

Impact of Non-Performing Loans on Financial Performance of Microfinance Banks in Kenya: A Survey of Microfinance Banks in Nakuru Town

Wangai David, K.¹, Bosire Nemwel², Gathogo George³

^{1,2,3}School of Human Resource Development, Jomo Kenyatta University of Agriculture and Technology, Kenya

Abstract: *All over the world financial institutions face massive risk on non-performing loans. As a result of the foregoing, financial institutions are obliged to review their lending policies. In Kenya, the lure of maximizing profitability has been alleged to increase credit risk and the potential for non-performing loans. The aforementioned loans negate profitability of financial institutions and as such the initial object of maximizing profitability by employing relaxed conditions when awarding credit facilities defeats the very goals of financial institutions. This study aimed to establish the effect of non-performing loans on financial performance of microfinance banks (MFBs) in Kenya. The study was conducted in microfinance banks in Nakuru town, Kenya. It was guided by one independent variable (credit risk) and financial performance as the dependent variable. A descriptive research design was adopted. The target population constituted the 66 credit and management staff of the aforementioned microfinance banks. A census survey was employed which implies that there was no sampling. A structured questionnaire was used to collect data from the respondents. A pilot study was conducted prior to undertaking the main study. The aim of pilot testing the instrument was to verify the instrument's reliability and validity. The study sought to determine both the content validity of the instrument. The reliability was tested using the Cronbach alpha. The collected data was analyzed both descriptively and inferentially. Descriptive analysis sought to present the opinions of the respondents regarding all the study constructs. On the other hand, inferential analysis enabled making deductions pertinent to non-performing loans and financial performance of microfinance banks under study. The research findings were presented in form of descriptive and inferential statistical tables. It was established that, credit risk significantly affected financial performance of MFBs in Nakuru town. The credit risk negated the MFBs' financial performance. It was deduced that, increase in credit risk would significantly reduce the MFBs' financial performance. It is anticipated that the study findings and the recommendations hereof, will enable financial institutions particularly microfinance banks to formulate and implement more appropriate strategies to mitigate non-performing loans in order to enhance their financial performance. It is recommended that, potential borrowers should be critically analyzed to assess their credit worthiness before they are awarded loans. It is recommended that, researchers can embark on studies to investigate the financial implication of non-performing loans in other financial institutions in Kenya such as saving and credit cooperative societies.*

Keywords: Credit risk, credit worthiness, financial performance, non-performing loans, profitability

1. Introduction

All over the world, financial institutions face enormous risks of non-performing loans (NPLs). In this respect, therefore, it is advisable for financial institutions to institute mechanisms of monitoring the behaviour of borrowers. It was noted that since 1990's, importance of credit risk management has increased for both borrowers and lenders, particularly in the developing countries [24]. Consequently, the scholars argued that, financial institutions were obliged to review their lending policies. The basic functional responsibilities related to lending include assessment of potential borrower's credit risk; making the credit granting decision in tandem with credit terms and limits; collecting receivables as they fall due and dealing with defaulters; monitoring borrower's behaviour and compiling management report; bearing the risk of default or bad debt; and financing the investment in receivables.

A study was conducted on the macroeconomic determinants of NPLs across 75 countries during the decade after year 2000 [6]. The study observed that, over the past decade, the credit quality of loan portfolios across most countries in the world remained relatively stable till the financial meltdown hit the global economy in years 2007 – 2008. It is noted that ever since, average bank asset quality worsened drastically as a result of the global economic recession. It is, however, argued that the deterioration of loan performance was very

uneven across various countries. The scholars further established that there are a number of variables that significantly affected NPL ratios. These include real gross domestic product (GDP) growth, share prices, the exchange rate, and the lending interest rate.

In an empirical investigation of Nigeria deposit money bank's credit administration and the incidence of bad loans, it was asserted that credit risk is a major concern for banks and other financial institutions globally due to the fact that it is the most critical of all risks faced by any financial institution [1]. It is advised that credit analysis of potential borrowers should be conducted in order to determine the credit risk of borrowers and ultimately reach a lending decision. It was observed that, due to the massive size of non-performing assets, credit risk is the most important risk faced by the Nigerian banks [2]. Credit risk is argued to lead to financial loss due to a borrower defaulting in servicing the advanced loan in line with the set agreement.

