Risk Management Practices and Financial Performance of Commercial Banks in Kenya
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ABSTRACT

The main objective of the study was to carry out a survey risk management practices and financial performance of commercial banks in Kenya. This paper seeks to contribute to the literature by broadening the understanding of the concept of credit risk beyond the technical considerations in the accounting, banking and finance literature. The objectives of this study was to identify the types of credit risks that Commercial Banks in Kenya face, to establish the impact of credit risk management practice on performance of commercial banks in Kenya. This study used a descriptive research design to enable the researcher to generalize the findings to a larger population. The study targeted auditors of all commercial banks in Kenya; the population of the study were the internal auditors of all the 42 commercial banks in Kenya as at 31st December 2015. Primary data was collected using questionnaires which were administered using drop and pick method by the researcher. The data was then analyzed using quantitative techniques. The study concluded that bank considers risk identification as a process in credit risk management, that the bank focuses in interest rate risks in the risk identification map and that the bank focuses in foreign exchange risks. The study also concludes that in view of risk analysis and assessment as a credit risk management practice in the bank the application of modern approaches to risk measurement, particularly for credit and overall risks is important for commercial banks and that risk monitoring helps the bank management to discover mistake at early stages and that risk monitoring can be used to make sure that risk management practices are in line with proper risk monitoring. The study recommended that commercial banks management should understand how they can edge themselves against the eminent dangers of over exposure to credit risk whose importance cannot be understated as can be realized from the findings that can impact negatively on their profitability.

BACKGROUND TO THE STUDY

In recent years, risk management has received increasing focus as a central activity of commercial banks. Commercial banking is a combination of related activities such as providing products and services to the customers, engaging in financial intermediation and management of risk. The justification for studying the banks' activities by focusing on risk management can be traced to (Scholtens 2004) who argued that financial systems should be analyzed in terms of a "functional perspective" rather than an "institutional perspective" since over long periods of time functions have been much more stable than institutions. Research on financial services has followed this functional approach by relating banks' activities to the functions performed by them. Parrenas, (2005) suggested that, *inter alia,* the central function of a financial institution is its ability to distribute risk across different participants. According to Saunders and Cornett (2006), modern financial institutions are in the risk management business as they undertake the functions of bearing and managing risks on behalf of their customers through the pooling of risks and the sale of their services as risk specialists.

Commercial banks are in the risk business. In the process of providing financial services, they assume various kinds of financial risks. Attention has therefore shifted from focusing solely on the level of the capital buffer towards looking at internal risk management (Young, 2009). Suffice it to say that market participants seek the services of these financial institutions because of their ability to provide market knowledge, transaction efficiency and funding capability. In performing these roles they generally act as a principal in the transaction. As such, they use their own balance sheet to facilitate the transaction and to absorb the risks associated with it. It is no longer adequate to do things better; it's about "doing new and better things.

Concept of Credit Risk Management

Risk management is at the core of a bank's operations. This involves integrating risk management practices into processes, systems and culture. Crouhy, Galai and Robert, (2004) described the process of reducing risks to an acceptable level as involving risk planning, identifying and analyzing risks, developing and implementing risk handling plans and monitoring the progress of these plans. Organizations face increasing pressure from various stakeholder groups to manage operational risks effectively and to report their performance transparently across such risk management initiatives. By linking operational risks management and performance, firms can more effectively and efficiently understand the value of implementing an operational risks management framework. Such understanding is necessary for an organization to consistently invest resources in improving and evolving an operational risks management framework in order to drive strategy, resource allocation, and other decisions necessary for meeting organizational objectives.

Risk management framework is important for banks and other money lending institutions in Kenya. In conjunction with the underlying frameworks, basic risk management process that is generally accepted is the practice of identifying, analyzing, measuring, and defining the desired risk level through risk control and risk transfer. Boston Consulting Group (2001) defines credit risk management as a sequence of four processes; the identification of events into one or more broad categories of market, credit, operational and other risks into specific sub-categories; the assessment of risks using data and risk model; the monitoring and reporting of the risk assessments on a timely basis and the control of these risks by senior management.

Boston Consulting Group (2006), hold that risk management processes, require supervisors to be satisfied that the financial institutions have in place a comprehensive risk management process. This would include the Board and senior management to identify, evaluate, monitor and control or mitigate all material risks and to assess their overall capital adequacy in relation to their risk profile.

According to Boston Consulting Group (2001), credit risk is the oldest and important risk which credit unions are exposed to. Important of credit risk and credit risk management are increasing with time because of some reasons like economic crises and stagnation, company bankruptcies, infraction of rules in company accounting and audits, growth of off-balance sheet derivatives, declining and volatile values of collateral, borrowing more easily of small firms, financial globalization and business risk-based capital requirements. These findings are consistent with (Christen and Pearce. 2005)who found that the most important risk that financial institutions face was credit risk followed by interest rate risk and technological risk and that they used swaps, futures, forwards and options to manage the risk .

Shareholder value maximization requires a firm to engage in risk management practices only if doing so enhances the value of the firm and, by implication, its value to shareholders. This value enhancement can arise from minimization of the costs of financial distress, minimization of taxes and minimization of the possibility that the firm may be forced to forego positive NPV projects, because it lacks the internally generated funds to do so .However, the managerial risk aversion hypothesis holds that managers will seek to maximize their own personal well being. This means that managers may, at times, engage in risk management practices at the expense of shareholders.

