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The Effect of Risk Management on Financial Stability of Commercial Banks Listed at Nairobi Securities Exchange

Folem Dongfack Romeo
Financial Analyst, Department of Accounting, Finance and Investment, Kenya Methodist University, Nairobi, Kenya
Felix Mwambia
Professor, Department of Accounting, Finance and Investment, Kenya Methodist University, Nairobi, Kenya
James Gatauwa
Lecturer, Department of Accounting, Finance and Investment, Kenya Methodist University, Nairobi, Kenya

Abstract:
This study sought to establish the effect of risk management on financial stability of commercial bank. Specifically, to determine how operational risk management, capital risk management, market risk management and investment risk management influences financial stability. The study used a descriptive research design, the studied population comprised of listed commercial banks in Kenya. Random sampling method was used to 100 respondents. The study used questionnaire to collect data from the population's members who included risk managers, portfolio managers, credit managers, internal auditors, loan officers and investment officers. The data was summarized and presented in tables and charts. The results of the study showed that operational risk management, capital risk management, market risk management and investment risk management influenced the financial stability of listed commercial banks in Kenya. The study recommended that banks should ensure that they identify risks, measure exposures to those risks where possible, ensure that an effective capital planning and monitoring programme is in place, monitoring risk exposures and corresponding capital needs on an ongoing basis, taking steps to control or mitigate risk exposures and reporting to senior management and the board on the bank's risk exposures and capital positions. For effective capital risk management, companies should practice appropriate risk measurement, monitoring, and control functions. The use of new technology in managing capital risk can improve banks' financial stability. Organizations should take into thought development of ways of managing market risk, management of interest rate risk and maintaining of company reputation to enhance financial stability.

Keywords: operational risk management, capital risk management, investment risk management, market risk management

1. Introduction

Management of risk implies a set of processes put in place by bank in order to control their financial exposures. Risk management procedure involves identification of potential risk, risk analysis, risk audit control, and risk treatment (Bikker & Metzmakers, 2005). Commercial banks are specialized financial institution whose business is to link surplus units and deficits units of an economy by ways of providing saving avenue and loan opportunities to those units respectively. Risk management is therefore an essential activity to be closely monitored by commercial banks to ensure that savings are well kept loan and collections are as effective as possible.
 The presence of settlement risk in the international finance resulted from the liquidation of Herstatt bank in cologne-Germany prompted the launch of the Basel banking supervisory norms was originated with the formation of the Basel committee on banking supervision (BCBS), established by G-10 countries in 1974 to ensure that Commercial banks are strong and stable enough to carry on their business, the bank for international settlements (BIS) was the central pillar of this committee (Akshay et al. 2014). The New Basle Capital Accord otherwise known as Basle II which is summarized in three pillars; pillar 1 on the minimum capital requirement, pillar II on supervisory review process and pillar III on market discipline; is supposed to better align regulatory capital with actual risk. The New Basle Accord (2001) has the objective of improving safety and soundness in the financial system by placing more emphasis on the three pillars. The minimum capital requirement which seek to refine the measurement framework set out in 1988 accord, supervisory review of an institutions capital adequacy and internal assessment process and market discipline through effective 8 disclosures to encourage safe and sound banking practices. The obvious benefit of these pillars is to provide consistency among banks around the world, thus enhancing the stability of the financial markets (Conford, 2000).
 The global financial crisis – and the credit crunch that followed – put credit risk management into the regulatory spotlight. As a result, regulators began to demand more transparency. They wanted to know that a bank has thorough knowledge of customers and their associated risk. And new Basel III regulations have been created for bigger regulatory burden for banks. To comply with the more stringent regulatory requirements and absorb the higher capital costs for credit risk, many banks are overhauling their approaches to risk management. But banks who view this as strictly a compliance exercise are being short-sighted. Better risk management also presents an opportunity to greatly improve overall performance and secure a competitive advantage. Therefore, the main task of the

committee is to provide law and regulations on banking system based on firstly on capital risk, market risk, operational risk as well as investment risk.

Operational risk with respect to activities undertaken may also result in losses. Thus, banks are exposed to credit risk, market risk and operational risk in respect of their business (Duffie & Singleton, 2012). A primary focus should be therefore call upon bank governance team to ensure proper care when transacting business in regard to bank regulation. Insurmountable trading losses have been reported from off-balance sheet transactions by commercial banks with gaping financial black holes to unsuspecting depositors. It is worth noting that adequate disclosure of off balance sheet items should be a priority concern of any bank's financial statements. This would be in tandem with International Financial Reporting Standards. The public has developed an interest in the role of banking institutions in these derivative transactions. This centre on the level of a bank's overall risk exposure with derivatives constituting a potential source of increased solvency exposure (Omondi, 2013).

In doing business, banks are regularly faced with different types of risks that may have a potentially unenthusiastic effect on their business. Risk management in bank operations includes risk identification, measurement and assessment, and its objective is to minimize negative effects risks can have on the financial result and capital of a bank. Banks are therefore required to form a particular organizational unit in charge of risk management. Also, they are required to prescribe actions for risk identification, measurement and assessment, as well as procedures for risk management. regrettably many commercial banks do not always adhere to the guideline set for risk management with the collapse of many banks during the global financial crisis of 2008- 2009 has reveal the non-respect of Basel guideline on enterprise risk management (ERM) by major banks therefore risk management has not been effectively managed or closely monitor as it is supposed to be done by commercial banks. The observation of the Kenya financial market, the collapse of various commercial banks in a span of 5 years such as Imperial Bank, Dubai Bank and Chase bank under statutory management.

Gitogo *et al.* (2013) on the study about the relationship between derivatives as tools of risk management and the financial performance of commercial banks in Kenya found out that there exists a relationship between the derivatives and the financial performance of the commercial banks. However, very few studies have been done in the developing countries especially Kenya on the impact of risk management on financial stability of commercial bank. This study seeks to evaluate the stability of commercial bank Kenya that make it important to investigate the techniques banks have put in place to mitigate the various risk incidental to the operation of their business and to analyze the impact of operational risk, capital risk, market risk and investment risk management on the stability of commercial bank. Understanding various methods used in risk management by commercial banks in Kenya help in addressing weaknesses in their risk management techniques and to have a much more stable financial market in Kenya this will help to avoid the collapse of others banks as we have observed in resent past.

The subsequent sections of the paper detailed past and current literature on the topic area of financial stability, the methodology used in this research, data analysis techniques, the result derived from data the findings, conclusion and recommendation of the study.

2. Literature Review

2.1. Financial Stability

Padoa-Schioppa (2002) contends that financial stability is a condition where the financial system is able to withstand shocks without giving way to cumulative processes, which impair the allocation of savings to investment opportunities and the processing of payments in the economy. The emphasis here is on the shock-absorbing capacity or resilience of the financial system, so that it can continue to carry out its essential functions of resource allocation and provision of payments services.

The reference to payments services here is important because like disruptions to the intermediation function, disturbances to the payments system have the capacity to inflict adverse effects on the level of economic activity. From this perspective, financial stability can be defined as a condition in which the financial system – comprising financial intermediaries, markets and market infrastructure – is capable of withstanding shocks and the unraveling of financial imbalances, thereby mitigating the likelihood of disruptions in the financial intermediation process which are severe enough to significantly impair the allocation of savings to profitable investment opportunities (ECB, (2007)). Bank financial stability can be group into bank internal factors and external factors (Aburime, 2005). Internal factors are bank specific characteristics which affect the performance of banks and are influenced by internal decisions of management and the board decision process. The external factors are macroeconomics elements that affect financial industry or country entire economy which are beyond the control of the bank and affect the bank's financial performance (Akong'A 2014).

So far, the overall financial performance of banks in Kenya in the last two decades has been improving but not a reason to believe that all banks are profitable because there are banks declaring losses (Oloo, 2010). Studies have shown that bank specific and macroeconomic factors affect the performance of commercial banks (Flamini et al. 2009).

Policymakers and academic researchers have focused on a number of quantitative measures in order to assess financial stability. The set of Financial Soundness Indicators developed by the IMF (IMF (2006)) are examples of such indicators, as are the monitoring variables used in Hawkins and Klau (2000), Nelson and Perli (2005) and Gray et al (2007) which focus on market pressures, external vulnerability and banking system vulnerability. The financial sector is characterized by monetary aggregates, real interest rates, and risk measures for the banking sector, banks' capital and liquidity ratios, the quality of their loan book, standalone credit ratings and the concentration /systemic focus of their lending activities. All these proxies can be reflective of problems in the banking or financial sector and, if a crisis occurs, they can gauge the cost of such a crisis to the real economy.

2.2. Operational Risk Management

The Basle Committee on banking supervision has recently initiated work related to operational risk. Managing such risk is becoming an important feature of sound risk management practice in modern financial markets. The most important types of operational risk involve breakdowns in internal controls and corporate governance. Operational risk is inherent in all banking products, activities, processes and systems, and the effective management of operational risk has always been a fundamental element of a bank's risk management programme. As a result, sound operational risk management is a reflection of the effectiveness of the board and senior management in administering its portfolio of products, activities, processes, and systems (BCBS, 2010).

