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EFFECTS OF FINANCIAL RISK ON PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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ABSTRACT

The ability to mitigate risk and meet shareholder and stakeholder demands is a key ingredient in the success of any commercial bank hence enterprise risk management has been widely researched for years. Nevertheless, a few number of studies have been carried out in developing countries like Kenya. Of key consequence has been the inconsistent performance of most commercial banks in Kenya in the market, a factor that has adversely contributed to receivership due to their inability to meet shareholders and stakeholder's demands. This study aimed at determining the effects of financial risks on performance of commercial banks in Kenya. In particular, this study aimed at determining the impact of liquidity risks on return of assets (ROAs) of commercial banks in the country. Questionnaires were also used to source for data. Internal consistency checks of data were performed using Cronbach's alpha to check for the reliability of data. Financial performance on commercial banks was assessed on terms of return on assets. The study uncovered that liquidity risks have a positive and significant effect on performance of the commercial banks. The study concluded that the banks involved in the study had well managed their liquidity and that bank earnings were positively influenced by higher interest rates. This study recommended that commercial banks should have a proper methodology for the measurement, identification, and control of financial risks. It is important that all banking ventures have a comprehensive risk mitigation process embedded within their operations and that this is subjected to appropriate board and upper management oversight. Commercial banks should also know the risk appetite of its key stakeholders such as directors and gauge appropriate responses to them. This study also recommended that all banks should explore more methods to enhance interest rate risks management capacities. Finally yet importantly, this study recommended the use of Forward exchange contracts as they provide businesses with a cushion from the adverse shifts in exchange rates by fixing an exchange rate until a much later date.

Key Words: *Liquidity Risks, Interest Rate Risks, Foreign Exchange Risks*

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INTRODUCTION

Commercial Banks are the biggest contributors of economic growth globally (Cavusgil et al., 2014, p136). They play a vital role in any country's economic development by amassing savings from individuals and organizations with idle funds and channel these savings into investments in commercial ventures. Commercial banks furnish entrepreneurs with capital needed to start their businesses, government with direct loans. They also hand out managerial advice to small-scale businesspersons and facilitate payment services to its clients. In doing so, commercial Banks serve both surplus and deficit entities by channeling a variety of services to their clients. Thus, the economic wellbeing of any country is determined by the activities of the commercial banks. Historically, we can find cases where the activities of commercial banks had a direct effect on the economies. One such example is the Global Financial Crisis of 2007/08.

The Global Financial crisis affected banking systems worldwide. Many markets reported fall in growth of Bank credit. As a result, the Return on Assets (ROA) of Banks (indicator of Banking system's profitability and soundness) showed a lot of volatility during the period, at first dipping and thereafter improving by the year 2010 on account of recovery post crisis. In 2016, the global commercial bank performance measured in terms of ROA showed that the average in Germany 0.3, France was 0.4; United Kingdom 0.4, Italy and Japan both had 0.7, while Greece had 1.0, and the United States 1.2. Under emerging economies, financial performance measured as ROA was 0.9 in China and India, 1.5 in Malaysia, 3 in Russia, and 3.4 in Brazil (Shukla, 2016, p16).

The Global Financial crisis showed that changes in the process could lead to disrupted economies worldwide. The financial crises also revealed bank regulations importance in hedging against higher risks attributed bank's financial position imbalance.

Banks play a very important role in the allocation of limited savings to investments that are most productive, and the facilitation of the allocation of risks efficiently among the investments (Diamond & Dybvig, 1983, p19). The efficient management of the bank determines its stability.

Mishkin, (2000) portends that every nation should have Central bank whose major responsibility is to ensure the control of inflation and avoid devaluation of local currency thereby stabilizing the economy. In essence, the Central Bank (CB) ensures that the commercial banks are well governed to protect the loss of funds from its citizens. The Central Bank is the body that is assigned the obligation of licensing and regulation of commercial banks by ensuring that they meet all the requirements. It has the power to redact the license of any player in the banking industry that does not conform to its requirements. One of the regulations is that all commercial banks should adhere to a logically sound financial risk management methodology as this can have pronounced effects even on other market economies. A study by Reinhart and Rogoff (2008), for example, uncovered that the defaults in emerging market economies tend to rise sharply when many countries simultaneously experience domestic banking crises. Despite repeated emphasis on implementing sound financial risk management policies, this has not been the case. There are evident symptoms of chronic systemic failures within banking institutions such as high inflation and currency debasement despite fiduciary banks controls. Inadequate practices of financial risk management have also been seen to be manifested in non-performing loans, fraudulent schemes, cybercrime, and money laundering among other vices.