 Specifically, when the interests of shareholders are not perfectly aligned with those of the managers, managers may pursue risk management strategies designed to insulate their own personal wealth from the effects of changes in interest rates, commodity prices, or foreign currency values. These steps may be taken without regard for the consequences of these decisions for shareholders' wealth. (Fatemi, and Glaum. 2000).

Kenya Banking Industry

As at 31st December 2015, the banking sector in Kenya comprised of forty-two commercial banks, one mortgage finance company, eight representative offices of foreign banks, twelve micro finance banks and eighty foreign exchange bureaus. Out of the 43 banking institutions, 40 were privately owned while the Kenya Government had majority ownership in 3 institutions. Of the 40 privately owned banks, 26 were locally owned (the controlling shareholders are domiciled in Kenya) while 14 were foreign-owned (many having minority shareholding). The 26 locally owned institutions comprised 25 commercial banks and 1 mortgage financier. Of the 14 foreign-owned institutions, all commercial banks, 10 were local subsidiaries of foreign banks while 4 were branches of foreign banks (Central Bank of Kenya Annual Report, 2015). The industry is dominated by a few large banks most of which are foreign-owned. Eleven of the banks are listed on the Nairobi Securities Exchange. The commercial banks and non-banking financial institutions offer corporate and retail banking services but a small number, mainly comprising the larger banks, offer other services including investment banking.

Statement of the Problem

Consistent stream of failures and scandals in the banking and financial services industry has served as a catalyst for anxiety about risk (Power, 2004). The risk anxiety generated by these events has led to the proliferation of new categories of risk and new models for managing these risks (Power, 2004; Ciborra, 2006). In particular, the events that have resulted from the above failures and scandals have now been put into a category of risk referred to as credit risk; a label that is intended to allow for risk visibility, particularized risk management, and regulatory intervention.

According to an Annual Bank Supervision report (2013), the Kenyan economy recovered to expand with a GDP growth of 5.2% in 2013 compared to overall 4.3% in 2012. During the year, the economy enjoyed a favorable macroeconomic environment, consistent with low and stable interest rates, strengthening shilling exchange rate and falling inflation. Managing operational risks is becoming an important feature of sound risk management practice in modern financial markets. According to Republic of Kenya (RoK),(2013) Weak operational risk management can also lead to corruption, evidenced by the Anglo Leasing Affair in Kenya in 2004 that involved a supplier's credit with extremely bad conditions for Kenya. All payments by Kenya were transferred to Anglo Leasing & Finance Ltd's account with a small bank in Zurich, and in the end it was revealed that it did not even exist (RoK),(2013). Such breakdowns can lead to financial losses through error, fraud, or failure to perform in a timely manner or cause the interests of the bank to be compromised in some other way.

The review of the literature shows that there have been several studies on commercial banks in Kenya. Yusuf (2005) conducted a survey of operational risk management practices by

commercial banks in Kenya; Kabiru (2002) did a study on the relationship between credit risk assessment practice and the level of non-performing loans of Kenyan banks. Ongechi (2009) also analysed the risk management strategies used by Fina Bank Limited in lending to SMEs. These studies have primarily focused on the practices used by commercial banks in dealing with operational and credit risks only. None of the studies have dealt with the comprehensive risk management practices that address all the aspects including operational, financial, regulatory and governance risks and the relationship of the practices to the performance of the commercial banks. This research focusing on the relationship between the various risk management practices used by the commercial banks in Kenya and their performance is a modest attempt to address the challenge of ever emerging risks within the banking sector due to complexity in the technological developments among other factors. It is an effort to critically examine the various ways in which banks manage operational, financial, regulatory and governance risks and determine if there is a relationship between these practices and the performance of the commercial banks. This study, therefore, sought to fill the lacuna in knowledge by answering the question: is there a relationship between the risk management practices used by commercial banks listed at the Nairobi Securities Exchange and their performance?

Objectives of the Study

The objectives of this study was to investigate the risk management practices and financial performance of commercial banks in Kenya

The specific objectives of the study were;

   i. To establish the risk identification methods used by commercial banks in Kenya

   ii. To identify the risk monitoring procedures used by commercial banks to monitor credit risks

   iii. To determine whether risk analysis affects financial performance of commercial banks in Kenya

   iv. To determine whether risk assessment affects financial performance of commercial banks

Research questions

   i. To what extent does a risk identification method affect the financial performance of commercial banks in Kenya?

   ii. How does risk monitoring procedures used by commercial banks affects the performance of banks Kenya?

   iii. To what extent does risk analysis affect financial performance of commercial banks Kenya?

iv.   How does risk assessment affects financial performance of commercial banks in Kenya?

Scope of the Study

This study being a survey of all the commercial banks in Kenya, it was conducted on all the 46 commercial banks in Kenya as at 31st December 2015.

LITERATURE REVIEW

Theoretical framework

Risk Management Theory

The theory of risk management is concerned with how individuals and firms allocate resources through time to recover from or avoid disasters. In particular, it seeks to explain how solutions to the problems faced in allocating resources through time are facilitated by the existence of risks in the market environment. Numerous theories have explained the role of risk management in a market environment. The concept of risk management theory involves studying the various ways by which businesses and individuals raise money, as well as how money is allocated to projects while considering the risk factors associated with them (Sarkis, 1998).

