EFFECT OF RISK ANALYSIS ON PERFORMANCE OF FINANCIAL INSTITUTIONS

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Abstract

Purpose*:* The purpose of the study was to determine the effect of risk analysis on performance of financial institutions.

Methodology: The study used explanatory research design. The study used stratified random sampling to select respondents from target population comprising of managers of 46 commercial banks, 52 Micro Finance institutions (MFIs) and 200 SACCOs and a sample size of 239 respondents obtained. Data was collected using questionnaires. Descriptive statistics was presented, while inferential statistics was done using Pearson product moment correlation.

Results: The risk analysis had positive relationship with the performance of financial institutions.

Unique contribution to theory, practice and policy: considerations due to the complexity of the financial sector nowadays makes it necessary before any policy analysis should rely upon different indicators and mainly upon those that reflect the whole reality of the industry performance and explicitly consider and carefully impose some regulations that consider different characteristics of ownership structure of financial institutions and the level of risk tolerance.

Key words: *Risk analysis, performance, financial institutions*

1.0 INTRODUCTION

1.1 Background of the Study

Firm performance is a concept that explains the extent to which an organization achieves objectives. It indicates how organizations have been scrutinizing key business activities over time (Saeidi *et al.,* 2014). Firm performance is an indicator that helps to evaluate and measure how an organization succeeds in realizing business objectives to all its stakeholders (Antony and Bhattacharyya, 2010). Firm performance refers to a firm's ability to achieve its goal through the application of available resources in an efficient and effective manner (Asat *et al.,* 2015). Studies have used different types of performance indicators to measure firm performance.

For instance, measures such as return on investment, return on sale and return on equity are some of the commonly used parameters to measure performance (Saeidi *et al.,* 2014). Thus, for a more comprehensive assessment, organizations have resorted to the utilization of both financial and non-financial performance measures. Judge *et al.* (2003) used both financial and non-financial indicators such as process improvements, customer satisfaction, capacity utilization and product service quality to measure firm performance.

The financial performance assessment is devoid of such a multitude of options and methodologies despite critical importance of financial sustainability. Though an ambition for sustainable institutions has been often articulated, there was also an opinion that most financial institutions working in this field have been unsustainable. Research studies have shown that this is predominantly connected to the perception of micro borrowers' risk and creditworthiness, and the diseconomies of scale in making small loans (Quach, 2005).

According to Dayson *et al*., (2006), microfinance has been attractive to lending agencies because of demonstrated sustainability and low cost of operations. Results of these studies strongly suggest that bank profitability determinants vary across countries and also among regions of the world (Doliente, 2003). In accordance with the study of Grier (2007), profitability ratios are often used in a high esteem as the indicators of credit analysis in banks, since profitability is associated with the results of management performance. Bank performance indicates bank's capacity to generate sustainable profits. Banks protect the profitability against unexpected losses, as it strengthens its capital position and improves future profitability through the investment of retained earnings. A bank that persistently makes a loss will ultimately deplete its capital base, which in turn puts equity and debt holders at risk.

The International Monetary Fund (IMF, 2014) survey on financial performance of Sub-Sahara Africa home grown institutions finds that risks were increasing and negatively affected the financial performance of firms in the region. The report further outlines various risks such as; declining prices for commodity goods, fiscal vulnerabilities, security, and growing capital flows were dynamics for risk management. In some countries for instance in Ghana growing deficits in the national budget and political instability was affecting the local currencies against the major currencies and therefore putting pressure on locally produced goods. While in the case of Zambia, general increase in wages was affecting firms 'income by increasing cost of production. Generally the increasing insecurity rates in Central Africa Republic and Southern Sudan was the main reason behind the continuous factors that affected growth prospects of the local firms in the region (IMF, 2014).

