



EFFECT OF LIQUIDITY RISK ON THE PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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Abstract: *Commercial banks in Kenya have recorded mixed results with regard to their financial performance while studies have linked financial performance to the financial risk. Very few studies have been done in Kenya with regard to financial risk and financial performance in commercial banks. The objective of the study was to determine the effect of liquidity risk on the performance of commercial banks in Kenya. The findings of the study may be important to financial institutions because they may be able to understand the financial risk and how they influence the financial performance of the banks and how the same can be leveraged to achieve high financial performance. They may therefore formulate and adopt strategies to help mitigate the problems and hence achieve higher financial performance. The study adopted a descriptive research design in which the data was collected from the 45 commercial banks covering periods between 2017 to 2022. Data analysis involved both descriptive and inferential statistics. Correlation and regression analysis was used to determine the relationship between the study variables. The researcher also tested for multi-collineality, and autocorrelation and homoscedastic test before correlation and regression tests are done. The study found that the liquidity risk has an effect on the performance of the commercial banks in Kenya. The study recommended that the management of the commercial banks should strengthen the credit risk management so as to minimize this risk with the aim of enhancing the financial performance of their respective commercial banks.*

Keywords: *financial performance, liquidity risk, financial risk*

1. Financial Risk

Financial risk is defined as the unexpected variability or volatility of returns (Holton, 2004). Financial risk refers to the danger likely to be caused by an event or a loss that could impair the value of member's savings or substantially affect assets, hence its delivery and earning capacity (Maina, 2011). According to Arif and Showket (2015) financial risk refers to the possibility that shareholders may lose their monies because of the company's use of debt where the company cash flows are insufficient to meet its financial obligations. Further, Panigrahi (2013) define financial risk as the corporate inability to meet expected and unexpected demand for cash flows. It is the risk at which corporate institutions do not have enough cash to use for its own obligations. It is a term used to explain a situation where a company does not hold enough cash to pay suppliers, bank and other parties on time.

According to Jacques et al., (1997) financial risk encompasses the risk of cash insolvency. There is also the risk of being unable to meet prior claims with the cash generated by the firm, which is determined by dispersion of net cash flows and the level of fixed obligations as well as the firm's poor of liquid resources. It reflects uncertainty about foreign exchange rates, interest rates, commodity prices, equity prices, credit quality, liquidity, and an organization's access to financing (Margaret & Kevin, 2010). It is whereby returns may vary or fluctuate unexpectedly. The hypothesis therefore is that risk leads into failure of financial performance if not well managed. There are several types of financial risks which are classified as credit risk which is the analysis of the financial soundness of borrowers has been at the core of banking activity since its inception. This analysis refers to what nowadays is known as *credit risk*, that is, the risk that counterparty fails to perform an obligation owed to its creditor. Liquidity Risk according to Greuning and Bratanovic (2012), a bank faces liquidity risk when it does not have the ability to efficiently accommodate the redemption of deposits and other liabilities and to cover funding increases in the loan and investment portfolio. Operational risk denotes a financial loss to an organization because of undertaking it in a wrong and insufficient way and is operationalized as operating expense to net operating income ratio (Al-Tamimi, Hussein, Miniaoni & Elkelish, 2015). Market risk which comprises of exchange rate, inflation and interest rate risks affect the financial performance of banks.

Company motives for managing financial risks are the same as those for employing a risk management, as financial risks are a subgroup of the company's risks. One of the main motives is to reduce the instability of earnings or cash flow due to financial risk exposure (Dhanini, 2014). The reduction enables the firm to perform better forecasts (Drogt & Goldberg, 2014). This will help to guarantee that sufficient funds are available for the company for investment and dividends (Ammon, 2014). Another reason for management of financial risks is to avoid financial distress and the costs connected with it (Triantis, 2010; Drogt & Goldberg, 2012). Lastly also management own-interest of stabilizing earnings or the objective to keep a constant tax level can be motives for risk management (Dhanini, 2014). Depending on which of the arguments is in the focus of the company, the risk management can be structured.

