



EFFECTS OF MICRO AND MACRO ECONOMIC FACTORS ON BANK LIQUIDITY IN KENYA

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Abstract: The study sought to determine the effects of micro and macro-economic factors on bank liquidity in Kenya; the specific objectives are; to determine the effects of macroeconomic factors on bank liquidity; to determine the effects of microeconomic factors on banks liquidity and to determine the combined effect of macroeconomic and microeconomic factors on banks liquidity. The study utilized Commercial Loan theory; The Shiftability Theory and the Anticipated Income Theory of Liquidity. The population of the study consisted of 37 commercial banks in Kenya as of 2016. A census study of all banks that had been in operation for 5 years, were included in the study. Multiple regression analysis was applied to the data to examine the effect of level of customer's deposits, loan growth, capital adequacy, profitability and other effects macroeconomic factors on bank liquidity in Kenya. The results of multiple regressions suggest that the selected independent variables explain more than 10.8% changes in the net profit. By analyzing the other statistical results of multiple regressions we found that the results are very much consistent with the simple regression. All the results are not statistically significant and overall the study provides an idea that macro and micro factors are not the basic determinants of profitability in the banking sector. So it can be inferred that this promising and potential sector in Kenya can flourish very fast and enhance profitability by improving its liquidity position and operating efficiency. The government as a bank regulator through the CBK should adopt policies that ensure increased bank performance. Strict conditions of minimum liquidity and capital should continue being emphasized on to ensure none of the banks has lower of the two. Increased bank performance leads to general economic growth.

Keywords: Micro Economic, Macro Economic Factors, Bank Liquidity

Introduction

The banking system is the backbone of any financial intermediation through the mobilization and channelling of funds. It also facilitates financial settlement through the payment system; influence money market rates and provide a means of international payments. 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 (Ngugi and Kabubo1998). The role of banks in a financial market is to act as an intermediary between the savers and borrowers by mobilizing funds from the surplus spending units into the economy and by lending such funds to the deficit spending units for investments. Kenya currently has 42 banks. 29 of the banks are locally owned while the remaining 13 are foreign-owned. Among the 31 locally owned banks, the government of Kenya has a shareholding in three of them, 27 of them are commercial banks and one is a mortgage finance institution, known as Housing Finance. The recent development in banking technology has transformed banking from traditional to a digital era where efficient channels of transactions like ATM'S and newly introduced agency banking model(Mazur & Szajit, 2015).

Liquidity is the ability of a bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses (“Guidance on Liquidity Risk Management,” 2009). Liquidity can come from direct cash holdings in currency or on account at the central bank. More frequently, it comes from acquiring securities that can be sold quickly with minimal loss. This states highly creditworthy securities, comprising of government bills, which have short term maturities. If their maturity is short enough the bank may simply wait for them to return the principal at maturity. For the short term, very safe securities favour to trade in liquid markets, stating that large volumes can be sold without moving prices too much and with low transaction costs. Liquidity was a key factor during the 2008-2009 financial crisis in which the banks funding sources dried up quickly and they found themselves short on cash to cover their obligations as they came due (Bordeleau & Graham, 2010)). There is a general sense that banks had not fully appreciated the importance of liquidity risk management and the implications of such risk for the bank itself. As result, policymakers have suggested that banks should hold more liquid assets than in the past, to help self-insure against potential liquidity or funding difficulties (Maaka, 2013). Liquid assets such as cash and government securities generally have a relatively low return, therefore, holding them imposes an opportunity cost on a bank. In the absence of regulation, it is reasonable to expect that banks will hold liquid assets to the extent they help to maximize the firm’s profitability. Henceforth, policymakers have the opted to require larger holdings of liquid assets.

