THE KEY CHALLENGES FACING CREDIT RISK MANAGEMENT BY ETHIOPIAN COMMERCIAL BANKS: A SURVEY STUDY

Shobor Gudeta Rundassa[1], Professor (Dr) G.S.Batra[2]

[1]PhD student, school of management studies, Punjabi university, Patiala, Punjab (India)

[2]Dean, head and director, center for business policy research and development, school of management studies, Punjabi university, Patiala, Punjab (India)

ABSTRACT

The major objective of the research is identifying the key challenges facing credit risk management by Ethiopian commercial banks. A descriptive research design employed. A primary source of data has been used for the purpose of the research. The data is collected through a survey of structured questionnaire administered to the authoritative bodies and other member staffs of the credit risk management department of the samples of eleven Ethiopian commercial banks. A factor analysis-exploratory factor analysis is used to do the statistical analysis using Statistical Package for Social Sciences Software version twenty. The findings of the research uncovered that weak corporate governance, lenient credit practices, tight regulatory practices, priority of profitability at the expense of safety and corruption of credit officers are the key challenges facing credit risk management by Ethiopian commercial banks.

Key words: Commercial Banks, Credit, Credit Risk

1. Introduction

Risk management is primarily concerned with reducing earnings volatility and avoiding large losses. In a proper risk management process, one needs to identify the risk, measure and quantify the risk and develop strategies to manage the risk Gestel and Baesens (2009).

Credit is an economic obligation to an outsider, an entity that doesn't own equity in the firm Malz (2011). Credit risk is the possibility that an unexpected change in counterparty's creditworthiness may generate a corresponding unexpected change in the market value of the

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.

International Research Journal of Management and Commerce (IRJMC) ISSN: (2348-9766)

83 | P a g e

associated credit exposure Resti and Sironi (2007). According to Baesens and Gestel (2009), credit risk is the risk that a borrower defaults and does not honor its obligations to service debt.

Credit risk is the most important and dominant source of financial risk in a typical commercial bank, whose traditional role is of an intermediary between lenders and borrowers Bindseil, Gonzalez and Tabakis (2009). Credit risk affects every financial contract. The measurement, pricing, and management of credit risk have received much attention from financial economists, bank supervisors and regulators, and from financial market practitioners Wagner (2008).

Credit risk arises each time a new facility is approved and disbursed while portfolio credit risk is the aggregate credit risk exposure that is derived from multiple groups or classes of assets rather than a single asset Colquitt (2007).

Credit risk is one of the integrated financial risk components that banks and suppliers of business credit face on a daily basis. Managing credit risk is the bread and butter of most commercial banks Heffernan (2005). Hence, banking business risks are not isolating whereby the happening of a risk triggers the happening of others risks. A bank faces credit risk upon the default by a borrower customer along with liquidity risk or gap-risk upon the non-receipt of funds. The non-receipt of funds results in asset-liability mismatch and a bank needs to arrange for new deposits at a market interest rate for which its outcome is market risk. The concept is that credit risk is a foundation for other risks commercial banks faces and a prudent credit risk management directly or in directly is meant by a prudent management of other risks as well. Taking in to account the consequence of credit risk management in the business of banking; there are a few studies that have addressed credit risk management practices of Ethiopian commercial banks. Among these the following can be accounted for.

The National Bank of Ethiopian (NBE) 2009, survey study on the risk management system of Ethiopian commercial banks revealed that irrespective of the strengths the banks are dealing with, weaknesses dominate the Ethiopian commercial banking sector risk management practice.

Asfaw (2015) has examined credit risk management practices of Ethiopian commercial banks using establishing an appropriate credit risk environment, operating under sound credit granting process, maintaining an appropriate credit administration, measurement and monitoring process, and ensuring adequate control over credit risk as credit risk determinants. The findings revealed that all the factors have positive association with credit risk but instituting appropriate

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.
International Research Journal of Management and Commerce (IRJMC) ISSN: (2348-9766)

84 | P a g e

credit risk environment and ensuring adequate control over credit were the major determinants of Ethiopian commercial banks credit risk.

