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INFLUENCE OF MACROECONOMIC VARIABLES ON LIQUIDITY OF COMMERCIAL BANKS IN KENYA

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ABSTRACT

This study focused on the influence of macroeconomic variables on liquidity of commercial banks in Kenya. The study adopted descriptive survey design and census technique was used to arrive at 43 commercial banks Kenya. The study adopted mixed research method in data collection. Secondary data was collected using a data collection sheet. Primary data was collected using a questionnaire. Data was edited, cleaned, codded and categorized then analyzed using SPSS version 22.0. The study adopted multiple regression model to establish the relationship between dependent variable and the independent variables and used correlation technique to analyze the degree of relationship between two variables with the Pearson correlation coefficient (r). Presentation of results was in form of tables. The study found that foreign exchange rate had less positive effect on the liquidity of commercial banks while inflation rate had great positive effect. Interest rate on the other side revealed negative relationship with liquidity of commercial banks over period of study. It was concluded that each macroeconomic variable studied had influence on liquidity of commercial banks. It was also found from primary data analysis that interest rate capping in Kenya doesn't influence liquidity ratio. The research recommended that commercial banks monitor macroeconomics variables behavior closely by developing risk monitoring and mitigation plans. Commercial banks should diversify their investment portfolios to spread the risk of macroeconomic variables. Commercial banks should further monitor and anticipate regulatory bodies interventions in financial sector and ensure they are flexible to adapt to stringent regulations by creating innovative products that improves liquidity. Regulators such as Central Bank of Kenya set up mandatory liquidity ratios that safeguard viable financial environment in Kenya. It further encouraged policy makers to balance between objectives of borrowers and providers of capital by creating enabling environment for healthy competition thereby creating robust demand and supply for capital. Finally, the study recommended that Central Bank of Kenya should set Central Bank Rate that reduces the risk to commercial banks and provide more liquidity for lending. The applicability of study results may be restricted; hence the study recommended a similar study be carried out to cover wider macroeconomic variables and wider financial sector.

Key Words: *Interest Rate Capping, Inflation, Foreign Exchange Rate, Bank Liquidity*

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INTRODUCTION

Liquidity is a fundamental component of any successful business enterprise. There is no universally accepted definition for the term as it is applied in different business fields such as accounting, economics, finance and investments. However, various scholars have suggested definitions of liquidity. From a finance perspective, (Ibbotson, Chen, Kim, & Hu, 2013) describes liquidity as the ability of investors to convert securities into cash at a price that is similar to the price of previous trade, assuming that no new information has arrived since previous trade. From economics perspective, González and Rubio (2011) describe liquidity as "when asset can be converted into spending power without significant loss of face value or interest income". Accountants, on the other hand, define liquidity as the ease to which an asset can be converted into cash.

A commercial bank is a profit making institution that, among other things, accepts deposits from customers and provides them with payment transmission services (Cheques) together with savings and loan facilities. Commercial banks act as financial intermediaries by bringing together people who want to save for future and those who want to borrow now in order to undertake investment projects. They are profit seeking enterprises and lending has been the most profitable venture that gives banks incentives to maximize returns on their loans. Their profits come from lending at a higher rate than the interest paid for deposits but within Central Bank Rate. Banks should maintain an adequate stock of liquid assets in case their reserves come under pressure since, unlike other businesses, the liabilities must be paid when the depositor demands it (Duttweiler, 2011).

Low liquidity for a bank will lead to failure to meet the demands of depositors on time which leads to declining depositors' confidence, hence rendering the banks to occasion "bank runs" and ultimate legal wrangles and closure. On the other hand, high liquidity of banks also poses some disadvantages in that it leads to having idle cash and assets. The banks therefore must contain some adequate supply of cash to meet all normal and unexpected withdrawals, additionally some extremely liquid assets to deal with unexpected heavy demands for cash (Duttweiler, 2011). Banks must maintain a supply of cash at central bank of Kenya and at other banks which will meet day to day demand for notes and coins and the same time keep cash at minimum because it earns no income. For instance, in 1971, the UK banks maintained cash reserves equal to at least 8% and liquid assets equal to at least 28% of total deposits. Banks hold treasury bills and government securities nearing maturity that can be sold at any time with little risk.