A study sought to determine the causes and impact of NPLs on the operations of microfinance institutions (MFIs) in Ghana [4]. The study indicated that MFIs provide significant financial services including microcredit facilities especially in rural and semi-urban areas of the country. The loan portfolio, according to the scholar, constitutes a considerable percentage of the assets of the MFIs. As such, MFIs obtain most of their income from interest charged on loans. Against

this backdrop, nonetheless, it is argued that not all loans granted to beneficiaries perform well and earn the projected returns, a situation that, needless to say, hampers the quality of the loan portfolio.

The liberalization of the Kenyan banking industry in early 1990's led to intense competition among financial institutions which saw many such institutions extending huge amounts of credit with the primary objective of increasing profitability. It is asserted that some of the loans were awarded with little or no credit assessment. Others were advanced to insiders. All these loans ended being non-performing. The low quality loans led to high level of NPLs and subsequently eroded profits of financial institutions. It was argued that, the collapse of many financial institutions in late 1990's was portrayed by high level of NPLs. It was further noted that since the turmoil in the Kenya's financial institutions, different credit risk management policies have been adopted including credit reference bureaus and credit scoring systems. Another study [17] assessed the effects of interest rate spread on the level of non-performing assets (NPAs) in Kenya's commercial banks. It was established that credit risk management techniques remotely affects the value of a bank's interest rates spread since interest rates are benchmarked against the associated NPAs, and the latter are associated with high cost of loans.

In a report commissioned by the Kenya Credit Information Sharing Initiative (KCISI), it was observed [3] that the introduction of the Central Bank of Kenya (CBK) of mandatory submission of NPL data by banks marked an important step of credit information sharing in the Kenyan credit market. The NPL data submission initiative is managed by KCISI. KCISI was jointly established by the CBK and Kenya Bankers Association (KBA). The Association of Microfinance Institutions (AMFI) has 41 members drawn from microfinance banks, wholesale MFIs, retail MFIs, development institutions and insurance companies representing the entire landscape of microfinance industry in Kenya. Their membership serves over 4 million customers with an outstanding loan portfolio of over US\$ 300 million

The CBK sector report for 2013 indicated that bank loans amounting to Kshs 80.6 billion had gone for more than three months without being serviced as at December 2013, which was an increase from Kshs 61.6 billion the previous year [9]. In the same light the CBK has set a new directive on the treatment of NPLs which has increased pressure on banks. The directive requires lenders to classify as non-performing loan accounts of a borrower who defaults on the repayment of any one of their multiple loans for more than three months. It is argued that the NPLs increased due to change of laws specifically relating to the recovery process, high interest rates in year 2012, and introduction of CBK prudential guidelines. The foregoing has inflated a bad look on the banks and has obliged them to set aside additional cash as provision for defaults; a situation which has served to adversely affect their financial performance by negating their profitability. It was, therefore, necessary to delve into how NPLs affect financial performance, in this case, of microfinance banks in Kenya.

2. Statement of the Problem

It is averred that all over the world, financial institutions face enormous risks of non-performing loans (NPLs). Financial institutions particularly MFIs and microfinance banks are very important in not only banking the low income earners in the society, but also in advancing credit facilities to them. However, just like other financial institutions, they experience many cases of NPLs. CBK has set a new directive on the treatment of NPLs which has increased pressure on banks [9]. The NPLs negates the profitability of financial institutions including microfinance banks. Non-performing loans are not only argued to adversely affect the financial performance of financial institutions, but they also have other far reaching implications. This is due to the fact that, other potential borrowers may fail to access credit facilities since part of the funds that could be extended as loans by financial institutions are still tied to NPLs. The NPLs also affect the economy of a country which explains the reason why the CBK sets guidelines for enabling financial institutions to mitigate NPLs. The importance of NPLs to the financial performance necessitated this study which aimed to establish the effects of NPLs on financial performance of microfinance banks in Kenya.