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In order to create shareholder value, bank's return on equity (ROE) needs to be greater than its cost of equity. Return on equity, ROE, and return on assets and ROA are the most commonly used ratios, and the quality level of ROE is between 15% and 30%, for ROA is at least 1%. *Wong et al.,* (2008) indicated that the efficiency of banks can be measured by using the ROE which illustrates to what extent banks use reinvested income to generate future profits. According to Riksbank's Financial Stability Report (2002), the measurement of connecting profit to shareholder's equity is normally used to define the profitability in the banks. Jensen Investment Management (2008) mentioned that ROE provides a very useful gauge of profit generating efficiency because it measures how much earnings a company can get on the equity capital.

European Central Bank (2010) looks at financial performance of banks from the perspective of analyzing the main drivers of profitability; earnings, efficiency, risk-taking and leverage. The report goes on to note that the performance however needs to incorporate the views of various stakeholders (e.g. depositors, debt or equity holders and managers). The CAMELS model, a recent tool of financial analysis also provides a framework for measuring financial performance of banks. According to the parameters bank financial performance is looked at in the perspective of the internal strength of the bank, loan portfolio quality, management efficiency, liquidity management and the banks sensitivity to risk.

A study conducted by Hakkak and Ghodsi (2015) revealed that implementation of non-financial performance measures in organizations has a significant positive effect on firms' competitive advantage and sustainability. "The organization's ability to achieve long-term goals is based on its financial performance" (Wheelen and Hunger, 2000). Financial performance is the measurement of the result achieved or expected in the light of predetermined criteria to determine what can be measured (Al-Hannawi, 2009).

1.2 Statement of the Problem

Performance refers to money that a firm can produce with the resources it has. The goal of most financial institution is profit maximization (Niresh & Velnampy, 2014). Profitability involves the capacity to make benefits from all the business operations of a financial institution (Muya & Gathogo,2016).Theoretically, risk management plays a key role in improving firms' financial performance (Kaplan *et al.*, 2008).Risk management affect financial performance of a firm by reducing surprises arising from business complexities, unpredictable business environment and evolving risks. Effective risk management practices and profitability when aggregated affects financial performance of firms in today's competitive environment, profitability is a key factor for smooth running of the business that has a significant effect on performance of the bank and economic development as well ;Tariq *et al*., (2014).

Financial institutions are bestowed with an imperative responsibility to execute in the economy by acting as intermediaries between the surplus and deficit units, making their job as mediators of critical significance for efficient allocation of resources in the modern economy; El-Hawary *et al.*, (2007). The stability of the entire economy is affected by a crumple of the financial institutions, as a result a robust risk management system is mandatory to keep the financial institutions up and running (BNM, 2008; Blunden, 2005). Risk management is an issue that needs to be stressed and investigated, especially in the banking industry, where the need for a good risk management structure is extremely important.

In the financial sector, risk management is seen as one of the most essential internal itineraries upon which decisions are made by financial institutions (Pauzuolis, & Cvilikas 2014). A good risk management framework helps the institution to protect from unfavorable consequences (downside risks) and permit the institution to take the benefit of any possible opportunities (up-side risks). Moreover, as the nature of business for financial institutions are accepting and managing credit risk, thus they act as shock absorbers.

1.3 Objectives of the Study

To establish the effect of risk analysis on performance of financial institutions.

2.0 LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Risk Management Theory

Wenk (2005), states that the Risk Management model consists of risk identification, risk assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities. Risks can come from uncertainty in financial markets, project failures, legal liabilities, credit risk, accidents, natural causes and disasters as well as deliberate attack from an adversary, or events of uncertain or unpredictable root-cause. Several risk management standards have been developed including the Project Management Institute, the National Institute of Science and Technology, actuarial societies, and ISO standards. Methods, definitions and goals vary widely according to whether the risk management method is in the context of project management, security, engineering, industrial processes, financial portfolios, actuarial assessments, or public health and safety (Simkins and Fraser, 2010).The strategies to manage risk typically include transferring the risk to another party, avoiding the risk, reducing the negative effect or probability of the risk, or even accepting some or all of the potential or actual consequences of a particular risk.