Risk management generally encompasses the process of identifying risks to the bank, measuring exposures to those risks (where possible), ensuring that an effective capital planning and monitoring programme is in place, monitoring risk exposures and corresponding capital needs on an ongoing basis, taking steps to control or mitigate risk exposures and reporting to senior management and the board on the bank's risk exposures and capital positions. Internal controls are typically embedded in a bank's day-to-day business and are designed to ensure, to the extent possible, that bank activities are efficient and effective, information is reliable, timely and complete and the bank is compliant with applicable laws and regulation. In practice, the two notions are in fact closely related and the distinction between both is less important than achieving the objectives of each (BCBS, 1998).

Sound internal governance forms the foundation of an effective operational risk management Framework. Although internal governance issues related to the management of operational risk are not unlike those encountered in the management of credit or market risk operational risk management challenges may differ from those in other risk areas (BCBS, 2011).

The Committee is seeing sound operational risk governance practices adopted in an increasing number of banks. Common industry practice for sound operational risk governance often relies on three lines of defense: business line management, an independent corporate operational risk management function and an independent review (BCBS, 2003). Depending on the bank's nature, size and complexity, and the risk profile of a bank's activities, the degree of formality of how these three lines of defense are implemented will vary.

2.3. Capital Risk Management

It has been widely agreed that the elements of intellectual capital (IC or intangible asset) lay beyond the success of companies (Irinja &Raimo, 2012). Most particularly human capital, defined as the individual's knowledge, experiences, capabilities, skills, creativity and innovativeness (Edvinsson and Malone, 1997), has long been argued to be a critical where the success of the company is based on the proficiency and motivation of the personnel. Although intellectual capital has attracted increasing research interest, it has mainly been seen as a value creating asset, and with few exceptions (Harvey and Lusch, 1997, 1999; Caddy, 2000; Stam, 2009) the risks or liabilities related to IC have not been extensively discussed in literature. Just as intangible assets create value for the company, there are many things that create unrecorded and unrecognized intangible liabilities.

Although some studies demonstrate the possibility of the existence of intellectual liabilities in the constitution of intellectual capital (Harvey and Lusch, 1997; Caddy, 2000; Kupi et al., 2008; Stam, 2009), their importance still seems to be underestimated. However, it can be claimed that if the investments directed into IC can improve organization's productivity, losses related to the most important intangible assets, such as peoples' capabilities, are likely to pose a threat to the organization (Jääskeläinen, 2011).

Ignoring risks related to human capital can lead to considerable consequences regarding both the company's financial and intangible capital (Jääskeläinen, 2011), which is why the importance of managing these risks properly should be emphasized both in research and management.

2.4. Market Risk Management

Over the last several years, a dramatic rise in the failure of banks is observed in global banking and serious concerns are raised about the current banking supervision and regulation systems (Haldane and May, 2011). Using international convergence of capital standards and measurements (known as Basel standards), commercial banks are in process of significant modernization of their risk cultures and management practices (Nedzvedskas and Aniunas, 2007) investigated the impact of exchange rate and interest rate factors on the stock return performance. Reputational risk has been viewed as the single biggest risk facing companies (Murray, 2003). It differs from other types of risk in that it encompasses purely "manmade" products of social interaction and communication (Power et al., 2009). Scandizzo (2011, p. 18) describes reputation risk as "a function of the gap between stakeholder expectations and the company's performance", and Fombrun et al. (2000, p. 88) even suggest that, "since reputational capital depends on stakeholder support, each stakeholder group is a source of reputational risk to be managed".

The executive management of an organization therefore has an important role in managing the stakeholders. Even though some stakeholders demand more from an organization than others, they all form an impression of that organization resulting in either positive or negative consequences. It therefore important to note that responsible firms are governed by directors who embed a culture of ethical practices, lead the way themselves, and reward employees for behaving ethically. Directors also need to ensure that they respond ethically and responsibly to stakeholder demands in order to build corporate reputation and mitigate reputational risk.

2.5. Investment Risk Management

According to Kithinji (2010) commercial banks have approved decisions that are not well examined; there have been cases of loan defaults and non-performing loans, massive extension of credit and directed lending. Policies to minimize on the negative effects have focused on mergers in banks, better banking practices but stringent lending, review of laws to be in line with the global standards, well

capitalized banks which are expected to be profitable, liquid banks that are able to meet the demands of their depositors, and maintenance of required cash levels with the central bank which means less cash is available for lending (Mutua, 2015).

This has led to reduced interest income for the commercial banks and by extension reduction in profits, the banks also concentrate highly on collateral as the main security for loans which at times makes the banks assume other forms of mitigating risk. Githinji (2010), did a study on Credit Risk Management and Profitability of Commercial Banks in Kenya to assess the degree to which the credit risk management in practice had significantly contribute to high profits in commercial banks of Kenya. According to Featherson, et al, (2006), foreign exchange risk arises when fluctuation in the relative values of currencies affects the competitive position or viability of an organization. Firms are exposed to foreign exchange risk if the results of their projects depend on future exchange rates and if exchange rate changes cannot be fully anticipated.

Generally, companies are exposed to, Transaction exposure, Economic exposure and Translation exposure (El-Masry, 2006; Salifu et al, 2007). Griffin and Stulz (2001) find the effect of exchange rate shocks is minimal in explaining relative US industry financial performance and is even smaller in other countries that are more open to trade finding that industry effects are more significant than exchange rate effects. While there may be some differences in empirical 20 findings, as Marston (2001) shows, foreign exchange exposure most likely depends on the competitive structure in an industry. It is widely believed that changes in exchange rates have important implications for financial decision-making and for the profitability of firms (Limo 2014).

2.6. Conceptual Framework

Conceptual framework is used in research to outline possible courses of action or to present a preferred approach to an idea or thought. Armstrong (2006) explains that the conceptual framework aims to update and refine the existing concepts to reflect the changes. According to Rose (2008), conceptual framework is an intermediate theory that attempts to connect all the aspects of inquiry (statement of the problem, significance of the study, literature review, methodology, data collection and analysis). According to Rose (2008), conceptual framework acts like a map that gives coherence to empirical inquiry and is used to outline possible causes of action or present preferred approach to an idea; hence it is a structure of assumptions and principles that hold together the ideas comprising a broad concept. She further points out that conceptual framework synthesizes ideas for the purpose of organized thinking and providing study direction, and comprise the independent and dependent variables and an examination into their relationship.
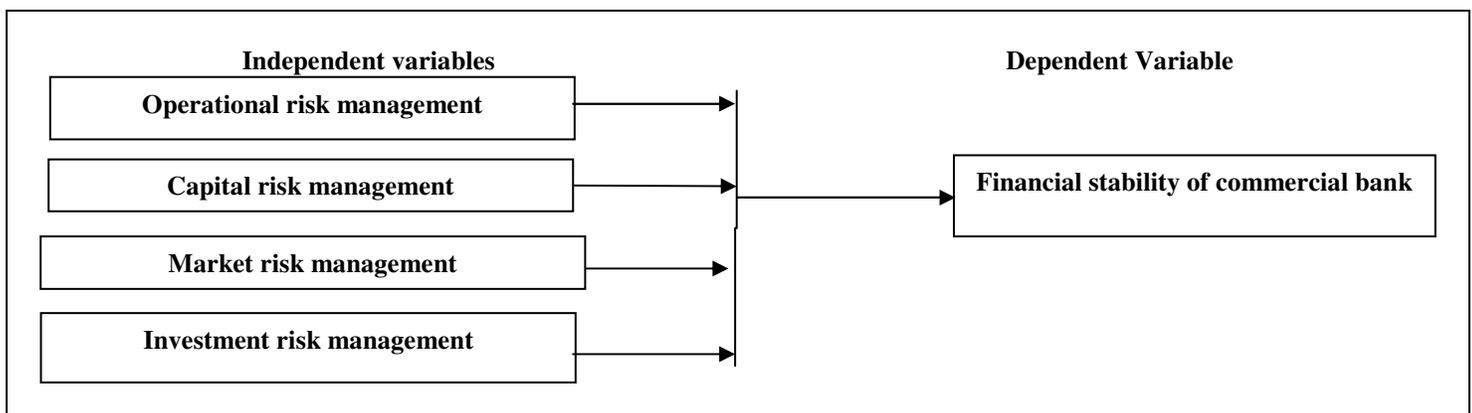

Figure 1: Conceptual Framework
Source: Author (2017)

3. Research Methodology

3.1. Research Design

In this study, a descriptive research design was used. This method seeks to describe the state of the affairs, as they exist. The objective of this design is to portray an accurate profile of persons, events or situations. It allows the collection of large amount of data from a sizable population in a highly economical way. It allows one to collect quantitative data, which can be analyzed quantitatively using descriptive and inferential statistics. Therefore, the descriptive survey is deemed the best method to fulfill the objectives of this study. The design is preferred because it is concerned with answering questions such as who, how, what which, when and how much (Cooper & Schindler, 2001). This method would help collect data from members of a population in order to determine the status of that population with respect to one or more variables.

Descriptive survey research was used in collecting the data from the respondents. The purpose of using survey research is to obtain information that describes exiting phenomena by the population of study which would specifically be the importance of storage system on the bank financial stability.

3.2. Target Population

Target population is the specific population about which information iss desired. A population is a well-defined or set of people, services, elements, and events, group of things or households that are being investigated. The target population in this study included 10 risk managers, 10 portfolio managers, 10 credit managers, 10 internal auditors; in this four categories of respondents the researcher

would randomly select one respondent from each of the 10 commercial banks listed at NSE, 60 loan officers in this category of respondents the researcher randomly selected 3 respondents from each bank and 20 investment officers the researcher randomly selected 2 respondents from each of the commercial bank listed at Nairobi Securities Exchange.

