

EFFECT OF FINANCIAL RISK EXPOSURE ON MARKET PERFORMANCE OF LISTED COMMERCIAL BANKS IN KENYA

¹PETERSON WANJOHI WANGARI, ²DR OLUOCH OLUOCH

Abstract: Managing risk is one of the basic tasks. The risk and return are directly related to each other, which means that increasing one will subsequently increase the other and vice versa. And, effective risk management leads to more balanced trade-off between risk and reward, to realize a better position in the future (Fatemi and Fooladi, 2006). Globalization and internationalization has increased the risk of firms in the developing countries. This is due to competition from within and outside the countries by either directly from other or indirectly through access to International trade. Management of financial risks has been a big concern for investors, analysts, managers and shareholders around the world. This study therefore sought to evaluate the effect of financial risk exposure on market performance of public listed commercial banks in Kenya. The study specifically focuses on influence of credit risk on the market performance of public commercial banks in Kenya, influence of currency risk on the market performance of public commercial banks in Kenya, influence of liquidity risk on market performance of public commercial banks in Kenya. The study is hinged on the Credit risk theory, Extreme Value Theory and Shiftability Theory of Liquidity. This study adopted quantitative research design. This study used all the 11 listed commercial banks in Kenya as its population. The researcher used secondary data which was extracted from the CBK website specifically the Statistical Bulletin. The research employed use of data collection sheet and hardware and software tools. The hardware that was used included a computer which was used to run the software components necessary to give the research results. The researcher used secondary data which was extracted from the CBK website specifically the Statistical Bulletin. The period of the study ranged from 2009 to 2018 and the study used both income statement and financial statements of all 11 listed commercial banks in the Country. The t-statistic was used to test the hypotheses at 5% confidence level. The data was run using SPSS. Data was also analyzed using ANOVA for purposes of determining if there is a relationship between financial performance and market performance of commercial banks. The study investigated the effect of credit risk on the market performance of Kenyan banks considering mainly variables related to lending activities. The coefficients of the financial ratios of non performing loans and advances in the regression model which are indicators of the level of credit risk have negative effect on the market performance. The study also investigated the effect of currency risk on the market performance of Kenyan banks by considering degree of Kenya Shillings Exchange Rate as the indicator. The analysis of the currency risk shows the degree in which changes in the degree of Kenya Shillings Exchange Rate can have an adverse impact on the market performance. Finally, the study investigated the impact of liquidity risk on the market performance of Kenyan banks. Liquidity risk has a negative significant effect on the market performance. From findings, it is recommended that management of Kenyan commercial banks should enhance their capacity in credit analysis and loan administration. The study recommends that clear credit policies and lending guidelines should be established. Management also is required to make sure that the terms and conditions are adhered to in loans approval. The study also recommends that commercial banks should explore avenues to enhance capacities within banks for managing currency risks. Finally, the study also recommends 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.

Keywords: credit risk, currency risk and liquidity risk.

1. INTRODUCTION

The term financial risk may be used like an umbrella term for multiple types of risk associated with financing, including financial transactions that include company loans in risk of default. Ahmed (2015) says that financial risk arises from possible losses in financial markets due to movements in financial variables. It is usually associated with leverage with the

risk that obligations and liabilities cannot be met with current assets. Our focus in this study will use the term financial risks to broadly cover credit risk, market (price) risk, interest rate risk, liquidity risk and foreign exchange risk. Financial risk may be caused by variation in interest rates, currency exchange rates, variation in market prices, default risk and liquidity gap that affect the cash flows and, therefore its financial performance and competitive position in product markets. Indeed most of the Kenyan Commercial banks outline credit risk, liquidity risk, market risk, interest rate risk and foreign exchange risk as the most important types of financial risks they face (Achou & Tenguh, 2008).