Therefore, efficient and effective liquidity management is crucial if the survival and prosperity of banks are to be assured. Liquidity management can be defined as the planning and controlling of cash flow by owner-managers to meet their day-to-day commitments (Collis & Jarvis, 2002). Day-to-day management of a firm’s short term assets and liabilities plays an important role in the success of the firm. Firms with glowing long term prospects and healthy bottom lines do not remain solvent without good liquidity management (Demirgünes, 2016). According to Moss and Stine (1993), a useful way of assessing the liquidity of firms is with the cash conversion cycle (CCC). The cash conversion cycle measures the time lag between cash payments for the purchase of inventories and collection of receivables from customers. The traditional measures of liquidity such as the current ratio and quick ratio are useful liquidity indicators of firms though they focus on static balance sheet values (Maaka, 2013)

The banking sector in Kenya is comprised of 44 commercial banks with 2 banks; Dubai Bank and Imperial Bank in receivership. All banks are regulated by the Central Bank of Kenya and Capital Markets Authority has additional oversight over the listed banks. All banks are required to adhere to certain prudential regulations such as minimum liquidity ratios and cash reserve ratios with the Central Bank (“Kenya Listed Commercial Banks Analysis Cytonn Q1 ’ 2016 Banking Sector Report’). The banking sector in Kenya is ever-evolving. Despite the numerous economic challenges that have been witnessed within the sector, the industry remains strong and vibrant. At the moment, three banks have been placed under receivership with only one having recovered and back to operations. The recent changes in the industry i.e. interest rate capping and instability of banks profitability have made the public panic on the safety on their deposits.

Statement of the Problem

Liquidity was a key factor during the 2008-2009 financial crisis in which the banks funding sources dried up quickly and they found themselves short on cash to cover their obligations as they came due (Gezu, 2014). Following the collapse of 3 commercial banks in Kenya, Dubai bank in which in 2015 it was put under receivership for breaching its daily cash reserve ratio, Imperial bank was also put under receivership in October 2015 due to unsafe business practices and internal fraud of up to 38 Million. Chase bank was in April 2016 put under statutory management due to huge insider loans which stood up to 5.72B, liquidity has become one of the major concerns of financial institutions throughout the

country. This financial crisis has revealed that liquidity has become one of the top priorities of banks management to ensure availability of sufficient funds to meet future demands at reasonable costs. Few pieces of research have been done on the effects of Micro and Macro-economic factors on bank liquidity and conflicting findings were achieved. For instance (Tesfaye, 2012) argued that capital adequacy, bank size, the share of non-performing loans in the total volume of loans, had positive and statistically significant impact on banks liquidity and loan growth had statistically insignificant impact on banks liquidity whereas (Vodová, 2011) on the same issue argued that bank profitability, capital adequacy, size of banks and non-performing loans have no statistically significant impact on liquidity of Slovak commercial banks. Therefore identifying the effects of micro and macro-economic factors of bank liquidity has become the major concern of all banks and their regulators so as to mitigate liquidity problems. From the studies reviewed, it is evident that several research works on internal and external factors affecting bank performance in various parts of the world have been carried out. However, the short-coming of these reviews is that most studies seem to be ignoring the industry specific factors affecting financial institutions and only concentrate on internal and macroeconomic variables which give a generalized overview. Further from the studies these factors are inconclusive with some researchers finding insignificant effect while others establishing significant influence. This study bridges this gap by use of annual data involving the Microfinance industry, specifically answer the question: What is the effect of the micro and macro variables on the financial performance of commercial Banks in Kenya? To uncover this liquidity problems which has forced banks to go under receivership, this study seeks to determine if liquidity is the major root cause of bank insolvency.

Research Hypotheses

H₀₁: There is no significant effect of macroeconomic factors on banks liquidity.

H₀₂: There is no significant effect of microeconomic factors on banks liquidity.

H₀₃: There is no significant effect of both macroeconomic and microeconomic factors on banks liquidity.

Literature Review

Theoretical Framework Underlying the Study

The major objective of a commercial bank is to create liquidity while remaining financially sound. However, there are a number of dimensions in the way banks concretely manage their liquidity. In other words, there are competing liquidity management theories. The study was guided by commercial loan theory, shiftability theory and anticipated income theory

Commercial Loan (Traditional) Theory and Liquidity

The commercial loan theory was developed by Adam Smith in 1920 and it became obsolete both because of its conceptual flaws and its impracticality. A critical underlying assumption of the theory held that short-term commercial loans were desirable because they would be repaid with income resulting from the commercial transaction financed by the loan. When business started growing and the requirements of trade increased, banks were able to capture additional reserves by rediscounting bills with the central banks. When business went down and the requirements of trade declined, the volume of rediscounting of bills would fall, the supply of bank reserves and the amount of bank credit and money would also contract.