This study inadvertently showed that despite the fact that many banks around the globe had embraced a number of risk management practices, a lot more still needed to be done to iron out the remaining inefficiencies that have negative effects on profitability. This is supported by a survey by Delloite University Press on the Ninth edition of the Global Risk Management Study, which found that risk data and technology systems continue to pose challenges (Sumner 2000, p8).

Prior to the 2007-2008 market crush many countries banking sector had excessive on- and off balance sheet leverage built up together with gradual erosion of banks' capital base level (Bank of International Settlements (BIS), (2009)). Consequently, the banking industry did not absorb the credit losses, trading systematically nor deal with the off-balance sheet large intermediation exposures that occurred in the banking system. To respond to the problems caused by the global financial crisis, many regulatory authorities world over began important reforms to the conceptual framework in the banking industry. This sought to ensure global capital strengthening and regulations on liquidity to create a banking sector that is resilient and ensure financial stability (BIS, 2009; Naceur and Kandil, 2009; Financial Service Authority, 2009).

As at 30th September 2020, the financial performance aspects of commercial banks as well as financial risks management in Kenya was guided by the CBK prudential guidelines issued in January 2013. Commercial banks in Kenya were required by CBK to submit audited annual reports that include their financial performance and in addition disclose various financial risks in the reports including, interest rate risk, credit risk, foreign liquidity risk, exchange risk, as well as capital management risk on a yearly basis by 31 March of every year. The Kenyan banking sector registered improved performance in 2019. It grew by 10.1 percent amounting to 49.5 percent of the GDP largely because of an increase in loans and investment in government securities. (Central Bank of Kenya, 2019, p3). The Central Bank of Kenya (CBK) further warned, "Automation of operations and adoption of financial technologies elevated operational risks and increased the vulnerability of the banking sector to fraud and cyber-crime in 2019". Nevertheless, Banks tightened internal control systems, sensitized customers on fraud and undertook ICT vulnerability assessments and penetration tests to mitigate operational risks. The CBK also strengthened the AML/CFT risk assessment frameworks to address this risk. The development of risk management as an autonomous function in particular has been rapid, with 95% of institutions surveyed saying they had created "independent and well-funded risk management functions".

Statement of the Problem

Financial risks have led to the decline in the performance of commercial banks in Kenya. In 2015, the financial sector's assets as a share of nominal GDP was 83.27 percent, by 2019 it was at 76.09 percent. Market Capitalization for all listed and actively trading equities at the Nairobi Securities Exchange (NSE) have also decreased from 42.61 per cent at the end December 2014, to 26.24 at the end of December 2019, reflecting a decline in shareholders' wealth due to fall in share prices.

Despite CBKs issuance of prudential guidelines intended to assist commercial banks in managing and improving their ROAs, some institutions have experienced liquidity risks rendering them incapacitated to raise sufficient funds to fulfill their obligations resulting in statutory receivership. Many Commercial banks have also affected by interest rate risks.

Financial risk management has been growing in relative importance in financial institutions. In today's dynamic environment, risk is present constant. The government of Kenya and private sector has provided a very conducive environment and invested heavily in the banking sector, as a result commercial banks have in the past performed exceedingly well. Their existence is however at risk as some commercial banks such as Dubai commercial bank, Imperial commercial bank and Chase bank have experienced fluctuating financial performance to the extent of being put under statutory receivership by the CBK.

A number of research studies in Kenya have attempted to address the issues of financial risk with little success. They have addressed the different components of financial risk individually. Kithinji (2010), Kargi (2011) and Fredrick (2012) studied credit risk while Abid and Mseddi (2004), Wachiaya (2011), Nimalathasan *et al.,* (2012), and Gatsi et al., (2013), did research on market risk. Akhtar (2011), Ogol (2011), and Said (2014) studied liquidity risk. By tackling these risks individually these studies fail to see the bigger picture, that is, how financial risks overall affect the financial performance of commercial banks. It was important therefore to study how banks were managing the broader financial risk.