Pagach and Warr (2010) studied the effect of adoption of enterprise risk management (ERM) principles on firms' long-term performance by examining how financial, asset and market characteristics change around the time of ERM adoption. Using a sample of 106 firms that announce the hiring of a Chief Risk Officer (an event frequently accompanied by adoption of Enterprise Risk Management) they find that firms adopting ERM experience a reduction in stock price volatility. We also find that firms hiring Chief Risk Officers (CRO) when compared to similar, non-CRO appointing firms in their industry group, exhibit increased asset opacity, a decreased market to book ratio and decreased earnings volatility. In addition, Pagach and Warr find a negative relationship between the change in firms' market to book ratio and earnings volatility. They also found that banks increase leverage after ERM adoption. Pagach and Warr (2010) overall results fail to find support for the proposition that ERM is value creating.

Modern Portfolio Theory

Modern portfolio theory (MPT) is a theory of investment which attempts to maximize portfolio expected return for a given amount of portfolio risk, or equivalently minimize risk for a given level of expected return, by carefully choosing the proportions of various assets (Mignola and Ugoccioni, 2006). Since the 1980s, companies have successfully applied modern portfolio theory to market risk. Many companies are now using value at risk models to manage their interest rate and market risk exposures. Unfortunately, however, even though credit risk remains the largest risk facing most companies, the practice of applying modern portfolio theory to risk has lagged (Linbo 2004).

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. This industry is 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, (Chopra and Sodhi, 2004).The combination of these developments has precipitated vastly accelerated progress in managing credit risk in a portfolio context. Traditionally, organizations have taken an asset-by-asset approach to risk management. While each company's method varies, in general this approach involves periodically evaluating the quality of service exposures, applying a service 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 risk review and internal risk rating system. This system enables management to identify changes in individual operations, or portfolio trends in a timely manner. Based on the changes identified, risk identification, review, and risk rating system management can make necessary modifications to portfolio strategies or increase the supervision of risks in a timely manner (Mignola and Ugoccioni, 2006).

Arbitrage Pricing Theory
The famous theory of option pricing by (Fisher Black and Myron Scholes 1973) relies heavily on the use of arbitrage reasoning. Intuitively, if the returns from an option can be replicated by a portfolio of other assets, then the value of the option must be equal to the value of that portfolio, or else there will be arbitrage opportunities. Arbitrage logic was also used by (M. Harrison and David M. Kreps 1979 and Chi-Fu Huang 1985) to value multi-period securities. All this spills over into the Neo-Walrasian theories of general equilibrium with asset markets (complete and incomplete) developed by (Oliver D. Hart 1975) and many others since.

The famous Modigliani-Miller theorem on the irrelevance of corporate financial structure for the value of the firm also employs arbitrage logic. This famous theorem Franco Modigliani and Merton H. Miller (1963) can actually be thought of as an extension of the Separation Theorem originally developed by Irving Fisher (1930). Effectively, Fisher had argued that with full and efficient capital markets, the production decision of an entrepreneur-owned firm ought to be independent of the intertemporal consumption decision of the entrepreneur himself. This translates itself into saying that the profit-maximizing production plan of the firm will not be affected by the borrowing/lending decisions of its owners, i.e. the production plan is independent of the financing decision.

Modigliani-Miller extended this proposition via arbitrage logic. Viewing firms as assets, if the underlying production plans of differently-financed firms are the same, then the market value of the firms will be the same for, if not, there is an arbitrage opportunity there for the taking.
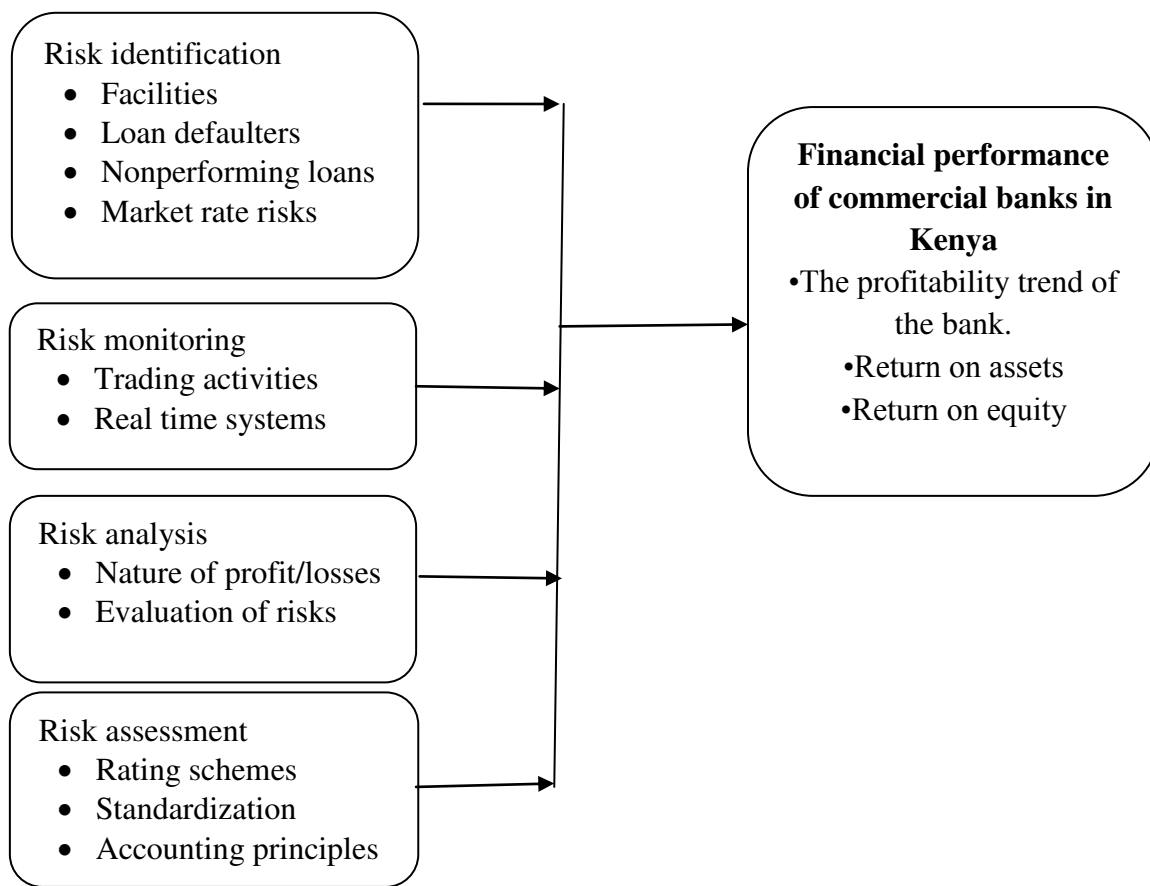
Consequently, arbitrage enforces that the value of the firms to be identical, whatever the composition of the firm's financial structure.