This theory is in line with this study since theory states that whenever commercial banks make short term self-liquidating productive loans, the central bank should lend to the banks on the security of such short-term loans. This principle assures that the appropriate degree of liquidity for each bank and

appropriate money supply for the whole economy. The central bank was expected to increase or erase bank reserves by rediscounting approved loans.

The Shiftability Theory of Liquidity

This theory was proposed by Moulton in 1915. It states that, for an asset to be perfectly shiftable, it must be directly transferable without any loss of capital when there is a need for liquidity. This is specifically used for short term market investments, like treasury bills and bills of exchange which can be directly sold whenever there is a need to raise funds by banks but in general circumstances when all banks require liquidity, the Shiftability theory need all banks to acquire such assets which can be shifted on to the central bank which is the lender of the last resort.

The Shiftability theory of liquidity replaced the commercial loan theory and was supplemented by the doctrine of anticipated income it holds 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 ready secondary market. Included in this liquidity reserve were commercial paper, prime bankers' acceptances and, most importantly as it turned out, Treasury bills. Under normal conditions all these instruments met the tests of marketability and, because of their short terms to maturity, capital certainty.

The study is related with this theory in a way that the Shiftability theory survived realizations under a modified form that included the idea of ultimate liquidity in bank loans resting with Shiftability to the Federal Reserve Banks. Under this institutional scheme, the liquidity concerns of banks were partially returned to the loan portfolio, where maintenance of quality assets that could meet the test of intrinsic soundness was paramount

Anticipated Income Theory of Liquidity

This theory was proposed by Prochanow in 1944 based on the practice of extending term loans by the US commercial banks, he embodied these ideas and equated intrinsic soundness of term loans, which were of growing importance, with appropriate repayment schedules adapted to the anticipated income or cash flow of the borrower. The credit demands of business were well accommodated under this system of banking policy, and the use of loan commitments was freely pursued. This theory dominates the commercial loan theory and the shiftability theory as it satisfies the three major objectives of liquidity, safety and profitability. Liquidity is settled to the bank when the borrower saves and repays the loan regularly after certain period in installments. It fulfills the safety principle as the bank permits a relying on good security as well as the ability of the borrower to repay the loan. The bank can use its excess reserves in lending term-loan and is convinced of a regular income. Changing economic conditions, however, placed extra demands on the banking system that resulted in a new approach to balance sheet. Management and businesses faced new financial challenges. Under this emerging state of affairs, bank loan commitment policies would come to play a more important part in the credit process.

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Empirical Studies

Gitau and Anyango (2017) assessed effect of micro economic factors on performance of listed commercial banks in Kenya. The performance of commercial banks plays an important role in the economic development of a country. The performance of commercial banks can be expressed or

measured in various terms and these include competition, productivity, profitability, efficiency as well as concentration. The study seeks to establish the influence of bank specific variables on the performance of listed commercial banks in Kenya. The specific objectives included to determine the effect of capital adequacy on the performance of commercial banks in Kenya; to establish the effect of bank size on the performance of commercial banks in Kenya; to evaluate the effect of operating expenses on the performance of commercial banks in Kenya; and to assess the effect of total deposits on the performance of commercial banks in Kenya. The intermediation theory and liquidity theory were used in the study. The study adopted an explanatory research design. The target for the study was 43 commercial banks in Kenya. Out of these, the 11 listed commercial banks were sampled for performance over the past five years (2010-2015). Panel secondary data was utilized in the study. Data was analyzed using descriptive such as means, standard deviation and inferential statistics such as correlation to show the strength of the effect between variables and regression analysis to depict the nature of the effect between variables. Results of the study revealed a positive and significant relationship between capital adequacy, bank size, total deposits and commercial banks performance while operational expenses had an inverse significant relationship with commercial bank performance. Commercial banks ought to continuously evaluate their capital adequacy, diversify their asset base and deposits accumulation strategies. Moreover, there is need for commercial banks to be innovative strategies which will minimize their operational costs.