Macroeconomics is a subfield of the study of economics that examine the behavior of the economy once all of the individual economic decisions of the companies and industries have been summed up. Economy wide phenomena considered by macroeconomics include changes in unemployment, national income rate, rate of growth, gross domestic product, inflation, and how it is affected by changes in unemployment, national income and rate of growth. Macroeconomics is also referred to general approach to economic reasoning which include long term strategies, and rational expectation in aggregate behavior. Macroeconomics can be used to analyze how to influence government policy goals such as economic growth, price stability, full employment and the attainment of a sustainable balance of payments. Macroeconomics focuses on the movement and trends in the economy as a whole. The factors that are studied in macroeconomics and microeconomics will often influence each other. For example, the current level of unemployment (Macroeconomics) in the economy as a whole will affect the supply of workers which an oil company can hire from (Microeconomics) (McConnell, Brue, & Flynn, 2009).

The Kenyan economy is occasionally faced with uncertainties with regard to macroeconomic pointers including interest rates, inflation levels and the overall and current exchange rate.

Macroeconomics variables have been changing in Kenya in the last few years. Inflation was 10.10%, 3.88%, 14%, and 9.36% 5.7% in 2009, 2010, 2011, 2012, and 2013 respectively. GDP growth rate was 2.7%, 5.8%, 4.4%, 4.2% and 4.5 % in 2009, 2010, 2011, 2012, and 2013 respectively. Interest rate was 7.8%, 7.2%, 13.79%, 16.3%, and 8.8% in 2009, 2010, 2011, 2012, and 2013 respectively. The country has registered poor performance in most of the economic parameters as indicated by increasing interest rate, rising inflation rates, currency depreciation, and diminishing money supply in the economy. All these combined have had a negative influence on the operations of various organizations especially the liquidity of MFIs (Miencha & Selvam, 2013).

Statement of the problem

Macroeconomic aggregate has been an important determinant of banks' liquidity behavior. As such, volatility in macroeconomic conditions normally affect manager's determination of the appropriate level of liquid assets to hold. Gibson (1992) suggest that declining trend in current ratios maybe as a result of some macroeconomic influence and not necessarily that firms are facing liquidity problems.

Statistics has it that from the period between 2011, 2012, 2013, 2014, 2015, 2016, and 2017 respectively GDP growth rate has been growing at a decreasing rate as 4.4%, 4.6%, 5.9%, 5.4%, 5.7%, 5.9% and 4.9% respectively. According to Central Bank of Kenya interest rates statistics from CBK website, Central Banks Rate (CBR) was 8.4%, 15.8%, 8.8%, 8.5%, and 10.1% in 2011, 2012, 2013, 2014 & 2015 respectively whereas commercial banks' weighted average lending interest rates were 15.0%, 19.7%, 17.31%, 16.5% and 16.2% respectively in the same years compared. This prompted Central Bank of Kenya to seeks capping law to avoid the exploitation of the consumer seeking for loans in commercial banks in Kenya. The country has registered poor performance in most of the economic parameters as indicated by increasing interest rate, rising inflation rates, currency depreciation, and diminishing money supply in the economy.

Olweny and Shipho (2011) evaluated the effects of bank-specific factors on the profitability of commercial banks in Kenya and concluded that banks that are profitable, improves their capital bases, reduces operational costs, improves assets quality, employ revenue diversification strategies and keep the right amount of liquid assets. Enqvist, Graham and Nikkinen (2014), studied the relationship between liquidity and macroeconomic trends across industries. Adrian and Shin (2009) attempted to determine monetary policy and money stability in South Africa. All these studies did not measure the effects. Three banks faced liquidity problems according to Central Bank of Kenya Supervision report (2016). Owidi (2018) analyzed the relationship between liquidity and macro-economic indicators, an industry comparison. The study sought to find out if a relationship exists between the liquidity of quoted firms and the following macro-economic variables; Interest rates, Inflation and the Nairobi Securities Exchange (NSE) 20 share index. The study specifically sought to determine the magnitude or strength of the relationship if it exists and the influence of industry categorization on the relationship described above. And later concluded that there was a relatively high degree of correlation between short and long term measures of liquidity especially cash flow from operations to current liabilities and cash flow from operations to total liabilities.

