks officials supervise and monitors the borrowers' activities after credit is granted to them while 21% of the respondents agreed that banks officials supervise and monitors the borrowers' activities after credit is granted to them. This shows that banks officials do not supervise and monitor borrower's activities after they give them credit. This finding disagrees with those of Ahmed, Takeda and Shawn (2011) in their study found that banks uses monitoring of borrower's financial activities after credit is issued in order to ensure that loan is put in proper use which allows the borrower to be in a position to repay the principal and interest therefore accrued. This activity was found to reduce credit risk and has a significant positive influence on lending performance.

**Banks Performs Re-Analysis of Borrowers Ability to Pay from Time to Time**

The study investigated whether commercial banks performs re-analysis of its borrower's ability to pay from time to time. The responses were as indicated in table 4

**Table 4: Banks Performs Re-Analysis of its borrower's ability to pay from time to time**

Responses	Frequency	Percent
Strongly Disagree	1	.4
Disagree	50	18.4
Neutral	14	5.1
Agree	112	41.2
Strongly Agree	95	34.9
Total	272	100.0

**Source; Survey Data (2018)**

The results indicated that 76.1% of the respondents agreed that commercial banks perform re-analysis of its borrower's ability to pay from time to time while 18.8% disagreed that commercial banks perform re-analysis of its borrower's ability to pay from time to time. This shows that commercial banks perform re-analysis of its borrower's ability to pay from time to

time. This finding agrees with those of Ahmed, Takeda and Shawn (2011) in their study found that banks uses monitoring of borrower’s financial activities after credit is issued in order to ensure that loan is put in proper use which allows the borrower to be in a position to repay the principal and interest therefore accrued. This activity was found to reduce credit risk and has a significant positive influence on non-performing loans.

**Bank Management Regularly Receives Accurate and Timely Credit Reports**

The study investigated whether bank management regularly receives accurate and timely credit reports. This is important because it shows whether management are aware of on regular basis on how the loans granted are performing. This was presented in table 5

**Table 5: Bank Management Regularly Receives Accurate and Timely Credit Reports**

<b>Responses</b>	<b>Frequency</b>	<b>Percent</b>
Disagree	1	.4
Neutral	26	9.6
Agree	164	60.3
Strongly Agree	81	29.8
Total	272	100.0

**Source; Survey Data (2018)**

The results indicated that 90.1% of the respondents agreed that bank management regularly receives accurate and timely credit reports while only 9.6% that were not sure whether the bank management regularly receives accurate and timely credit reports. This shows that commercial banks management are always aware of how the loans are performing since they receive credit information regularly and timely. This finding agrees with those of Juanjuann (2009) highlighted that commercial banks bank management regularly receives accurate and timely credit reports as internal method of credit monitoring and this has positive effect on lending performance of the institution. The analysis further indicated that the impact of timely credit reports on the financial performance is not the same on all commercial banks sampled.

**Banks Strictly Reminds the Customers before repayment date by email or phone calling**

The study investigated whether the banks strictly reminds the customers before repayment date by email or phone calling. This is important since it takes the care of borrowers forgetting to make payments especial on non-check off loans. The responses were as in table 6

**Table 6: Banks Strictly Reminds the Customers before repayment date**

Responses	Frequency	Percent
Strongly Disagree	70	25.7
Disagree	108	39.7
Neutral	13	4.8
Agree	50	18.4
Strongly Agree	31	11.4
Total	272	100.0

**Source; Survey Data (2018)**

The results indicated that 65.4% of the respondents disagreed that banks strictly remind the customers before repayment date by email or phone calling while 29.4% of the respondents agreed that banks strictly remind the customers before repayment date by email or phone calling. This shows that from the majority of the responses, commercial banks do not strictly remind the customers before repayment date by email or phone calling. This finding is in contrast with those of Chen and Pan (2012) who examined the credit risk efficiency of 34 Taiwanese commercial banks over the period 2005-2008. Their study found that banks reminds the borrowers when the next pay falls due and this communication is released early enough before the due date for timely payments. The results indicated that this reduces credit risks in bank and it was very efficient over the evaluated loan period.

**Continuous Reassessment of Existing Borrowers during the Life Cycle of the Loan**

The study investigated whether commercial banks do a continuous reassessment of existing borrowers during the life cycle of the loan. Reassessing an existing the borrower during the life cycle of the loan is it important since the borrower's capacity may change during the life cycle and this may affect the loan performance.