Egbunike and Okerekeoti (2018) did a study on the Macroeconomic factors, firm characteristics and financial performance A study of selected quoted manufacturing firms in Nigeria. The purpose of this paper is to explore the interrelationship between macroeconomic factors, firm characteristics and financial performance of quoted manufacturing firms in Nigeria. Specifically, the study investigates the effect of interest rate, inflation rate, exchange rate and the gross domestic product (GDP) growth rate, while the firm characteristics were size, leverage and liquidity. The dependent variable financial performance is measured as return on assets (ROA). The study used the ex post facto research design. The population comprised all quoted manufacturing firms on the Nigerian Stock Exchange. The sample was restricted to companies in the consumer goods sector, selected using non-probability sampling method. The study used multiple linear regression as the method of validating the hypotheses. The study finds no significant effect for interest rate and exchange rate, but a significant effect for inflation rate and GDP growth rate on ROA. Second, the firm characteristics showed that firm size, leverage and liquidity were significant. The study has implications for regulators and policy makers in formulating policy decisions. In addition, managers may better understand the interplay between macroeconomic factors, firm characteristics and profitability of firms. Few studies have addressed the interplay of macroeconomic factors and firm characteristics in determining the profitability of manufacturing firms in the country and developing countries in general

Monjurul (2012) assessed the effect of macroeconomic variables on stock returns on Dhaka stock exchange, This article investigates the effects of macroeconomic variables of treasury bill interest rate and industrial production on stock returns on Dhaka Stock Exchange for the period between January 2000 and February 2007 on the basis of monthly time series data using Autoregressive Integrated Moving Average (ARIMA) model. The paper has taken the overall market stock returns as an independent variable. It does not consider the stock returns of different companies separately.

Ouma (2014) assessed the impact of macroeconomic variables on stock market returns in Kenya. Objectives of the study are the impact M2 money supply, exchange rates, inflation (CPI) and Interest rates (91 T-bill rates) on stock returns (captured by NSE 20-share index) in Kenya and the appropriate policy measures regarding the dynamics of macroeconomic variables (money supply (M2), exchange rate, inflation rate, and interest rates measured by 91 T-bill rates and their resultant effect on the Stock market returns in Kenya. The study variables for the study are not the same with this study.

Conceptual Framework

The independent variables in this study were macroeconomic factors and microeconomic factors. The moderating variable was government policies and the dependent variable was bank liquidity. Figure 2.1 shows the relationship between independent variables, moderating variable and the dependent variable.