Mekonnen (2009) assessed credit risk management system of sample of Ethiopian commercial banks covering a period of years 2004-2008. Return on asset and return on equity used as financial performance indicator and nonperforming loan ratio as credit risk management indicator. The study found that there is an inverse and insignificant association between return on asset and return on equity and nonperforming loan ratio over the period under study.

To sum up, to the extent that an attempt is made to review what previous researches have substantiated about credit risk management practices of Ethiopian commercial banks; the researches' conducted by the National Bank of Ethiopian (NBE) 2009, Asfaw (2015) and Mekonnen (2009) are all of them. Even though the studies have made a contribution in order to enrich the body of knowledge in the subject; but none of the studies have ventured to document the challenges/obstacles facing credit risk management by Ethiopian commercial banks. Therefore; the main purpose of the present research is exploring the key challenges/obstacles facing credit risk management by Ethiopian commercial banks.

2. Literature Review

This section discusses the review of empirical literature on the subject of credit risk management practices of commercial banks elsewhere. There are numerous articles demonstrating the credit risk management practices of commercial banks at global and regional levels. Among these some of them are as under:

Tetteh (2012) has evaluated credit risk management practices in Ghana commercial bank limited for the period of years 2000-2010. The finding of the study unveiled that despite the presence of clear written guide line on credit risk management within the bank, the case bank is facing high default rate.

Chen and Pan (2012) have examined the credit risk efficiency of 34 Taiwanese commercial banks over the period years 2005-2008 using data envelopment analysis. The credit risk parameters were credit risk technical efficiency, credit risk allocative efficiency and credit risk cost efficiency. The result indicated that only one bank is efficient in all types of efficiencies over the evaluated periods.

Abdelrahim (2013) studied the effectiveness of credit risk management of Saudi banks in the light of global financial crises. The study uncovered that weak corporate governance, low

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.
International Research Journal of Management and Commerce (IRJMC) ISSN: (2348-9766)

85 | P a g e

quality of assets, little credit diversification, not conducting serious financial analysis, not charging risk premium on risky loans, corruption of credit officers, Priority of profitability at expense of safety and priority of loan guarantees at the expense of capacity of repayment had impacted the effectiveness of credit risk management of the Saudi banks.

Njanike (2009) examined the impact of effective credit risk management on bank survival, the case of Zimbabwe's bank crisis in the year 2003/2004. The study identified that poor corporate governance, inadequate risk management system, ill planned expansion drivers, chronic liquidity challenges, foreign currency shortage and diversion from core business to speculative nonbanking activities as factors that caused the crisis.

Gweyi (2013) ascertained credit risk mitigation strategies adopted by commercial banks in Kenya for the period years 2008-2011. The result revealed that even though the banks had polices and strategies that govern the loan lending, most banks did not efficiently implement the same.

Afande (2014) studied credit risk management practices of commercial banks in Kenya. The study revealed that establishment of a credit policy that clearly outline the scope and allocation of bank credit facilities, maintenance of credit administration system with adequate controls over credit; top management support; communication of credit guidelines to every officer in the credit department, screening of potential borrowers, employing well trained staff, constant review of the borrowers' liquidity and the use of supportive technology in credit analysis were the main factors influencing effective credit risk management system used by commercial banks in Kenya.

Ghosh, Islam and Hasan (2014) carried out a study on credit risk management Brac Bank Limited using credit monitoring, reliability and assurance factors as credit risk management indicators in their analysis. The study found that credit risk has positive relationship with all these factors and minimizing credit risk is subject to proper framework of risks and justification with historical trends and other assurance factors.

