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Monetary Policy and Performance of Commercial Banks in Kenya

Kemboi Titus Kiplangat
College Tutor, Bethel Institute Technology, Kenya
Dr. Tibbs Y. Charles
Senior Lecturer, Kenyatta University, Kenya

Abstract:
The research aimed at probing the monetary policy and performance of commercial banks in Kenya. Commercial Banks have averagely been posting continuous decline in their performance over the last decade. The exploration was carried out with the following objectives; to establish the effect of interest rate, reserve requirement, open market operation and discount window operation and the independent variables was the performance of commercial banks measured using return on asset. All the commercial banks operating before the year 2011 in Kenya constituted the population. This study utilized both primary and secondary data. Data editing and coding were done to detect anomalies and omissions. Data collected were analyzed using multiple regression model and data presentation using graphs and tables to establish the relationship between independent and dependent variables. The (SPSS) software version 16 was used to analyze data. Correlation research design was adopted to explain the existing connection of monetary policy and performance. The overall result of the study found out that monetary policy controls 72.2% of performance of banks in Kenya. If monetary policy was assumed to be constant at zero the performance of commercial banks would be 10.365, one component rise in central bank rate would led to 0.025 rise in performance of banks; one component rise in cash reserve ratio led to a 1.053 times rise in performance of banks, one component rise in open market operation led to a 0.057 times rise performance of banks and one component rise in discount window operation led to 0.61rise in the performance of commercial banks. The study concluded cash reserve ratio had the biggest effect on the performance of commercial banks succeeded by open market operation.

Keywords*: Monetary policy, performance, interest rate, reserve requirement, open market operation discount window operation*

1. Introduction

1.1. Background of the study

In every country's economy banks are playing a very imperative role, first is mobilizing savings for capital formation, providing long-term finance for the improvement of economic activities and aiding implementation of monetary policies to accomplish the anticipated level of development among others. Performance of these commercial banks determines their continual operation existence. Its existence is felt by wider range stakeholders such as shareholder, debt holders, customers and even the government through the taxes it collects from them. High performance therefore is the main driver of commercial banks activities. Consequently, banks engage in a variety of products and services in order for them to diversify and earn profit, the commonest being advancement of loans to borrowers seeking financial accommodation, Kimani (2013)

1.1.1. The Concept of Monetary Policy in Kenya

Central bank is an institution fully owned and controlled by the state. It is mandated to enhance economic growth in the country. In order to attain this objective, Central bank created department to formulate and implement policies that enhance the growth. This department was formed vide Gazette Notice 3771 on 30th April 2008 replacing the then monetary policy advisory committee (MPAC) and was named Monetary policy committee (MPC). The members of monetary policy committee are the Central Bank Governor chairing this committee, the deputy Governor, two members appointed by the Governor and four other members from outside who have exemplary understanding in issues relating to finance, banking and fiscal policy. It is a requirement by law that MPC submits report on the findings to the Cabinet secretary for the National Treasury. Although monetary policy framework has remained the same over decades, CBK has been routinely altering it

operations and procedures in order to enhance effectiveness and efficiency in delivering its objectives in dynamic financial and economic environment, CBK Act (2005)

1.1.2. Performance of Commercial Banks in Kenya

Commercial Banks have averagely been posting continuous decline in their performance over the last less than a decade. The return on asset in 2014 was 4.46% declined to 3.4% in 2015 and 3.1% in 2016 while the return on equity has also been declining from 28.2% in 2014 to 23.8%in 2015 and 20.6% in 2016 (Central Bank Supervision report,2010- 2016). Commercial banks in Kenya have been enjoying an interest rate spread of more than 10% on average as compared with the world average of 6.6%, according to International Monetary Fund (2014

1.2. Problem statement

The (CBK), just like other economic regulating institutions in the world is delegated the task of articulating and instigating economic policies directed towards sustaining the set monetary targets in order to achieve economic growth and development. Additionally, CBK ought to ensure that there is guideline to sustain a sound financial system. Between 2010 and 2016 inflation has swung in spite of numerous intermediations by the central bank monetary Committee. Most prices of goods and services sky rocketed in the same era making the cost of living intolerable to majority of Kenyan, unemployment on the other hand, in which the CBK's monetary policy attempts to address has been continually increasing gradually and constantly. Whereas CBK has to some length been able to arbitrate, mostly the intervention becomes too late when the economy is already injured or the time lags between response and upshot has been long hence attempts only to restore the initial state and fails to enhance economic development. CBK uses commercial banks as the main transmission mechanism of the formulated monetary policies towards attainment of the set targets.