Banks fail because of; liquidity, insolvency, mismanagement or sudden shocks to the economic system, such as violent fluctuations in interest or exchange rates or outright frauds (Cole & White, (2012). When a business cannot meet its financial obligations, it is said to be insolvent, and drastic measures may be required, (Power, 2017). Insolvency explained. *Company Director*, pg *33*(8), 38.). Depending on the severity of the problems of the falling banks, the remedial measures open to central bank vary. The method used depends on a

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country's specific situations and the strength of the financial system (Cole & White, 2012).

Banerjee and Mio (2018) states that liquidity comes first, without it a bank does not open doors and with it banks may have time to solve its basic problems. Studies by Miencha and Selvam, (2013) have shown liquidity ratios as strong predictors of financial distress whereas Morris (2018) carried out studies to show the volatility of liquidity ratios in predicting financial distress.

Singh& Sharma, (2016) studied bank-specific and macroeconomic factors that determine the liquidity of Indian banks. Söderberg, (2008) evaluated 14 macroeconomic variables' ability to forecast changes in monthly liquidity on the Scandinavian order-driven stock exchanges. Kweri (2011) researched on the relationship between working capital management and profitability of manufacturing firms listed at the Nairobi stock exchange. Waweru (2014) examined the influence of macroeconomic variables on the liquidity of infrastructure bonds listed at the Nairobi Securities Exchange. However, these studies did not evaluate the influence of selected macroeconomic variables on liquidity of commercial banks in Kenya and this is what prompted me to submit this research project.

Objectives of the Study

The main objective of the study was to establish the influence of macroeconomic variables on liquidity of commercial banks in Kenya. The specific objectives were;

- To assess the influence of interest rate capping on liquidity of commercial banks in Kenya,
- To establish the influence of inflation on liquidity of commercial banks in Kenya,
- To determine the influence of foreign exchange rate factor on liquidity of commercial banks in Kenya.

LITERATURE REVIEW

Liquidity Preference Theory of Interest

According to Keynesian theory, Interest is not the price for waiting. It is not the remuneration necessary to call forth saving because a man may save money, bury it in his backyard and get nothing from it in the way of interest. Interest is the reward for surrendering liquidity, i.e., a reward for dispensing with the convenience of holding money immediately available (Keynes, 2018). Keynes (2018) further defines interest rates as the cost of borrowing reflecting the market rates prevailing at the time of obtaining the loan. According to his theory of liquidity preference its states that interest rates rise when there is excess demand for money and fall when there is excess supply (Bouwman, 2013) is also applicable in the interest rate capping where theory of liquidity advocated for a historically given prices level is set by the central bank of a given country. The price level informs on the interest rate to be charged. This theory is of importance as it provides a strong basis for government involvement in interest rate capping.

Structural Theories of Inflation

According to structural theory of inflation, market power is one of the factors that cause inflation, but it is not the only factor. There are two theories of inflation, Mark-up theory and Bottle Neck Inflation. According to Mark-up theory, inflation cannot occur alone by demand and cost factors, but it is the cumulative influence of demand-pull and cost-push activities. Demand-pull inflation refers to the inflation that occurs due to excess of aggregate demand, which further results in the increases in price level. The increase in prices levels stimulates production but increases demand for factors of production. Consequently, the cost and price both increase (Heathfield, 2016). According to Bottle-neck inflation theory, the direct relationship between wages and prices of products is the main cause of inflation. In other words, inflation takes place when there is a simultaneous increase in wages and prices of products (Gali, 2015) which was also supported by the Market-Power Theory asserting that when a single or a group of sellers together decide a new price that is different from the competitive price, then the price is termed as market-power price. Such groups keep prices at the

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level at which they can earn maximum profit without any concern for the purchasing power of consumers. According to the advanced version of market power theory of inflation, oligopolists can increase the price to any level even if the demand does not rise. The increase in wages is compensated with the hike in prices of products. With increase in the income of individuals, their purchasing power also increases, which further results in inflation. Inflation erodes the value of debt in businesses to the detriment of anyone who has lent money. Inflation makes people favor physical assets over money, (Malmendier & Nagel, 2015)

Loanable fund theory

Loanable fund theory was developed by Wicksel in 1930 and later improved by Ohlin and Robertson (1934) the theory was viewed to have great contribution to setting interest that favors both the borrower and the lenders of money. Ohlin and Robert (1934) assert that the determination of interest rates is between the factor of demand and supply of the loanable funds. Turnovskey (1985) defined loanable funds as amount of money which is demanded and supplied at any time by the parties concerned. Public, civil servants, business owners and entrepreneurs among others needs loanable funds for many reasons. Loanable funds are majorly used for the investment and consumable items at any time. The relationship between Interest rates and loanable funds is vital and great since both the investors and consumers have a strong preference for the funds being borrowed at a lower rate.

