Effect of Organization Culture and Staff Competence on the Implementation of Credit Scoring at Kenya Women Fund Trust

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Abstract

Credit scoring is a scientific method of assessing the credit risk associated with new credit applications. The implementation of credit scoring programs/projects in a microfinance environment is difficult and has encountered poor implementation outcomes. Insufficient volume of micro finance applications encountered, does not allow most lenders to develop their own scorecards using their own data and thus many microfinance institutions do not track applications because of insufficient systems to develop an elaborate scoring process. The study sought to investigate the effect of organizational culture and staff competence on the implementation of credit scoring at Kenya Women Fund Trust (KWFT). The target population was over 1,500 Business Development Officers and Credit Risk Managers who were working at KWFT of which 125 respondents were selected using random sampling approach. Data was collected using the questionnaire and analyzed using descriptive statistic. Correlation analysis and a multiple linear regression analysis model was used to establish the relationship between organization culture, staff competences and the implementation of credit scoring. The study found that organizational culture, staff competence were positively and significantly related with and implementation of credit scoring. The study concluded that Organizational culture and Staff competence influenced the implementation of credit scoring at KWFT. The study recommended for an effective use of the organizational culture and staff capacity since they were helpful in guiding the design, implementation and management of the credit scoring system through its various development stages in a microfinance environment.

Keywords: *Organizational culture, Staff competence, Credit scoring, and Kenya Women Microfinance Bank*

1.0 Introduction

1.1 Background of the Study

Globally lenders often rely on credit scoring to predict risk based on the performance of past loans with characteristics similar to current loans to inform decisions (Abedi, 2000). The question is if

credit scoring does the same for microfinance lenders in developing economies. This paper will discuss that though scoring is less powerful in poor countries than in rich countries, and although scoring will not replace the personal knowledge of character of loan officers or of loan groups, scoring can improve estimates of risk. Thus, scoring complements but does not replace the current microfinance technologies. Furthermore, the derivation of the scoring formula reveals how the characteristics of borrowers, loans, and lenders affect risk, and this knowledge is useful whether a lender uses predictions from scoring to inform daily decisions or not. In the future, biggest microfinance lenders will likely make credit-scoring models one of their most important decision tools (Abedi, 2000).

In Kenya, Microfinance Institution remains one of the most important players in provision of financial services since they have an extensive outreach than the retail banks. However, microfinance lenders have challenges of accessing credit bureaus. Most of their borrowers are poor and self-employed hence their credit information is unlikely to be with the credit bureaus. The key innovation of microfinance loans to groups whose members use social capital to screen out bad risks, and loans to individuals whose loan officers know them well enough to screen out bad risks rely fundamentally on qualitative information held in human memory. Scoring, in contrast, relies fundamentally on quantitative information stored in lenders' computers (Korir, 2012).

Although credit scoring brings a number of benefits which can help improve access to finance for micro finance institutions in Kenya, it is a technology and a system with a number of requirements that remains an impediment (Mwirigi, 2006). To realize the benefits, the right conditions for a scoring-based risk management system must be in place. The study sought to investigate factors influencing implementation of credit scoring in KWFT with an aim of developing a credit scoring model.

1.2 Statement of the Problem

The implementation of credit scoring programs/projects in a microfinance environment, is difficult and has been encountered poor implementation outcomes (FSD, 2008). Insufficient volume of micro finance applications encountered, does not allow most lenders to develop their own scorecards using their own data and thus many microfinance institutions do not track applications because of insufficient systems required to develop an elaborate scoring process. The existing credit bureaus are at their infancy, mandatory reporting of positive and negative credit performance information has just recently be introduced, and a lack of standardized collections and calculations of key financial data, all of which impede the development of a generic, pooled-data scoring model that could be used by all lenders. (Mwirigi, 2006). Because portfolio risk management that leverages credit scoring requires a significant up-front and ongoing investment in risk management skills and infrastructure, it is potentially not cost effective for small-volume lenders (Mwirigi, 2006).