Conceptual Framework

A conceptual framework can be defined as a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation (Reidenbach and Moak, 1986).A conceptual framework is a research tool intended to assist a researcher to develop awareness and understanding of the situation under scrutiny and to communicate this.

Independent variable   **Dependent variable**

Risk identification
- Facilities
- Loan defaulters
- Nonperforming loans
- Market rate risks

Financial performance of commercial banks in Kenya
•The profitability trend of the bank.
•Return on assets
•Return on equity

Risk monitoring
- Trading activities
- Real time systems

Risk analysis
- Nature of profit/losses
- Evaluation of risks

Risk assessment
- Rating schemes
- Standardization
- Accounting principles

Review of Important Literature

Risk Identification
Risk identification sets out to identify an organization's exposure to uncertainty. This requires an intimate knowledge of the organization, the market in which it operates, the legal, social,

political and cultural environment in which it exists, as well as the development of a sound understanding of its strategic and operational objectives, including factors critical to its success and the threats and opportunities related to the achievement of these objectives Venette (2003). Risk identification should be approached in a methodical way to ensure that all significant activities within the organisation have been identified and all the risks flowing from these activities defined. All associated volatility related to these activities should be identified and categorized.

Risk identification is a subjective component within this process. Each organization is responsible for its own risks and must identify them according to the company's perspective. In addition to those risks identified by specific organizations, there are risks common to companies within and across industries. Chopra and Sodhi (2004) presented a high-level categorization of potential risks in a supply chain, their associated drivers, and methods for defining appropriate mitigation strategies. Zsidison (2003) studied managerial perceptions of supply risk and used these to create a classification of supply risk sources.

The first step in organizing the implementation of the risk management function is to establish the crucial observation areas inside and outside the company (Power, 2004). Then, the departments and the employees must be assigned with responsibilities to identify specific risks.

Risk Monitoring

The last step, risk monitoring, has received the least attention by supply chain risk researchers and the literature has shown little focus on the tools necessary for temporal risk monitoring. While Ciborra, (2006) have noted an increased focus on developing tools to prevent or mitigate supply chain disruptions, we found only two papers that actually developed prototype methods. The first methodology developed by Mignola and Ugoccioni (2006) is a supplier assessment tool designed for new product development processes. While the methodology does include a risk index as a part of the measurement system, its focus is on supplier capability to meet customer requirements.

The second methodology developed by Wu *et al.* (2006) is an AHP-based supplier risk assessment tool. While the method is comprehensive in its enumeration of risk types, it becomes more difficult to use as the number of suppliers being evaluated grows large. In addition, AHP is designed to take into account judgment and personal values and has widespread applications for making decisions such as allocation of resources, analyzing the impact of a policy, and resolving a conflict. However, it is not designed to be a temporal monitoring g tool and consequently, does not focus on assessing supplier risk over time. This same difficulty applies to the analytic network process (ANP). ANP is used to aid decision makers in making a choice from a myriad of options. ANP has been successful in decision making in energy policy planning, product design, equipment replacement and for selecting a logistics service provider.

Risk Analysis

In general, Unexpected events occur in projects and may result in either positive or negative outcomes that are a deviation from the business plan. Positive outcomes are opportunities while negative outcomes generate a loss. Risk focuses on the avoidance of loss from unexpected events. Several definitions of risk are available in the literature and risk is usually referred to as an exposure to losses in a business or as a probability of losses in a project. While uncertainty is not measurable, it can be estimated through subjective assessment techniques (Harker and Satvros, 1998).

There is a growing research interest among researchers on the concept of risk. This is partly because risk and risk management have become major concerns to individuals, organizations and nation states to the extent that Ciborra, (2006) describes contemporary society as risk society. Despite improvement in technologies and global socio-economic development, individuals, institutions and nations see themselves to be more rather than less vulnerable to risks of various kinds. Risks and risk claims are now more than ever associated with every sphere of human endeavor.