Kenyan economy is becoming more and more open with international trading constantly increasing and as a result the Kenyan firms become more exposed to foreign exchange rate fluctuations. Financial risk changes can lead to changes in the relative prices of the firm's inputs and outputs. The relative price changes can affect the firms competitive market position, leading to changes in cash flows and, ultimately, in firms value. While it can be observed that firms in developed economies use a variety of instruments to manage financial risks, it is not clear whether the full potential of these instruments is being realized in developing economies notably Kenya since not all firms use derivatives and not all firms use all types and more important, whether they are used appropriately (Njoroge et al 2013).

Statement of the problem

Kenyan financial sector is largely bank-based as the secondary market is still not established in the country. Banks dominate the financial sector in Kenya and as such the process of financial intermediation in the country depends heavily on banks. Keeping their optimal market performance for banks in Kenya is very important to meet the expectation of their stakeholders. Hence understanding financial risk factors that influence the market performance of commercial banks is critical not only to the management of these commercial banks but also to other stakeholders and interest groups such as the country's Central Bank, the government as a whole, the banker's association as well as other financial authorities in the country (Ayele, 2012).

Empirical studies have mixed findings on the determinant of market performance. Chaganti and Damanpour (2001), Grier and Zychowicz (2004), Bathala et al. (2004) and Crutchley and Jensen (2006) find a negative relationship between financial risk and market performance. On the other hand, Leland and Pyle (2007), Berger et al. (2007) and Chen and Steiner (2009) show that financial risk and market performance are positively related.

Most of the studies on effect of financial risk on market performance of listed commercial banks have covered developed economies, whereas much less studies covered developing economies such as Kenya's economy. Some of these studies include Aburime (2008) in Nigeria, Al-Tamini (2010) in UAE, Clair (2004) in Singapore, Heffernan & Fu (2010) and Wong, Fong, Wong, & Choi (2007) in China. It is however important to note that countries differ in terms of the macro-economic conditions, the financial systems as well as the operating environment of these banks (Ongore & Kusa, 2013). This shows that financial risk that influence market performance in one country may not be the same as those in another country (Lipunga, 2014).

Studies that are close to effect of financial risk on market performance of listed commercial banks in Kenya include Njihia (2005), Mwanja (2009), Okutoyi (1988), and Ndungu (2003). These studies were however designed to focus on each financial risk factor to the exclusion of the other factors while some only focused on listed commercial banks as in the case of Ndungu (2003). There is no study that has been done on more than one financial risk factors combined of commercial banks hence a gap that needs to be filled in by carrying out the present study. This study builds on the study by Njihia (2005) as the former study was limited by the scope as it only focused on one aspect of commercial banks market performance. Given the passage of time and limitations of case studies as far as generalization of results to the population is concerned, there is need for the present study to be conducted. The study poses the following research question: What is the effect of financial risk exposure on market performance of listed commercial banks in Kenya?

Objectives

- i. To determine influence of credit risk on the market performance of listed commercial banks in Kenya
- ii. To determine influence of currency risk on the market performance of listed commercial banks in Kenya.
- iii. To evaluate influence of liquidity risk on market performance of listed commercial banks in Kenya.

2. THEORETICAL REVIEW

Credit Risk Theory

Even though people have been confronting credit risk ever since early ages, there has been very scanty literature on the same. This theory was introduced by Melton (1974), it is the most important of all others in financial management (Crosbie et al., 2003). It asserts that the management should monitor all the information including screening of the borrower's ongoing creditworthiness and ensure that the borrower adheres to the terms of the contract. It also explains how financial institutions like Islamic banks can deal with uncertainties when they arise during credit servicing period. According to (Ibrahim, 2004) money loaning continuously encompasses some features of risks arising from situations which result from the failure to honor loan obligation when they fall due.

Extreme Value Theory

In 1709, Bernoulli discussed the mean largest distance from the origin when n points lie at random on a straight line of length (Johnson et al., 1995). A century later Fourier stated that, in the Gaussian case, the probability of a deviation being more than three times the square root of two standard deviations from the mean is about 1 in 50,000, and consequently could be omitted (Kinnison, 1985). The financial institutions with significant amounts of trading activity proved to be very vulnerable to extreme market movements and, in time, the measurement of market risk became a primary concern for regulators and also for internal risk control. This calls for indicators showing the risk exposure of firms and the effect of risk reducing measures.