A lot of research has been done in developed countries on credit scoring practices by various companies. Lawson (1995) examined the use of credit scoring by Hibernia Corp. Locally, Mutie (2006) carried out a study to evaluate the credit scoring practices in Kenyan commercial banks and to assess the relationship between these credit scoring practices and non-performing loans. A few studies have been done on credit scoring practices and among them are credit scoring practices and non-performing loans in the Kenyan commercial banks (Mutie, 2006). Most studies focused on credit risk management practices which covered the use of credit scoring models in credit risk

management. From these trends the study investigated the effect of organizational culture and staff competence on the implementation of credit scoring at Kenya Women Fund Trust (KWFT).

1.3 Specific Objectives

i. To assess how the organizational culture affects implementation of credit scoring at KWFT.
ii. To establish how staff competence affects implementation of credit scoring at KWFT.

1.4 Research Questions

i. How does Organizational culture influence implementation of credit scoring at KWFT?
ii. To what extent does staff competence influence implementation of credit scoring at KWFT?

2.0 Literature Review

2.1 Theoretical Review

The study presented theories that informed the variables of the current study. These theories include portfolio theory and moral hazard theory.

2.1.1 Moral Hazard Theory

Moral hazard theory was propagated by Helpman in 1970. The theory argues that Information sharing can reinforce borrowers' incentives to perform, either via a reduction of banks' rents or through a disciplinary effect (Pagano and Jappelli, 2002). The exchange of information between banks reduces the informational rents that banks can extract from their clients within lending relationships. Padilla and Pagano (1997) as cited in Pagano and Jappelli, (2002) make this point in the context of a two-period model where banks are endowed with private information about their borrowers. This informational advantage confers to banks some market power over their customers, and thereby generates a hold-up problem: since banks are expected to charge predatory rates in the future, borrowers exert low effort to perform, leading to high default and interest rates, and possibly to the collapse of the credit market.

Moral hazard theory is relevant to this study since it informs organizational culture, steering committee, technology and staff competence variables. By banks committing to exchange information about borrowers' types, they restrain their own future ability to extract informational rents. This reduces the probability of default of each borrower and the interest rate he is charged, and increases total lending relative to the regime without information sharing.

2.1.2 Portfolio Theory

This theory was proposed by Sharpe in 1970. The theory argues that companies recognize how credit concentrations can adversely impact financial performance. As a result, a number of institutions are actively pursuing quantitative approaches to credit risk measurement. Microfinance institutions are also making significant progress toward developing tools that measure credit risk in a portfolio context. They are also using credit derivatives to transfer risk efficiently while preserving customer relationships. Portfolio quality ratios and productivity indicators have been adapted. (Gakure, 2012). Traditionally, organizations have taken an asset-by-asset approach to credit risk management (Gakure 2012). This approach involves periodically evaluating the quality of credit exposures, applying a credit risk rating, and aggregating the results of this analysis to identify a portfolio's expected losses. The foundation of the asset-by-asset approach is a sound

credit review and internal credit risk rating system. This system enables management to identify changes in individual credits, or portfolio trends in a timely manner. This theory is relevant to this study since it informs implementation of credit scoring which is one of the approaches to credit risk measurement. Based on the changes identified, credit identification, credit review, and credit risk rating systems, management can make necessary modifications to portfolio strategies or increase the supervision of credits in a timely manner. The figurative representation was as shown on figure 1.
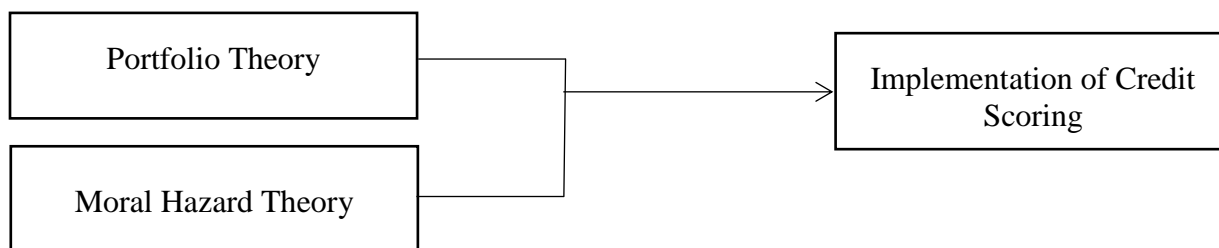