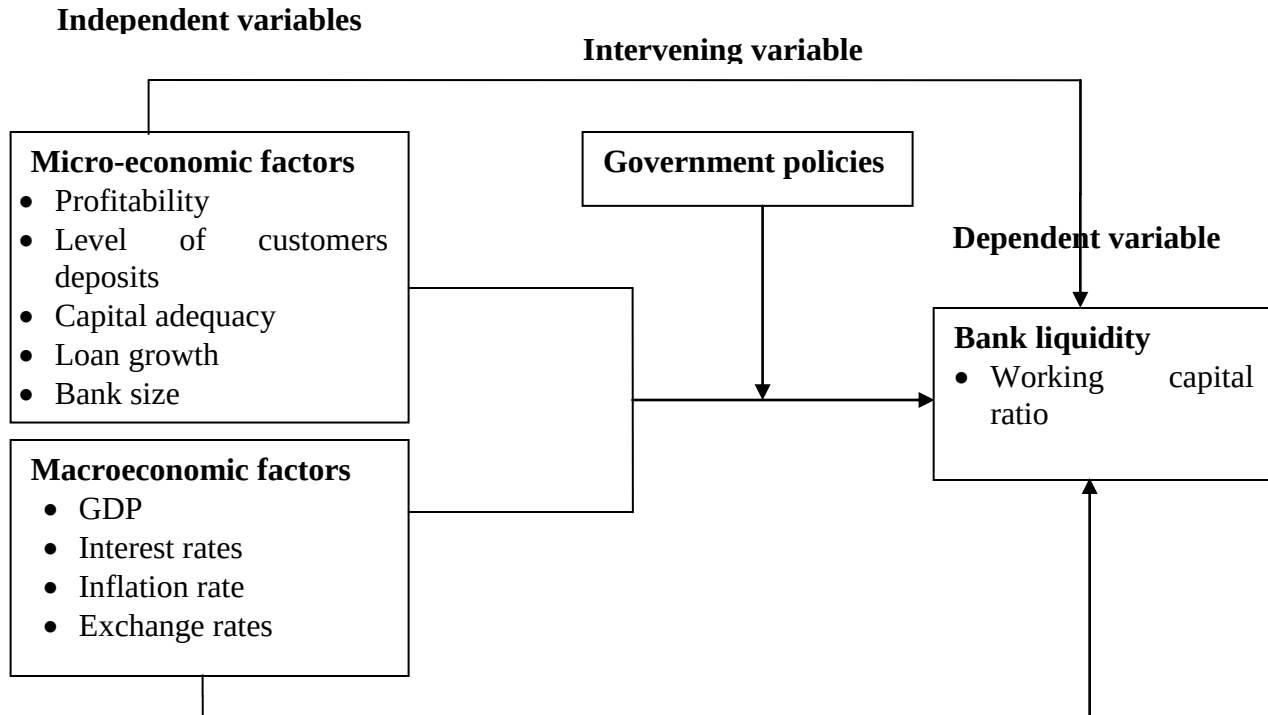


Figure 1: Conceptual Framework

Research Methodology

The study adopted panel data. A panel data set is one that follows a given sample of individuals over time and thus provides multiple observations of each individual in the sample. Panel data set design was used in other studies such as the impact of determinants of liquidity of commercial Banks in Kenya by Ogilo, (2012); banking survey report and determinants of financial performance of commercial banks in Kenya by Kusa, (2013).

The population of study consisted of all the 42 banks in Kenya as at 2016. A census study of all banks that have been in operation for the past 5 years was included in the study but the study will collect data from 37 commercial banks since the other banks were in receivership. This population is small. Therefore, there was no sampling.

Only secondary data was used in this study. Data was collected from audited financial statements, annual reports on record and data from the financial market. The secondary data from the financial statements included after tax profit, level of customer deposits, loan advances, liquidity ratios, the liquidity gap in the bank's balance sheet, total capital base, total assets and value of loans outstanding. Data was collected for the period of five years from 2011-2015 using data collection sheet.

The data collected was coded, organized and analyzed with the help of statistical computer package for social sciences (SPSS). Multiple regression analysis was applied to the data to examine the effect of level of customer's deposits, loan growth, profitability and capital adequacy on bank liquidity in

Kenya. Descriptive statistics were used to summarize the data through percentages, frequencies. Tables and bar charts were used to present the data for easy understanding and analysis. Inferential statistics was used to show the strength of association between the variables. The Statistical Package for Social Sciences (SPSS) was used to analyze the data. The bank size data was converted into their natural logarithm on all variables to counter co linearity problem. The multiple linear regression model was specified as;

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \alpha \dots \dots \dots (i)$$

Where; Y is the dependent variable (bank liquidity); a = constant; $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8$ = Variable Coefficients; X_1 = Profitability; X_2 =Customer Deposits; X_3 =Capital Adequacy; X_4 =loan Growth; X_5 = GDP; X_6 =Interest Rate; X_7 =Inflation rate; and X_8 =Exchange rate

The study conducted the diagnostic test by determining the multicollinearity, normality and the linearity of the study variables. According to Gujarati (2004), the standard statistical method for testing data for multi-colinearity is analyzing the explanatory variables correlation coefficients (CC); tolerance values and Variance Inflation Factor (VIF). Therefore in this study, to determine multi-colinearity variance inflation factors (VIF) and tolerance were used. For tolerance, values of less than 0.1 suggest multi-colinearity while for values of VIF that exceed 10 are often regarded as indicating multi-colinearity.