1.3. Research Hypotheses

These hypotheses were framed to steer the study.

- **H_1**: There is no significant relationship between interest rate and performance of commercial banks in Kenya.
- **H_2**: There is no significant relationship between cash reserve ratio and performance of commercial banks in Kenya.
- **H_3**: There is no significant relationship between open market operation and performance of commercial banks in Kenya.
- **H_4**: There is no significant relationship between discount window operation and performance of commercial banks in Kenya.

2. Literature review

2.1. Theoretical Review

2.1.1. Loan able Fund Theory

Interest rate with which banks lend depends on demand and supply of loan-able fund, and reserves and investments determines the rate of interest rate in the long run whereas the rate of interest in the short run is determined by prevailing financial conditions in a country. The rate of interest is measured by the availability of loan-able funds, the availability of such loan-able funds is determined by deposits made by customers, and demand for loan-able fund determined by availability of investments opportunities offered by the environment. The nominal rate of interest is calculated where the supply and demand forces intersect for loan-able funds. However, holding all other factors constant, a rise in loan-able fund demand for push interest rate upwards and reverse is true. The demand for loan-able fund is determined by demands for final goods and services. An increase in supply of loan-able fund reduces interest rate. If both demand for and supply of loan-able fund change, the change in rate of interest will depends upon the magnitude and net change. Supply of and demand for loan-able fund is not the sole determinant of interest rate but also other factors such as productivity of capital and savings affects interest rate. (Bibow 2000)

2.1.2. Classical Theory of Interest Rate

This theory is the most adapted theory in determining the equilibrium interest rate by comparing supply of saving and demand of borrowing. Equilibrium is reached when supply of saving and demand of borrowing for investment equals each other by drawing a simple demand-supply curve and the intersection is taken as the equilibrium interest rate and the desired level of money supply and demand. Demand is represented by investment for investable funds and supply represents the savings of these resources. If supply of funds is greater than investment, interest rate drops up to a point where the two are equal and vice versa and if savings is less than investment it causes disequilibrium and the interest rate shifts to ensure equality in both, (Albertazzi & Gambacorta, 2006).

2.1.3. Liquidity Preference Theory

According to Keynes (1936), liquidity refers to the ease at which assets are changed into liquid money cheaply and quickly. People prefer liquidity depending on individuals varying reasons and can either be transactional, precautionary or

speculative motive. Transactional motive according to Keynes refers to the amount of money that individual holds to cater for daily usage of funds. The precautionary motive is the amount of money held to cater for unplanned activities such as illness while speculative is where individuals hold money to take advantage of investment opportunities that may arise in security market. The speculative demand for money is affected by the prevailing interest rate in the market, commercial banks may get exposed to low level of liquidity and reduces their performance level by constraining on the funds that will be lend out and earn profits and may lead to a state of bank run a situation where depositors panic and withdraw their deposits. Banks depends mostly on the individuals' deposit, which they consider it to be the cheapest source of loan-able funds. Liquidity preference theory is centered on the interest rate that the bank offers out of client's savings as it would lead to attracting deposit from them. If investment yields them higher returns, then they will choose to deposit and forego liquidity, (Biefang & Howells, 2002).