Categories	Population Size	Frequencies (%)
Risk managers	10	8
Portfolio mangers	10	8
Credits managers	10	8
Internal auditors	10	8
Loan officers	60	50
Investment officers	20	18
Total	**120**	**100**

Table 1: Target Population
Source: Author (2017)

3.3. Sample Design

In this study, random sampling was used. This is because most departments constituting the organizational population other than the employees at each department randomly selected in order to increase the responding rate. The sample size was calculated using Yamane (1967:889) formula given a population size (N) of 120 assuming a confidence level of 95% and P = 0.5

Sample Size (n) = $N / (1 + N*(.05)^2)$

$$= 120 / (1 + 120*(.05)^2) = 92.3 = 93$$

Categories	Target Population	Sample Size	Frequencies %
Risk managers	10	7	8
Portfolio managers	10	7	8
Credit managers	10	7	8
Internal auditors	10	7	8
Loans officers	60	48	50
Investment officers	20	17	18
Total	**120**	**93**	**100**

Table 2: Sample Size
Source: Author (2017)

3.4. Data Collection Instrument and Procedures

Primary data was used in this study whereby data was collected by the use of questionnaires. Research questionnaires having both structured and unstructured questions was designed and administered. This would enable the researcher to get vital data directly from respondents. The Researcher used questionnaire that was both structured and unstructured. And ensured immediate feedback, accuracy, clarity and they helped reveal sensitive information important for the study. Mugenda and Mugenda assert the accuracy of data to be collected largely depend on the data collection instrument in term of validity and reliability. Validity as noted by Robinson (2002) is the degree to which result obtained from the analysis of the data actually represents the phenomenon under study.

3.5. Data Analysis

Cooper & Schindler (2011) highlighted data analysis as inspection, cleaning, transforming and modeling data in order to highlight useful information to draw conclusions and to support decision making. The questionnaires were first edited for completeness and consistency to ensure that respondents complete them as required. Data collected from the questionnaires was edited, coded to enable responses be grouped into categories. This involves giving all statements numeric codes based on meaning for ease of data capturing. The data gathered was analyzed by use of descriptive and qualitative statistics. This would be done with the aid of computer applications, specifically the SPSS software. The descriptive statistics helped in describing the data and determining the respondents' degree of agreement with the various statements under each factor. The use of percentages, means, modes and standard deviation could be employed. Information was presented in the form of detailed descriptions with the possible use of other presentation techniques like graphs, pie charts, and tables. Quantitative data was analyzed using descriptive statistics which involves percentages, measures of central tendency, frequencies and measures of dispersion as well as inferential statistics with 5% test significance level which entail correlation and regressions models, which took the form of:

$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \text{Є}$

Where: Y = financial stability

X1, X2, X3, X4 = Independent Variables

X1 = operational risk management

X2 = capital risk management

X3 = market risk management

X4 = investment risk management

β0 = Constant
β1, β2, β3, β4, = Regression coefficients or Change included in Y by each X value
ϵ = error term

4. Data Analysis

4.1. Response Rate
The researcher distributed 100 questionnaires and was able to collect ninety-four fully filled in questionnaires which represented 94% of the total questionnaires distributed. According to Kothari (2004) 50% response rate is considered average, 60-70% is considered adequate while anything above 70% is considered to be an excellent response rate. Morrison and Louis (2007) indicated that for a social study, anything above 60% response rate is adequate for making significant conclusion in social sciences. The 94% response rate was therefore a good representative of the respondents to provide enough information for analysis and to derive conclusions. However, some respondents were reluctant to respond to questionnaires citing demanding work schedules, stringent bank disclosure policies and general lack of time as their excuses.

Details	Frequency	Percent
Distributed Questionnaires	100	100%
Returned Questionnaires	94	94%

Table 3: Response rate
Source: Author's computations (2017)

4.2. Operational Risk Management
The questions in this section aimed at measuring the knowledge and understanding of the respondents regarding the operational risk management in their organization.

4.2.1. Incorporation of Operational Risk Management Plan
It was important to ascertain whether the respondents were aware that their company had incorporated operational risk management plan, a yes or no response was required. It is evident that the greater majority (62.8%) of the respondents indicated that their companies had incorporated operational risk management.
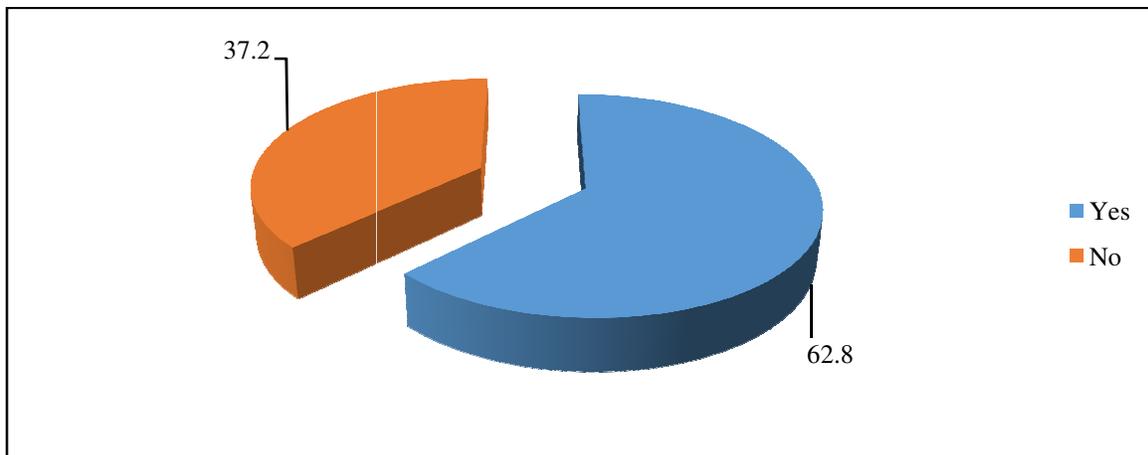

Figure 2: Incorporation of Operational Risk Management Plan

4.2.2. Practices for Effective Corporate Governance
The respondents were asked what their companies were doing to ensure effective corporate governance. Figure 5, majority (63%) of the respondents cited that their companies were practicing business ethics, 17% indicated they were doing proper reporting system while a few (2%) did not respond.
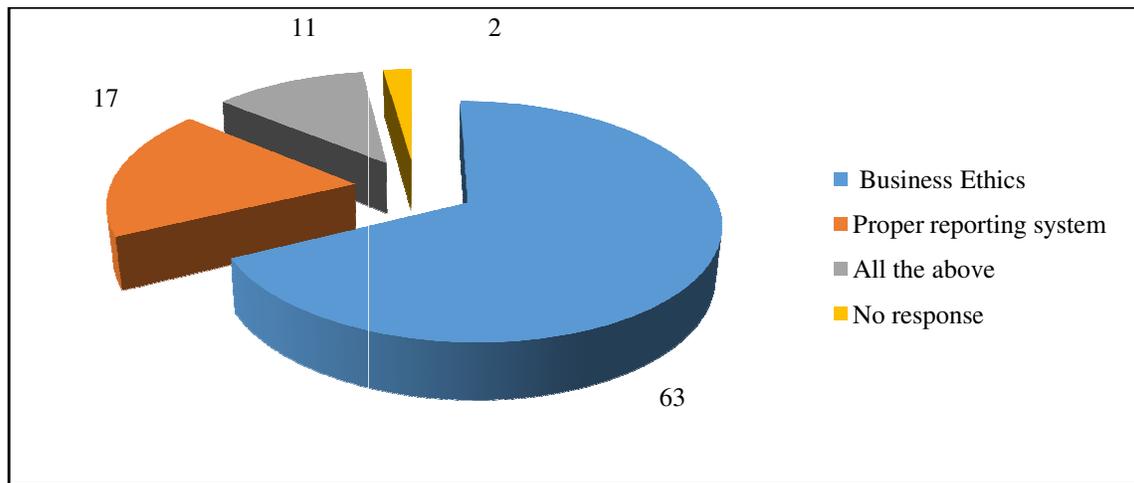
Figure 3: Practices for Effective Corporate Governance