Abbadi and Karsh (2013) has examined methods of evaluating credit risk used by commercial banks operating in Palestine in evaluating customers' application using the 5C's, LAPP, 5P's, CAMPARI and FAPE methods and which element in each method they concentrate on most. Average, percentages and ANOVA tests were used to do the empirical analysis. The percentage analysis revealed that banks more concentrate on collateral, credit records and ability to pay including liquidity and cash flow and less on condition, purpose and product. The

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.
International Research Journal of Management and Commerce (IRJMC) ISSN: (2348-9766)

86 | P a g e

ANOVA test shows that there is no difference between banks in using the LAPP and 5P's methods but they differ in using the 5C's and FAPE methods and banks treat natural person and NGO's in the same way in evaluating their application; but differ in treating business organizations and artificial persons. Lastly the authors have developed a new model called PACT: representing person, activity, collateral and terms.

Lalon (2015) conducted a study on credit risk management practices of Bangladesh commercial banks over a period of years 2008-2012. Return on asset was used as dependent variable and nonperforming loan ratio, loan loss provision ratio, and capital adequacy ratio were used as independent variables. The finding shows that nonperforming loan ratio has an inverse and statistically significant relationship with return on asset whereas loan loss provision ratio and capital adequacy ratio have positive and statistically insignificant relationship with return on asset

Nyamutowa and Masunda (2013) made a study on analysis of credit risk management practices in commercial banking institutions in Zimbabwe over a period of years 2004-2008. The study found out that commercial banks in Zimbabwe use a classical credit risk management frame work to modern credit risk management.

Kessey (2015) had assessed the credit risk management practices in the banking industry of Ghana: processes and challenges over a period of years 2007-2011. The findings revealed that even though the bank has documented policy on credit risk management with a senior manager having oversight responsibility for implementation but there were implementation challenges of the credit risk policies which have resulted to low quality of loan portfolio of the bank.

Ugoani (2015) has made an investigation on poor credit risk management and bank failure in Nigeria the case of Aba, Owerri and Umuahia South East Nigeria. The study finding unveiled that poor credit risk management measured by bad debt and weak corporate governance accelerates bank failures.

Zribi and Boujelbène (2011) examined factors influencing commercial banks credit risk: The case of Tunisia over the period of years 1995-2008. Both macroeconomic variables such as gross domestic product growth, inflation, exchange rate and interest rate and micro microeconomic variables like return on asset, capital adequacy ratio and asset size were considered in the study. Two dummy variables to represent form of ownership and regulation were used. The study results show that the main determinants of bank credit risk are: ownership structure, prudential regulation of capital, profitability and macroeconomic indicators.

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.
International Research Journal of Management and Commerce (IRJMC) ISSN: (2348-9766)

87 | P a g e

Kwabena (2014) carried out a study on credit risk management in financial institutions: A case study of Ghana commercial bank limited over the period of 1995-2009. Return on asset and return on equity were used as dependent variables and loan loss provision was used as indicator of credit risk. The result showed that return on asset and return on equity has positive and significant association with loan loss provision.

Kimutai and Ambrose (2013) evaluated factors influencing credit rationing by commercial banks in Kenya. The study found out factors that influenced credit rationing by commercial banks in Kenya are loan characteristics(interest rate, collateral provided and loan maturity), firm characteristics(risk profile and earnings) and observable characteristics(credit history and age and gender).

Al-rawashdeh, Al-omari, Saleh and Al nawayseh (2013) examined factors affecting granting of credit facilities in commercial banks in the Aqaba Special Economic Zone Authority-Jordan. The variables: customer borrowers, credit policies, central administration of the loans and the environmental conditions of the local economy used as factors affecting granting of credit facilities to do the statistical analysis. The findings show that all the variables are important decision variables for granting credit facilities.

Nazir, Daniel and Nawaz (2012) have examined risk management practices of conventional and Islamic banks in Pakistan. The study employed risk management related variables such as understanding risk and risk management, risk identification, risk assessment and analysis, risk monitoring, risk management practices and credit risk analysis. A correlation, multiple regression and analysis of variance were used to do the empirical analysis. The study found out that risk identification and risk assessment and analysis have positive and insignificant effect on the risk management practices of conventional and Islamic banks in Pakistan whereas understanding risk and risk management, risk monitoring and credit risk analysis have positive and significant effect on the risk management practices of conventional and Islamic banks in Pakistan.