Figure 1: Theoretical Framework

2.2 Empirical Review

Frames (2001) empirically examined the effect of the use of credit scoring by large banking organizations on small business lending in low- and moderate-income (LMI) areas. Using census tract level data for the southeastern United States, the authors estimated that credit scoring increases small business lending by $16.4 million per LMI area served. The authors also found that credit scoring increased the probability that a large banking organization will make small business loans in a given census tract. They concluded that if credit scorecard is thoughtfully developed, flexibly implemented and properly managed which speed loan processing and inform pricing and provisions it will help banks and MFI's save cost, reduce subjectivity and improve risk management, this will also increase profitability and expand micro borrowers' access to credits.

Samreen and Zaidi (2013) studied the design and development of credit scoring model for the commercial banks of Pakistan. The found out that the Credit Scoring Model for Individuals (CSMI) assessed the creditworthiness of individual borrowers with 100% accuracy rate and distinguished the high risk loan applications to low risk prior to default. They used logistic regression and discriminant to support the results of developed credit scoring model. The accuracy rate of Credit Scoring Model for Individuals was 100%, logistic regression (LR) had the accuracy rate of 98.8% and the discriminant analysis credit scoring model for individuals had the accuracy rate of 95.2%. They recommended that future research studies should use the advanced credit scoring techniques like genetic algorithms, fuzzy discriminant analysis and neural networks. For the generalization and accuracy of the results generated by the credit scoring models, they recommended a large data of individual borrowers.

Mwithi (2012) carried out a study to establish the relationship between credit risk management approaches employed by Microfinance Institutions in Nyeri County and the level of Non-Performing Loans (NPLs). The study found that the level of credit risk assessment and management was high in the MFIs. The study also found that the organizations have specified credit collection period. Respondents unanimously indicated that effective management of their institutions was affected by liquidity and profitability, and that asymmetric information in loan market affects the effective management of NPLs in MFIs in Nyeri County. The study found that inability to enforce covenants leads to NPLs among MFIs in Nyeri County to a very large extent.

90% of the respondents indicated that the inability to enforce covenant was high. In conclusion, the study found that the relationship between credit risk management approaches employed by Micro Finance Institutions in Nyeri County and the level of Non-Performing Loans is a negative correlation i.e. the higher the level of credit risk management, the lower the level of NPLs.

Mitrani, Dalziel and Fitt, (1992) mention the need for competency and predict that organizations of the future will be built around people. They add that there will be less emphasis on jobs as the building blocks of an organization; instead increased attention will be focused on employee competence. If we are using people as the building blocks of an organization, then competence or what they bring to the job becomes crucial. The competency approach to selection and assessment is based on classifying, identifying, and measuring individual differences for particular work-related constructs that are relevant to successful job performance (Bartram, 2004).

The Society for Human Resource Management (2003) has indicated that competencies have become integral in the field of HRM. The Society cite supporting evidence showing that in the last thirty years the competency approach has emerged from being a specialized and narrow application to being a leading technique for diagnosing, framing and improving most aspects of HRM. According to the Society, a new competency model was necessary because the business world was changing at an unprecedented rate. These changes require HR professionals to add significant value and to do so quickly. Moreover, since HRM activities directly impact company ability to compete, competency models need to be continually researched and updated (Society for Human Resource Management, 2003).