4.2.3. Internal and External Control and Financial Stability

It was important to ascertain the respondents' knowledge whether having internal and external control does improve the financial stability of their company, a yes or no response was required. Figure 6 showed that 62.8% indicated that having internal and external control does improve the financial stability of their company 36.2% thought otherwise while 1.1% did not give any response.
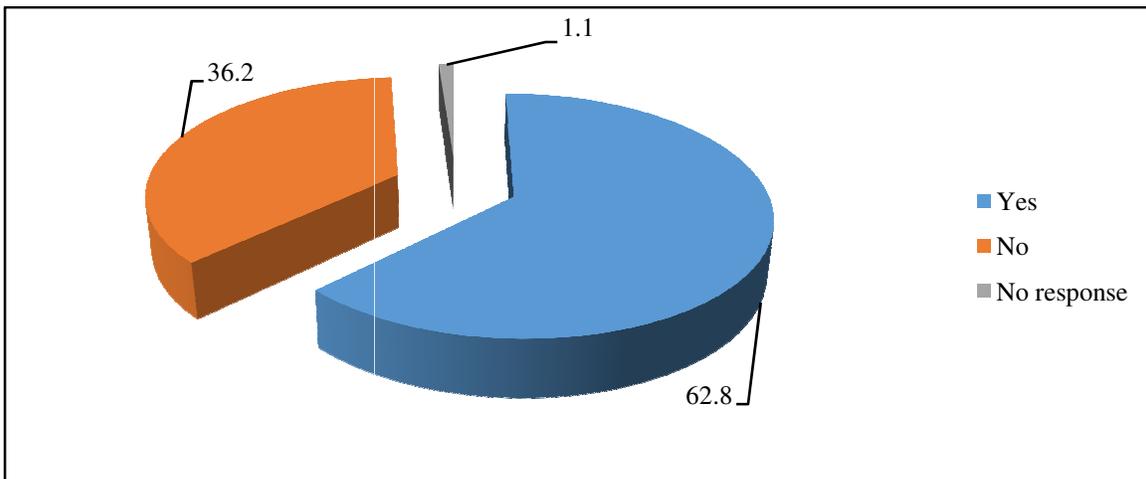

Figure 4: Internal and External Control and Financial Stability

4.2.4. Benefits of Internal and External Control

The respondents were asked to indicate some of the benefits of internal and external control toward financial stability of their company. From Figure 7, majority (64.9%) indicated risk assessment as a benefit of internal and external control, 26.6% indicated risk assessment and process walkthroughs and documentation while 7.4% cited process walkthroughs and documentation.
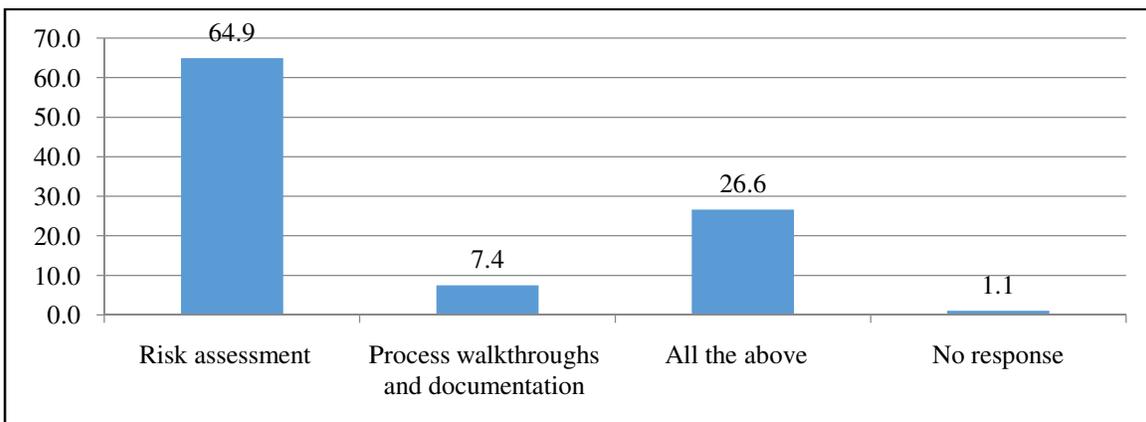

Figure 5: Benefits of Internal and External Control

4.2.5. Effect of Communication Policy

The respondents were asked how communication policy within and without their company affected the financial stability of their companies. Majority (66.0%) indicated that communication policy plays a crucial role in altering individual's attitudes, 20.2% indicated communication policy assisted in controlling process while 9.6 indicated that communication policy plays a crucial role in altering individual's attitudes and assisted in controlling process.
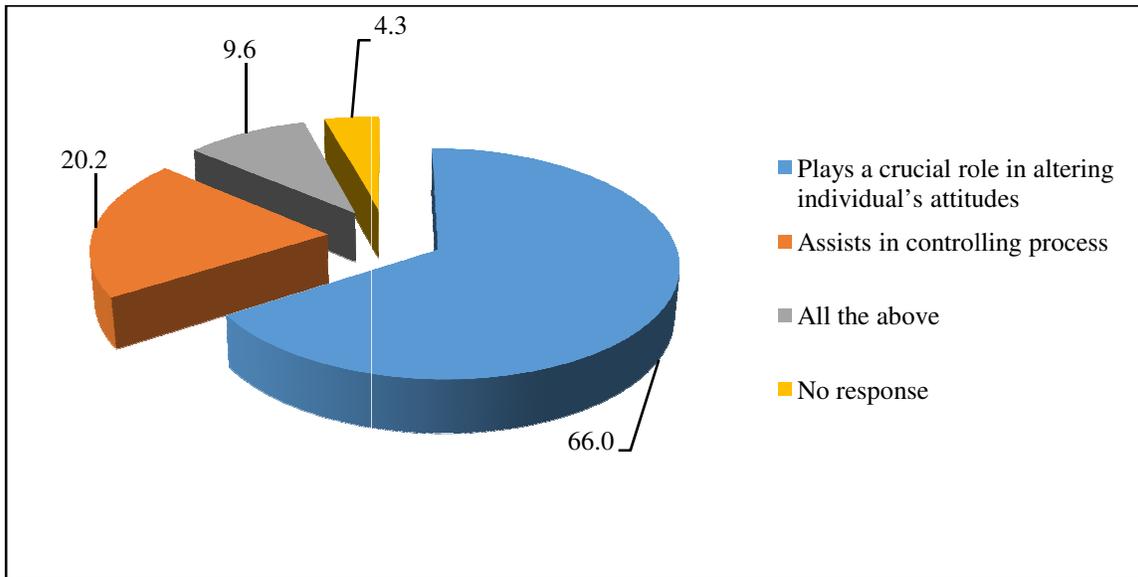

Figure 6: Effect of Communication Policy

4.2.6. Response on Statements about Operational Risk Management

The respondents were asked to give their level of agreement with statements about operational risk management in their company. Regarding grading of their company on embracing the idea of operational risk management was ranked very good at 62.8%, on how the respondents saw the benefits of operational risk management to their company, majority 62.8% cited the benefits of operational risk management as very good. Regarding staff members support of the implementation of ERM, majority of the responds 62.8% indicated very good while a few 1.1% indicated very poor. Lastly, rated policies put in place by their company to support change in their operational risk management guideline as very good, 23.4% did not give any opinion, 6.4% very good, another 6.4% rated the policies at poor while 1.1% rated the policy put in place as very poor.

Statement	5	4	3	2	1	Mean	Std dev
How will you grade your company on embracing the idea of operational risk management?	62.8	6.4	24.5	5.3	1.1	4.2	0.255
How do you see the benefit of operational risk management to your company?	62.8	8.5	22.3	5.3	1.1	4.3	0.252
How did staff members support the implementation of ERM for your company?	62.8	6.4	22.3	7.4	1.1	4.2	0.252
How could you rate policies put in place by your company to support change in its operational risk management guideline?	62.8	6.4	23.4	6.4	1.1	4.2	0.253

Table 4: Results for operational risk management
Source: Author's computations (2017)

4.3. Capital Risk Management

The questions in this section aimed at measuring the knowledge and understanding of the respondents regarding the capital risk management in their organization.

4.3.1. Developed a Capital Risk Management Tools

It was important to ascertain whether the respondents were aware that their company had developed a capital risk management tools, a yes or no response was required. It is evident that the greater majority (94.7%) of the respondents indicated that their company had developed a capital risk management tools.
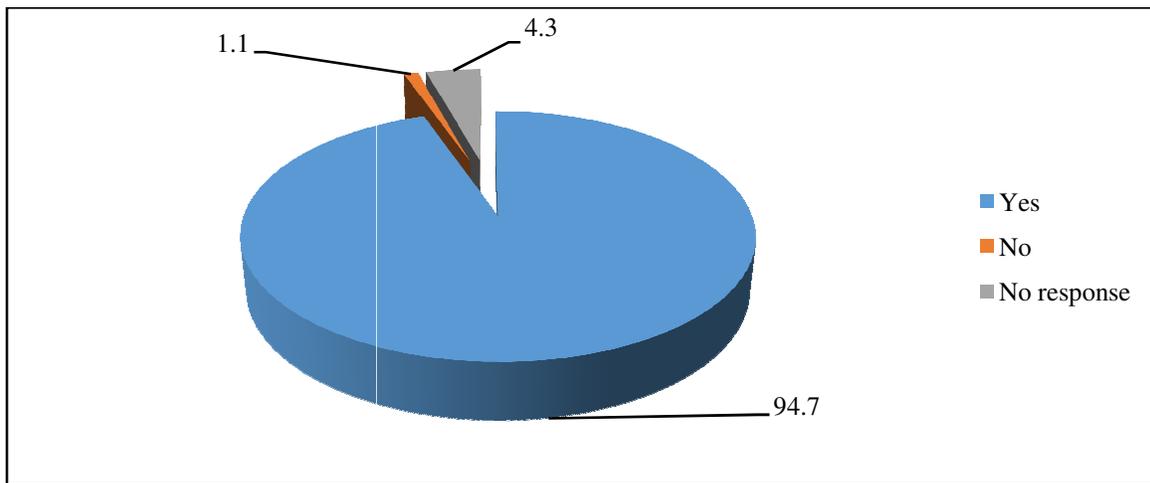
Figure 7: Developed a Capital Risk Management Tools

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4.3.2. Practices for Effective Capital Risk Management

The respondents were asked to indicate what their companies were doing for effective capital risk management. Table 6 shows that 25(26.6%) indicated that for effective capital risk management, their companies were practicing Appropriate risk measurement, monitoring, and control functions, 18(19.1%) indicated that their companies were practicing adequate risk management policies and procedures using technology while 14(14.9%) indicated their companies were practicing both adequate risk management policies and procedures using technology and appropriate risk measurement, monitoring, and control functions.