**Table 7: Continuous Reassessment of Existing Borrowers during the Life Cycle of the Loan**

Responses	Frequency	Percent
Strongly Disagree	32	11.8
Disagree	75	27.6
Neutral	10	3.7
Agree	115	42.3

Strongly Agree	40	14.7
Total	272	100.0

**Source; Survey Data (2018)**

The study found from 57% of the respondents that commercial banks conduct continuous reassessment of existing borrowers during the life cycle of the loan while 39.4% of the respondents indicated that commercial banks conduct continuous reassessment of existing borrowers during the life cycle of the loan. This shows that there is continuous reassessment of existing borrowers during the life cycle of the loan. This finding agrees with those of Epure and Lafuente (2012) examined bank performance on credit monitoring in the presence of risk for Costa-Rican banking industry during 1998-2007. The results showed that there was continuous assessment and contact with the new and existing credit borrowers during the life cycle of the loan and this resulted to lending performance improvements with a positive impact on the net interest margin.

**Borrower Submits reports regularly to the bank on changes in the value of collateral**

The study investigated whether borrower submits reports regularly to the bank on changes in the value of collateral. This was important since the value of collateral may change with time due to depreciation and other factors and hence its regular valuation is important. The responses were as indicated in table 8

**Table 8: Borrower Submits reports regularly to the bank on changes in the value of collateral**

Responses	Frequency	Percent
Strongly Disagree	87	32.0
Disagree	163	59.9
Neutral	5	1.8
Agree	16	5.9
Strongly Agree	1	.4
Total	272	100.0

**Source; Survey Data (2018)**

The results indicated from a majority of respondents 91.9% that borrower does not submit reports regularly to the bank on changes in the value of collateral while only 6.3% agreed that borrower submits reports regularly to the bank on changes in the value of collateral. This means that borrower do not submits reports regularly to the bank on changes in the value of collateral. This finding agrees with those of Koziol and Lawrenz (2009) about the bankruptcy and the failure of the risk whose major results suggested that the dynamic endogenous financing decision

introduced an important self-regulation mechanism due to the challenge with the monitoring of credit risk is that credit borrowers do not submit reports regularly to the bank on changes in the value of collateral which was used to secure the credit.

**There is regular contact with borrower to update borrowers' profile**

The study investigated whether the commercial banks have a regular contact with borrower to update borrowers' profile. This was important since the borrower's details may change when the loan is still in payments. Their responses were as indicated in table 9

**Table 9: There is regular contact with borrower to update borrowers' profile**

Responses	Frequency	Percent
Strongly Disagree	59	21.7
Disagree	64	23.5
Neutral	9	3.3
Agree	74	27.2
Strongly Agree	66	24.3
Total	272	100.0

**Source; Survey Data (2018)**

The results indicated that 52% agreed there is regular contact with borrower to update borrowers' profile while 45% disagreed that there is regular contact with borrower to update borrowers' profile. This shows that majority of commercial banks regularly contacts with their borrowers to update borrowers' profile. This finding is in agreement with those of Epure and Lafuente (2012) examined bank performance on credit monitoring in the presence of risk for Costa-Rican banking industry during 1998-2007. The results showed that there was continuous assessment and contact with the new and existing credit borrowers during the life cycle of the loan and this resulted to lending performance improvements with a positive impact on the net interest margin.

**Satisfaction of Credit risk Monitoring**

The study investigated the level at which respondents were satisfied with credit risk monitoring. This was important since their level of satisfaction will reflect how monitoring of risk has been of help to the commercial banks when it comes to lending performance. The responses were as in table 10

**Table 10: Satisfaction of Credit risk Monitoring**

Responses	Frequency	Percent
Highly Satisfied	24	8.8
Slightly Satisfied	166	61.0
Neutral	24	8.8
Slightly Dissatisfied	58	21.3
Total	272	100.0

**Source; Survey Data (2018)**

The results indicated that 61% of the respondents were slightly satisfied while 21% of the respondents were slightly dissatisfied with credit risk monitoring. This shows that majority are satisfied with the credit risk monitoring of their commercial banks. This finding contradicts those of Koziol and Lawrenz (2009) about the bankruptcy and the failure of the risk. Their study claimed that regulation of the banking stuff matters a lot for meeting the efficient criteria of credit risk management and uncovering how credit manager makes lending decision since there was dissatisfaction with the banks regulator on how monitoring of credit was done after issuing the loans.