Effective risk management can bring far reaching benefits to all organizations, whether large or small, public or private sector (Ranong and Phuenngam, 2009). These benefits include, superior financial performance, better basis for strategy setting, improved service delivery, greater competitive advantage, less time spent firefighting and fewer unwelcome surprises, increased likelihood of change initiative being achieved, closer internal focus on doing the right things properly, more efficient use of resources, reduced waste and fraud, and better value for money, improved innovation and better management of contingent and maintenance activities (Wenk, 2005).Effective risk management structure supports better decision making through a good understanding of the risks and their likely impact. In practicing Risk Management (RM), if risks are left unmanaged, they can cause a negative impact on stake holder's value. It therefore means that good risk management enhances shareholders value. By creating a good discipline in risk management it helps improve governance process and therefore improves effectiveness (Moore; 1983).

According to Dorfman (2007), ensuring that an organization makes cost effective use of risk management first involves creating an approach built up of well-defined risk management and then embedding them. These risk management include financial risks management, operational risk

management, governance risk management, and strategic risk management. The theory of Risk Management Theory is applied in the study to determine the effects of risk management on financial performance of financial institutions in Kenya.

2.2 Empirical Studies

The risk analysis is a comprehensive risk measurement and mitigation method used for various risks. Strutt (2003) reveals that risk analysis is set of stages of systematic assessment which may involve a number of different analyses like establishing acceptable or tolerable levels of risk, evaluation of risks, determine whether the risks are as low as reasonably practicable, and determine risk reduction measures where appropriate. Risk analysis and assessment comprises identification of the outcomes, probability of those outcomes and estimation the magnitude of the consequences. According to Strutt (2003), risk analysis now goes beyond evaluation to include some of the decision making processes of risk management.

Claessens, Fan and Wong (2003) analyzed the relationship between the independent director system and the operating performance of business in Taiwan. The authors attributed risky financing patterns and weak performance of business entities to poor corporate governance. It is from the same perspective that Donaldson (2003) pointed out that good corporate governance is crucial in enhancing investors' confidence and market liquidity. In further support of the foregoing are Brown and Caylor (2004) who opine that indeed firms with weaker corporate governance perform poorly in contrast to entities whose corporate governance is stronger in terms of profitability, riskiness, stock returns, and payments of dividends.

In addition, Ellul and Yerramilli (2010) conducted an empirical study on risk controls in the U.S. bank holding companies. Their study involved collection of data from on 74 of the top 100 bank holding firms in the country in order to analyze the link between bank risk-taking and the structure of risk management in the organization. It was later acknowledged that the scholar's study was the only one that employed systematic data to analyze the role of risk management weaknesses in a crisis. Nonetheless, even their study was highly constrained since the firms under study limited their disclosures according to Anil (2010). Ellul and Yerramilli's (2010) risk management index presents several other results. These include the ability to explain year to year changes in risk taking, illustrating that firms with better risk management had better operating performance during crisis times, and documenting that the aforementioned patterns are robust to controlling for a host of other influences.

Al-Tamimi (2002) studied the degree to which the financial institutions utilized risk management techniques to deal with various types of risk. The result of study was that these financial institutions faced mainly credit risks. The research also discovered that the main means used to identify risk was via inspection conducted by branch managers and via financial statements. The methods used in risk management avoided the escalation credit risk, credit score, credit worthiness analysis, risk rating and collateral. The research also highlighted the willingness of financial institutions to adopt sophisticated risk management techniques.

Moreover, Salas and Saurina (2002) investigated the existence of credit risk in Spanish financial institutions. The schedule of data was to compare the determinants of problematic loans of Spanish financial institutions during the period 1985-1997. The GDP growth rate, firms, family indebtedness, rapid past credit or branch expansion, inefficiency, portfolio composition, size, net

interest margin, capital ratio and market power are the list of variables that is able to explain credit risk further. The study revealed that the role of competition in the banking sector and ownership determines credit risk. It also raises important financial institution supervisory policy issues: the use of financial institution variables as early warning indicators and finally the advantages of financial institutions managing from different regions merging together.