Shiftability Theory of Liquidity

Formally developed by Moulton in 1915, the Shiftability theory held that banks could most effectively protect themselves against massive deposit withdrawals by holding, as a form of liquidity reserve, credit instruments for which there existed a read secondary market. The theory is based on the proportion that banks liquidity is maintained if it holds assets that could be shifted or sold to other lenders or investors for cash. Also, these assets could be shifted to the Central Bank for cash without material loss in case of necessity than relying on maturities to solve their liquidity problems (Ngwu, 2006).

Conceptual Framework

The main objective of the study is to evaluate the effect of financial risk exposure on market performance of public commercial banks in Kenya. Some of the key financial risk factors are credit risk, market risk, liquidity risk and operational risk. The dependent variable is performance of commercial banks in Kenya. Based on the empirical literature the study came up with the following conceptual framework.

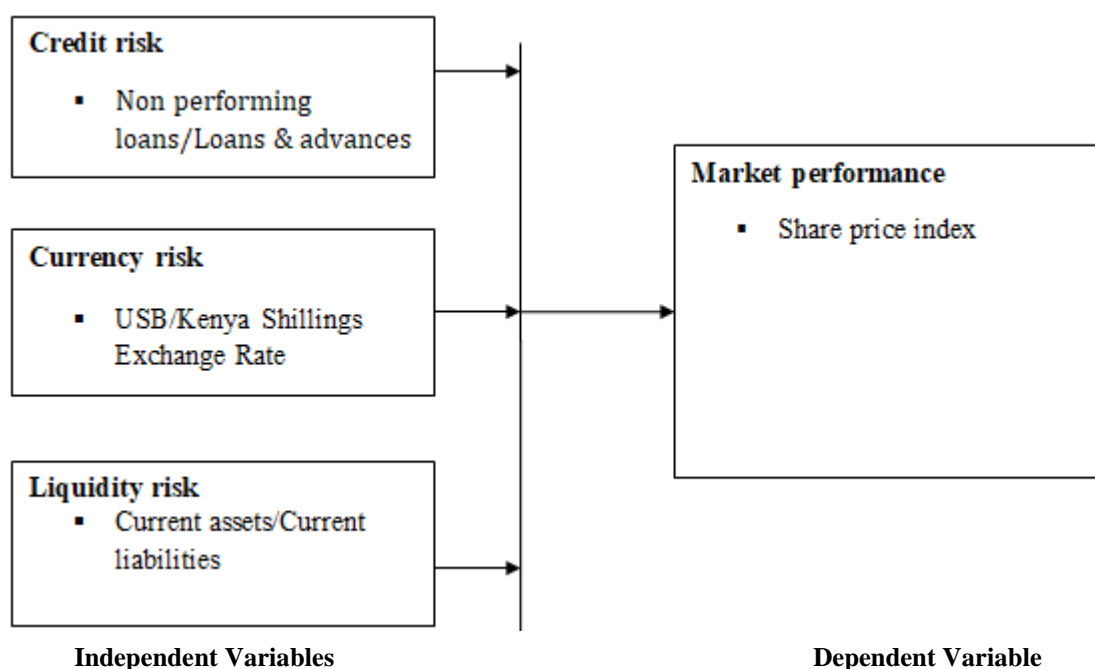


Figure 2.1: Conceptual Framework

Research Gaps

From the foregoing review of relevant literature, it is evident that research in the area of bank risks has been done but not in a comprehensive approach. Most of the literature reviewed indicated that previous researchers only concentrated on credit risks leaving out the components of market risk. The current study has a wider scope by covering additional important variables of liquidity, market and operational risks that were omitted by previous studies. This makes the study more comprehensive. From survey of relevant literature, it has been found that there are few studies specific to Kenya on the link of financial risk and market performance of commercial banks. This study therefore intended to fill these pertinent gaps.