Risk Assessment

Risk assessment is the determination of quantitative or qualitative value of risk related to a concrete situation and a recognized threat (also called hazard). Quantitative risk assessment requires calculations of two components of risk: R, the magnitude of the potential loss *L*, and the probability *p*, that the loss will occur. Risk assessment consists in an objective evaluation of risk in which assumptions and uncertainties are clearly considered and presented. Part of the difficulty of risk management is that measurement of both of the quantities in which risk assessment is concerned - potential loss and probability of occurrence - can be very difficult to measure. The chance of error in the measurement of these two concepts is large. A risk with a large potential loss and a low probability of occurring is often treated differently from one with a low potential loss and a high likelihood of occurring. In theory, both are of nearly equal priority in dealing with first, but in practice it can be very difficult to manage when faced with the scarcity of resources, especially time, in which to conduct the risk management process (Power, 2004).

RESEARCH METHODOLOGY

Research Design

The main focus of this study was both qualitative and quantitative. However some qualitative approach was used in order to gain a better understanding and possibly enable a better and more insightful interpretation of the results from the quantitative study. The research adopted an exploratory research design. This research design was adopted since it is a non-experimental investigation in which researchers sought to identify cause and effect relationship by forming

groups of individuals/objects in whom the independent variable is present or present at several levels and then determining whether the groups differ in the dependent variable (Mugenda &Mugenda 1999). It is the easiest research free form material bias and enables one to intensively study a particular area. This may not be possible with other methods of study.

Population

According to Cooper and Schindler (2000), a population is the total collection of elements about which we wish to make inferences. The target population of this study were the all the 42 commercial banks in Kenya. The study focused more on the section and particularly on the top, middle and lower level management staff in the commercial banks who are directly dealing with the day to day management of the company since they are the ones conversant with the subject matter of the study. Mugenda and Mugenda (1999) explain that the target population should have some observable characteristics, to which the researcher intends to generalize the results of the study.

Data Collection

The study used both primary and secondary data. Primary data was obtained through self-administered questionnaires with closed and open-ended questions. A 5-point likert scale was used to assess the effects of risk management on performance in the banks. The questionnaires included structured and unstructured questions and were administered through drop and pick method to respondents. The closed ended questions enabled the researcher to collect quantitative data while open-ended questions enabled the researcher to collect qualitative data.

Data Analysis

Before processing the responses, the completed questionnaires were edited for completeness and consistency. The data was then be coded to enable the responses to be grouped into various categories. A descriptive analysis was employed. Descriptive statistics such as means, standard deviation and frequency distribution were used to analyze the data. The quantitative data on risk management was measured in real values by normalizing. Tables and other graphical presentations as appropriate were used to present the data collected for ease of understanding and analysis. In addition, the researcher conducted a multiple regression analysis so as to determine the relationship between the bank's profitability and the four risk management practices. The researcher used ordinary least squares method for estimation. A probabilistic model was used to represent the randomness that is part of real-life process using simple linear regression model to analyze the interval variables, the independent and dependent variables.

For the methods of ordinary least squares (OLS) and the regression equation to estimate and predict, four requirements involving the probability distribution of the error variable must be satisfied (Keller, 2001). To evaluate how well the regression models fit the data statistical techniques were employed to conduct the tests.

The probability distribution is normal. The t and f tests used in regression require that the error term follow normal distribution. The mean of the distribution is zero and hence no relationship between the explanatory variables as the assumption of the classical linear regression model using ordinary least squared (OLS) is that there is no multicollinearity among the regressors included in the regression model. Multicollinearity test was therefore conducted to detect the extent of correlation.

The regression equation was ($Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + e$):

Whereby   Y = banks performance (measured using ROA)

X1= Risk Identification (measured using Inspection, Financial   statement analysis and Risk rating and collateral)

X2 = Risk Monitoring (Controls, Responses, Reporting and review)

X3= Risk analysis (Transferring risk, Eliminating risk, Reducing risk, Subdividing risk and risk Prevention)

X4= Risk Assessment (measured using Approximations and projections)

e = Error Term

RESULTS AND FINDINGS

Descriptive Statistics for the Model Variables

	Mean	Minimum	Maximum	Std. Deviation
Financial Performance	7.589098	4.7093	5.4788	2.1176330
Risk identification	0.337204	0.2231	0.4671	0.1013428
Risk analysis	17.576467	15.4249	18.4081	1.2324235
Risk assessment	8.589098	6.7093	9.4788	1.1176330

Risk monitoring	18.454888	17.5044	18.9335	.5667863

Descriptive Statistics for the Model Variables

The table above shows the mean score, minimum and maximum values and the standard deviations for the value of variables; both dependent and independent used found from the secondary sources. According to the table, Risk analysis had a mean of 17.576467 with a standard deviation of 1.2324235 between a maximum and a minimum value of 15.4249 and 18.4081 respectively. Since as Bogan, (2008) advanced, credit risk management is defined as having an Risk analysis level of 100% or more or more and the $e^{0.3372} = 1.401$ is 140%, means that the financial institutions are managing their credit levels.

Financial performance

This study showed that there is a significant relationship between financial performances (in terms of profitability) and credit risk management (in terms of loan performance and capital adequacy). The results of the analysis states that both Non-Performing Loan Ratio (NPLR) and capital adequacy ratio (CAR) have negative and relatively significant effect on ROE, with NPLR having higher significant effect on ROE in comparison to CAR.