2.2. Empirical Review

2.2.1. Interest Rate and Performance

Otuori (2013) studied the exchange rate and financial performance of commercial banks in Kenya. The findings were, there is a direct positive relationship of rate of interest and performance of banks. If the rate of interest is raised, performance also go up since because of a greater spread between CBR and the rate that banks charge its customer and the spread between long term and short term rate of interest and widens since short term rate hikes faster than long term leaving a commercial bank better off and additionally banks response to interest rate hike faster than what they pay on deposits boosting their net interest margin instantly Gavin (2010).Mohanty (2003) concluded that, central banks changes short term interest rate in answer to any deviation in target rate of inflation and exchange rate movement to restore equilibrium and it refers to the price paid for the use of funds.

2.2.2. Cash Reserve Ratio and Performance

According to Laurent (2015) in his study on 'cash reserve ratio and the bank lending channel in China', cash reserve ratio is considered to be one of the most effective policies in China to control money supply and maintain desired inflation rate. Change in cash reserve ratio signals policy intent to tighten or loosen bank lending. An increase in cash reserve ratio reduces the ability of commercial to advance loans to its deficit unit and thus reducing banks profit hindering its performance. An advantage of using cash reserve ratio over interest rate as central bank enjoys greater discretion in making cash reserve ratio decision and hence making it more immediate in its effect.

Kashyap and Stein (2012) concluded that, if central banks follows mostly price constancy policy and practices the interest rate as the basic tool, changing cash reserve ratio leads to the economic steadiness. Kashyap and Stein added that higher cash reserve ratio increases interest rate spread which induces raises the pressure on consumption because of lower deposit rate and exchange rate depreciation and tough credit conditions. Cash reserve ratio is a prominent tool in developing countries; Kenya for example raised it six times in 2010 while interest rate was changed only once. Kimani (2013) Concluded that cash reserve ratio cause an immediate liquidity challenge to banks with low excess reserve as it constraints the lending capacity of the banks and thereby affecting its performance negatively and similarly holding excess reserve leads to high interest paid out for unutilized funds hence impeding banks profitability.

2.2.3. Open Market Operation and Performance

During the 1970s open market operation was conducted in to have the resources within a slim range which in turn was chosen to appreciate money growth goal set by central bank, Mulwa (2011). Mulwa added that high rate of inflation in a monetary situation related to surplus money supply. The driver was the printing of money to finance the budget deficit, an expansionary stance of fiscal policy. It is a response to this excess money supply in the economy that open market operation was introduced through the sale of government securities, by the country's central bank, at an attractive rate of return to entice banks an individual buy them. Main aim for introducing open market operation was to control and maintain the supply of money in the short run in an economy and interest rate, as it is intertwined with the money supply, and consequently control the total money supply in the long run.

Central banks have employed this instrument to fine-tune the supply of reserve balances to keep these monetary targets in balance and in line with the central banks objectives Kimani (2013). Kimani added that through open market operation, banks performance is raised as the rate offered is higher compared to that paid by those advanced with loans and taking advantage of less risky investment with less cost.

2.2.4. Discount Window Operation and Performance

Mulwa (2010) concluded that central bank procedures for controlling money supply involve use of discount window and open market operation working together. Mulwa concluded that discount window is an effective tool to control money supply by boosting banks liquidity at a penal rate which force commercial banks to mobilize savings from their clients, commercial banks when faced with liquidity challenge may go for an overnight fund from central bank of Kenya at a higher

rate intended to discourage them from relying on this fund. The penalties they are paying through the interest rate make commercial banks enjoy narrow spread and hence impede their performance Mulwa added.

In the past, banks were unenthusiastic to count on discount window to acquire financing need with fear that if it became known might infer weaknesses in doing business. A situation which may lead to bank run and depositors may rush to withdraw their deposits and may warrant bank closure. Kirui (2014) in their study on "Discount window stigma in the 2007-08 financial crises" concluded that in usual times, in the money and illiquid banks must have the ability to obtain financing from bank with surplus liquidity via inter-bank lending. This inter-bank lending may become dysfunctional due to information asymmetry problem in such a case lending rate might be raised in order to cater for uncertainties. A decrease in discount window operation rate to necessitate banks to borrow money leading increased fund availability for lending.