Results and Discussion

Inferential Statistics

This is used to make inference about the study population using data drawn from the population itself, usually on the basis of sample analysis and observation. It enables a researcher to arrive at conclusions that extend beyond the immediate data alone; it basically compares, tests and predicts data (Fabozzi & Modigliani, 2003). The indices that were used included regression analysis to show the relationship between the variables, ANOVA (Analysis of Variance) that tests the significance of the findings of the study, the t-test that showed the statistical significance of the findings obtained with results in form of probabilities, which explains the chances of occurrence of an event.

The study conducted multiple regression model to establish the effect of macroeconomic factors and micro economic factors combined on the bank liquidity of commercial banks in Kenya. The value of R^2 is 0.411, revealing 41.1% variability in bank liquidity accounted for by the macroeconomic factors and microeconomic factors in the model developed. The adjusted R^2 is an improved estimation of R^2 in the population. The value of adjusted R^2 is 0.376. This adjusted measure provides a revised estimate that is 37.6% per cent of the variability in bank liquidity due to the fitted model. The coefficient of determination in this study was 0.641 which depicts the strong correlation between the dependent and independent variables. These findings are supported by the findings of the Tesfaye 2012 who found the coefficient correlation was more than 0.61 and the R square of 0.423.

To draw inferences about the population of the sampled data, the study used a regression model, T -test is widely adopted for hypothesis testing. This test-of-significance method is to verify the truth or falsity of a null hypothesis by using sample results, showing that the means of two normally distributed populations are equal. As a result, the key idea behind tests of significance is that of a test statistic and the sampling distribution of such a statistic under the null hypothesis (Gujarati, 2004). In the case of t-test, t distribution is used, and a statistic is considered to be statistically significant if the value of the test statistic lies in the critical region, in which case the null hypothesis is accepted. In all the tests, the decision rule was if the P value observed (calculated P) is less than the set alpha (α) that is the confidence level of 0.05, then accept the null hypothesis and if the P value observed is greater than the

set alpha of 0.05, do reject the null hypothesis. The testing of these hypotheses was done at level of significance of 0.05. The analysis of variance which measures the overall significance of the model, the model was statistically significant since the p value of 0.000 was less than 5% level of significance. The study composed a composite index for the four variables of macro and micro economic factors using the excel before exporting the variables to the spss. The regression result presented in table indicates macroeconomic factors and microeconomic factors had positive coefficients. The coefficients are used to answer the following regression model which relates the independent and dependent variables.

$$Y = a + \beta_1 \text{Macroeconomic factors} + \beta_2 \text{Microeconomic factors}$$

$$Y (\text{Liquidity}) = 0.376 + 0.208 * \text{Macroeconomic factors} + 0.530 * \text{Microeconomic factors}$$

The regression equation above has established that holding independent variables to be constant liquidity of commercial banks will be 0.376. The findings presented also depicted that taking other independent variables at zero, a unit increase in macroeconomic factors will lead to 0.208 increase in bank liquidity and a unit increase in macroeconomic factors will lead to 0.503 increase in bank liquidity. These findings depict a positive relationship between the variables.

Table 1: Model Summary, ANOVA and Regression Coefficients

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.641 ^a	.411	.376	.90535

a. Predictors: (Constant), Micro economic factors , Macro economic factors

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.429	2	9.714	11.852	.000 ^b
	Residual	27.868	34	.820		
	Total	47.297	36			

a. Dependent Variable: Bank Liquidity

b. Predictors: (Constant), Micro economic factors , Macro economic factors

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	
(Constant)	.376	.487		.772
Macro economic factors	.208	.184	.151	1.131
Micro economic factors	.530	.117	.601	4.517

a. Dependent Variable: Bank Liquidity

As presented in Table 1, macroeconomic and microeconomic factors has significant relationship ($p=0.00$) with bank liquidity at a minimum of 95% confidence level. Based on these results of Hypothesis H_03 (There is no significant effect of macroeconomic and microeconomic factors on banks liquidity) was rejected because it fall on rejection region. By rejecting the null hypothesis the results indicates that macroeconomic and microeconomic factors profitability has significant effect on bank liquidity. In addition, the ANOVA test shown in table above was used to test the significance of the model and to test the existence of variable variations within the model.