3. Methodology

The research is conducted based on primary source of data that have been collected through structured questionnaire survey from the risk/credit risk management authoritative bodies and other member staffs working in the credit risk management department of samples Ethiopian commercial banks. In order to inspect the perception of the authoritative bodies and

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.
International Research Journal of Management and Commerce (IRJMC) ISSN: (2348-9766)

88 | P a g e

other member staffs in this particular department, the researcher has used a modified questionnaire that has been used in the previous researchers namely Abdelrahim (2013), Afande (2014) and Njanike (2009). The questionnaire consists of twenty (20) statements based on five point likert scale which addresses the various issues regarding the challenges facing credit risk management by Ethiopian commercial banks.

The research is conducted on 11 commercial banks out of 18 commercial banks in Ethiopia that accounts for 61% (percent) of the total banks. The selection of banks was based on age of their establishment and experience in the banking business. The sample includes 2 state owned commercial banks and 9 private commercial banks. The survey has been performed at the head offices of the sample banks.

A total of 66 questionnaires have been administered to the target respondents (on average 6 questionnaires to each bank) out which 56 of them have returned. The filtering process has discarded 3 questionnaires because of excessive missing data and 53 of them were retained for analysis.

Out of a total of the respondents who have taken part to complete the questionnaire, 71.7% were male and 27.3% were female. The academic profile of respondents showed 56.6% of them were first degree holders, 26.4% were diploma holders and 17% of the have masters and above degree holders. The analysis of respondents work experience on the subject under consideration indicated that 34% (percent) of them have between >=6<=10 years' work experience succeeded by 26.4% (percent) of them have a work experience of >=1<=5 years. While 15.1 of the have a work experience of less than 1 year, 13.2% (percent) have >=11<15 years of work experience. A few i.e. 11.3% (percent) of them have above 15 years of work experience.

In order to perform the statistical analysis, factor analysis is used and the result of the analysis is presented in the form of tables. The SPSS software used to process the data analysis.

4. Analysis Result and Discussions

4.1. Assumptions Diagnostics

Factor analysis is an umbrella term for a set of statistical procedures that examines the correlations between variables in large sets of data to see if a small set of underlying variables or factors can explain the variation in the original set of variables often collected in a questionnaire Hinton, Brownlow, Murray & Cozens (2004) and Ajai S. Gaur and Sanjaya S. Gaur (2009).

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.
International Research Journal of Management and Commerce (IRJMC) ISSN: (2348-9766)

89 | P a g e

In a same manner, for the purpose of this research, a short survey of questionnaire have been prepared and administered to the target respondents and the feedback back of the respondents have been analyzed using factor analysis-exploratory factor analysis. Like all other inferential statistics, for factor analysis to be a suitable statistical analysis, there is a need to check for the appropriateness of the data as to scale reliability, sampling adequacy and the correlation among variables are not identity matrix. According to these authors; in order to test these assumptions, the Cronbach alpha statistics should exceed .7 for a scale to be a reliable scale; the Kaiser-Meyer Olkin measure of sampling adequacy statistics should come out above 0.5 so that the sample size is adequate and the Bartlett's test of sphericity should be significant ($p<0.05$) showing there is a correlation among the variables and the correlation is not an identity matrix.