Critique of Existing Literature and Research Gaps

Review of literature indicate that majority of past empirical studies have analyzed the effect of financial risk on the financial performance. The indicator the have been used in most studies is ROA and ROE to measure profitability. In as much as a lot of researches have been done on the impact of financial risk and market performance of commercial banks, most of the local studies have leaned heavily towards the various tools and techniques of financial risk management, practices and strategies used by various institutions (Ochola, 2009; Ngare, 2008; Mwirigi, 2006; Simiyu, 2008).

Empirical evidence and results of various studies show a mixed trend on the effect of financial risk components on market performance. There is also evidence from review of literature that even in situations where similar indicators of market performance have been employed, conflicting empirical results have been provided. Some of the studies have provided for significant or insignificant positive effect while others have shown significant or insignificant negative relationship. In the extreme are the studies have postulated no relationship between independent variables and dependent variable. This lack of convergence implies that the studies did not establish a clear relationship between financial risk and market performance. Hence the manner in which financial risk influences financial performance is still inconclusive.

Review of literature indicate that majority of past empirical studies have analyzed the effect of financial risk based on different dependent variable indicators. The dependent variable the have been used in most studies is financial performance in the context of ROA .In as much as a lot of researches have been done on the impact of financial risk and financial performance of commercial banks, most of the local studies have leaned heavily towards the various tools and techniques of financial risk management, practices and strategies used by various institutions (Wanjira, 2010; Ochola, 2009; Ngare, 2008; Mwirigi, 2006; Simiyu, 2008).

3. METHODOLOGY

This study adopted quantitative research design. This study used all the 11 listed commercial banks in Kenya as its population. The study used commercial banks because of its availability of the secondary data as opposed to other financial institutions like Saccos which is very hard to find the secondary data. Populations of 11 commercial banks branches (all the listed commercial banks in the Nairobi Securities Exchange) in Kenya will be used in this study. The research employed use of data collection sheet and hardware and software tools. The hardware that was used included a computer which was used to run the software components necessary to give the research results. Software that was used includes statistical software such as SPSS and Microsoft Excel. The researcher used secondary data which was extracted from the CBK website specifically the Statistical Bulletin. The period of the study ranged from 2014 to 2018 and the study used both income statement and financial statements of all 11 listed commercial banks in the Country.

Model Presentation

This section presents the model for the study.

$$\text{Market Performance} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where,

X_1 : Credit risk (Independent Variable)

X_2 : Currency risk (Independent Variable)

X_3 : Liquidity risk (Independent Variable)

Market Performance= Market returns

$\beta_1, \beta_2, \beta_3$, = Beta co-efficients

ε = error term

4. RESULTS

Table 1: Correlations Analysis

		Credit risk	Market risk	Liquidity risk	Market performance
Credit risk	Pearson Correlation	1	-.870**	-.809**	-.0881**
	Sig. (2-tailed)		.000	.000	.000
	N	50	50	50	50
Currency risk	Pearson Correlation	-.870**	1	.923**	-.842**
	Sig. (2-tailed)	.000		.000	.000
	N	50	50	50	50
Liquidity risk	Pearson Correlation	-.809**	.923**	1	-.835**
	Sig. (2-tailed)	.000	.000		.000
	N	50	50	50	50
Market Performance	Pearson Correlation	-.881**	-.842**	-.835**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	50	50	50	50

** . Correlation is significant at the 0.01 level (2-tailed). Source: Research results

Regression Results

The results in Table 2 show that the independent variables had a correlation with the market performance. The model accounted for 80.2% of the variance in market performance as shown by the R²

Table 2: Regression Model Parameters

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.905	.819	.802	.40879

Source: Research results

The results in Table 3 present the ANOVA from the regression analysis showing the significance of F-statistic. Table 4.4 shows that the F-statistic of 46.886 was significant at 5% level of significance, p = .000. This shows that the model was fit to explain the relationship between financial risk exposure and market performance of commercial banks in Kenya.