Thomson and Strickland (2004) also place building core competencies and competitive capabilities as a key component of building a capable organization. They state that building core competencies and competitive capabilities will enable good strategy execution and that maintenance of a competence/capability portfolio, that is updated as strategy and external conditions change, will guarantee that an organization is capable of effective strategy execution. From the literature cited above it can be summarized that, during the last thirty years, competency has become a key factor in HRM in terms of building a capable organization. This is because academic or knowledge content alone is insufficient for an individual to be successful in their job. Rather, desired characteristics or behavior are meaningful in ensuring that an individual is effective in performing their tasks according to the job demands.

2.3 Conceptual Framework

According to Kombo and Tromp (2009), a concept is an abstract or general idea inferred or derived from specific instances. The dependent variable under this study was the implementation of credit scoring in KWFT while the independent variables include organization culture and staff competence. The figurative representation of the variables explored by this study is on figure 2.
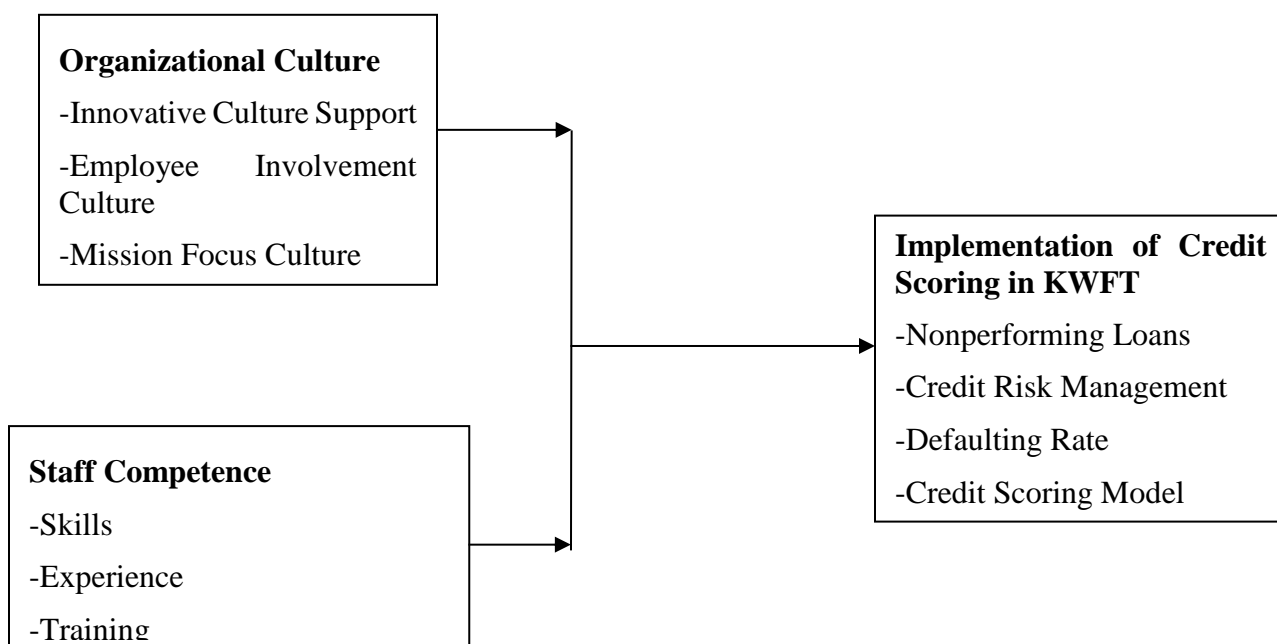
Figure 2: Conceptual framework

3.0 Research Methodology

The study adopted a descriptive research design. The study focused on 250 Business Development Officers and Credit Risk Managers of KWFT in South Rift. Stratified random sampling technique was used to determine the sample size of 125 respondents. Data was collected through the administration of the questionnaires and analyzed using descriptive and inferential statistics.in particular correlation and regression was used to establish the relationship between the organizational culture, staff competence and implementation of credit scoring at KWFT. A multiple regression model was used to test the significance of the effect of organizational culture, staff competence on the implementation of credit scoring.