Hence, these assumptions have been checked and the Cronbach's alpha statistics comes out 0.842, the Kaiser-Mayer Olkin measure of sampling adequacy statistics comes out 0.652 and Bartlett's test of sphericity test showed the sig. value of $0.0001<0.05$ alpha value and the data is appropriate for factor analysis. The analysis result of each of the assumptions is demonstrated as follows:

Table 4.1Scale Reliability Statistics

Cronbach's Alpha	N of Items
.842	20

Source: Researcher's own computation using SPSS software

Table 4.2 KMO and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.652
Bartlett's Test of Sphericity	Approx. Chi-Square	839.108
	Df	190
	Sig.	.000

Source: Researcher's own computation using SPSS software

4.2. Factor Analysis Result and Discussions

4.2.1. Factors or Components Extraction

The factor analysis result has identified five components out of 20 (twenty) initial variables. In order to extract the factors, the Kaiser-Mayer Olkin stopping criterion-eigen value greater than one is used. The factor extraction result has produced Eigen values along with

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.
International Research Journal of Management and Commerce (IRJMC) ISSN: (2348-9766)

90 | P a g e

percentage of variance explained headed as initial Eigen values, extraction sums of square loadings and rotation sums of squared loadings. Before extraction, the analysis has shown twenty linear components with their Eigen value and percentage of variance explained. After extraction same result appeared but components with Eigen value less than one discarded. Further, after extraction the factors have been rotated using Varmax rotation method, the Eigen values and percentage of variance explained also displayed but the statistics shown moderate changes. It is shown that the first three components have more explanatory power than the latter two based on their Eigen values. The first component have the power to explain the variance by 31.168% to the latter four 19.113%, 11.606%, 7.958% and 5.442% respectively after extraction but before rotation. However; after rotation the first component has able to explain 25.270% of the variance to the latter four of 14.911%, 14.837%, 11.073% and 9.196% respectively. The five components extracted jointly are able to explain 75.287% of the variance in the latent variable i.e. the unexplained and the remaining percent would be explained by other variables not included in these statements. The analysis output is presented in the table under.

Table 4.3 Factor Extraction

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.234	31.168	31.168	6.234	31.168	31.168	5.054	25.270	25.270
2	3.823	19.113	50.281	3.823	19.113	50.281	2.982	14.911	40.181
3	2.321	11.606	61.887	2.321	11.606	61.887	2.967	14.837	55.018
4	1.592	7.958	69.845	1.592	7.958	69.845	2.215	11.073	66.091
5	1.088	5.442	75.287	1.088	5.442	75.287	1.839	9.196	75.287
6	.918	5.091	80.379						
7	.852	4.258	84.637						
8	.642	3.211	87.848						
9	.522	2.609	90.458						
10	.397	1.986	92.444						
11	.319	1.595	94.039						
12	.285	1.425	95.464						
13	.214	1.070	96.534						
14	.178	.889	97.423						
15	.136	.678	98.100						

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.
International Research Journal of Management and Commerce (IRJMC) ISSN: (2348-9766)

91 | P a g e

16	.131	.655	98.755
17	.114	.572	99.327
18	.059	.296	99.623
19	.041	.207	99.830
20	.034	.170	100.000

Extraction Method: Principal
Component Analysis.

Source: Researcher's own computation using SPSS software

4.2.2. The Scree Plot

Besides, the number of components extracted could be presented using the scree plot. Using the scree plot, the number of useful components can be identified by looking at a sharp break in the sizes of Eigen values which results in the slope of the plot from steep to shallow. The analysis output of the scree plot is presented in the figure under.
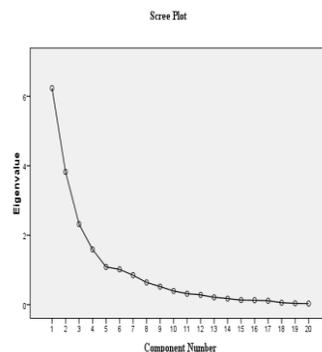
Figure 4.1 The Scree Plot

The figure displays the same result with the factor extraction table shown above that out of 20 (twenty) initial variables five components have been explored. A sharp break in the Eigen value occurred within the range of the Eigen values of somewhere above 1 and below 2 explicitly at the fifth component where the graph becomes shallower and shallower.