2. *Liquidity Risk*

Bank liquidity is the capacity of banks to accomplish their monetary obligations when they fall due. Dang (2011) hold a view that adequate of liquidity in banks is positively linked with their success. Liquidity risk control is an obligatory factor of the general risk mitigation charter for all financial institutions (Majid, 2003). An efficient bank ought to adhere to a well-documented framework for alleviation of liquidity risk and shun losses (Guglielmo, 2008). Gatev and Strahan (2003) suggest that customer deposits offer an innate cushion against liquidity risk in commercial banks. The banking sector is interconnected meaning cash flows in one bank harmonize other banks whereby the inflows hedge other banks from outflows emanating from customer withdrawals and loan advancements. This assertion underpins the need for risk management in commercial banks since, banks use deposits to hedge against the liquidity risk.

There are contradictory views on whether liquidity influences financial performance of commercial banks. Shen et al., (2010) note that liquidity risk has a positive correlation to net interest margin which implies that banks with substantial liquidity levels earn higher interest revenue. On the flipside, Molyneux and Thornton (1992) documented that an inverse relation exists amid bank success and liquidity.

3. Financial Performance

Financial performance of an enterprise is the ability to leverage operational and investment decisions and strategies to achieve a business' financial stability. According to Almajali, Alamro and Al-Soub (2012), financial is the ability to achieve the range of set financial goals such as profitability. Financial performance is a degree of the extent to which a firm's financial benchmarks has been achieved or surpassed. It shows the extent at which financial objectives are being accomplished (Nzuve, 2016). Banks, as the critical part of financial system, play an important role in contributing to a country's economic development. If the banking industry does not perform well, the effect to the economy could be huge and broad. Studies on performance of banking institutions are plenty. Results of these studies strongly suggest that bank profitability determinants vary across countries and also among regions of the world (Doliente, 2003). In accordance with the study of Grier (2007), profitability ratios are often used in a high esteem as the indicators of credit analysis in banks, since profitability is associated with the results of management performance.

Financial performance is important to the shareholders, those investing and the entire economy by extension. To the investors, the returns are totally worthwhile and having a good company may offer increased and long lasting revenue to those investing (Fatihudin & Mochklas, 2018). Financial performance of a firm is fundamental to their health and survival. Bank performance indicates bank's capacity to generate sustainable profits. Banks protect the profitability against unexpected losses, as it strengthens its capital position and improves future profitability through the investment of retained earnings. A bank that persistently makes a loss will ultimately deplete its capital base, which in turn puts equity and debt holders at risk. In order to create shareholder value, bank's return on equity (ROE) needs to be greater than its cost of equity.

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

4. Commercial Banks in Kenya

A commercial bank is an institution that provides financial services, including issuing money in various forms, receiving deposits of money, lending money and processing transactions and the creating of credit (Campbell, 2007). Commercial Banks in Kenya are licensed, supervised and regulated by the Central Bank of Kenya. Kenya has 44 banks; 31 are locally owned and 13 foreign owned. The locally owned financial institutions comprise three banks with significant shareholding by the Government of Kenya and State Corporation, 27 commercial banks and one mortgage finance institution, Housing Finance. Commercial banks in Kenya are categorized in three tier groups on the basis of the value of bank assets. Tier group one are banks with an asset base of more than Ksh 40 billion, tier group two are commercial banks with asset base between Ksh40 billion and Ksh10 billion while tier group three are banks with asset base of less than Ksh10 billion. According to the 2009 Banking Survey, there are eleven commercial banks in tier group one, eleven commercial banks in tier group two and twenty-two on commercial banks in tier group three comprising to a total of forty-three commercial banks.

The Banking industry in Kenya is governed by the Companies Act, the Banking Act, the Central Bank of Kenya Act and the various prudential guidelines issued by the Central Bank of Kenya (CBK). The banking sector was liberalized in 1995 and exchange controls lifted. The CBK, which falls under the Minister for Finance docket, is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and proper functioning of the financial system.