The multiple regression model will be laid as below.

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e$

Where:

Y = Implementation of Credit Scoring

X_1 = Organizational Culture

X_2 = Staff Competence

e is error term

β_0 represents the constant

4.0 Results and Findings

4.1 Response Rate

The number of questionnaires that were administered to KWFT was 125 and a total of 119 questionnaires were properly filled and returned. This represented an overall successful response rate of 95.2% as shown on Table 1. According to Kothari (2004) a response rate of above 50% is adequate for a descriptive study. From these assertions, 95.2% response rate was very good for the study.

Table 1: Response Rate

Response	Frequency	Percent
Returned	119	95.2%
Unreturned	6	4.8%
Total	**125**	**100%**

4.2 Descriptive Statistics

4.2.1 Organizational Culture

The study established the effects of organizational culture on the implementation of credit scoring at KWFT. The results were presented on table 2 show 70.6% (30.3%+40.3%) of the respondents agreed that the organization supported innovative culture in implementation of credit scoring. Similarly, results found that the organization supported an employee participative/ involvement in implementation of credit scoring as indicated by 68.9% of the respondents. Results also showed that 73.1% of the respondents agreed that the organization supported mission focus culture in the implementation of scoring culture. In addition, results show that 68.1% of the respondents agreed that the organization insisted on the consistency of effectiveness of credit scoring. Further, 75.7% of the respondents agreed that the organization supported a credit risk management by focusing on implementation of credit scoring. Overall 76% of the respondents indicated that organizational culture influence implementation of credit scoring while only 24% indicated that it did not. The results herein implied that organizational culture affected implementation of credit scoring at KWFT. The average likert scale of the responses is 3.87 which indicated that majority of the respondents agreed to the statements. The standard deviation was 1.29 which indicates that the responses were varied.

Table 2: Organizational Culture

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std. Dev.
The organization supports innovative culture in implementation of credit scoring.	6.70%	18.50%	4.20%	30.30%	40.30%	3.79	1.327
The organization supports an employee participative/ involvement in implementation of credit scoring.	11.80%	10.90%	8.40%	21.00%	47.90%	3.82	1.43
The organization supports mission focus culture in the implementation of scoring culture	6.70%	4.20%	16.00%	35.30%	37.80%	3.93	1.148
The organization insists on the consistency of effectiveness of credit scoring	6.70%	8.40%	16.80%	26.10%	42.00%	3.88	1.236
The organization supports a credit risk management by focusing on implementation of credit scoring.	11.80%	4.20%	8.40%	32.80%	42.90%	3.91	1.321
Average						**3.87**	**1.29**

4.2.2 Staff Competence

The study also established the effect staff competence on the implementation of credit scoring at KWFT. Results on table 3 show that 80.7% (34.5%+46.2%) of the respondents agreed that competency improved the ability of staff to implement credit scoring, 68.9% of the respondents agreed that competency motivated the staff to accept the credit scoring usage in credit risk detection, 67.2% of the respondents agreed that in many cases credit scoring could not be implemented unless employees gained new competencies, 68 % of the respondents agreed that building core competencies and competitive capabilities w enable good strategy implementation of credit scoring while 84.9% of the respondents indicated that staff competence needed to be focused since the staff were used as building blocks of the credit scoring implementation. On an average likert scale the responses had an overall mean of 3.96 which indicated that the respondents agreed to the majority of the questions asked. The standard deviation of 1.06 indicated that the responses were varied. The results herein implied that staff competence affected implementation of credit scoring at KWFT. Overall 76% of the respondents indicated that staff competence influenced implementation of credit scoring while only 24% indicated that it did not.