Table 3: Analysis of Variance of the Regression

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	23.505	3	7.835	46.886	.000 ^b
Residual	5.180	46	.167		
Total	28.686	50			

Source: Research results

Table 4: Significance of Independent Variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.769	.279		2.649	.002
	Credit risk	-.389	.123	-.407	3.257	.002
	Currency risk	-.221	.125	-.213	2.578	.003
	Liquidity risk	-.149	.123	-.151	4.260	.002

Source: Research results

The results in Table 4.6 show that credit risk had a negative effect on market performance and this effect was significant (B = -0.389, p = 0.002).

The results also show that currency risk had a negative effect on market performance of commercial banks in Kenya, but the effect was significant ($B = -0.221$, $p = 0.002$).

The study also found that liquidity risk had a negative effect on market performance of commercial banks in Kenya, but the effect was significant ($B = -0.149$, $p = 0.002$).

$$\text{Share returns} = 0.769 - 0.389 \text{ CCR} - 0.221 \text{ ACR} - 0.149 \text{ APR} + \varepsilon$$

Interpretation of the findings

The study sought to establish the effect of financial risk exposure on market performance of listed commercial banks in Kenya. The study examined the effect of credit risk on the market performance of listed commercial banks in Kenya. Credit risk was measured as the non-performing loans over loans & advance. The study found that credit risk had a negative effect on market performance and this effect was significant ($B = -0.389$, $p = 0.002$). This means that market performance of listed commercial banks in Kenya is influenced by the credit risk. A unit increase in credit risk leads to a 0.001 units decrease in market performance.

The study assessed the effect of currency risk on the market performance of listed commercial banks in Kenya. The results also show that currency risk had a negative effect on market performance of listed commercial banks in Kenya, but the effect was significant ($B = -0.221$, $p = 0.002$). This suggests that the currency risk influence market performance of these listed commercial banks.

The study assessed the effect of liquidity risk on the market performance of listed commercial banks in Kenya. The results also show that liquidity risk had a negative effect on market performance of listed commercial banks in Kenya but the effect was significant ($B = -0.149$, $p = 0.002$). This suggests that the average liquidity risk influence market performance of these listed commercial banks.

5. CONCLUSION

The study investigated the effect of credit risk on the market performance of Kenyan banks considering mainly variables related to lending activities. The coefficients of the financial ratios of non performing loans and advances in the regression model which are indicators of the level of credit risk have negative effect on the market performance. The study also investigated the effect of currency risk on the market performance of Kenyan banks by considering degree of Kenya Shillings Exchange Rate as the indicator. The analysis of the currency risk shows the degree in which changes in the degree of Kenya Shillings Exchange Rate can have an adverse impact on the market performance. The study finally investigated the impact of liquidity risk on the market performance of Kenyan banks. Liquidity risk has a negative significant effect on the market performance. The conclusion of the study is that liquidity problems if unchecked may adversely affect a given bank's Equity returns, capital and under extreme circumstances, it may cause the collapse of an otherwise solvent bank.

REFERENCES

- [1] Abid, F., & Mseddi, S. (2004). The impact of operating and financial leverages and intrinsic business risk on firm value. Available at SSRN 942029
- [2] Achou, T. F., & Tenguh, N. C. (2008). Bank performance and credit risk management. Finance Universitu of Skodve School of Technology and Society.
- [3] Adolphus, T. J. (2011). Modelling bank management, rural lending and small business finance in Nigeria. Global Journal of Management and Business Research, 11(7).
- [4] Afriyie, H. O., & Akotey, J. O. (2012). Credit risk management and profitability of selected rural banks in Ghana. Ghana: Catholic University College of Ghana.
- [5] Ahmed, L. (2015). The effect of foreign exchange exposure on the financial performance of commercial banks in Kenya. International Journal of Scientific and Research Publications, 5 (11) 115
- [6] Ahmed, A., A., & Nauman, A., A. (2012). Liquidity risk and performance of banking system. Journal of Financial Regulation and Compliance, 20(2), 182-195. 157