4.2.3. Factor Rotation

In order to run the factor rotation, an orthogonal rotation used. Under the orthogonal rotation, the varimax (variance maximization) method of factor rotation was employed. All the statements are sorted by size and all values are suppressed for loadings less than 0.4. The table below presents the rotated component matrix result of the factor analysis.

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.
International Research Journal of Management and Commerce (IRJMC) ISSN: (2348-9766)

92 | P a g e

Table 4.4 The Rotated Component Matrix[a]

	Component				
	1	2	3	4	5
Ignoring market risk	.894				
Absence of serious financial analysis of customer	.862				
Lack of comprehension or understanding of Basel guideline	.841				
Lack of resources	.824				
Overload	.815				
Inconsistencies in risk rating approaches	.798				
Inappropriate information technology support	.626				
Granting high credit ceiling exceeding customer capacity of repayment		.886			
Loan guarantee at the expense of customer capacity of repayment		.871			
Extra provision of doubtful credit debt		.707			
Absence of risk premium on risk loans		.688			
Stringent regulatory requirement			.818		
Lack of risk awareness			.792		
Lack of credit diversification			.724		
Lack of standardization of risk rating and review process			.660		
Disintegration of systems in departments				.875	
Targeting profitability at the expense of safety				.714	
Data management			.514	.554	
Corruption of credit officers					.801
Inadequate training of credit officers					.766

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 8 iterations.

Source: Researcher's own computation using SPSS software

Hence, as shown in the above table of the rotated component matrix table, the variables have been loaded and structured according to their loadings on to each of the components. The variables have been highly loaded on to the first three components and lesser on to the latter two components.

4.2.4. The Labeling of the Components

The hardest and toughest of the data analysis using factor analysis is the labeling of the factors or components extracted. The rotated component matrix of the factor analysis has resulted in one statement has cross loaded to the third and fourth components at a time. In order

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.
International Research Journal of Management and Commerce (IRJMC) ISSN: (2348-9766)
93 | P a g e

to handle this problem for the proper naming of the components, the followings conventions have been considered.

Convention suggests three possible ways of handling significant cross loadings. These are (1) if the matrix indicates many significant cross-loadings; this may suggest further commonality between the cross-loaded variables and the factors. The researcher may decide to rerun factor analysis, stipulating a smaller number of factors to be extracted. (2) Examine the wording of the cross-loaded variables, and based on their face-validity, assign them to the factors that they are most conceptually/logically representative of. (3) Delete all cross-loaded variables. Among these conventions, convention (2) was preferred as convention (1) and convention (3) have been tried and could not yield a meaningful and pretty good component that enables interpretation of the components as simple as possible. The statements have been named as follows.

Thus, the findings unveiled that there are five components that are key challenges facing credit risk management by Ethiopian commercial banks. These are labeled as follows. On to the first component, seven statements have been highly loaded. They all refer to weak corporate governance followed by four statements have been loaded on to the second component. They all refer to lenient credit practices. On to the third component five statements have been loaded. They all refer to tight regulatory practices. Three statements have been loaded on to the fourth component. They all refer to priority of profitability at the expense of safety. Finally, two variables have been loaded on to the fifth component. They refer to corruption of credit officers.

5. Conclusions

Lending institutions especially commercial banks across the globe irrespective of the type of their ownership and the country in which they operate are susceptible to credit risk. Risk in financial term is defined as the probable future change in the credit worthiness of the borrower that would result in the financial loss to the lender at the time of default by the borrower to settle its obligation as agreed. Hence, credit risk is an omnipresent event and has an indispensable role in the operation of commercial banks which cannot be avoided but managed. This research paper has tried to highlight the key challenges facing credit risk management by Ethiopian commercial banks and the result of the research has valuable information for the various stakeholders in the industry such as the regulator, the board of directors and the management. Even though, the result of the research has such a role, the main limitation of the research was that only a short survey of primary source of data used not supported by secondary sources of data. Thus, the

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.
International Research Journal of Management and Commerce (IRJMC) ISSN: (2348-9766)

94 | P a g e

result of the research is useful for the stake holders to search for the where about of drawbacks and devising possible remedies to solve the drawbacks.