5. Statement of Problem

Commercial banks in Kenya have recorded mixed results with regard to their financial performance. Muriithi (2016) found financial risk (market, credit and liquidity) to have a significant effect on financial performance of commercial banks. Akong'a (2014) on the other side found financial risk to have no significant effect on financial performance of commercial banks in Kenya. Juma (2018) found liquidity and interest rate risks to have a positive significant effect on performance while credit and exchange risks had negative and significant effect on performance of commercial banks. This has raised concern in both academics and corporate as to the explanation on how two organizations under the same environment perform differently. It has been hypothesized that financial risk cause failure in the financial productivity if unmanaged (Gathiga, 2016). This concerned the regulator, the Central Bank of Kenya (CBK) the intervene through the CBK Risk based Supervisory Framework of 2013, saw a number of major banks placed under liquidation such as Dubai bank, and under receivership such as Chase bank and Imperial bank in 2015 and 2016 resulting from deficiencies in capital, fraudulent and unsafe financial conditions respectively. Over the same period, a 1.2 billion loss was recorded by National Bank at the close of the 2015 fiscal year (National Bank, 2016). This is a clear indication that some Kenya banks continue to experience problem in financial performance notwithstanding the review of the regulations of CBK in the year 2013 meant to address the performance improvement issue and commercial bank's financial stability (CBK, 2018). However, the other banks like; KCB, Equity and Co-operative Bank have demonstrated positive performance following the regulation review by CBK (CBK, 2018). There is therefore a need for a comprehensive review why the mixed performance. This study proposes to examine the effect of financial risk on the financial performance of commercial banks in Kenya.

Previous studies with regard to financial risk and financial performance found mixed results (Muriithi, 2016; Odhiambo, 2019; Juma, 2018). Study by Muriithi found financial risk to have a significant effect on financial performance of banks. Odhiambo (2019) found financial risk to have no significant effect on the finance performance of banks. Juma (2018) found liquidity and interest rate risks to have a positive significant effect on performance while credit and exchange risks had negative significant effect on performance of commercial banks. The differences in results are a confusion and thus need to carryout study find out the exact effect of financial risk on the financial performance by commercial banks in Kenya. This study therefore sought to determine the effect of financial risk on the performance of commercial banks in Kenya.

6. Research Methodology

The researcher adopted descriptive research design in the study to collect the data for the period 2017 to 2022 for all the commercial banks in Kenya. According to Mugenda and Mugenda (2008), descriptive research describes various phenomenon of interest from various perspectives. Data in this case was presented in a meaningful way that enables the researcher undertake characteristics in a given scenario and make proper decisions. The population of the study was the 45 Commercial Banks in Kenya which were registered with the Central Bank of Kenya and licensed to operate as at December 2021 in the period 2017-2021. According to Best and Khan (2009) there is the need to balance between a large sample and a feasible small one. The

researcher therefore, ensured that the sample was large enough to adequately represent the population while at the same time being small enough for selection economically in terms of subject availability and expenses in both time and financial resources. Due to the fact that there are only 45 commercial banks in Kenya, the researcher employed a census study in which all the commercial banks were studied. The study utilized secondary data. This was obtained from the annual reports of Commercial banks in the form of financial statements which include statement of comprehensive income and the statement of financial position.

7. *Descriptive Data Analysis*

Before proceeding with the regression analysis to test the hypotheses proposed by the research model, the researcher first examined the general descriptive statistics of this study. Descriptive analysis was done to provide summaries of the observations. The descriptive statistics presented is a representation of the mean, minimum and maximum values of variables of the study together with the standard deviations. Table 1 below displays the qualities of the study variable.

Table 1: Descriptive Statistics for Study Variables

Variables	Liquidity risk
Mean	20.42409
Std Deviation	24.928828
Minimum	4.413
Maximum	252.638

The results show that mean coefficient of the liquidity risk is, 20.42409. The variable liquidity risk had standard deviation greater than 1, implying presence of variances.

8. *Diagnostic Tests*

The data collected was subjected to diagnostic tests to test they suitability for regression analysis. The study presumed a significance level of 5% or 95% confidence interval so as to make variable deductions on the data adopted. Diagnostic tests were useful for ascertaining the falsity or truth of the data. Therefore, the nearer to 100% the confidence interval, the more accurate the data used is presumed to be. In this case, the diagnostic tests conducted were multicollinearity test, normality test, autocorrelation test and heteroscedasticity tests.