**Table11: Logistic Regression Estimation Results**

LR chi2(4) = 64.17			
Prob >chi2 = 0.0000		Pseudo R2 = 0.6974	
Log likelihood = -24.61436			
Variables	Odds Ratio	P> z	Marginal effects (dy/dx)
Monitoring	3.5247	0.0217**	.373524
**significant at 0.05 level of significance			

Table 11 shows the estimated results for the binary logistic regression with the odds ratios, p-values and the marginal effects of the four explanatory variables. The Pseudo R2 (0.6974) means that the model accounts for 69.74 percent of variations in the lending performance while the remaining 30.26 percent are accounted for by other factors that are not represented in the model. The overall significance of the model in predicting the relationship between the independent variables and lending performance is also confirmed by its goodness of fit as given by the p-value < 0.05

### **Testing of Hypothesis**

**Ho: There is no significant relationship between credit risk monitoring on lending performance of commercial banks in Nairobi County, Kenya.**

It can be shown from table 11 above that the p-value of credit risk monitoring (0.0217) is statistically significant ( $p < 0.05$ ). The decision therefore is to reject the null hypothesis and conclude that there is a statistically significant relationship between credit risk monitoring and lending performance of commercial banks.

On the other hand, the odd ratio (3.52) shows that all other factors affecting loan performance held constant, commercial banks that undertake credit monitoring are 3.52 times more likely to perform better in term of credit lending compared to banks which do not undertake credit risk monitoring. The marginal effect (0.3735) shows an improvement in credit risk monitoring would result to a 37.35 percent improvement in lending performance of commercial banks, all other factors affecting lending performance held constant.

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

The objective of the study was to establish the influence of credit risk monitoring on lending performance of commercial banks in Nairobi County, Kenya. The results showed that credit risk monitoring have a positive influence on lending of commercial banks in Kenya. The analysis produced a marginal effect which shows an improvement in credit monitoring would result to an improvement in lending performance of commercial banks, all other factors affecting lending performance held constant. The significance test showed that influence of risk monitoring on lending performance was statistically significant and hence the alternate hypothesis was accepted. Majority of the respondents agreed that risk monitoring had a positive influence of lending performance. It was found that there was an on-going credit review with accurate credit grading, appropriate amount and reporting to the management and it allowed the commercial banks to monitor credit risk and solve credit problems in an appropriate and timely manner.

Credit risk monitoring was affected due to failure that banks do not enforce to the borrowers to submit regularly to the bank the change in value of collateral that was used to acquire credit from time to time. When credits are granted and assets are used as collateral, banks do not make were not able assess the correlation between borrowers' financial condition and income generating ability and price changes and liquidity of the market for the collateral. This greatly affected the lending performance because the borrowers' primary income, the principal source of repayment, is directly related to the quality of the associated asset. When the borrowers' income stream deteriorates, due to economic problems, the value of the asset placed as collateral is likely to decline. The study concludes that the activities of credit risk monitoring were so much below the expected levels and this is a challenge across the entire sector. These activities can be concluded to have contributed more in exposing the banks to credit risk and as result the lending performance is affected. The study also concludes that as a result of this, there is more credit defaulting, unregularly loan repayments and the results is decline in lending across the entire commercial banks sector.



**Recommendations and Policy Implications**

The results indicated positive significant influence of credit risk monitoring activities on lending performance of commercial banking sector in Kenya, implying their importance. Therefore, the directors of the banks should ensure the use of the right credit risk monitoring tools and also ensure that banks officials supervise and monitors the borrowers' activities after credit is granted on behalf of the bank. KBA and CBK should make it a requirement that borrowers should be submitting reports regularly to the bank on changes in the value of collateral which was used to acquire loan. The aim of this should be to ensure that the value of collateral does not lose more value in time below the value of loan granted. This will improve the lending performance of the whole banking sector. KBA and CBK should lobby for the development of section in the banking sector that will charged with strictly reminding the customers to of their loan status every month before repayment date is due by calling or sending an email.

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