3. Objectives

3.1 General Objective

To establish the effects of non-performing loans on financial performance of microfinance banks in Kenya

3.2 Specific Objective

To analyze the impact of credit risk on financial performance of microfinance banks in Nakuru town

4. Research Hypothesis

H_{01} : Credit risk does not significantly impact on financial performance of microfinance banks in Nakuru town

5. Conceptual Framework

The study variables are conceptualized into a framework as illustrated in Figure 1.

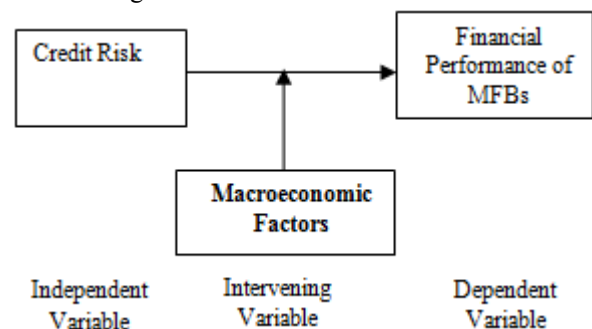


Figure 1: Conceptual Framework

The framework illustrates the hypothesized relationship between the independent variable (credit risk) and the dependent variable (financial performance). In other words,

it was presumed that credit risk affects the financial performance of microfinance banks in Nakuru town, Kenya. The relationship between the two variables was expected to be influenced by the macroeconomic factors such as inflation which are beyond the control of microfinance banks.

6. Literature Review

This part presents a review of theories, and empirical studies that touch on strategic management practice (in particular, strategy implementation) and completion of projects.

6.1 Theoretical Literature

6.1.1 The Moral Hazard Theory

Moral hazard refers the risk in which a party to a transaction provides misleading information about its assets, liabilities or credit capacity, or has an incentive to take unusual risks in a desperate attempt to earn a profit before the contract settles. Usually a party to a transaction may not enter into the contract in good faith, thus providing misleading information about its assets, liabilities or credit capacity. It is postulated that, moral hazard problems may be occasioned by asymmetric information which makes it difficult to distinguish between good and bad borrowers [21]. It is also noted that moral hazard has led to substantial accumulation of NPLs [8].

Problems of moral hazard in financial institutions are evident at many stages of the recent financial crises. This theory is considered relevant in this study since borrowers and lenders tend to conceal crucial information pertaining to the lending and borrowing agreement. Yet in modern macroeconomic theory economic growth rate depends, crucially, on the efficiency of financial institutions. The financial systems themselves depend on accurate information about borrowers and the project the funds are used for. Though it is asserted that NPLs may be caused by less predictable incidents [7], they indicated that moral hazards resulting from generous government guarantees could lead to loan default.

Consistent with earlier assertions regarding moral hazard [12], it is arguable that microfinance banks with relatively low capital, just like other mainstream financial institutions, may respond to moral hazard incentives by increasing the riskiness of their loan portfolio. The foregoing is bound to result in higher non-performing loans on average in the future. As further reinforced by another study's argument [10], microfinance banks that tend to take more risks, including in the form of excess lending ultimately incur losses. Still in tandem with moral hazard, higher equity-to-assets ratio results in lower NPLs. Given that, moral hazard incentives such as low equity tend to aggravate NPLs [12], then microfinance banks and other financial institutions ought to avoid such moral hazard incentives in order for them to mitigate losses through NPLs.

6.1.2 Adverse Selection Theory

The theory rests on two main assumptions: that lenders cannot distinguish between borrowers of different degrees of risk, and that loan contracts are limited. This analysis is

restricted to involuntary default, that is, it assumes that borrowers repay loans when they have the means to do so. In a world with simple debt contracts between risk-neutral borrowers and lenders, the presence of limited liability of borrowers imparts a preference for risk among borrowers, and a corresponding aversion to risk among lenders. This is because limited liability of borrowers implies that lenders bear all the downside risk. On the other hand, all returns above the loan repayment obligation accrue to borrowers. It is further asserted that, just like moral hazard, adverse selection can lead to significant accumulation of NPLs [8].