Linbo (2004) offered two important practices of information on the efficiency of the financial institutions in terms of profit that were found to be related to risks. The results suggest that the profitability of a financial institution is sensitive to credit and solvency risk but it is not sensitive to liquidity risk or to the investment/mix of portfolios. Meanwhile, Rajagopal (1996) attempted to oversee financial institutions risk management and suggested a model for pricing the products based on credit risk assessment of the borrowers. It was concluded that good risk management results in good practice, which ultimately leads to the profitable survival of the institution. A proper approach to risk identification, measurement and control will safeguard the interests of financial institutions in the long run.

Richard *et al.,* (2008) conducted a study in Tanzania on understanding credit risk management system in financial institutions established in less developed countries. The result obtained indicated that there were differing elements of credit risk management in financial institutions that operated in a lesser developed economy compared to the developed economy. Therefore it can be concluded that the environment in which the financial institution operates is an important criteria for the success of credit risk management. A similar empirical work was conducted by Hahm (2004) on interest rates and exchange rates in Korea. The Korean financial institutions were involved in both the interest rate and exchange rate risks. It was found that the efficiency of Korean financial institutions was closely linked to the degree of the interest rate and credit policy.

The risk analysis is viewed from the same perspective as risk assessment. Ademba (2011) reported on the challenges that SACCO regulations in Africa face. When citing the SACCO regulations model, Ademba noted that as SACCOs approach maturity stage, regulations concentrate on prudential standards which seek to establish a risk assessment process that focuses on liquidity, capital and governance among other vital issues. Magali (2013) further conducted a study on the influence or rural SACCOs' variables on loan default risks in Tanzania. The results of the study revealed that the large size loan had a higher risk of default than the small one. In that respect, the study recommended that SACCOs ought to offer large size loans to their members after conducting a deep analysis of credit risks mitigation techniques.

Mwirigi (2006) examined the credit risk management techniques adopted by microfinance institutions (MFIs) in Kenya. The author inferred that many MFIs have developed distinct credit risk management departments with the aim of credit appraisal. Lagat *et al.,* (2013) studied the effect of credit risk management practices on lending portfolio among SACCOs in Kenya. The study observed that, most of these financial institutions have adopted risk management practices as one way of managing their portfolio. In this case management processes address risk identification, evaluation, analysis, monitoring and mitigation.

3.0 RESEARCH METHODOLOGY

The study used explanatory research design. The study used stratified random sampling to select respondents from target population comprising of managers of 46 commercial banks, 52 Micro

Finance institutions (MFIs) and 200 SACCOs and a sample size of 239 respondents obtained. Data was collected using questionnaires. Descriptive statistics was presented, while inferential statistics was done using Pearson product moment correlation.

4.0 RESULTS

4.1 Demographic Information of the Respondents

A total of 279 questionnaires administered to the respondents but only 236 were used in the analysis and this accounted for a response rate of 81.7% which was found to be very good. This agrees with Babbie (1990) that a response rate of over 70% is very good. Although these are rules of thumb that ignore the compounding effect of sampling, measurement, and coverage errors. The demographic information sought from the respondents included; the gender, age, educational level, department worked, duration the firm has been in operation. All these were relevant in establishing the extent to which personal characteristics may influence risk management practices as summarized in table 1. Majority of the respondents involved in the study were male. Of the 236 respondents included in the study, 58.5% (138) were male, while 41.5% (98) were female. This indicates that there was gender disparity in the employees working in financial institutions in Kenya.

Regarding age, the results showed that 30.5% (72) of the respondents were in the age bracket of 35 and 44 years, 29.2% (62) were in the age bracket of 25 and 34 years and 26.3% (62) were in the age bracket of 45 and 54 years and 8.9% (21) were over the age of 54 years. The findings showed that dominant 64.8% (153) of the tea firms' employees were in their active working age of below 44 years. The academic levels of employees were varied and 61 (25.8%) had diploma qualification, 104 (44.1%) had degree, 64 (27.1%) having masters, 3% had PhD. The findings indicated that majority of the employees had at least a diploma as the highest level of Education and were in good position to perform well during the adoption of risk management practices. During the study 88 of the respondents (37.3%) held the position of credit officers, 49(20.8%) as risk and compliance, 43 (18.2%) from mortgage department and 56(23.7%) from debt recovery.