3. Methodology

3.1. Population and Sample Size

The study adopted correlation research design to examine relationship between variables. the researcher used the population of commercial bank operating in Kenya before 2011. In Kenya, there are a total of forty-two banks which constituted the population of the study. A survey of all banks was done. The primary and secondary data were used. Data was collected through administering questionnaire to all commercial banks head of department staffs on a leave and pick basis. Secondary data was obtained from the central banks of Kenya prudential management reports of various years relating to the performance of banks from the year2011 to 2015.

3.2. Data Analysis and Presentation

The researcher after collecting the data through the above means did the editing which refers the practice of probing the gathered raw data to discover errors and omission and to rectify them when probable and tabulation in order to identify anomalies in the data collection Kothari (2004). The data were then evaluated using the SPSS version 16 to help researcher correlate the data. The findings then presented using graphs and table to enable comparison.

3.3. Model Specification

The variables of the study comprised of the banks' performance, measured by the return on Asset, as the dependent variable and interest rate, cash reserve ratio, open market operation and discount window operation as the independent variables. Since the study was multivariate the researcher employed multiple regression analysis to develop the connection between the performance of commercial banks and causal variables. The choice of multivariate regression model was appropriate since it explained the nature and magnitude of impact of independent variable on the independent variable. Thus the regression equation appears as follows;

Regression model one

$Y = ß_0 + ß_1$(rate of interest)$+ ß_2$(cash reserve ratio) $+ ß_3$(Open market operation) $+ß_4$(Discount window operation)

4. Data Analysis

4.1. Correlational Analysis

Study explored the spearman's rank correlation coefficients which were used to illustrate the relationship between various pairs of variables, that is, dependent and independent variables and between independent variables. The analysis was done to show whether the independent variables had any relationship to each other and therefore becoming indeterminate and allows to ascertain multi-collinearity of variables and avoid development of spurious regression mode. The independent variables considered in the regression model; Central bank rate, cash reserve ratio, open market operation and discount window operation and return on assets and performance. The result shows that cash reserve ratio and open market operation were highly correlated to the performance of commercial banks.

4.2. Model Summary

The model summary was used to predict the value of dependent variable using independent variables. The study independent variables were the central bank rate, reserve requirement., open market operation and discount window operation while the dependent variable was the performance.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.850[a]	.722	.648	.31900

Table 1

a. Predictors: (Constant), Central Bank Rate, Open Market Operation, Cash Reserve Ratio, Discount Window Operation

The coefficient of multiple determination R square value of 0.722 showed 72.2% of the variation in performance of commercial banks in Kenya can be explained by the variation in the independent variables herein studied. The other portion of 27.8% of the variant in in performance can be expounded by other factors not studied as shown in table 4.18. the independent variable was found to be having a strong and positive and strong correlation with a correlation coefficient of 0.850.

4.3. Regression Analysis of All Variables

The researcher did multiple regression analysis to establish the relationship that exist between monetary policy (independent variable of the study) and performance (dependent variable of the study) of banks. The study used the SPSS version 16 to code, to record as well as computing the measurement of regression analysis. Multiple regression analysis was done to determine the connection of monetary policy and performance of banks.

The SPSS generated regression equation (Y) = β_0+ β_1X_1+ β_2X_2 + β_3X_3+ β_4X_4 becomes; Performance (Y) = 10.365+ 0.025X_1- 1.053X_2 - 057X_3- 0.61X_4

The positive beta of central bank rate implied a positive relationship of central bank rate and performance while negative betas of cash reserve ratio, open market operation and discount window operation depicts that they have a negative relationship with performance. According to the regression equation, taking central banks rate, cash reserve ratio, open market operation and discount window operation caused by expected changes in monetary policies into account, constant at zero performance would be 10.365.

With 95% level of confidence the p- value for central bank rate was 0.010 which was less the critical value (α= 0.05) hence central bank rate was significant in determining the performance. Assuming other independent variables are constant at zero, an element rise in Central bank rate led to a 0.025 elements risein performance of bank in Kenya. These findings supported Otuori's (2013) conclusion that there is a positive direct relationship of interest rate and performance. Otuori argued that as interest rate raises the performance of commercial bank also rise since the lending rate is raised leading to higher interest rate spread between lending rate and central banks rate as banks are responding to interest rate hike faster than response to what they pay on deposits boosting their net interest margin.