Study Objective

The General objective of this study was to investigate the effect of financial risks on performance of commercial banks in Kenya. The specific objectives of the study were;

- To determine the effect of Liquidity risk on the financial performance of commercial banking ventures in Kenya.

The study was guided by the following research null hypothesis;

- H_0: There is no statistically significant relationship between liquidity risk and performance on commercial banks in Kenya.

LITERATURE REVIEW

Agency Theory

This theory was advanced by Jensen and Meckling in 1976. It offers a set of propositions in managing present day corporations uniquely characterized by "their large number of shareholders or owners who allow particular individuals to control and channel the use of their collective capital for future gains" (Percy, 2013). This theory is involved in diminishing the agency problem thereby capitalizing on improved value maximization. It provides a direct link between corporate governance and financial performance. Meckling (1976) on agency theory, argue that a firm is made of binding contracts between the owners of factors of productions and agents. Information asymmetry is the most common problem between the principal and the agent. The theory states that in order to balance the demands of the involved groups (owners / shareholders and management) information flow between them must be enhanced.

This theory is relevant to the study as it implies that when the demands of the owner are made agency costs are minimized. Agency costs can maroon a firm's financial status and lead to liquidity risks that may undermine the normal operations of the bank for case. The theory gives importance to the decision making power of upper level management in providing banking institutions and their employees with the best financing strategies and optimally utilization of resources owned by the organization to reduce the bad effects of liquidity risks.

Financial performance of commercial banks in Kenya

In 2015, Rodean studied the financial performance of commercial banks listed and traded on Bucharest stock exchange. The major objective of the study was to perform a factor analysis on financial profitability made by three of the biggest banks using the Du Pont. The study showed the importance of reducing capital costs and maintaining a fixed advantage ratio on the financial performance of the banks. He argued that the decrease in profitability rate determined the downward trend registered by the return on equity. The study described the association between advantage and financial performance while excluding other risks that can affect financial performance. The study left a research gap that was filled by this research, which arrived at the conclusion that not only does the source of capital affect the financial performance but also so do the financial risk management practices applied.

METHODOLOGY

The study adopted a descriptive survey design. According to Mugenda and Mugenda (2003), they explain that descriptive survey design helps to determine and report the way things are and answers questions concerning the status of the subject in the study. This study was guided by qualitative, quantitative and descriptive research design establishes the relationship between variables especially the factors influencing performance management. This study's response rate was 100% from the data collected from questionnaires administered. All annual reports and secondary data needed were also collected. This was attributed to the data collection methods employed in either case. A response rate that is above 70% is generally considered as very good, a 60% response rate is good while a 50% response rate is considered adequate (Mugenda and Mugenda, 2003; Bailey, 2000).

FINDINGS

Descriptive results on Liquidity Risks

This study sought to find out how the organizations the employees worked for handled liquidity risks. Table 1 presented the results of the study. As can be seen, 40.47% of employees strongly agreed that their organization had put in place rules for short term crediting every year compared to 3.57%. In addition, 52.38% of employees strongly agreed that their frequently reconciles the volumes of assets and liabilities in terms of maturity compared to 10.71% who strongly disagreed with the same. 70.23% of employees also strongly agreed that their respective commercial banks had sufficient and efficient settlement account balances to meet overnight expenses.

Table 1: Response on Liquidity Risks on financial performance of commercial banks in Kenya

	SD	D	N	A	SA
My organization has put in place rules of short term crediting in every Quarter	3.57	34.52	1.19	20.23	40.47
My organization has increased the limit of funds held at any given time over recent years	23.81	17.85	21.44	53.57	7.14
My organization has significantly reduced off balance sheet liabilities as compared to recent years	33.33	11.90	9.52	34.52	10.71
My organization frequently reconciles the volumes of assets and liabilities in terms of maturity	10.71	7.14	16.7	12.36	52.38
My organization frequently uses short term financial instruments compared to long-term financial instruments	34.52	21..44	19.50	17.85	7.14
My organization has sufficient and efficient settlement account balances to meet overnight expenses.	3.57	2.38	1.19	22.83	70.23
My organization usually projects likely net withdrawals and inflows by our customers	3.57	10.71	10.71	34.52	40.47

Regression Analysis

Liquidity Ratio was found to have enough sufficient variables to explain financial performance on commercial banks in Kenya. The coefficient of determination R square of 54.8% supports the results. This meant that Liquidity Ratio explained 54.8% of the variability in the dependent variable that is financial performance.