Raising interest rates would affect the profitability of low risk borrowers disproportionately, causing them to drop out of the application pool. However, excess demand in the credit market may persist even in the face of competition and flexible interest rates. In the adverse selection theory, the interest rate may not rise enough to guarantee that all loan applicants secure credit, in times when loanable funds are limited. Therefore, in line with this theory, microfinance banks may find themselves in dilemma; whether to increase interest rates and lower the number of applicants, or reduce the rates and have many applicants some of which may default in servicing their loans.

It is argued that in line with stipulations of the adverse selection theory, information sharing is said to reduce adverse selection by enhancing banks' information on credit applicants. It is argued that, ordinarily, each banking institution has private information about local credit applicants, but has no information about foreign applicants. In this light, it is reasoned that if banks were to share information about their clients' credit worth, they can assess the quality of foreign credit applicants as carefully as they would assess their local customers. As such, minimizing information asymmetry between lenders and borrowers, loans are extended to borrowers with lower credit risk [5]. As such non-performing loans are likely to be reduced. In the context of Kenya's microfinance banking sector, the issue of adverse selection is being handled by CRBs that minimizes information asymmetry.

6.2 Empirical Literature Review

This part reviews empirical studies that have hitherto been conducted by different scholars on areas touching on components of non-performing loans and in particular credit risk, and financial performance. The study reviews global, regional, and local studies respectively.

6.2.1 Credit Risk and Financial Performance

When studying determinants of NPLs in different countries, it was observed that assessment of credit risk in the financial sector is a vital component of macro-prudential surveillance [6]. It was further opined that, most of the studies relating credit risk to the real economy have dwelt on the development of expected default frequencies (EDF), loan loss provisions (LLP), loss given default (LGD), and NPLs as a measure of asset quality [18], [19]. The aforementioned studies observed that credit risk plays a crucial role in stress test exercises through its impact on bank balance sheets. It is further exemplified in another analysis of the Spanish commercial and savings banks [23]. The analysis revealed

that, credit risk is determined by microeconomic individual bank level variables, like bank size, net interest margin, capital ratio, market power, and real GDP growth.

In a paper on the Italian banking sector, banks' behaviour over the business cycle was analyzed [20]. The study investigated whether loan loss provisions, NPLs and the return on assets have a cyclical pattern and deduced that banks' riskiness and profitability are affected by the evolution of the business cycle. An investigation was carried out on the NPLs in Central, Eastern, and South-Eastern Europe (CESEE) in the period between years 1998 and 2011 [12]. It was noted that high cost efficiency may reflect little resources allocated to monitor lending risks and, thus, may lead to higher NPLs in the future. In tandem with "moral hazard" hypothesis, the scholar observed that banks with relatively low capital respond to moral hazard incentives by increasing the riskiness of their loan portfolio, which in turn, results to higher NPLs on average in the future.

In a study of causes and effects of NPLs on MFIs' operations in Ghana, it is asserted that the lender should ensure that good decisions are made relative to granting of loans with the object of minimizing credit risk [4]. In other words, the lender ought to always aim to assess the extent of the risk associated with the lending and try to minimize factors that could otherwise compromise repayment. The scholar further asserts that, needless to say, the lender should gather information regarding the prospective borrower that will assist in reaching a sound credit decision. It was noted that in order to mitigate NPLs which are occasioned by non-repayment of loans, MFIs in Ghana have adopted a standard loan request procedure and requirements that are usually contained in credit policy manual with the object of guiding loan officers and customers.

A study sought to analyze the effectiveness of credit management system on loan performance in Kenya's MFIs [14]. It was observed that credit risk results from investor's risk of loss emanating from default in loan repayment. When citing a previous study [22] it was argued that credit risk could be mitigated by employing a number of strategies such as risk-based pricing, covenants, credit insurance, and tightening and diversification. It is deduced that credit risk controls adopted by MFIs affect the loan performance. In a study on NPLs in Kenya Commercial Bank (KCB), it was noted that quality credit risk assessment and risk management and sufficient provisions for bad and doubtful debts can reduce the bank's credit risk [11]. It was continued to assert that when the level of NPAs is high, the assets provisions made are not adequate protection against default risk.