Table 3: Staff Competence

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std. Dev
Competency improves the ability of staff to implement credit scoring	4.20%	4.20%	10.90%	34.50%	46.20%	4.14	1.052
Competency motivates the staff to accept the credit scoring usage in credit risk detection	4.20%	9.20%	17.60%	42.00%	26.90%	3.78	1.075
In many cases credit scoring could not be implemented unless employees gained new competencies	4.20%	10.90%	17.60%	26.90%	40.30%	3.88	1.18
Building core competencies and competitive capabilities will enable good strategy implementation of credit scoring.	8.40%	10.90%	12.60%	31.90%	36.10%	3.76	1.28
Staff competence needs to be focused since the staff are used as building blocks of the credit scoring implementation.	0.00%	0.00%	15.10%	45.40%	39.50%	4.24	0.701
Average						**3.96**	**1.06**

4.3 Correlation Analysis

Association between organization culture, staff competence and implementation of credit scoring at KWFT was established by the study. Results on table 4 indicated that organizational culture and implementation of credit scoring were positively and significantly related (r=0.243, p=0.008). Similarly, results showed that staff competence and implementation of credit scoring were positively and significantly related (r=0.236, p=0.010). This implies that an increase in any unit of the variables leads to an improvement in implementation of credit scoring.

Table 4: Correlation Matrix

		Implementation of Credit scoring	Organizational Culture	Staff Competence
Implementation of Credit scoring	Pearson Correlation	1.000		
Organizational Culture	Pearson Correlation	.243**	1.000	
	Sig. (2-tailed)	0.008		
Staff Competence	Pearson Correlation	.236**	0.020	1.000
	Sig. (2-tailed)	0.010	0.830	

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

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

4.4 Regression Analysis

The study established the relationship between organizational culture, staff competence and implementation of credit scoring in KWFT. The results presented on table 5 presented the fitness of model used of the regression model in explaining the study phenomena. Organizational culture and staff competence were found to be satisfactory variables in explaining the implementation of credit scoring. This was supported by coefficient of determination/R square of 48.1%. This meant that organizational culture and staff competence explained 48.1% of the variations in the dependent variable which is implementation of credit scoring in KWFT. This results further means that the model applied to link the relationship of the variables (organizational culture, staff competence and implementation of credit scoring) was satisfactory.

Table 5: Model Fitness

Indicator	Coefficient
R	0.693
R Square	0.481
Adjusted R Square	0.429
Std. Error of the Estimate	0.46187

Results on the analysis of the variance (ANOVA) was presented on table 6. The results indicated that the overall model was statistically significant. Similarly, the results imply that the organizational culture and staff competence were good predictors of implementation of credit scoring. This was supported by an F statistic of 5.498 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

Table 6: Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.677	4	1.169	5.498	**.000**
Residual	24.247	114	0.213		
Total	28.924	118			

Regression of coefficients results on table 7 shows that organizational culture was positively and significantly related with implementation of credit scoring as supported by (r=0.129, p=0.006). The findings also agreed with that of Moradi, Safari and Torkestani, (2013) who conducted a study on the impact of organizational culture on the performance of insurance companies in Iran. The results indicated that organizational culture impacts competitive strategy directly and organizational performance indirectly.

Similarly, results showed that staff competence was positively and significantly related with implementation of credit scoring as supported by (r=0.129, p=0.020). This implies that an increase in any unit of the variables leads to an improvement in implementation of credit scoring. This finding agrees with that of Mitrani. (1992) who mentioned the need for competency and predict that organizations of the future will be built around people. They add that there will be less emphasis on jobs as the building blocks of an organization; instead increased attention will be focused on employee competence. If we are using people as the building blocks of an organization, then competence or what they bring to the job becomes crucial. The competency approach to selection and assessment is based on classifying, identifying, and measuring individual differences for particular work-related constructs that are relevant to successful job performance (Bartram, 2004).

Table 7: Regression of Coefficients

Variable	B	Std. Error	t	sig
(Constant)	2.228	0.436	5.112	0.000
Organizational Culture	0.129	0.046	2.784	**0.006**
Staff Competence	0.129	0.054	2.361	**0.020**

The optimal model was therefore;

The multiple regression model will be laid as below.