Hence, the regression as whole is significant; this means that NPLR and CAR reliably predict ROE. From the data analyzed above, the relationship of the three variables i.e. ROE, CAR, and NPLR well explains the credit risk management on the financial performance of these institutions. Since banks take deposits and use the same to advance loans the costs associated with these loans e.g. insurance costs reduces the profitability margins of the bank. Increase in loan books may at times increase the portfolio at risk and hence an upward increase in insurance costs. Return on equity (ROE) is the reward to the shareholders for the funds they have invested with the banks after other financiers and costs, including liabilities e.g. taxes have been paid. Therefore increased portfolio at risk will reduce the revenue aspect and increase the cost associated as indicated by the analysis of nonperforming loans.

This therefore means that we reject our null hypothesis Credit risk management practices does not affect financial performance of commercial banks in Kenya and accept our alternate hypothesis which is Credit risk management practices affect financial performance of commercial banks in Kenya

Multiple Regression

In addition, the researcher conducted a linear multiple regression analysis so as to test the relationship among variables (independent) on the effect of credit risk management on performance of commercial banks in Kenya. The researcher applied the statistical package for

social sciences (SPSS) to code, enter and compute the measurements of the multiple regressions for the study.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.897	.880	.133	.3195

Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (Financial Performance) that is explained by all the four independent variables (Risk identification, Risk analysis, Risk monitoring and Risk assessment.)

The four independent variables that were studied, explain only 88% of the financial performance as represented by the R^2. This therefore means that other factors not studied in this research contribute 12% of the Financial Performance. Therefore, further research should be conducted to investigate the other factors (12%) that affect Financial Performance.

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.534	5	2.878	52.400	.0073
	Residual	186.555	27	2.129		
	Total	198.089	32			

The significance value is 0.0073 which is less that 0.05 thus the model is statistically significant in predicting risk identification, risk analysis, risk monitoring and risk assessment. The F critical at 5% level of significance was 3.23 (obtain from frequency table). Since F calculated is greater than the F critical (value = 52.400), this shows that the overall model was significant.

Multiple Regression Analysis

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	3.657	1.033		0.787	0.255
	Risk Identification	1.654	0.107	0.159	1.091	0.002
	Risk analysis	0.988	0.139	0.085	0.687	0.005
	Risk Assessment	0.568	0.097	0.145	0.97	0.013
	Credit Monitoring	0.444	0.069	0.210	0.349	0.032

The researcher conducted a multiple regression analysis so as to determine the relationship between Financial Performance and the four variables. As per the SPSS generated table 4.14, the equation ($Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$) becomes:

$Y = 3.657 + 1.654 X_1 + 0.988 X_2 + 0.568 X_3 + 0.444 X_4 + \varepsilon$

Where Y is the dependent variable (Financial Performance), X_1 is the Risk identification variable, X_2 is Risk analysis variable, X_3 is Risk assessment variable and X_4 is Risk Monitoring

According to the regression equation established, taking all factors into account (Risk Identification, Risk analysis, Risk monitoring and Risk assessment) constant at zero, Financial Performance will be 3.657. The data findings analyzed also show that taking all other independent variables at zero, a unit increase in Risk identification will lead to a 1.654 increase in Financial Performance; a unit increase in Risk analysis lead to a 0.988 increase in Financial Performance, a unit increase in Risk assessment will lead to a 0.568 increase in Financial Performance, a unit increase in Risk monitoring will lead to a 0.444. This infers that Risk identification contributes more to the Financial Performance followed by Risk monitoring.

At 5% level of significance and 95% level of confidence, Risk identification had a 0.002 level of significance; Risk analysis showed a 0.005 level of significant, Risk monitoring showed a 0.013

level of significant, Risk assessment had a 0.032 level of significant; hence the most significant factor is Risk identification.

Karl Pearson's Coefficient of Correlation

To compute the correlation (strength) between the study variables and their findings the researcher used the Karl Pearson's coefficient of correlation (r). From the findings, it was clear that there was a positive correlation between Financial Performance and Risk identification as shown by a correlation figure of 0.512, it was also clear that there was a positive correlation between Financial Performance and Risk analysis adopted with a correlation figure of 0.609, there was also a positive correlation between Financial Performance and Risk Analysis with a correlation value of 0.732 and a positive correlation between Financial Performance and supportive organization structure staffs training with a correlation value of 0.518. This shows that there was a positive correlation between Financial Performance and Risk identification, Risk assessment, Risk Analysis and Risk Monitoring.

Previous studies by Donaldson (1994), Treacy and Carey (1998) Tummala and (Burchett 1999) and Mwisho (2001) indicate that analysis, among others, frequent contact with borrowers, creating an environment that the organization can be seen as a solver of problems and trusted adviser, develop the culture of being supportive to borrowers whenever they are recognized to be in difficulties and are striving to deal with the situation, identifying the flow of borrower's business through the commercial bank's account, regular review of the borrower's reports as well as an on-site visit; updating borrowers credit files and periodically reviewing the borrowers rating assigned at the time the credit was granted. These study findings therefore support previous literature.