It is asserted in a study of factors affecting NPLs in Kenyan banks [16] that, granting loans to borrowers who are already overloaded with debt or possess unfavourable credit history could possibly expose banks to unnecessary default and credit risk. Information asymmetry is attributed to inappropriate determination of credit risk due to lack of requisite credit history of prospective borrowers. Financial institutions operating in isolation are argued to suffer from worse credit risk than those which share their credit information. Serial defaulters, associated with credit risk,

have negatively altered the lending business in the credit market, and as such negated the performance of banks [11].

7. Research Methodology

The study employed descriptive survey. As elsewhere asserted [13], descriptive survey enables to respond to the "what" question which is the case in this study. The aspect of survey was based on the fact that, the study was conducted at a specific point in time, that is, September/October, 2014 and the respondents cut across different departments and firms.

The target population is the population to which the study findings will be generalized. The current study was limited to the credit and management personnel of microfinance banks (MFBs) within Nakuru town, Kenya. There are four MFBs in Nakuru town (Kenya Women Finance Trust – KWFT, Faulu, Rafiki, and SMEP). The management and credit personnel from the aforementioned firms total to 66. Therefore, the target population was made up of 66 staff members.

Given that the target population (66) was relatively small, the researcher included all members of the population in the study. As such, there was no rationale of sampling. Instead, a census survey was employed. The aforementioned method was highly recommended not necessarily due to the small target population; but more importantly, census survey enhances the accuracy and reliability of the study findings by eliminating the sampling bias.

Questionnaires are very suitable in survey research [15]. In tandem with this assertion, a structured questionnaire was used to collect data from the respondents. The research instrument was pilot tested in order to determine both its reliability and validity prior to administering it in the main study. Validity was determined through expert opinion of the supervisor's at Jomo Kenyatta University of Agriculture and Technology while the reliability was tested using the Cronbach alpha coefficient. Only those factors in every construct that returned alpha values equal to or greater than 0.7 ($\alpha \geq 0.7$) were deemed reliable and as such include in the final instrument.

7.1 Data Processing and Analysis

The collected data underwent both descriptive and inferential analysis with the aid of the Statistical Package for Social Sciences (SPSS) version 21. Descriptive analysis involved frequencies and percentages for demographic data of respondents. As part of descriptive analysis, means and standard deviations were employed across all variables (independent and dependent). On the other hand, inferential analysis was in form of Pearson's correlation. The aforementioned analysis is founded on the fact that data pertaining all variables was on a Likert scale. The study findings were presented in form of tables that reflected both descriptive and inferential statistical results.

7.2 Research Findings

Out of the 66 members of the target population (credit, accounting, and management staff of microfinance banks in Nakuru town, Kenya), 7 participated in the pilot study. As such, they were excluded from the main study which implies that only 59 were included in the ultimate study. 59 questionnaires were issued and 51 were filled and collected by the researcher. Therefore, the response rate was 86.4 per cent.

7.2.1 Descriptive Findings

In this section, the study sought to establish the opinions of the credit, accounting/finance, and management staff of the MFBs in Nakuru town.

a) Descriptive Findings for Credit Risk

The researcher wanted to find out the views of the respondents pertaining credit risk in light of both non-performing loans and financial performance. Table 1 illustrates findings regarding credit risk

Table 1: Descriptive Results for Credit Risk

	N	Min	Max	μ	σ
i. Credit risk is caused by individual MFB variables e.g. size, net interest margin, capital ratio, etc	51	1	5	3.51	1.255
ii. Credit risk controls adopted by our MFB affects its financial performance	51	1	5	4.08	1.017
iii. Our MFB has initiated strategies for mitigating credit risk	51	3	5	4.47	.578
iv. Our MFB monitors credit risk of potential borrowers	51	2	5	4.51	.809
v. There is credit management system in our MFB	51	3	5	4.53	.578
vi. Credit risk assessment is very important before lending money	51	4	5	4.73	.451

The means of all propositions regarding credit risk were inclined towards either 4.00 (agree) or 5.00 (strongly agree). Therefore, it was noted that, credit risk is caused by individual MFB variables such as size, net interest margin, capital ratio, etcetera; credit risk controls adopted by MFBs affect their financial performance, and that MFBs have initiated strategies for mitigating credit risk. It was further noted that, MFB monitors credit risk of potential borrowers

b) Descriptive Findings for Financial Performance

Table 2 illustrates how respondents commented on propositions regarding financial performance of microfinance banks.