Regarding duration of operation of the financial institution, the results showed that 50.4% had been in operation for between 26 and 30 years', 16.5% between 16 and 20 years', with 11.9% between 11 and 15 years, while10.6% between 6 and 10 years and 7.2% being in operation between 21 and 25 years. The findings showed that most of the financial institutions had been in operation for more than 20 years.

Table 1: Respondents Demographic Characteristics

	Response	Frequency	Percent
Gender	Male	138	58.5
	Female	98	41.5
	Total	236	100.0
Age bracket	18-24 years	12	5.1
	25-34 years	69	29.2
	35-44 years	72	30.5
	45-54 years	62	26.3
	55– 64 years	21	8.9

	Total	236	100.0
Highest level of education	Diploma	61	25.8
	Bachelors	104	44.1
	Masters	64	27.1
	PhD	7	3.0
	Total	236	100.0
Type of department	Credit	88	37.3
	Risk and compliance	49	20.8
	Mortgage	43	18.2
	Debt recovery	56	23.7
	Total	236	100.0
Duration of operation of the institution	0-5 years	8	3.4
	6-10 years	25	10.6
	11-15 years	28	11.9
	16-20 years	39	16.5
	21-25 years	17	7.2
	26-30	119	50.4
	Total	236	100.0

4.2 Financial Institution Background Information

The background Information of financial institution sought from the respondents included; duration the financial institution implemented risk management compliance, nature of activities and size of the firm. All these were relevant control variable in establishing the extent to which risk management practices maybe influenced by size of the firm as summarized in table 2.

Table 2: Financial institution Background Information

	Response	Frequency	Percent
Duration the financial institution implemented risk management compliance	0-1years	7	3.0
	2- 4 years	56	23.7
	5-7 years	39	16.5
	8-10 years	47	19.9
	11-15 years	37	15.7
	15 years and above	50	21.2
	Total	**236**	**100.0**
Nature of activities	Commercial Banking	109	46.2
	Investment banking	28	11.9
	offshore banking	17	7.2
	Foreign Banking	3	1.3
	Investment (including funds)	9	3.8

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	Stock brokers	17	7.2
	Deposit Taking	53	22.5
	Total	**236**	**100.0**
Size of the Firm	Large (Over 40 Bn Assest)	40	16.9
	Medium (10-40 Bn)	56	23.7
	Small (below 10m)	140	59.3
	Total	**236**	**100.0**

Regarding duration the financial institution has implemented risk management compliance, the results showed that 21.2% had implemented risk management compliance for more than 15 years', 19.9% between 8 and 10 years', with 16.5% between 5 and 7 years, while 15.7% between 11 and 15 years. The findings showed that most of the financial institutions had implemented risk management compliance for more than 5 years. This concurs with Hull, (2012) that commercial banking in virtually all countries has been subject to a great deal of regulations. One of the regulations is the minimum capital commercial banks must keep absorbing loss if unexpected things happen. This kind of capital requirement is, in particular, conducted by Basel Committee which aims to enhance the key supervisory issue and improve the quality of banking supervision (Bis.org, 2014).

On the nature of activities the commercial bank 109 (46.2%)of the respondents identify the financial institutions engage in commercial banking activities, 22.5% deposit taking, with 11.9% in investment banking, 7.2% in offshore banking and stock brokers. This indicated that most of the financial institutions engage in banking. On the size of the firm most of the financial institutions 140(59.3%) had a small asset base of below 10 million, with 32.7% being medium sized with 10 to 40 million asset base and 16.9% with large asset base of over 40 billion. This indicates that commercial banks hold deposits, bundling them together as loans and operating payments mechanism.

4.3 Descriptive Statistics of Risk analysis

The respondent's views on risk analysis were sought and their responses presented in table 4.6. The findings showed that all the statements representing risk identification had a mean score of above 3.78, indicating that the respondents highly rated the variable. The overall skewness was -2.67and kurtosis of 8.61, indicating that the distribution of values deviates from the mean. From the 7 statements used to explaining analysis had an overall mean score of 4.06 indicating that respondents agreed on its risk analysis measures.