Hypothesis Testing and Discussion of the Findings

The purpose of this study was to establish the effects of micro and macro-economic factors on bank liquidity of commercial Banks in Kenya. Secondary data was collected from central bank of Kenya database and annual audited financial statements for the banks that formed the sample. Data collected

was keyed into SPSS and analysis undertaken. The descriptive results found that most banks take much into considerations the macro economic factors and micro economic factors since they have an effect on the bank liquidity.

H₀₁: There is no significant effect of Microeconomic factors on banks liquidity

Microeconomic factors has significant effect ($p=0.000$) with bank liquidity at a minimum of 95% confidence level. Based on this finding, the study rejects the null hypothesis (H_02) that there is no significant effect of microeconomic factors on banks liquidity. By rejecting the null hypothesis the results indicates that microeconomic factors have significant effects on the liquidity of commercial banks in Kenya. These findings are in line with the findings of Malende, (2014) which depicts microeconomic factors positively influence the bank liquidity of commercial banks in Zimbabwe and also the findings are in line with the findings of Mutunga (2018) who did a study on the role of micro factors on the financial performance of manufacturing firms in Kenya and found out a statistically positive and significant direct relationship between micro factors on firm financial performance.

From the above regression model, the study found out that micro economic factors and macro economic factors had a positive effect on bank liquidity. The three independent variables that were studied (macro economic factors and microeconomic factors) explain a substantial 37.6% of bank liquidity of commercial banks in Kenya as represented by adjusted R^2 (0.376). This therefore means the two variables contribute to 37.6% of the bank liquidity, while other factors not studied in this research contributes 62.4% of bank liquidity. This is in agreement with Mutemi (2015) who stated that firm efficiency can be influenced by factors that can be controlled by the firm, as well as by factors that are not under the control of such firms. Several studies conducted under the same topic by the South African Ncube (2009), Tanzanian Aikaeli (2008), Ikhida (2008) and Adongo, Stork and Hasheela (2005) found positive results in the relationship between micro economic variables and efficiency. However, Casu and Molyneux (2003), Chakrabarti and Chawla (2005) and Kiyota (2009) found no significant relationship between micro economic variables and institutional efficiency.

H₀₂: There is no significant effect of macroeconomic factors on banks liquidity

There is no significant relationship of macroeconomic factors with the liquidity of commercial banks ($p=0.266$) a minimum of 95% confidence level. The above results thus leads to the accepting the null hypothesis that there is no significant effect between macroeconomic factors and bank liquidity given that the p -value is higher than 0.05. In a study by Mwangi (2017) on the effects of macroeconomic variables on financial performance of insurance companies in Kenya and found out high macroeconomic factors resulted in increased NPLs as a measure of financial performance which would then reduce the profits realized. These findings were similar to the findings of this study which also macroeconomic factors insignificantly affects the banks liquidity which was measured using the working capital ratio.

The study also established that the beta coefficient for macroeconomic factors was 0.208, meaning that macroeconomic factors positively and insignificantly influenced the bank liquidity of commercial banks in Kenya. This is in line with Mwangi (2017) who found that macro economic factors is positively related to a firm's ability to produce technologically complicated products which in turn leads to banks efficiency. Vodová, (2011) also found that the positive association between macroeconomic factors and efficiency stems from implementing greater differentiation and specialization strategies, and should therefore lead to bank efficiency. Subedi and Neupane (2011) who re-evaluated earlier findings against new data within an improved analytical framework showed that macroeconomic factors influences liquidity in some, but not all industries. In addition, Tuyishime, (2015) indicated that the macroeconomic factors is a primary factor in determining the deposit

mobilization of a firm due to the concept known as economies of scale which can be found in the traditional neo classical view of the firm.

The study established that the coefficient for micro economic factors was 0.530, meaning that micro economic factors positively and significantly influenced the bank liquidity of commercial banks in Kenya. This correlates to Mutunga (2018) showed a positive impact of micro economic factors on manufacturing firm's performance. On the other hand, studies of Surow (2014), showed a significant negative impact of micro economic factors on company efficiency. The contradicting empirical evidence suggests that higher capital adequacy ratio as a proxy of micro economic factor leads to lower financial performance.