9. *Multicollinearity Test*

Multicollinearity can be defined as a statistical state where more than one predictors are highly correlated in a multiple regression model. It is an unwanted situation for independent variables to have a strong correlation. A combination of variables is said to exhibit high Multicollinearity in case there is one or more exact linear correlation amongst the study variables. The presence of multicollinearity may result to significant impact on

regression and statistical results. Multicollinearity is tested using VIF. According to Cohen, West and Aiken, (2013) and (Xie, Hong, Laing, & Kang, 2017) argue that a VIF greater than 10 signals the presence of multicollinearity. The results are presented in Table 2.

Table 2: Multicollinearity Test

Collinearity Statistics		
	Tolerance	VIF
(Constant)		
Liquidity risk	.955	1.047

VIF value and Tolerance of the variable were utilized where the values below 10 for VIF and values more than 0.2 for Tolerance imply no Multicollinearity. From the results, all the variables had a VIF values <10 and tolerance values >0.2 as illustrated in table 2 suggesting that no Multicollinearity.

10. Normality Test

Shapiro-wilk test and Kolmogorov-Smirnov test was utilized for normality testing. The level of significance in the study was 5%. The outputs of the test are depicted in Table 3. The null hypothesis is that the data is distributed normally. If the Shapiro-wilk test and Kolmogorov-Smirnov tests contradict, the later test is picked over the former because it is more statistically sound. Since the p value in both tests of all the variables is greater than the α (0.05), then the null hypothesis is not rejected. Hence the data series of all the variables is normally distributed.

Table 3: Normality Test

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Liquidity risk	.087	204	.561	.940	204	.593

a. Lilliefors Significance Correction

11. Correlation Analysis

Before running the regression analysis, the researcher run the correlation matrix in order to check whether there was association between the variables. The Pearson product moment correlation coefficient (r) was used to aid in establishing correlation between the study variables of interest. The correlation coefficients are used to show the magnitude and direction of the relationship between the variables.

The correlation coefficients varies over a range of +1 through 0 to -1. A positive value of r means a positive association between the two variables, the regression line has a positive slope. However, a negative value of r means a negative association between the variables, the regression line has a negative slope. The study used a confidence interval of 95%, as it is most commonly used in social sciences. A two tailed test was utilized. Table 4 shows the correlation analysis outcome.

Table 4: Correlation Analysis

	ROA	Liquidity
ROA	Pearson Correlation	
	Sig. (2-tailed)	
Liquidity	Pearson Correlation .076	
	Sig. (2-tailed)	.280

The results of the study show that there exists a small positive and a non-statistically significant correlation ($r = -.483$, $p = .280$) between liquidity risk and financial performance (ROA). The study findings show that the association between the Liquidity and credit risks was weak and negative, but the test was statistically significant. Other statistically significant associations was the association between credit and operating risks which was also positive.

12. Discussion of Research Findings

The researcher studied the influence of financial risk on the commercial banks’ performance. The variables under investigation were liquidity risk, credit risk, operating risk and the market risk which were the predictor variables while performance of banks was given by ROA which was the dependent variable. The adequacy of the overall model in predicting financial performance was examined. The influence of each predictor variable on the dependent variable was also examined with respect to strength and direction.

The study established that the liquidity had a positive effect on the financial performance of the commercial banks in Kenya. These results were however statistically not significant. These study findings are similar to those by Njiru (2020) whose study was on the effect of financial risk on the financial performance of the commercial banks in Kenya. The research targeted a population of all the 42 banks in Kenya. Data was from 37 out of the 42 which was a response rate of 88.1% which was considered adequate for the study. The study was conducted for 5 years, 2015 - 2019. The research design used during the study was descriptive cross-sectional. Secondary data was gathered from published bank’s financial statements and annual reports. Analysis was made using the descriptive, correlation and multiple regression models.

13. Summary of Findings

The aim of the study was to determine the effect of financial risk on the performance of commercial banks in Kenya. The study objective was to determine the effect of liquidity on the financial performance of commercial banks in Kenya. The study established that the correlation of variables between liquidity risk and ROA was positive. These results were confirmed by the regression analysis in which the study found that the liquidity risk had a positive relationship with ROA. However, this was not statistically significant as the p -value was

greater than 0.05. This means that a change in the liquidity risk will result in the change in the financial performance of the commercial banks in the same direction.

14. References

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