References

Tony Van Gestel and Bart Baesens (2009). *Credit risk management; Basic concepts: financial risk components, rating analysis, models, economic and regulatory capital*, Oxford, United states: Oxford University Press Inc, New York.

Allan M. Malz, (2011). *Financial risk management: Models, history and institutions*, John Wiley & Sons, Inc., Hoboken, New Jersey.

Andrea Resti and Andrea Sironi (2007). *Risk management and shareholders' value in banking: From risk measurement model to capital allocation policies*, John Wiley & Sons Ltd, the Atrium, Southern Gate, Chichester, West Sussex PO19 8SQ, England.

Ulrich Bindseil, Fernando Gonza´ lez and Evangelos Tabakis (2009). *Risk management for central banks and other public investors*, Cambridge University Press, New York, United States of America.

Nikolas Wagner (2008). *Credit risk: models, derivatives and management*, Chapman & Hall/CRC Financial Mathematics series, CRC Press, Taylor and Francis Group Baca Rotan, London New York.

Joetta Colquitt (2007). *Credit risk management: How to avoid lending disasters and maximize earnings*, 3rd ed. Mc Graw-Hill, New York, United states of America.

Shelagh Heffernan (2005). *Modern banking*; John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex PO19 8SQ, England.

National Bank of Ethiopia (2009). Banking industry risk management survey report. Retrievedfromhttp://www.nbebank.com/pdf/bankrisk/SurveyReportrevised.pdf

Atakelt Hailu Asfaw and P.Veni(2015). Credit risk management tools practices in Ethiopian commercial banks. International journal of social science and interdisciplinary research Vol.4(5).Retrieved from http://www.indianresearchjournals.com/pdf/IJSSIR/2015.

Sahlemichael Mekonnen (2009). Credit risk management system of Ethiopian commercial banks, MSC thesis, Addis Ababa University, Addis Ababa, Ethiopia, retrieved from http://etd.aau.edu.et.Retrievedfrom http://etd.aau.edu.et/bitstream/.pdf.

Fredric Lawer Tetteh(2012). Evaluation of credit risk management practices in Ghana commercial bank limited, master's thesis. Retrieved from https://www.google.com.et/.

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.
International Research Journal of Management and Commerce (IRJMC) ISSN: (2348-9766)

95 | P a g e

Kuan-Chung Chen and Chung-Yu Pan (2012). Credit risk efficiency of banking industry in Taiwan. *Web journal of Chinese management review*, *Vol.15* No.1. Retrieved from http://cmr.ba.ouhk.edu.hk/cmr/webjournal/v15n1/CMR326E11.pdf.

Khalil Elian Abdelrahim (2013). Effectiveness of credit risk management of Saudi banks in the light of global financial crisis. *Journal of Asian transactions on basic and applied sciences, Volume 03* Issue 02. Retrieved from http://asian-transactions.org/Journals/Vol03Issue02/ATBAS/ATBAS-10305028.pdf.

Kosmas Njanike (2009). The impact of effective credit risk management on bank survival: Annals of the University of Petroşani, Economics, 9(2), 2009, 173-184. Retrieved from http://upet.ro/annals/economics/pdf/2009/20090222.pdf.

Moses Ochieng Gweyi (2013). Credit risk mitigation strategies adopted by commercial banks in Kenya. *International journal of business and social science Vol. 4* No. 6. Retrieved from http://ijbssnet.com/journals/.

Francis Ofunya Afande (2014). Credit risk management practices of commercial banks in Kenya. *European journal of business and management Vol.6*, No.34. Retrievedfrom http://www.iiste.org/Journals/index.php.