H₀₃: There is no significant effect of macroeconomic and microeconomic factors on banks liquidity

Macroeconomic and microeconomic factors has significant relationship ($p=0.00$) with bank liquidity at a minimum of 95% confidence level. Based on these results of Hypothesis H₀₃ (There is no significant effect of macroeconomic and microeconomic factors on banks liquidity) was rejected because it fall on rejection region. By rejecting the null hypothesis the results indicates that macroeconomic and microeconomic factors profitability has significant effect on bank liquidity. In addition, the ANOVA test shown in table above was used to test the significance of the model and to test the existence of variable variations within the model. These findings are supported by the findings of Gatuhu, (2013) which depicts the macroeconomic factors and microeconomic factors on the bank liquidity. The ANOVA results show that the model was significant ($F = 11.852, p < 0.05$). This further indicates that the independent variables used (macroeconomic factors and microeconomic factors) are statistically significant in predicting bank liquidity of commercial banks at 5% level of significance.

The study also established that the anova coefficient for combined micro economic and macro economic factors was 0.000, meaning that macroeconomic and micro economic factors positively and significantly affect the bank liquidity. This agrees with Talaso (2015) who indicated that The government as bank regulator through the CBK should adopt policies that ensure increased bank performance. Strict conditions of minimum liquidity and capital should continue being emphasized on to ensure none of the banks have lower of the two. Increased bank performance leads to general economic growth. The supervisory body of macroeconomic environment like Inflation and GDP should ensure viable environment for micro banking. They should regulate the variables in such a way that they lead the economy towards the growth and favor of MFBs. This will favor the financial sector by facilitating better the financial health thus increased economic growth. Previous studies revealed that managers cannot keep increasing the level of debt and that debt can also serve as a protection mechanism not to overinvest as cash should be paid to bondholders limiting the possibility of conducting wasteful activities and bondholders have a possibility to evaluate management (Pawlina, 2010).

Conclusions

Conclusions are made from the study findings resulting from the analyzed data. These are based on the variables studied and their influence on liquidity of commercial banks in Kenya. The objective of the study was to establish the effect of micro and macro variables on the liquidity of commercial banks in Kenya.

This study concludes that out of the microeconomic factors that turn out to positively affect bank liquidity, the data analysis results in chapter four also indicate that liquidity is one of the determinants of performance of banks. The relationship between microeconomic factors and liquidity is positive implying that an increase in microeconomic factors will lead to an increase in bank liquidity of commercial banks.

By analyzing the other statistical results of multiple regressions the study found that the results are very much consistent with the simple regression. Microeconomic factors were statistically significant and overall provide an idea that macro and micro factors are the basic determinant of liquidity in banking sector. So it can be inferred that this promising and potential sector in Kenya can flourish very fast and enhance profitability by improving its liquidity position and operating efficiency. The pursuit of high financial performance without consideration to the liquidity level can cause great illiquidity. Therefore, any financial institution that has the aim of maximizing its financial performance level must adopt effective liquidity management

Recommendation of the Study

Strategies to facilitate increased a favorable microeconomic environment of commercial banks should be adopted by management for a good financial performance. As the findings illustrated, financial performance banks in Kenya is highly dependent on the level of the institutions' micro environment. Increased Liquidity, total asset (size), and Capital adequacy are seen to facilitate favorable financial performance of these banks.

The supervisory body of macroeconomic environment should ensure viable environment for banking. They should regulate the variables in such a way that they lead the economy towards the growth and favor of commercial banks. This will favor the financial sector by facilitating better the financial health thus increased economic growth.

The government as bank regulator through the CBK should adopt policies that ensure increased bank performance. Strict conditions of minimum liquidity and capital should continue being emphasized on to ensure none of the banks have lower of the two. Increased bank performance leads to general economic growth.

Areas for further Research

This study is based on data for 5 year, so data from this and other published sources may be insufficient to make a solid conclusion. Hence, further studies should be undertaken to expand the period under study thus increasing the sample data and reliability of the conclusion. The study focused only on the commercial banks sub-sector of the banking sector which provides a conclusion that may not be the same with the rest of the banking sub-sectors hence this provides new areas for further research where the banking sector will be considered in totality including the CBK, microfinance institutions and insurance firms.

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