	Frequency	Percent
Market risk	28	29.8
Organizational risk	19	20.2
All the above	21	22.3
Total	**68**	**72.3**

Table 5: Practices for Effective Capital Risk Management
Source: Author's computations (2017)

4.3.3. Benefits of Using Modern Technology in Capital Risk Management

The respondents were asked to give some of the benefits of using modern technology in capital risk management toward improving financial stability of their firm. From Table 7, most of the respondents (58.5) indicated the benefit of using modern technology as monitoring and continuous process improvement, 8% indicated detection and removing conflicts of sections while another 8% indicated both monitoring and continuous process improvement and, detection and removing conflicts of sections.

	Frequency	Percent
Monitoring and continuously process improvement	55	58.5
Detection and removing conflicts of sections	8	8.5
All the above	8	8.5
No response	23	24.5
Total	**94**	**100.0**

Table 6: Results for modern technology in capital risk management
Source: Author's computations (2017)

4.3.4. Response on Reasons Why Companies Embraced Capital Risk Management

The study sought to establish the respondent's extent to which they rated with the following statements as reasons why their companies embraced capital risk management. The study used a scale of 1 to 5 where 1 was Very Poor, 2 was Poor, 3 was acceptable, 4 was Good and 5 was very Good.

Regarding how the respondents rated the level benefited derive from its employees' skills in regard to risk management 38.3 of the respondents did not give any opinion,35.1% rated the benefit as good while 26.6% rated the benefits as very good. On how the respondents rated the measure put in place by their companies to fully incorporate modern technology in risk management, 41.5% rated the measure put in place by their companies as very good, 38.3% rated measure put in place by their companies as good while 19.1% did not give any opinion. Lastly, the respondents were asked to rate the work performed by the risk management department in their companies, 39.4% percent rated the work performed by the risk management department as good, followed by 30.9% rated the work performed by the risk management department at very good while 29.8% did not give any opinion.

Statement	1	2	3	4	5	Mean	Std dev
How will your rate the level benefited derive from its employees' skills in regard to risk management by your company?	0.0	0.0	38.3	35.1	26.6	3.9	0.19
How will you rate the measure put in place by your company to fully incorporate modern technology in risk management?	0.0	1.1	19.1	38.3	41.5	4.2	0.20
How could you rate the work performed by the risk management department on your company?	0.0	0.0	29.8	39.4	30.9	4.0	0.19

Table 7: Results for the adoption of capital risk management
Source: Author's computations (2017)

4.4. Market Risk Management

4.4.1. Development of Ways of Managing Market Risk
It was important to ascertain whether the respondents were aware that their company had developed way of managing market risk, a yes or no response was required. It is evident that the greater majority (26.6%) of the respondents indicated that their companies had not developed a way of managing market risk, 18.1% indicated otherwise while 17.0% did give any response.

	Frequency	Percent
Yes	17	18.1
No	25	26.6
No response	16	17.0
Total	**58**	**61.7**

Table 8: Results for development of Ways of Managing Market Risk
Source: Author's computations (2017)

4.4.2. Element of Market Risk Companies Are Exposed to
The respondents were asked to indicate the element of market risk their companies were exposed to. The results in Table 10, shows that the companies were exposed to foreign exchange risk as indicated by 26.6% of the respondents, 18.1% indicated loan defaulting risk while 17.0% indicated both loan defaulting risk and foreign exchange risk.

	Frequency	Percent
Loan defaulting risk	17	18.1
Foreign exchange risk	25	26.6
All the above	16	17.0
No response	36	38.3
Total	**94**	**100.0**

Table 9: Results for element of Market Risk Companies are Exposed to
Source: Author's computations (2017)

4.4.3. Interest Rate Risk impact on Financial Stability
The study sought to find out whether the respondents thought interest rate risk has an impact on the financial stability of their companies; a yes or no response was required. It is evident that the greater majority (68.1%) of the respondents thought interest rate risk has an impact on the financial stability of their companies.
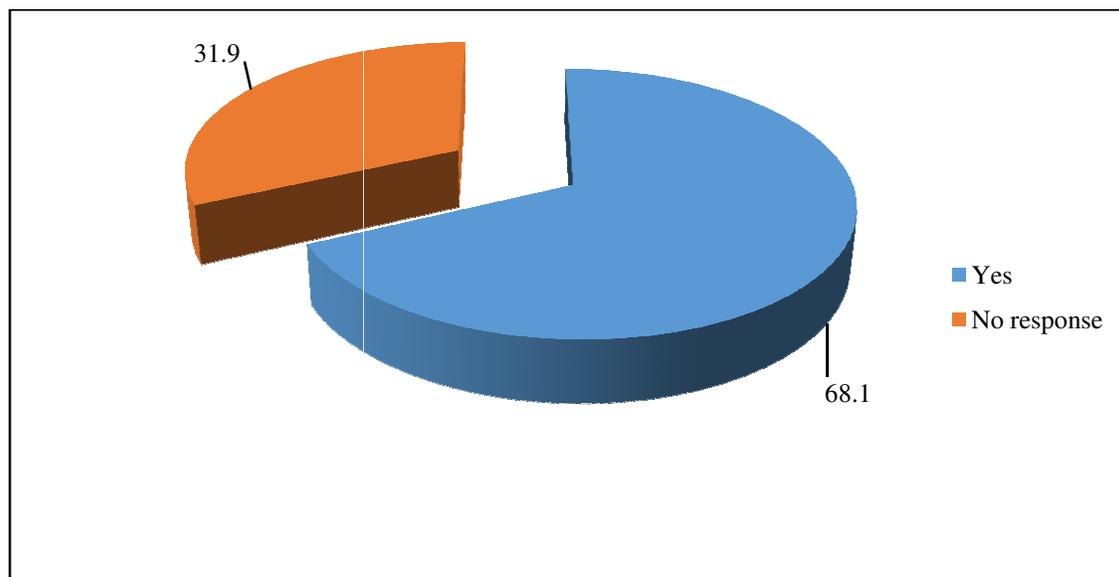
Figure 8: Interest Rate Risk impact on Financial Stability

4.4.4. Management of Interest Rate Risk

The respondents were asked to indicate what the companies were doing in order to manage interest rate risk, 44.7% of the respondents indicated their companies were practicing adequate risk management policies and procedures, 8.5% indicated both adequate risk management policies and procedures and appropriate risk measurement, monitoring, and control functions while 6.4% indicated appropriate risk measurement, monitoring, and control functions.

	Frequency	Percent
Adequate risk management policies and procedures	42	44.7
Appropriate risk measurement, monitoring, and control functions	6	6.4
All the above	8	8.5
No response	38	40.4
Total	**94**	**100**

Table 10: result for management of Interest Rate Risk
Source: Author's computations (2017)

4.4.5. Measures Put in Place to Ensure Proper Reputational Risk Management

The study sought to establish some of the measures put in place by the companies to ensure proper reputational risk management, Table 12 shows that 44.7% did not respond, 39.4% indicated adequate risk management policies and procedures as measures put in place, 8.55% indicated both adequate risk management policies and procedures, and appropriate risk measurement, monitoring, and control functions while 7.4% indicated appropriate risk measurement, monitoring, and control functions.

	Frequency	Percent
Adequate risk management policies and procedures	37	39.4
Appropriate risk measurement, monitoring, and control functions	7	7.4
All the above	8	8.5
No response	42	44.7
Total	**94**	**100**

Table 11:Results for measures put in place to ensure proper reputational risk management
Source: Author's computations (2017)

4.4.6. Response on Market Risk Management

The study sought to establish the respondents' extent to which they rated with the following statements market risk management. The study used a scale of 1 to 5 where 1 was Very Poor, 2 was Poor, 3 was acceptable, 4 was Good and 5 was very Good.

Regarding how the respondents graded market risk management, 85.1% indicated market risk management in their organizations as acceptable, 7.4% indicated very good while 6.4 indicated good. On the question about the level of risk management benefit derived by their companies, 69.1% indicated the benefits derived were acceptable, 19.1% indicated good while 11.7% indicated very good. The respondents were asked to indicate their opinions regarding staff member support towards market risk management in their companies, 76.6% indicated acceptable, 17.0% indicated good while 6.4% indicated very good.

Statement	1	2	3	4	5	Mean	Std dev
How will you grade market risk management in your company?	0	1.1	85.1	6.4	7.4	3.2	0.37
What Is the level risk management benefit derived by your company?	0	0	69.1	19.1	11.7	3.4	0.29
How is staff member support market risk management in your company?	0	0	76.6	17.0	6.4	3.3	0.32
What is the level market risk exposure protection of your company?	1.1	0	51.1	7.4	40.4	3.9	0.24

Table 12: Results for the adoptions of market risk management
Source: Author's computations (2017)

4.5. Investment Risk Management
The questions in this section aimed at measuring the knowledge and understanding of the respondents regarding the investment risk management in their organization.