Proshenjit Ghosh, Md. Ariful Islam and Md. Moeid Hasan (2014). Credit risk management BRAC bank limited: Macro think institute. *Business management and strategy,Vol.5* No.1. Retrieved from file:///C:/Users/boom/Downloads/4618-20896-1-PB%20(1).pdf.

Suleiman M. Abbadi and Sharif M. Abu Karsh (2013). Methods of evaluating credit risk used by commercial banks in Palestine. *International research journal of finance and economics*, ISSN 1450-2887, Issue 111. Retrieved from file:///C:/Users/boom/Downloads/IRJFE_111_12%20(1).pdf

Raad Mozib Lalon (2015). Credit risk management practices in commercial banks of Bangladesh. *International journal of economics, finance and management sciences, Vol.3*,P, 78-90. Retrieved from https://www.econbiz.de/Record/credit-risk-banks.

Nyamutowa C and Masunda S (2013). An analysis of credit risk management practices in commercial banking institutions in Zimbabwe: Nyamutowa, Masunda, *International journal of economics research*,*Vol.4* i1,31-46ISSN:2229-6158. Retrievedfrom http://www.ijeronline.comf.

Kwaku D. Kessey (2015). Assessing credit risk management practices in the banking industry of Ghana: Processes and Challenges. *Global Journal of Management and Business*

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.
International Research Journal of Management and Commerce (IRJMC) ISSN: (2348-9766)

96 | P a g e

Research: C Finance, Volume 15 Issue 6 Version 1.0. Retrieved from https://globaljournals.org/GJMBR_Volume15/1-Assessing-Credit-Risk.pdf.

Ugoani, J. N. N. 2015. Poor credit risk management and bank failures in Nigeria. *International journal of economics and business administration, 1(1)*: 17-24. Available at http://www.aiscience.org/journal/ijeba.

Nabila Zribi and Younes Boujelbène (2011). The factors influencing bank credit risk: The case of Tunisia. *Journal of Accounting and Taxation Vol. 3(4)*, pp. 70-78. Retrieved from http://www.academicjournals.org/journal/JAT/article-full-text-pdf/C53D91B795.

Addo Boye Michael Kwabena(2014). Credit risk management in financial institutions: A Case Study of Ghana Commercial Bank Limited. *Research Journal of Finance and Accounting, Vol.5*, No.23. Retrieved from file:///C:/Users/boom/Downloads/18479-20749-1-PB%20(8).pdf.

Carolyne Jebiwott Kimutai and Jagongo Ambrose (2013). Factors influencing credit rationing by commercial Banks in Kenya. *International Journal of Humanities and SocialScienceVol.3*No.20.Retrievedfrom http://business.ku.ac.ke/images/.

Firas Mohammed Al-rawashdeh, burhan M. Al-omari, Mohammad Hasan Saleh and Mousa Abdalateef Al nawayseh (2013). Factors affecting granting of credit facilities in commercial banks in the Aqaba Special Economic Zone Authority- Jordan. *European journal of business and management*. Retrieved from http://www.iiste.org/Journals/index.php/EJBM/article/viewFile/3914/3972.

Mian Sajid Nazir, Adeel Daniel and Muhammad Musarrat Nawaz (2012). Risk management practices: A Comparison of Conventional and Islamic Banks in Pakistan. *American journal of scientific research* ISSN 2301-2005 Issue 68. Retrieved from http://www.ciitlahore.edu.pk/Papers/Abstracts/146-8588087132468758308.pdf.

Perry R.Hinton, Charlotte Brownlow, Isabella McMurray and Bob Cozens (2004). *SPSS explained*, Routledge Tylor and Francis Group.

Ajia S.Gaura and Sanjaya S.Gaura (2009). *Statistical methods for practice and research*: *A guide to data analysis using SPSS*, 2nd ed. Vivek Mehra for SAGE Publications India Pvt Ltd.

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories.
International Research Journal of Management and Commerce (IRJMC) ISSN: (2348-9766)

97 | P a g e