- [7] 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.
- [8] Al Karim, R., & Alam, T. (2013). An evaluation of financial performance of private commercial banks in Bangladesh: ratio analysis. *Journal of Business Studies Quarterly*, 5(2), 65.
- [9] Al-Tamimi, H., Hussein, A., Miniaoui, H., & Elkelish, W. W. (2015). Financial Risk and Islamic Banks' Performance in the Gulf Cooperation Council Countries. *The International Journal of Business and Finance Research*, 9(5), 103-112.
- [10] Alexander, C. (2005). The present and future of financial risk management. *Journal of Financial Econometrics*, 3(1), 3-25
- [11] Alexiou, C., & Sofoklis, V. (2009). Determinants of bank profitability: Evidence from the Greek banking sector. *Economic annals*, 182, 93-118.
- [12] Allen, S. (2003). *Financial risk management: a practitioner's guide to managing market and credit risk (with CD-ROM)* (Vol. 119).
- [13] John Wiley & Sons. Amin, M. A. M., Sanusi, N. A., Kusairi, S., & Abdallah, Z. M. (2014). Inverse relationship of financial risk and performance in commercial banks in Tanzania. *Investment Management and Financial Innovations*, 11(4), 279- 291.
- [14] Angora, A., & Roulet, C. (2011). Transformation risk and its determinants: A new approach based on the Basel III liquidity management framework. *Universite de Limoges*. 158
- [15] Archer, S., & Karim, R. A. A. (2007). Measuring Risk for Capital Adequacy: The Issue of Profit-sharing Investment Accounts. *Islamic Finance: The Regulatory Challenge*, 394, 223. .
- [16] Aruwa, S. A. S., & Musa, A. O. (2014). Risk components and the financial performance of deposit money banks in Nigeria. *International Journal of Social Sciences and Entrepreneurship*, 1(11), 514-522.
- [17] Ashraf, D., L'Huillier, B., & Rizwan, M. S. (2015). Does the implementation of a Net Stable Funding Ratio enhance the financial stability of the banking industry? An international study.
- [18] Athanasoglou, P. P., Brissimis, S. N., & Delis, M. D. (2008). Bank-specific, industry specific and macroeconomic determinants of bank profitability. *Journal of international financial Markets, Institutions and Money*, 18(2), 121-136.
- [19] Awojobi, O. (2011). Analysing risk management in banks: Evidence of bank efficiency and macroeconomic impact. *Journal of Money, Investment and Banking*, (22).
- [20] Beck, T., Demirgüç-Kunt, A., & Levine, R. (2009). *Financial institutions and markets across countries and over time: data and analysis*. World Bank Policy Research Working Paper Series.
- [21] Berger, A. N., & Humphrey, D. B. (1994). Bank scale economies, mergers, concentration, and efficiency: The US experience.
- [22] Berument, H. & Dinçer, N. (2004). The effects of exchange rate risk on economic performance: the Turkish experience, *Applied Economics*, Taylor and Francis Journals, 36 (21), 2429-2441.
- [23] Biekpe, N. (2011). The competitiveness of commercial banks in Ghana. *African Development Review*, 23(1), 75-87.
- [24] Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115-143. 160
- [25] Bodily, S. E. & Bruner, R. F. (2002). *Enron: 1986–2001*. FEN Case Studies. Available <http://papers.ssrn.com>.
- [26] Bobakova, I.V. (2003). Raising the Profitability of Commercial Credit Unions, BIATEC, 11.
- [26] Bordeleau, E., Crawford, A. & Graham, C. (2009). Regulatory Constraints on Bank Leverage: Issues and Lessons from the Canadian Experience, Bank of Canada Discussion Paper