4.5.1. Reason for Investing
The study sought to establish the reason for it to invest, 53.2% of the respondents indicated the reason for investing was to increase revenue and improve capital base, 39.4% indicated to increase revenue while 6.4% indicated to improve capital base.

	Frequency	Percent
Increase in revenue	37	39.4
Improvement capital base	6	6.4
All the above	50	53.2
No response	1	1.1
Total	**94**	**100.0**

Table 13: result for reason for investing
Source: Author's computations (2017)

4.5.2. Investing and Financial Stability
It was important to establish whether investing helped in financial stability, a yes or no response was required. It is evident that the greater majority (59.6%) of the respondents indicated that investing helped in financial stability while 1.1% indicated otherwise.
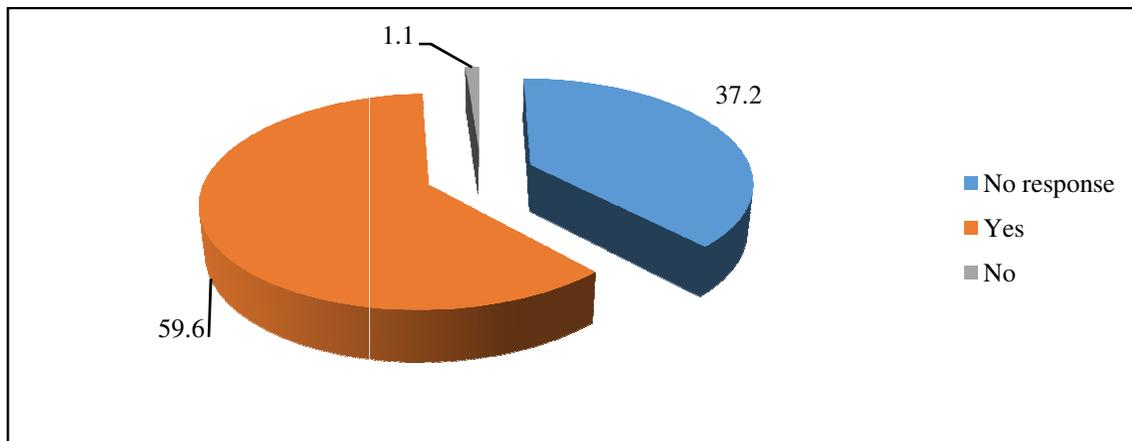

Figure 9: Investing and Financial Stability

4.5.3. Company Practices to Minimize Investment Risk
The respondents were asked to indicate what their companies were doing to minimize investment risk, 27.7% of the respondents indicated that their companies were practicing adequate risk management policies and procedures, 18.1% indicated their companies were practicing appropriate risk measurement, monitoring, and control functions while a few (9.6%) indicated that their companies were practicing both adequate risk management policies and procedures, and appropriate risk measurement, monitoring, and control functions.

	Frequency	Percent
No response	41	43.6
Adequate risk management policies and procedures	26	27.7
Appropriate risk measurement, monitoring, and control functions	17	18.1
All the above	9	9.6
Total	**94**	**100**

Table 14: Results for company practices to minimize investment risk
Source: Author's computations (2017)

4.5.4. Company Practices to Minimize Rate of Defaulting Loan

The respondents were asked to indicate what their companies were doing to minimize the rate of defaulting loan its issue to customer, 25.5% of the respondents indicated that their companies were practicing adequate risk management policies and procedures, 17.0% indicated their companies were practicing appropriate risk measurement, monitoring, and control functions while a few (9.6%) indicated that their companies were practicing both adequate risk management policies and procedures, and appropriate risk measurement, monitoring, and control functions.

	Frequency	Percent
No response	44	46.8
Adequate risk management policies and procedures	24	25.5
Appropriate risk measurement, monitoring, and control functions	16	17.0
All the above	9	9.6
Total	**94**	**100**

Table 15: Results for company practices to minimize rate of defaulting loan
Source: Author's computations (2017)

4.5.5. Company Practices to Improve the Liquidity Position of It Investment Asset

The respondents were asked to indicate what their companies were doing to improve the liquidity position of it investment asset, 23.4% of the respondents indicated that their companies were practicing adequate risk management policies and procedures, 18.1% indicated their companies were practicing appropriate risk measurement, monitoring, and control functions while a few (1.1%) indicated that their companies were practicing both adequate risk management policies and procedures, and appropriate risk measurement, monitoring, and control functions.

	Frequency	Percent
No response	53	56.4
Adequate risk management policies and procedures	22	23.4
Appropriate risk measurement, monitoring, and control functions	17	18.1
All the above	1	1.1
Total	94	100

Table 16: Results for company practices to minimize rate of defaulting loan
Source: Author's computations (2017)

4.5.6. Measures to Mitigate the Impact of Inflation on Investment Asset

The respondents were asked to indicate measures put in place by their company to mitigate the impact of inflation on it investment asset, 17.0% of the respondents indicated that their companies were practicing adequate risk management policies and procedures, 10.6% indicated their companies were practicing appropriate risk measurement, monitoring, and control functions while a few (3.2%) indicated that their companies were practicing both adequate risk management policies and procedures, and appropriate risk measurement, monitoring, and control functions.

	Frequency	Percent
No response	64	68.1
Adequate risk management policies and procedures	16	17.0
Appropriate risk measurement, monitoring, and control functions	10	10.6
All the above	3	3.2
Total	**94**	**100.0**

Table 17: Results for measures to mitigate the Impact of Inflation on Investment Asset
Source: Author's computations (2017)

4.5.7. Practices to Hedge against Government Decisions or Policies Related Risks

The respondents were asked to indicate measures put in place by their company to hedge against government decisions or policies related risks, 17.0% of the respondents indicated that their companies were practicing appropriate risk measurement, monitoring, and control functions, 9.6% indicated their companies were practicing adequate risk management policies and procedures while a few (2.1%) indicated that their companies were practicing both adequate risk management policies and procedures, and appropriate risk measurement, monitoring, and control functions.

	Frequency	Percent
No response	65	69.1
Adequate risk management policies and procedures	9	9.6
Appropriate risk measurement, monitoring, and control functions	16	17.0
All the above	2	2.1
Total	**94**	**100.0**

Table 18: Results for practices to hedge against government decisions or policies related risks
Source: Author's computations (2017)

4.5.8. Response on Reasons why Companies Embraced Investment Risk Management

The study sought to establish the respondents' extent to which they rated with the following statements as reasons why their companies embraced investment risk management. The study used a scale of 1 to 5 where 1 was Very Poor, 2 was Poor, 3 was acceptable, 4 was Good and 5 was very Good.

Regarding how investment risk management impact on operation efficiency in their companies 26.6% of the respondents indicated acceptable, 27.2% investment risk management had a good impact on operation efficiency while 4.3% indicated very good impact. On how the respondents rated investment risk management in reducing expense, 34.0% rated investment risk management reduced expenses to an acceptable level. Lastly, the respondents were asked how investment risk management depicted mismanagement in their company, 37.2% percent indicated to an acceptable level, 14.9% indicated that investment risk management depicted mismanagement in their company as to be good.

Statement	1	2	3	4	5	Mean	Std dev
How does investment risk management impact on operation efficiency in your company?	0.0	3.2	26.6	27.7	4.3	2.2	0.14
How will you rate investment risk management in reducing expense to your company?	0	2.1	34.0	17.0	8.5	2.2	0.14
How investment risk management does depict mismanagement in your company?	0	3.2	37.2	14.9	5.3	2.0	0.15

Table 19: results for the adoption of investment risk management
Source: Author's computations (2017)

4.6. Inferential Statistics

4.6.1. Regression Analysis

A multiple linear regression of variables was carried out to determine the effect of risk management on financial stability of commercial bank listed at Nairobi securities Exchanges, Kenya. Tables 4.10 provides a summary of model and indicate the Adjusted o used as test for model fitness. The F -test was carried out to test the significance of the regression model in predicting the dependent variable (financial stability). From the results, it is clear that the four independent variables predict the financial stability (adjusted R squared = 0.304). That means the model explains 33.4 percent of the variance in financial stability (r square = .334), 66.6 percent of variations are brought about by factors not captured in the objectives. Therefore, further research should be conducted to investigate the other factors that affect financial stability of commercial bank listed at Nairobi securities Exchanges, Kenya. The regression equation appears to be very useful for making predictions since the value of R^2 is close to 1.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.578[a]	.334	.304	1.29374
a. Predictors: (Constant), a Predictors: (Constant), operational risk management, capital risk management, market risk management and investment risk management				

Table 20: results for Coefficient of Determination (R^2)
Source: Author's computations (2017)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	73.934	4	18.483	11.043	.000[b]
	Residual	147.292	88	1.674		
	Total	221.226	92			

Table 21: Results for ANOVA[b]
Source: Author's computations (2017)

The significance value is .000 which is less than 0.05 thus the model is statistically significant in predicting independent variables (operational risk management, capital risk management, market risk management and investment risk management) this shows that the overall model was significant.