Table 2: Descriptive Results for Financial Performance

	N	Min	Max	μ	σ
Credit risk plays a major role in determining financial performance of MFBs	51	4	5	4.57	.500

Respondents were found to strongly agree ($\mu = 4.57$) with the assertion that credit risk plays a major role in determining financial performance of MFBs. Given that the standard deviations for all the three assertions were

noticeably small ($\sigma = 0.500$), it meant that the respondents' opinions were closely related, that is, the degree of variation of responses regarding financial performance was relatively small.

7.2.2 Effect of Credit Risk on Financial Performance

In this section, the study sought to establish the strength and significance of relationship between credit risk and financial performance of MFBs in Nakuru town. This was determined by use of Pearson's correlation due to the fact that the responses sought were on a Likert scale. The analysis of the pertinent data led to the results as indicated in Table 3.

Table 3: Effect of Strategy Implementation on Successful Project Completion

		Financial Performance
Credit Risk	Pearson Correlation	-.444**
	Sig. (2-tailed)	.001
	N	51

** . Correlation is significant at the 0.01 level (2-tailed).

The findings indicate that there exists a moderately strong and positive relationship between credit risk and financial performance of MFBs in Nakuru town ($r = 0.444$; $p < 0.01$). More so, the relationship is statistically significant as exemplified by the value of "p". Therefore, the second null hypothesis (credit risk does not significantly affect financial performance of MFBs in Nakuru town) was rejected. The findings were interpreted to mean that, when credit risk of borrowers rises, financial performance of the MFBs is likely to be negatively affected. This may be due to the argument that, the rise of credit risk occasions increased default rates hence increased non-performing loans. The aforementioned loans ideally are not serviced which leads to decrease in profitability of the MFBs concerned.

8. Summary, Conclusions and Recommendations

This section presents a summary of research findings. Conclusions are then deduced from the summary, and eventually recommendations are suggested in line with the study objectives.

8.1 Summary

It was noted that, credit risk is caused by individual MFB variables such as size, net interest margin, capital ratio, among others; credit risk controls adopted by MFBs affect their financial performance, and that MFBs have initiated strategies for mitigating credit risk. It was further established that, MFB monitors credit risk of potential borrowers. The findings were in tandem with an earlier study's [23] observations that, credit risk is determined by microeconomic individual bank level variables, like bank size, net interest margin, capital ratio, market power, and real GDP growth. It was indeed found out that, credit risk is significantly and negatively related with financial performance of MFBs. In other words, credit risk was argued to negate the profitability of MFBs due to increment in NPLs.

8.2 Conclusions

The study deduced that credit risk is caused by size, net interest margin, and capital ratio of MFBs among other variables. Credit risk controls adopted by MFBs were also concluded to affect MFBs' financial performance. It was concluded that credit risk negates the profitability of MFBs due to increment in NPLs and as such reduces the MFBs' financial performance.

8.3 Recommendations

It is that, MFBs ought to critically analyze potential borrowers regarding their credit worthiness before advancing loans to them, or even offer cascading loans depending on borrower's ability to service these loans. Moreover, it is suggested that, MFBs should fully abide with the credit regulations stipulated by the CBK. The MFBs need to work closely with CBK's established credit reference bureaus by sharing credit information in order to identify serial defaulters and desist from awarding such borrowers loans.