Y= *2.228+ 0.129*X_1+ *0.129*X_2.

Where:

Y = Implementation of credit scoring

X_1 = Organizational Culture

X_2 = Staff Competence

5.0 Conclusions

Based on the findings above the study concluded that organizational culture and staff competence influence the implementation of credit scoring at KWFT. The study also concluded that organizational culture had an active and direct role in implementation of credit scoring. Organizational culture contributed to the improved implementation of credit scoring. In addition, the study concluded that mastering the implementation of credit scoring process by the staff is

paramount. The availability of literate, efficient and dependable workforce is critical for the success of implementation of credit scoring.

6.0 Recommendations

The study recommended for an effective organizational culture since it was instrumental in guiding the design, implementation and management of the credit scoring system through its various development stages. The design and implementation of a scoring system involves careful planning among and coordination of various functional areas of the bank, so each functional area should be represented in the committee from the outset, or strategy formulation phase. Additionally, the study recommended that KWFT should have good employee competence. To improve efficiency in implementation of credit scoring, the institution must build the capacity to attract and employ an adequate number of high-quality staff. The study also recommended that employees have to be trained for new jobs and for handling implementation of credit scoring effectively.

7.0 References

Bartram, D. (2004). Assessment in Organizations. Applied Psychology: *An International Review*, 53(2), p. 237-259.

Frames, W.S, Padhi, M. &Lynn, W. (2001) *The Effect of Credit Scoring on Small Business Lending in Low-and Moderate- Income Areas*. [Working Paper 2001 -6]. Federal Reserve Bank of Atlanta.

Gakure, R.W., Ngugi, J.K., Ndwiga, P.M., & Waithaka, S.M. (2012). Effect of Credit Risk Management Techniques on the Performance of Unsecured Bank Loans Employed By Commercial Banks in Kenya. *International Journal of Business and Social Research (IJBSR), 2*(4), 221-236.

Kenya, F. S. D. (2008). The potential for credit scoring for SME lending in Kenya. *Financial Sector Deepening (FSD) Publication*.

Kombo, D.K. & Tromp, L.A. (2009). Proposal and Thesis Writing: An Introduction. Nairobi: Paulines Publications Africa.

Korir, M.K. (2012) *Effects of Credit Risk Management Practices on Financial Performance of Deposit Taking Microfinance Institutions in Kenya* (Master's thesis). University of Nairobi, Kenya.

Kothari, C. (2004). *Research Methodology: Methods & Techniques*, 2nd edition. New age International Publishers, New Delhi, India.

Mitrani, A., Dalziel, M., & Fitt, D. (1992), Competency Based Human Resource Management. Hay Group.

Mutie, C.M. (2006). *Credit Scoring Practices and Non-Performing Loan in the Kenyan Commercial Banks* (Master's thesis). University of Nairobi, Kenya.

Mwirigi, P.K. (2006). *An Assessment of Credit Risk Management Techniques Adopted by Microfinance Institutions in Kenya* (Master's Thesis). University of Nairobi, Kenya.

Mwithi, S. (2012). *Relationship between Credit Risk Management Practices and the Level of Non-Performing Loans of Microfinance Institutions in Nyeri County* (Master's thesis). University of Nairobi, Kenya.

Pagano, M. & Jappelli, T. (2002). Information sharing, Lending and Defaults: Cross country Evidence. *Journal of Banking and Finance, 26*(10), 2017-2045.

Samreen, A., Zaidi, F.B. & Sarwar, A. (2013). Design and development of credit scoring model for the commercial banks of Pakistan: Forecasting creditworthiness of individual borrowers. *International Journal of Business and Commerce, 2*(5), 1- 26.

Society for Human Resource Management. (2003). Competency Overview. http://www.Competencies%20Overview.htm.