Multiple regression analysis was conducted to determine the relationship between the (operational risk management, capital risk management, market risk management and investment risk management) and Financial stability.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.195	.355		6.188	.000
Operational risk management	.541	.129	.500	4.184	.000
Market risk management	.486	.184	.485	2.647	.010
Capital risk management	-.237	.151	-.237	-1.566	.121
Investment risk management	-.453	.127	-.457	-3.566	.001

Table 22: Results for Regression Analysis Results
Source: Author's computations (2017)

a Dependent Variable: Financial Stability

The regression equation ($Y = \beta 0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$) was:

$Y = 2.195 + 0.541X_1 + 0.486X_2 - 0.237X_3 - 0.453X_4$

According to the regression equation established, taking all factors into account (Operational risk management, Operational risk management, capital risk management, market risk management and investment risk management) constant at zero financial stability will be 2.195. A one unit increase in operational risk management will lead to 0.541-unit increase in financial stability of commercial bank listed at Nairobi securities Exchanges, Kenya ($p<0.05$). This finding agreed with Roque and de Carvalho (2013) that operational risk management is critical success factor and had a significant effect on financial stability ($P<0.05$). The results demonstrated that the effect of operational risk management on financial stability was positive and statistically significant at 5 percent level.

Also, the study revealed that a one unit decrease in capital risk management will lead to 0.237-unit increase in financial stability ($p>0.05$). This finding disagrees with Jun, Qiuzhen and Qingguo (2010) findings from their study on the effects of capital risk management on financial stability focusing on a case of China commercial banks. The study showed that there existed a significant positive relationship between capital risk management and financial stability ($P< 0.05$). The results indicated that capital risk management improves financial stability among listed banks in Kenya.

Further, a one unit decrease in investment risk management will lead to 0.453-unit increase in financial stability of commercial bank listed at Nairobi securities Exchanges, Kenya ($p<0.05$). The study findings disagreed with Juliane and Alexander (2013) findings that determined how investment risk management influences commercial banks in UK. The results indicated that investment risk management shows a significant negative relationship with financial stability ($b=-0.16$, $p<0.05$).

Lastly, the results showed that a one unit increase in market risk management will lead a 0.486-unit increase in in financial stability of commercial bank listed at Nairobi securities Exchanges, Kenya ($p<0.05$). The findings are in congruent with Addison and Vallabh, (2002) study results from their study on impact of capital risk management and financial performance of banks in China. The study results indicated that as market risk management increases, the banks improved in financial stability. The p-value showed a relationship between market risk management and financial stability was significant at a 95 percent confidence level.

5. Summary of Findings, Conclusions and Recommendations

5.1. Summary of Findings

The first objective sought to analyze the effect of operational risk management on financial stability of commercial bank. The indicators of operational risk management taken into consideration included corporate governance, internal and external control, and communication policy on financial stability. Descriptive and inferential statistical methods were used to arrive at the findings where deductions and relationships were established. Operational risk management was found to be statistically significant in explaining financial stability among listed commercial banks in Kenya since a unit change in operational risk management only causes 0.541% change in financial stability among the listed commercial banks in Kenya as indicated by regression coefficient. Therefore, statements which sought influence of operational risk management variable were concluded to be statistically significant in explaining changes in financial stability among commercial banks in Kenya. This study finding is in line with Saeed (2015) results from his study on the relationship between operational risk, Credit risk and liquidity risk with financial stability of Malaysia Banks. The regression analysis results that operational risk, have significant influence on capital adequacy and credit growth.

The second objective sought to analyze the effect of capital risk management on financial stability of commercial bank. The indicators of capital risk management taken into consideration included development of a capital risk management tools and use of modern technology on financial stability. Descriptive and inferential statistical methods were used to arrive at the findings where deductions and relationships were established. Capital risk management was found to be statistically insignificant in explaining financial stability among listed commercial banks in Kenya since a unit change in capital risk management only causes 0.237% change in financial stability among the listed commercial banks in Kenya as indicated by regression coefficient. Therefore, statements which sought influence of capital risk management variable were concluded to be statistically significant in explaining changes in financial stability among commercial banks in Kenya. This study finding is in line with Edvinsson and Malone (1997) results on the relationship between capital risk management and financial stability of banks in Sweden that there exists a positive and significant relationship between capital risk management and financial stability.

The third objective sought to analyze the effect of market risk management on financial stability of commercial bank. The indicators of market risk management taken into consideration included development of ways of managing market risk, management of interest rate risk and maintaining of company reputation on financial stability. Descriptive and inferential statistical methods were used to arrive at the findings where deductions and relationships were established. Market risk management was found to be statistically significant in explaining financial stability among listed commercial banks in Kenya since a unit change in market risk management only causes 0.486% change in financial stability among the listed commercial banks in Kenya as indicated by regression coefficient. Therefore, statements which sought influence of market risk management variable were concluded to be statistically significant in explaining changes in financial stability among commercial banks in Kenya. This study finding concurs with findings by Murithi (2016) on the influence of market risk management on financial stability of banks in Kenya. The analysis of the market risk management showed the degree in which changes in the degree of financial leverage, interest rate risk and currency exchange exposure management had an adverse impact on the bank's incomes which is an element of bank stability.

The fourth objective sought to analyze the effect of investment risk management on financial stability of commercial bank. The indicators of investment risk management taken into consideration included presence of an investment plan, management of defaulting

loans, management of illiquid assets and management of inflation on financial stability. Descriptive and inferential statistical methods were used to arrive at the findings where deductions and relationships were established. Investment risk management was found to be statistically significant in explaining financial stability among listed commercial banks in Kenya since a unit change in investment risk management only causes 0.453% change in financial stability among the listed commercial banks in Kenya as indicated by regression coefficient. Therefore, statements which sought influence of investment risk management variable were concluded to be statistically significant in explaining changes in financial stability among commercial banks in Kenya. This study finding is in line with Marston (2001) results from his study on the relationship between investment plan, management of defaulting loans, management of illiquid assets and management of inflation and financial stability of Banks in Nigeria. The regression analysis results revealed that investment plan, management of defaulting loans, management of illiquid assets and management of inflation have significant influence on financial stability of the banks under study.

5.2. Conclusions

From the research findings presented, operational risk management was found to affect financial stability among listed commercial banks in Kenya. It was evident that some companies had incorporated operational risk management plan. Majority of the companies were practicing business ethics and were doing proper reporting system. Communication policy played a crucial role in altering individual's attitudes and assisted in controlling process. A few of the companies did not have a clear execution plan for financial stability.

Research findings presented revealed that capital risk management influenced financial stability among listed commercial banks in Kenya. It was evident that majority of the companies had developed a capital risk management tools. Both market risk and organizational risk were incorporated in the capital management tools. For effective capital risk management, some companies were practicing appropriate risk measurement, monitoring, and control functions. The use of modern technology in capital risk management improved the financial stability.

Based on the research findings presented, it is clear that market risk management plays a role in ensuring financial stability among listed commercial banks in Kenya. It was evident that the majority of the companies did not have a developed a way of managing market risks. Majority of the companies were exposed to both loan defaulting risk and foreign exchange risk. Majority of the companies were affected by interest rate risk. In addition, company reputation and inflation had an impact on financial stability.

Findings revealed that investment risk management was found to be statistically significant in explaining financial stability among listed commercial banks in Kenya. It was evident that very few companies had an investment plan. Some reasons for investment included to increase revenue and improve capital base. To minimize investment risks, defaulting risks and inflation risks few companies were practicing adequate risk management policies and procedures, and appropriate risk measurement, monitoring, and control functions.

5.3. Recommendations

This study makes several recommendations to players in the financial sector like the government, policy makers as well as commercial banks. From these research findings, the study recommends that;

Operational risk is inherent in all banking products, activities, processes and systems, and the effective management of operational risk has always been a fundamental element of a bank's risk management programme. The study recommends that banks should ensure that they identify risks, measure exposures to those risks (where possible), ensure that an effective capital planning and monitoring programme is in place, monitoring risk exposures and corresponding capital needs on an ongoing basis, taking steps to control or mitigate risk exposures and reporting to senior management and the board on the bank's risk exposures and capital positions.

For effective capital risk management, companies should practice appropriate risk measurement, monitoring, and control functions. The use of modern technology in capital risk management can improve banks' financial stability.

The study showed that market risk management affected financial stability; this study recommends that organizations should take into consideration development of ways of managing market risk, management of interest rate risk and maintaining of company reputation to enhance financial stability.