Table 2: Model Fitness

Indicator	Coefficient
R	0.740
R Square	0.548
Adjusted R Square	0.540
Std. Error of the Estimate	0.0266786

The p-value showed the level of relationship that exists between the independent variable to the dependent variable. When the significance level is lower than the critical value/probability value (p) which is at 0.05 statistically, the conclusion is that the model is significant to explain the relationship.

Table showed the results on the ANOVA. The model is statistically significant from the results. The independent variables are good predictors of the commercial banks performance in Kenya. The F statistic of 73.288 and the p value (0.000) which is lower than the required 0.05probability of significance level agrees with the results.

Results interpretation for Hypothesis

H_0: The null hypothesis was rejected; therefore, there is a significant relationship between liquidity risk and performance of commercial banks in Kenya.

CONCLUSION AND RECOMMENDATIONS

Based on the findings above the study concluded that liquidity ratio and ROA are positively related. They are also significantly related. The null hypothesis was rejected hence there is a statistically significant relationship between Liquidity risk and return on assets of commercial banks in Kenya. The implication of the findings is that if the liquidity risk is well managed then the commercial banks could get higher returns, but when liquidity risk is not managed well then the performance of commercial banks declines drastically. The study reveals that the liquidity risk of commercial bank has been well managed hence the theory of enterprises risk management is abides in this study.

From the findings above, the study recommended that commercial banks to have a sound process for measuring, identifying, controlling and monitoring liquidity risk. The process should incorporate a robust framework for projecting cash flows in a comprehensive way that arises from liabilities, assets, and off-balance sheet items over an appropriate set of time horizons**.**

The study also recommended that it is vital for the management of the Kenyan bank to be aware of its liquidity position in different product segment. This will help in enhancing their investment portfolio and providing a competitive edge in the market. It is the utmost priority of a bank's management to pay the required attention to the liquidity problems. These problems should be promptly addressed, and immediate remedial measures should be taken to avoid the consequences of the bank becoming illiquid.

Recommendations for further studies

The study sought to investigate the Analysis of financial risks on performance of commercial banks in Kenya. This study called for the analysis of commercial banks located Kenya whereas we have commercial banks in other countries whose studies have never been considered. Financial institutions like insurance firms, Cooperative societies, and pension funds for purpose of making a comparison of the findings with those of the current study may also be conducted. Similar research can be carried on for other global commercial banks to know their performance since financial risks cuts across all financial institutions.

The study also relied on ROA as a measure of profitability. It is important to note, however, that many factors can influence ROA, including a firm's degree of capitalization. ROA favors highly capitalized institutions. ROA measure treats equity capital as free funds, there is no cost associated with them. Financial theory tells us that this is certainly not the case. Because of this, and other limitations, it is advisable to combine ROA with other measures of profitability and performance. Future research should involve measuring profitability using both Return on Assets (ROA) and Return on Equity (ROE). ROE is a true bottom-line profitability metric, comparing the profit available to shareholders to the capital provided or owned by shareholders.

REFERENCES

Abid, F., &Mseddi, S. (2004).The impact of operating and financial leverages and intrinsic business risk on firm value. Available at SSRN 942029

Abiero, J. A. (2012). *The effect of market risk management on company value among the firms listed at the Nairobi Securities Exchange* (MBA project, University of Nairobi, Kenya).

Acharya, V. V., Schaefer, S., & Zhang, Y. (2015). Liquidity Risk and Correlation Risk: A Clinical Study oftheGeneral Motors and Ford Downgrade of May 2005. *The Quarterly Journal of Finance*, 1550006.

Afriyie, H. O., &Akotey, J. O. (2012).Credit risk management and profitability of selected rural banks in Ghana. Ghana: Catholic University College of Ghana.