Coefficient of Correlation

		Financial Performance	Risk identification	Risk analysis	Risk Assessment	Risk Monitoring
Financial Performance	Pearson Correlation	1				
	Sig. (2-tailed)					
Risk Identification	Pearson Correlation	.5120	1			
	Sig. (2-tailed)	.0023				
Risk Analysis	Pearson Correlation	.6090	.3381	1		
	Sig. (2-tailed)	.0031	.0012			
Risk Assessment	Pearson Correlation	.7320	.1210	.0608	1	
	Sig. (2-tailed)	.0027	.0150	.0042		
Risk Monitoring	Pearson Correlation	.5180	.3370	.0000	.1580	1
	Sig. (2-tailed)	.0168	.0031	1.000	.0028	

Risk Identification

The key findings were that risk identification contributes more to the financial performance followed by risk monitoring. The banks involve internal auditors largely to identify risk. Also external auditors are used in the risk identification process. Study findings revealed that the commercial banks considers risk identification as a process in credit risk management to a very great extent, that in view of risk analysis as a credit risk management practice in the commercial banks the application of modern approaches to risk measurement, particularly for credit and overall risks is important for banks, the director's report on risk monitoring enables the shareholders to assess the status of the corporation knowledgeably and thoroughly, that the commercial banks considers credit risks to ensure profitability and that the bank considers technology risks to ensure profitability

Risk Analysis

The study also found that in view of risk analysis and assessment as a credit risk management practice in the bank's the application of modern approaches to risk measurement, particularly for credit and overall risks is important for banks.

Risk Monitoring

It was also found out that that risk monitoring helps the banks management to discover mistake at early stage and that risk monitoring can be used to make sure that risk management practices are in line with proper risk monitoring

Previous studies by Donaldson (1994), Treacy and Carey (1998) Tummala and (Burchett 1999) and Mwisho (2001) indicate that monitoring involves, among others, frequent contact with borrowers, creating an environment that the organization can be seen as a solver of problems and trusted adviser, develop the culture of being supportive to borrowers whenever they are recognized to be in difficulties and are striving to deal with the situation, monitoring the flow of borrower's business through the commercial bank's account, regular review of the borrower's reports as well as an on-site visit; updating borrowers credit files and periodically reviewing the borrowers rating assigned at the time the credit was granted. These study findings therefore support previous literature.

According to the findings, the director's report on risk monitoring enables the shareholders to assess the status of the commercial bank's knowledge on credit risk and risk monitoring helps the bank management to discover mistake at early stage. Further risk monitoring can be used to make sure that risk management practices are in line with proper risk monitoring.

Further, commercial bank considers credit risks to ensure profitability and that the bank considers technology risks to ensure profitability.

Risk Assessment

Commercial banks in Kenya use credit risk appraisal, assessment and evaluation processes when ascertaining the creditworthiness of their customers and capacity is the most significant factor in credit risk assessment, appraisal and evaluation process followed by character, condition, common sense and control in that order. Commercial banks attach a great significance to credit risk, followed by liquidity risk, foreign exchange risk, strategic risk, interest rate risk and operational risk in that order.

The findings relate with those of Aboagye & Otieku, (2010) who conducted a study on Credit Risk Management and Profitability in financial institutions in Sweden. They found that credit risk management in financial institutions has become more important not only because of the financial crisis that the world is experiencing nowadays but also the introduction of Basel II.

They concluded that since granting credit is one of the main sources of income in financial institutions, the management of the risk related to that credit affects the profitability of the financial institutions (Aboagye & Otieku, (2010).

The study found that the level of credit risk assessment and management was high in the banks to a large extent. All the commercial banks in Kenya follow procedures when assessing and managing credit risk and that credit risk assessment and management affects credit risk in the commercial banks in Kenya to a large extent. The study found that the organizations have specified credit collection period.

Valsamakis et al (2005) found that Credit risk encompasses both the loss of income resulting from the sector inability to collect anticipated interest earnings as well as the loss of principal resulting from loan defaults. Credit risk arises because of the possibility that the expected cash flows from advances and securities held, might not be paid in full. He concluded that credit risk is considered the most lethal of the risks firms face. The study also found that the inability to enforce covenant of commercial banks was high. Respondents unanimously indicated that effective management of their banks was affected by liquidity and probability, and that asymmetric information in loan market affects the effective management of Non-Performing loans in commercial banks to a very large extent.

The study found that inability to enforce covenant causes Credit risk among commercial banks in Kenya to a very large extent. 90% of the respondents indicated that the inability to enforce covenant of bank was high.

On liquidity and probability, 67.5% of the respondents indicated strong agreement that the liquidity and probability affects the effective management of Credit risk in commercial banks.

On the fourth variable, the study found that 55% of the respondents indicated that asymmetric information in loan market affects the effective management of Non-Performing loans in listed commercial banks to a very large extent.

Waweru & Kalani (2009) found that some of the causes of non-performing loans in Kenyan banks were national economic downturn, reduced consumer, buying ability and legal issues. This current study appreciate that the nonperforming loan and loan delinquency concepts are similar. However this study differs significantly from this because the studies have used different variables.

The study also found that Credit Risk Management (CRM) is essential to optimizing the performance of financial institutions. Lending has been, and still is, the mainstay of financial institutions, and this is more true to emerging economies of developing countries where capital markets are not yet well developed. This is because business firms on one hand are complaining about lack of credit and the excessively high standards set by financial institutions, while

financial institutions on the other hand have suffered losses on bad loans. It has been found out that in order to minimize loan losses thus the credit risk, it is essential for financial institutions to have an effective credit risk management system in place.

Effective CRM involves establishing an appropriate Credit Risk (CR) environment; operating under a sound credit granting process; maintaining an appropriate credit administration that involves monitoring process as well as adequate controls over CR. It requires top management to ensure that there are proper and clear guidelines in managing Credit Risks, that is all guidelines are properly communicated throughout the organization; and that everybody involved in CRM understands them.