Table 3: Descriptive Statistics of Risk analysis

	Mean	Std. Deviation	Skewness	Kurtosis
Credit information sharing among commercial banks can help them in their risk analysis	4.4322	1.03125	-2.258	4.725
It is useful to classify the different risks according to the amount of damage they possibly cause	4.0339	.90325	-1.709	3.903

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The application of modern approaches to risk measurement, particularly for credit and overall banking risks is important for banks	4.0636	.95438	-1.253	1.815
The need to adopt new measurement approaches is particularly critical for banks because of the role play	4.0212	1.07366	-1.187	.743
Risk analysis and assessment comprises identification of the outcomes	4.0805	1.09052	-1.432	1.781
Risk analysis and assessment comprises estimation the magnitude of the consequences	3.9915	.98927	-1.472	2.115
Risk analysis and assessment comprises the probability of those outcomes	3.7797	1.33774	-1.085	.008
Mean	**4.0575**	**.72561**	**-2.668**	**8.605**

4.4 Factor Analysis for Risk Analysis

The risk analysis factor analysis results had KMO of 0.802 and a significant (p<.05) Bartlett's Test of Sphericity (Table 4). The varimax rotated principle component applied resulted in two factors loading that explained 64.18 % of the variance. Since all the statements conform, they were computed and renamed analysis for further analysis.

Table 4: Factor Analysis of Risk Analysis Rotated Component Matrix[a]

	Component	
	1	2
Credit information sharing among commercial banks can help them in their risk analysis	.729	
It is useful to classify the different risks according to the amount of damage they possibly cause	.738	
The application of modern approaches to risk measurement, particularly for credit and overall banking risks is important for banks	.834	
The need to adopt new measurement approaches is particularly critical for banks because of the role play	.625	
Risk analysis and assessment comprises identification of the outcomes	.755	

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Risk analysis and assessment comprises estimation the magnitude of the consequences	.725
Risk analysis and assessment comprises the probability of those outcomes	.891
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.802
Bartlett's Test of Sphericity (df-21)	.000
Total Variance Explained	64.181

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

4.5 Correlations

Pearson moment correlation was used to describe the relationship between independent and dependent variables, depending on the level of measurement. The relationship between independent variable (risk analysis) and dependent variable (performance of financial institutions) were investigated using Pearson product-moment correlation coefficient as shown in table 5.

A positive relationship exist between risk analysis and performance of financial institutions [r = .385, n = 236, p<.05]. This showed that an increase in risk analysis the higher the performance of financial institutions. This agrees with Lagat *et al.* (2013) that, most of these financial institutions have adopted risk management practices as one way of managing their portfolio.

Table 5 Pearson moment correlation Results

	Financial	**Analysis**
Performance	1	
Risk Analysis	.385[**]	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
c. Listwise N=236

5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Findings

The objective of the study was to establish the effect of risk analysis on performance of financial institutions in Kenya. Risk analysis had a positive relationship with the performance of financial institutions [r=.385, p<.05]. An increase in risk analysis leads to higher performance of financial institutions. Most of these financial institutions have adopted risk management practice to effectively manage their portfolio. From the model the risk analysis had no significant relationship with financial performance (P>0.05). The null hypothesis **(Ho2)** stating that there is no significant effect of risk analysis on performance of financial institutions was not rejected.

5.2 Conclusions

The risk analysis had positive relationship with the performance of financial institutions.

5.2 Recommendations

The Central Bank of Kenya and Sacco's Regulatory Authorities as regulators should make considerations due to the complexity of the financial sector nowadays makes it necessary before any policy analysis should rely upon different indicators and mainly upon those that reflect the whole reality of the industry performance and explicitly consider and carefully impose some regulations that consider different characteristics of ownership structure of financial institutions and the level of risk tolerance. The policy implications might be different across different types of financial institutions. Consider establish effective and efficient risk analysis mechanisms that will assist financial institutions ascertain their risk earlier.

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