Ahmed, N., Ahmed, Z., &Usman, A. (2011). Determinants of Performance: A case of life Insurance Sector of Pakistan. *International Research Journal of Finance and Economics*, *61 (7)*, 123-128.

Akhtar, M. F., Ali, K., &Sadaqat, S. (2011). Liquidity risk management: a comparative study between conventional and Islamic banks of Pakistan. Interdisciplinary Journal of Research in Business, 1(1), 35-44

Akong'a, C. J. (2014). *The effect of financial risk management on the financial performance of commercial banks in Kenya* (MBA project, University of Nairobi).

Alessandri, P., &Drehmann, M. (2010). An economic capital model integrating credit and interest rate risk in the banking book. *Journal of Banking & Finance*, *34*(4), 730- 742.

Bank of International Settlement BIS (2009), Available (online) (www.**bis**.org)

Bartram, S. M. (2006). The use of options in corporate risk management. *Managerial Finance*, *32*(2), 160-181.

Bayer, R., Santelli, J., &Klitzman, R. (2015). New challenges for electronic health records: confidentiality and access to sensitive health information about parents and adolescents. *JAMA*, *313*(1), 29-30.

Berk, A. S., Peterlin, J., &Cok, M. (2009).Corporate risk management in Slovenian firms. *Managing global transitions*, *7*(3), 281.

Bessis, J., & O'Kelly, B. (2015).*Risk management in banking*. John Wiley & Sons.

Bhyat, Aneez. "An examination of liquidity risk and liquidity risk measures."PhD diss., University of Cape Town, 2010.

Brouwers, L., Hansson, K., & Ekenberg, L. (2002). Simulation of Three Competing Flood Management Strategies: A Case Study.

Cavusgil, S. T., Knight, G., Riesenberger, J. R., Rammal, H. G., & Rose, E. L. (2014).*International business*. Pearson Australia.

Central Bank Annual Report, 2019 Available https://www.centralbank.go.ke/uploads/cbk_annual_reports/665458124_Annual%2520Report%25202917%252018%2520low%2520resolution.pdf

Central Bank Supervision Report, 2015 Available (online)https://www.centralbank.go.ke/

Chisholm, A. M. (2011). *Derivatives demystified: a step-by-step guide to forwards, futures, swaps and options*. John Wiley & Sons.

Chow, E. H., & Chen, H. L. (1998). The determinants of foreign exchange rate exposure: Evidence on Japanese firms. *Pacific-Basin Finance Journal*, *6*(1), 153-174.

Committee of Sponsoring Organizations (COSO) (2004), Available (online)www.**coso**.org

Cornell, B., & Shapiro, A. C. (1983).Managing foreign exchange risks. *Midland Corporate Finance Journal*, *1*(3), 16-31.

Cornell, B., & Shapiro, A. C. (1987).Corporate stakeholders and corporate finance. *Financial management*, 5-14.

Crouhy, M., Galai, D., & Mark, R. (2001).Prototype risk rating system. *Journal of banking & finance*, *25*(1), 47-95.

Delaney, D., Mcmanus, L., &Lamminmaki, D. (2016).The Nature and Effectiveness of Sponsorship Performance Measurement Systems. *Australasian Marketing Journal (Amj)*.

Devinaga, R. (2010). Review of Literature and Theories on Commercial Bank Profitability. *Journal of Performance management*.

Diamond, D. W., &Dybvig, P. H. (1983). Bank runs, deposit insurance, and liquidity. *The journal of political economy*, 401-419.

Drehmann, M., & Nikolaou, K. (2013).Funding liquidity risk: definition and measurement. *Journal of Banking & Finance*, *37*(7), 2173-2182.

Epetimehin, F. M., &Fatoki, o. Operational risk management and the financial sector development: an overview.

Financial Service Authority, 2009 Available (online) www.fsa.gov.uk.

Flamini, V., Schumacher, M. L., & McDonald, M. C. A. (2009). *The determinants of commercial bank profitability in Sub-Saharan Africa* (No. 9-15).International Monetary Fund.

Fredrick, O. (2012). The impact of credit risk management on financial performance of commercial banks in Kenya. DBA Africa Management Review, 3(1), 22-37.

Gachua, N. F. (2011). The effect of foreign exchange exposure on a Firm's financial performance: a case of listed companies in Kenya (Doctoral dissertation, KCA University).