The findings relat with those of Fuser et al, 1999) who found this classification enables the management to divide risks that are threatening the existence of the corporation from those which can cause slight damages. Frequently, there is an inverse relationship between the expected amount of loss and its corresponding likelihood, i.e. risks that will cause a high damage to corporation, like earthquakes or fire, occur seldom, while risks that occur daily, like interest rate or foreign exchange risks, often cause only relatively minor losses, although these risks can sometimes harm the corporations seriously.

CRM is a structured approach to managing uncertainties through risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources. The strategies include: transferring to another party, avoiding the risk, reducing the negative effects of the risk and accepting some or all of the consequences of a particular risk.

The process of risk management is a two step process. The first is to identify the source of the risk, which is to identify the leading variables causing the risk. The second is to devise methods to quantify the risk using mathematical models, in order to understand the risk profile of the instrument. Once a general framework of risk identification and management is developed, the techniques can be applied to different situations, products, instruments and institutions. It is crucial for banks to have comprehensive risk management framework as there is a growing realization that sustainable growth critically depends on the development of a comprehensive risk management framework.

Finally the study found that Credit risk is the largest source of risk for any lending financial institution. Therefore, an effective and sound credit risk management system is important to the stability of any local financial institution. Overall, the management of this risk requires the development of an appropriate credit risk culture and environment. A sound credit extension process, maintaining appropriate credit administration, measurement and monitoring process and ensuring adequate credit controls, enhances this.

The finding collate with those of Fallon, (1996) who said that each organization must apply a consistent evaluation and rating scheme to all its investment opportunities in order for credit decisions to be made in a consistent manner and for the resultant aggregate reporting of credit risk exposure to be meaningful. To facilitate this, a substantial degree of standardization of process and documentation is required. This has lead to standardized ratings across borrowers and a credit portfolio report that presents meaningful information on the overall quality of the credit portfolio. In a single rating system, a single value is given to each loan, which relates to the borrower's underlying credit quality.

Finally, the researcher found out that credit management procedures ensure that all credits must be monitored and reviewed periodically through standardized procedures. The bank can report the quality of its loan portfolio at any time along the lines of the report presented and that credit management procedures results in a periodic but timely report card on the quality of the credit portfolio and its change from month to month.

The findings relate with those of (Derban *et al.*, 2005) who said that Monitoring involves, among others, frequent contact with borrowers, creating an environment that the organization can be seen as a solver of problems and trusted adviser; develop the culture of being supportive to borrowers whenever they are recognized to be in difficulties and are striving to deal with the situation; monitoring the flow of borrower's business through the bank's account; regular review of the borrower's reports as well as an on-site visit; updating borrowers credit files and periodically reviewing the borrowers rating assigned at the time the credit was granted.

Conclusions

Based on the above findings, the study concludes that the bank considers risk identification as a process in credit risk management to a little extent, that the bank focuses in interest rate risks to a great extent in the risk identification map and that the bank focuses in foreign exchange risks to a moderate extent.

The study also concludes that in view of risk analysis and assessment as a credit risk management practice in the bank the application of modern approaches to risk measurement, particularly for credit and overall risks is important for commercial banks.

In addition, the study concludes that director's report on risk monitoring enables the shareholders to assess the status of the corporation knowledgeably and thoroughly, that risk monitoring helps the bank management to discover mistake at early stage and that risk monitoring can be used to make sure that risk management practices are in line with proper risk monitoring

Finally, the researcher concludes that credit risk management procedures affect profitability of the bank, that to facilitate credit risk management as a substantial degree of standardization of

process and documentation is required, that credit risk management leads to standardized ratings across borrowers and a credit portfolio report that presents meaningful information on the overall quality of the credit portfolio.

The bank should consider risk identification as a process in credit risk management and focus in interest rate risks and foreign exchange risks to a great extent in the risk identification map. Further, the banks should involve internal auditors, external auditors, middle and lower level employees as well as senior employees in the process of risk identification. Auditors should be involved by making them begin the inherent risk evaluation process by generating expectatins of accunts balances, by letting them determine how changes should interact with historic trends to produce an expected balance in the account to a moderate extent and also by letting them identify changes that have occurred in the firm or its environment to a moderate extent.

In addition, the study also recommends the application of modern approaches to risk measurement, particularly for credit and overall risks for banks in view of risk analysis and assessment as a credit risk management practice.

Further, director's report on risk monitoring should enable the shareholders to assess the status of the corporation knowledgeably and thoroughly, that risk monitoring helps the bank management to discover mistake at early stage and risk monitoring be used to make sure that risk management practices are in line with proper risk monitoring

Finally, the research recommends credit risk management procedures be used to influence profitability of the bank positively, and also recommends the management of the banks to oversee facilitation of credit risk management as a substantial degree of standardization of process and documentation. Further, since credit risk management leads to standardized ratings across borrowers and a credit portfolio report that presents meaningful information on the overall quality of the credit portfolio it should be used to ensure that all credits are monitored, and reviewed periodically to allow the bank to report the quality of its loan portfolio at any time.

Recommendation

Risk is corporally related to competitiveness and profitability of commercial banks. It is important for banks management to understand how they can edge themselves against the eminent dangers of over exposure to credit risk whose importance cannot be understated as can be realized from the findings that can impact negatively on their profitability. This can be achieved through strong adherence to the use of credit appraisal model.

The results of this study are in line with a considered view in the credit risk management literature and provide an important insight for credit risk management process appropriate culture and credit policy designed taking into consideration the credit risk evaluation, assessment and appraisal procedures.

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