With 95% level of confidence the p- value for cash reserve ratio was 0.01 which was less the critical value (α= 0.05) hence cash reserve ratio was significant in explaining the performance of banks in Kenya. An element rise in cash reserve ratio led to a 1.053 elements drop in performance of bank in Kenya. The findings of this study supported of Laurent (2015) study on reserve requirement and performance of banks in Kenya. The conclusion was that an increase in reserve requirements reduces the ability of commercial banks to advance loan to its customers hence reducing the profitability and consequently the performance of commercial banks.

With 95% level of confidence the p- value for open market operation was 0.000 which was less the critical value (α= 0.05) hence open market operation was significant in explaining the performance of banks in Kenya. Anelement rise in open market operation will led to a 0.057 element rise in the performance of in banks. The findings of this study rejected Kimani's (2013) concluded that open market operation raises banks performance as the returns from government securities is higher and accompanied by less risk and cost compared to the returns from advancing loans to individual clients. According to the study, open market operation negatively affects performance of banks in Kenya.

With 95% level of confidence the p- value for discount window operation was 0.001 which was less the critical value (α= 0.05) hence discount window operation was significant in determining the performance. A unit increase in discount window operation will lead to 0.061 drop in the performance of commercial banks. It was also revealed cash reserve ratio had the greatest effect on the performance of commercial banks followed by open market operation and therefore it was the significant predictor of performance of commercial banks. Alton's (1985) conclusion that banks using discount window facility when faced with liquidity challenge end up enjoying a narrower interest rate spread as the facility interest is too high meant to discourage commercial banks to use it. A drop in discount rate makes it cheaper for banks to borrow leading to an increased availability of funds for lending. These findings however differed from when discount window operation is studied alone and all the variables are put together which implied that the independent variables are indeterminate but affected by the other variables in this study. The conclusion is, however, discount window operation affects the performance of commercial banks.

5. Conclusion and Suggestion

5.1. Conclusion

Central bank rate was positively correlated to the performance with beta of 0.025 and p-value of 0.010. Cash reserve ratio is negatively correlated with performance of commercial banks with beta -1.053 and p-value of 0.009 while open market operation is negatively correlated with beta value of -0.057 and p-value 0.000 and discount window operation is negatively with beta value of -0.61 and p-value 0.001 at 95% level of confidence or 5% level of significance, when all variables were kept constant the performance of commercial banks would be 10.365. The regression equation therefore became Performance (Y) = 10.365+ 0.025X_1- 1.053X_2 - 057X_3- 0.61X_4.

5.2. Suggestion

Due to the role that commercial banks play in the economy, central bank of Kenya should employ monetary policy interventions that seeks the improvement of performance.

To improve the performance of commercial banks, central bank of Kenya should consider raising the central banks rate since it was found to be the only variable from monetary policy that is improving commercial banks profitability. Cash reserve ratio kept on negating the performance, central bank of Kenya should select a low and suitable rate the commercial banks are required to maintain in the cash tills.

Monetary policy offers a good investment opportunity through the provision of open market operation. It was found that, open market operation had a negative relationship with performance of commercial banks since the individuals have been allow to invest in this facility and forego depositing their funds with commercial banks. Therefore, individual customers should be discouraged from investing in open market operation to enable them deposit their funds with commercial banks hence providing enough funds to lend.

Commercial banks should understand the source of funds the utilizing in order to avoid seeking funds from the discount window facility which was found to be having negative impact of the performance in banks. This helps the banks get alternative ways of sourcing finance instead of opting to discount window operation which makes commercial banks' performance drop. Facilities such as interbank borrowing should be made cheap. The study recommends that banks should put more effort on internal factors to enable them attain good performance. In order to realize it's objectives such as economic growth and full employment which are key in development of a country, central bank of Kenya should a good environment for commercial banks to easily and cheaply get finances to continue in business.

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