Gatsi, J. G., Gadzo, S. G., &Akoto, R. K. (2013).Degree of Financial and Operating Leverage and Profitability of Insurance Firms in Ghana. International Business and Management, 7(2), 57-65.

Govori, F. (2013). The performance of commercial banks and the determinants of profitability: Evidence from Kosovo.

Graca, S. S., Barry, J. M., &Doney, P. M. (2015).Performance Outcomes of Behavioral Attributes in Buyer-Supplier Relationships. *Journal of Business & Industrial Marketing*, *30*(7), 805-816.

Hakim, S., &Neaime, S. (2005). Profitability and Risk Management in Banking: A Comparative Analysis of Egypt and Lebanon. *Research in Middle East Economics*, *6*, 117-131.

Hannan, M. T., & Freeman, J. (1984).Structural inertia and organizational change. *American sociological review*, 149-164.

He, J., & Ng, L. K. (1998).The foreign exchange exposure of Japanese multinational corporations. *The Journal of Finance*, *53*(2), 733-753.

Helgesson, G., & Eriksson, S. (2015). Plagiarism in research. *Medicine, Health Care and Philosophy*, *18* (1), 91-101.

Hill, C. W., & Jones, T. M. (1992).Stakeholder-agency theory. *Journal of management studies*, *29*(2), 131-154.

Holton, G. A. (2003). *Value-at-risk: theory and practice* (Vol. 2). New York: Academic Press.

Hosna, A., Manzura, B., &Juanjuan, S. (2009). Credit risk management and profitability in commercial banks in Sweden. *Rapportnr. Master Degree Project 2009: 36*.

Huang, Z. (2012). *The Usefulness of Derivative Disclosures by Chinese Listed Companies* (Doctoral dissertation, Edinburgh Napier University). In *Proceedings of the SIAM Conference on Data Mining* (Vol. 4, p. 5).

Jorion, P. (2001). *Financial risk manager handbook 2001-2002* (Vol. 96).Wiley.

Kahuria, C. W., &Waweru, G. (2015). Does Capital Structure Matter? Effects On Profitability Of Firms Listed At The Nairobi Securities Exchange. *Journal of Business Economics and Finance*, *4*(3).

Kargi, H. S. (2011). Credit Risk and the Performance of Nigerian Banks. Ahmadu Bello University, Zaria.

Khrawish, H., Siam, W. Z., &Khrawish, A. H. (2011). Determinants of Islamic Bank Profitability: Evidence from Jordan. *Middle Eastern Finance and Economics*, (13), 43-57.

Kithinji, A. M. (2010). Credit risk management and profitability of commercial banks in Kenya. School of Business, University of Nairobi, Nairobi.

Klimczak, K. M. (2005). Rationales for corporate risk management from stakeholders' perspective.

Krapl, A., &Giaccotto, C. (2015).Foreign Exchange Risk andthe Term-Structure of Industry Costs of Equity. *Journal of International Money and Finance*, *51*, 71-88.

Li, Y. (2007). Determinants of banks' profitability and its implication on risk management practices: Panel evidence from the UK in the period 1999-2006.

Maaka, Z. A. (2013). *The Relationship between Liquidity Risk and Financial Performance of Commercial Banks in Kenya* (MBA project, University Of Nairobi).

Manganelli, S., & Engle, R. F. (2001).Value at risk models in finance.

Maria-Daciana, R. O. D. E. A. N. (2015). The Financial Performance Of Commercial Banks Listed And Traded On Bucharest Stock Exchange. *Revista Economica*, *67* (Supplement), 135-144.

Masud, M., Kaium, A., &Hossain, M. S. (2012). Corporate social responsibility reporting practices in Bangladesh: A study of selected private commercial banks. *IOSR Journal of Business and*

Management (IOSR-JBM) ISSN, 42-47.

Mishkin, F. S. (2000). *Inflation targeting in emerging market countries* (No. w7618).National Bureau of Economic Research.

Moyo, J., Nandwa, B., Council, D. E., Oduor, J., & Simpasa, A. (2014).Financial Sector Reforms, Competition and Banking System Stability in Sub-Saharan Africa. *New Perspectives*.