6. References

i. Aburime, U. (2005) Determinants of Bank Profitability: Company-Level Evidence from Nigeria: Available on from http://ssrn.com/abstract=1106825
ii. Akong' C. (2014). The effect of financial risk management on the financial performance of commercial banks in Kenya. University of Nairobi, 2014
iii. Akshay U. S., Yatin B. M. & Charan S. (2014). basel banking norms – a primer, iimb-wp n0. 470.
iv. Saeed, M. H. (2015). Examining the relationship between operational risk, Credit risk and liquidity risk with financial stability of Malaysia Banks, Unpublished Master of Science (Banking) project, Universiti Utara Malaysia.
v. Murithi, J. G. (2016). Effect of financial risk on financial performance of commercial banks in Kenya. Unpublished doctor of philosophy in finance thesis, Jomo Kenyatta University of Agriculture and Technology, Kenya.
vi. Armstrong, M. (2006). Human Resource Management Practices, 10th edition. London: Kogan Page
vii. Basel Committee on Banking Supervision (2001). consultative document: the new basel capital accord

viii.   Basel Committee on Banking Supervision. (1988). International Convergence of Capital Measurement and Capital Standards. Retrieved from http://www.bis.org/publ/bcbs04a.pdf

ix.   Basel Committee on Banking Supervision. (2003). Trends in Risk Integration and Aggregation. Joint Forum. Retrieved June 23, 2010, from www.bis.org

x.   Basel Committee on Banking Supervision. (2010). Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring. Basel. Retrieved from http://www. bis.org/publ/bcbs188.pdf

xi.   Basel Committee on Banking Supervision. (2011). Principles for the Sound Management of Operational Risk. Basel. Retrieved from http://www.bis.org/publ/bcbs196.pdf

xii.   Beasley, M. W., & Frigo, M. L. (2010). ERM and Its Role in Strategic Planning and Strategy Execution.

xiii.   Bessembinder, (1991). Forward contracts and firm value: investment incentive and contracting effects. The Journal of Financial and Quantitative Vol. 26, No. 4,

xiv.   Bikker J.A & Metzmakers (2001). Bank provisioning behavior and procyclicality. Journal of international financial markets, institutions and money. Vol.15(2), pages 141-157, April

xv.   Caddy, I. (2000), "Intellectual capital: recognizing both assets and liabilities", Journal of Intellectual Capital, Vol. 1 No. 2, pp. 129-46.

xvi.   Campbell, A. (2007). Bank insolvency and the problem of nonperforming loans. Journal of Banking Regulation, 9(1), 25-45.

xvii.   Carter, J.A., McAleer, M. & Perez-Amaral, T. (2006). The Ten Commandments for Managing value-at-risk under the Basel II Accord, Journal of Economic Surveys, 23, 850-855.

xviii.   Conford A (2000), "The Basel Committee's Proposals for Revised Capital Standards: Rationale, Design and Possible Incidence, G-24 Discussion Paper Series", United Nations, No.3, May.

xix.   Cooper &Schindler. (2011). Business Research Methods. Retrieved from http://www.ehow.com

xx.   Darrell, D, & Kenneth J, S, (2012). Credit Risk: Pricing, Measurement, and Management.

xxi.   Edvinsson, L. & Malone, M.S. (1997), Intellectual Capital: Realizing Your Company's True Value by Finding Its Hidden Brainpower, Harper Business, New York, NY.

xxii.   El-Masry, A A. (2006). Derivatives use and risk management practices by UK nonfinancial companies. Managerial Finance volume 32 number 2, pp.137-159

xxiii.   European Central Bank (2007): "Progress towards a framework for financial stability assessment", speech by José-Manuel González-Páramo, Member of the Executive Board of the ECB, OECD World Forum on "Statistics, Knowledge and Policy", Istanbul, 28 June.

xxiv.   Featherson, S., Littlefield, E. & Mwangi, P. (2006). Foreign Exchange Management. Microfinance: What is it and how can it be managed? Retrieved from http://www.cgap.org/sites/default/files/CGAP-Focus-Note-Foreign-ExchangeRate-Risk-in-Microfinance-What-Is-It-and-How-Can-It-Be-Managed-Jan- 2006.pdf Accessed October, 2009

xxv.   Flamini, C., Valentina C., McDonald, G., & Liliana, S. (2009) The Determinants of Commercial Bank Profitability in Sub-Saharan Africa. IMF Working Paper.

xxvi.   Fombrun, C.J., Gardberg, N., & Barnett, M.L., (2000). Opportunity platforms and safetynets: corporate citizenship and reputational risk. Business and Society Review105 (1), 85–106.

xxvii.   Githinji, W, J, (2013). The effect of financial risk management on the financial performance of commercial banks in Kenya, School of Business, University of Nairobi, Nairobi.

xxviii.   Gitogo, J.K. (2013). The Relationship between Derivatives and Financial Performance of Commercial banks in Kenya. Unpublished MBA Dissertation, University of Nairobi, Nairobi.

xxix.   Gordon, L. A., Loeb, M. P., & Tseng, C.Y. (2009). Enterprise Risk Management and Firm Performance: A Contingency Perspective. Journal of Accounting and Public Policy, 28(4), 301-327.

xxx.   Gray, DF, RC Merton & Z Bodie (2007): "New framework for measuring and managing macro financial risk and financial stability", NBER Working Paper no 13607, November.

xxxi.   Griffin, J. M. & Stulz, R. M. (2001). International competition and exchange rate shocks: a cross-country industry analysis of stock returns. Review of Financial Studies, 14(1), 215-241.

xxxii.   Haldane, A.G. & May, R.M. (2011), "Systemic risk in banking ecosystems", Nature, Vol. 469 No. 7330, pp. 351-355

xxxiii.   Harvey, M.G. & Lusch, R.F. (1997), "Protecting the core competencies of a company: intangible asset security", European Management Journal, Vol. 15 No. 4, pp. 370-80.

xxxiv.   Hawkins, J & M Klau (2000): "Measuring potential vulnerabilities in emerging market economies", BIS Working Papers, no 91, October.

xxxv.   I.J. Fraser & B. J. Simkins (Eds.), Enterprise Risk Management: Today's Leading Research and Best Practices for Tomorrow's Executives (pp. 31-50). Hoboken, New Jersey: John Wiley & Sons, Inc.

xxxvi.   International Monetary Fund (2006): Financial Soundness Indicators: Compilation Guide, March.

xxxvii.   Mäenpää& R. Voutilainen, "Insurances for human capital risk management in SMEs", VINE, (2012) Vol. 42 Iss: 1, pp.52 – 66

xxxviii.   Jääskeläinen, A. (2011), "How to measure and manage the risk of losing key employees?", International Journal of Learning and Intellectual Capital, Vol. 8 No. 1, pp. 63-75.

xxxix.   Jensen & Meckling (1976). Becker, Gary S. (1957). The Economics of Discrimination. Chicago, IL, University of Chicago Press.

xl.   Johannes, B. (2016). Enterprise risk management in SMEs toward a structural growth. International Small Business Journal-2014

xli.   John, M. K. (1936). The General Theory of Employment, Interest, and Money.

xlii.   Kamenchu, I.J. (2013). Factors leading to slow adoption of derivatives use in Kenya; A case of Commercial banks in Kenya. International Journal of economics and Finance 1 (3),

xliii. Kithinji, A.M. (2010). Credit Risk Management and Profitability of Commercial Banks in Kenya, School of Business, University of Nairobi, Nairobi.

xliv.   Kupi, E., Ilomäki, S-K., Talja, H., Lönnqvist, A. & Sillanpää, V. (2008), "Aineettoman pääoman riskienhallinta – Riskit ja riskienhallinnan käytännöt yrityksissä" ("Risk management of intangible assets – risks and risk management practices in companies"), VTT Working Papers 104, Espoo (in Finnish).

xlv.   Limo, D, (2014). the effect of foreign exchange risk management on the financial performance of commercial banks in Kenya. School of Business, University of Nairobi, Nairobi.

xlvi.   Murray, K., (2003). Reputation managing the single greatest risk facing businesstoday. Journal of Communication Management 8 (2), 142–149.

xlvii. Mutua, J, M, (2015). Effect of mitigating credit risk on performance of commercial bank in Kenya: a case of Chuka. European Journal of Business and Social Sciences, Vol. 4, No. 07.

xlviii. Nedzvedskas, J. & Aniunas, P. (2007), "Transformations in risk management of currency exchange in Lithuanian commercial banks", Ûkio Technologinis Ir Ekonominis Vystymas, Vol. 13 No. 3, pp. 191-197.

xlix.   Nelson, W R, & Perli, R (2005): "Selected indicators of financial stability", 4th Joint Central Bank Research Conference on "Risk Measurement and Systemic Risk", ECB Frankfurt am Main, November.

l.   Njoroge, N, Matumo M. & Maina, K. (2013). Factors influencing development of financial derivatives markets, Global Advanced Research Journal of Management and Business.

li.   Oloo, O. (2010). Banking Survey Report, the best banks this decade 2000-2009, Think Business Limited, Kenya, www.bankingsurvey.co.ke

lii.   Omondi, O, G, (2013).Implications of Private Note Issue on Price Stability: A Case Study of Commercial Banks in Kenya. Journal of Global Economics

liii.   Padoa-Schioppa, T., (2002), "Central Banks and Financial Stability: Exploring a Land in Between", paper presented at the Second ECB Central Banking Conference, Frankfurt am Main, 24-25 October.

liv.   Power, M., Scheytt, T., Soin, K., &Sahlin, K., 2011. Reputational risk as a logic of organising in late modernity. Organisation Studies 30 (2 & 3), 301–324.

lv.   Rose, E. D. (2008). Employment Relations. (3rd ed). UK: Pearson Education Ltd

lvi.   Salifu, Z., Osei, K A. & Adjasi, K. D. C. (2007). Foreign exchange risk exposure of listed companies in Ghana. The Journal of Risk finance,8(4), 380-393.

lvii.   Scandizzo, S., (2011). A framework for the analysisof reputation risks. The Journal of Operational Risk 6 (3), 41–63.

lviii. Stam, C.D. (2009), "Intellectual liabilities: lessons from The Decline and Fall of the Roman Empire", VINE: The journal of information and knowledge management systems, Vol. 39 No. 1, pp. 92-104.

lix.   Stulz, Rene, (1984). Optimal hedging policies, Journal of Financial and Quantitative Analysis 19, 127-140.

lx.   Tseng, C. (2007). Internal Control, Enterprise Risk Management, and Firm Performance. Unpublished PhD Dissertation. Department of Accounting and Information Assurance. Robert H. Smith School of Business.