References

- [1] Adewale, A.A., & Afolabi, B. (2010). Nigeria deposit money banks' credit administration and the incidence of bad loans: An empirical investigation. Afe Babalola University.
- [2] Agu, O.C., & Okoli, B.S. (2013). Credit management and bad debt in Nigeria commercial banks – Implication for development. *IOSR Journal of Humanities and Social Sciences*, 12(3), 47-56.
- [3] Ahmed, R., & Karunditu, S. (2010). *Kenya Credit Providers Association Roadmap 2010-2015*. Nairobi: KCISI.
- [4] Arko, S.K. (2012). Determining the causes and impact of nonperforming loans on the operations of microfinance institutions: A case of Sinapi Aba Trust. *An executive MBA thesis*. Kwame Nkrumah University and Technology, Accra, Ghana.
- [5] Auronen, L. (2003, May 21). *Asymmetric Information: Theory and Applications*. Paper presented in the Seminar of Strategy and International Business at Helsinki University of Technology, Helsinki.
- [6] Beck, R., Jakubik, P., & Piloiu, A. (2013). Non-performing loans; what matters in addition to the economic cycle? *European Central Bank Working Paper Series*, 1515, 1-32.
- [7] Bloem, M. A. and Gorter, N. C. (2001), "Treatment of Non-Performing Loans in Macroeconomic Statistics", *IMF Working Paper*, WP/01/209.
- [8] Bofondi, M. & Gobbi, G. (2003). *Bad Loans and Entry in Local Credit Markets*. Rome: Bank of Italy Research Department.
- [9] Central Bank of Kenya. (2014). *Financial Markets, Trends & Policies*. Nairobi: CBK.
- [10] Jimenez, G., & Saurina, J. (2005). *Credit cycles, credit risk, and prudential regulation*. Banco de Espana,
- [11] Kipyego, D.K., & Wandera, M. (2013). Effects of credit information sharing on nonperforming loans: The case of Kenya Commercial Bank, Kenya. *European Scientific Journal*, 9(13), 168-193.
- [12] Klein, N. (2013). Non-performing loans in CESEE: Determinants and impact on macroeconomic performance. *IMF Working Paper*, WP/13/72, 1-26.
- [13] Kothari C.R. (2008). *Research Methodology, Methods and Techniques*. New Delhi New Age International publishers.
- [14] Moti, H.O., Masinde, J.S., Mugenda, N.G., & Sindani, M.N. (2012). Effectiveness of credit management system on loan performance: Empirical evidence from microfinance sector in Kenya. *International Journal of Business, Humanities and Technology*, 2(6), 99-108.
- [15] Mugenda, O.M., & Mugenda, A.G. (2009). *Research Methods*. Nairobi: Acts Press.
- [16] Mwenjei, K.B.O. (2013). Assessing the factors contributing to non-performing loans in Kenyan banks. *European Journal of Business Management*, 5(32), 155-163.
- [17] Ng'etich, J.C. & Wanjau, K. (2011). The effects of interest rate spread on the level of non-performing assets: A case of commercial banks in Kenya. *International Journal of Business and Public Management*, 1(1), 58-65.
- [18] Peng, W., Lai, K., Leung, F., & Shu, C. (2003). The impact of interest rate shocks on the performance of the banking sector. *Hon Kong Monetary Authority Research Memorandum*, 2, 34.
- [19] Pesola, J. (2005). Banking fragility and distress: An econometric study of macroeconomic determinants. *Bank of Finland Research Discussion Papers*, 13.
- [20] Quagliariello, M. (2007). Banks' riskiness over the business cycle: A panel analysis on Italian intermediaries. *Applied Financial Economics, Taylor and Francis Journals*, 17(2), 119-138.
- [21] Richard, E. (2011). Factors that cause non-performing loans in commercial banks in Tanzania and strategies to resolve them. *Journal of Management Policy and Practice*, 12(7), 50-58.
- [22] Rossi, S., Schwaiger, M., & Winkler, G. (2008). *Managerial behaviour and cost/profit efficiency in the banking sectors of Central and Eastern European Countries. Working Paper No. 96*, Vienna: Austrian National Bank.
- [23] Salas, V., & Saurina, J. (2002). Credit risk in two institutional regimes: Spanish commercial and savings banks. *Journal of Financial Services Research*, 22(3), 203- 224 Santos and Reynolds (1999)
- [24] Summers, B., & Wilson, N. (2000). Trade credit management and the decision to use factoring: An empirical study. *Journal of Business Finance & Accounting*, 37-67.

Author Profile



Wangai David K. is an MBA (Finance) Finalist at Jomo Kenyatta University of Agriculture and Technology, Kenya. He has Bachelors Degree in Business Administration (Kenya Methodist University). Wangai has worked with Equity Bank as a Relationship Manager –Agency Banking. Currently, he is the Nakuru Branch Manager (Rafiki Microfinance Bank).