Mugenda, O. M. & Mugenda Ag (2003). *Research Methods, Qualitative and Quantitative Approaches*.

Mwangi, G. N. (2012). *The effect of credit risk management on the financial performance of commercial banks in Kenya* (*MBA Research Project, University of Nairobi*).

Mwangi, M. N. (2014). The effects of liquidity on financial performance of deposit taking microfinance institutions in Kenya. *MBA Research Project, University of Nairobi*.

Naceur, S. B., &Kandil, M. (2009). The impact of capital requirements on banks' cost of intermediation and performance: The case of Egypt. *Journal of Economics and Business*, *61*(1), 70-89.

Ngalawa, J., &Ngare, P. (2013).Interest rate risk management for commercial banks in Kenya.

Nimalathasan, B., & Pratheepkanth, P. (2012). Systematic Risk Management and Profitability: A Case Study of Selected Financial Institutions in Sri Lanka. Global Journal of Management and Business Research, 12(17).

Ogol, G. O. (2011). Liquidity risk management practices in micro-finance institutions in Kenya (Unpublished Masters project). University of Nairobi, Kenya

Omasete, C. A. (2014). *The effect of risk management on financial performance of insurance companies in Kenya* (MBA project, University of Nairobi).

Ongore, V. O., & Kusa, G. B. (2013).Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial Issues*, *3*(1), 237-252.

Reinhart, C. M., & Rogoff, K. S. (2008). *This time is different: A panoramic view of eight centuries of financial crises* (No. w13882). National Bureau of Economic Research.

Rogers, J. C., Rucks, C. T., & Swindler, S. (2015). A Credit Scoring Model to Evaluate the Credit Worthiness of Credit Card Applicants. In *Proceedings of the 1982 Academy Of Marketing Science (Ams) Annual Conference* (Pp. 585-585). Springer International Publishing.

Said, R. M. (2014).Net Stable Funding Ratio and Commercial Banks Profitability.

International Proceedings of Economics Development and Research, 76, 34

Schnusenberg, O., & Madura, J. (2000). Global and relative over-and under reactions in international stock market indexes. *Available at SSRN 228628*.

Searle, I. (2008).Enterprise Risk Management. London: Spiramus Press.,

Seligman, C., Syme, G. J., & Gilchrist, R. (1994).The role of values and ethical principles in judgments of environmental dilemmas. *Journal of Social Issues*, *50* (3), 105- 119.

Seshadhri, C., Pinar, A., &Kolda, T. G. (2013).Fast triangle counting through wedge sampling.i

Shukla, S. (2016).Analysis of banking system performance of select global economies with that of India– during and after the global financial. *Procedia Economics and Finance*, *11*, 383-395.

Stock, J. H., & Watson, M. W. (1988).A probability model of the coincident economic indicators.

Stulz, R. M. (1984). Optimal hedging policies. *Journal of Financial and Quantitative Analysis*, *19*(02), 127-140.

The Kenya financial stability report, 2015 Available (Online) https://www.centralbank.go.ke/

Triantis, G. G. (2000). Financial slack policy and the laws of secured transactions. *The Journal of Legal Studies*, *29*(1), 35-69.

Tseng, C. Y. (2007). *Internal control, enterprise risk management, and firm performance*. ProQuest.

Van Belle, G., Mentzelopoulos, S. D., Aufderheide, T., May, S., & Nichol, G. (2015). International variation in policies and practices related to informed consent in acute cardiovascular research: results from a 44 country survey. *Resuscitation*, *91*, 76-83.

Van Greuning, H., &Brajovic-Bratanovic, S. (2009). *Analyzing banking risk: a framework for assessing corporate governance and risk management*. World Bank Publications.

Wachiaya, J. (2011). A survey of market risk management techniques by commercial banks in Kenya and their suitability in mitigating financial loss (Doctoral dissertation, University of Nairobi, Kenya).

Williams, M. N., Grajales, C. A. G., & Kurkiewicz, D. (2013). Assumptions of multiple regression: correcting two misconceptions. *Practical Assessment, Research & Evaluation*, *18* (11), 2.

Zingales, L. (2000). In search of new foundations. *The journal of Finance*, *55*(4), 1623- 1653.