The supply of loanable funds increases with the increase in markets rate of interest. This is greatly due to lenders increasing their supply of funds to the market. The interest rate relates directly to loanable funds on the supply side, that is, when there is increase in the interest rate, there is also increase in supply of loanable funds. On graphical representation, the curve of supply slope upwards from left to right. Interest rates are thus determined by the market forces of supply and demand. Good policies need to be put in place to promote effective and efficient competition, this will ensure that better rates are available to consumers and investors. It can be clearly stated that this theory advocates for an environment where loan capping does not exist since the rates are determined by market forces. However, critics are that special instances within the business environment may demand for capping of interest rates. This theory is of great importance to this study as it helps us understand why capping is not necessary. Loanable funds theory stipulates that consumers and investors demand loanable funds for consumption and investments purposes. With this theory the determination of interest rates is left to the market forces of demand and supply. Banks are better left to charge their own interest rates hence capping should not exist. It was thus necessary to determine how capping has affected the performance of financial institutions in Kenya.

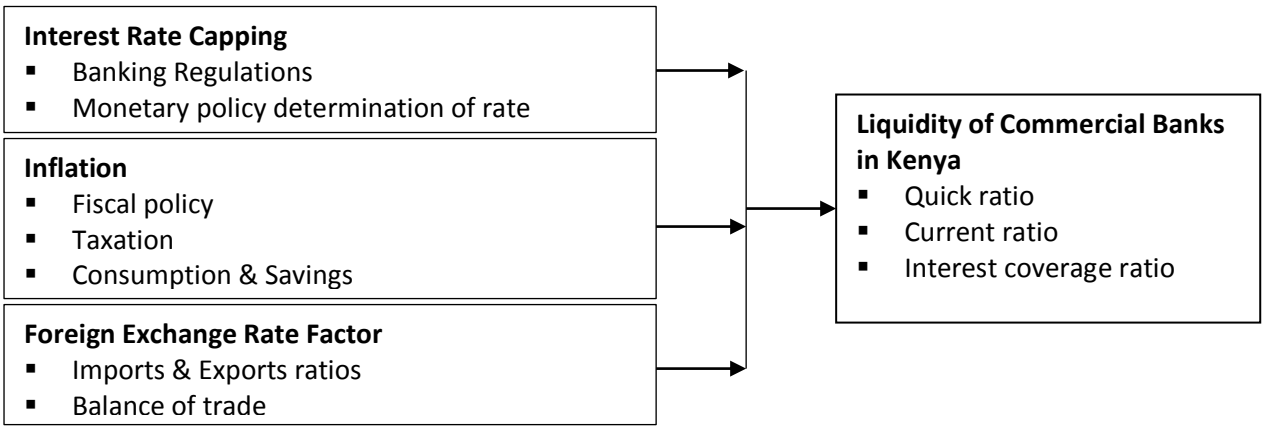

Figure 1: Conceptual Framework

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The banking Act defines a bank as any financial institution doing the business of accepting deposits, lending to the public and the companies offering the forex and other financial services. Licensing and regulations of commercial banks in Kenya is done by the Central Bank of Kenya (CBK). Since the cost of debt is interest, it has been viewed as the most vital factor in the banking industry (Wild, 2012)

The interest capping law became operational on September 14, 2016. The implementation was done following the public outcry regarding the high cost of credit in Kenya most so the banking industry, which was observed to be the most hindrance to credit access by a large segment of the population.

Inflation is the rise in general level of prices as measured against some base line of purchasing power. Inflation does not affect everyone the same way some prices, some stay constant. People living on fixed incomes that do not vary know inflation shrinks their money, as fixed sums will buy fewer goods. Inflation makes people demand higher interest payments. Lenders lose when inflation is high and borrowers gain. Inflation discourages savings and encourages spending.

High inflation is a corrosive force creating uncertainty and redistributing income to those with economic strength and away from those who are weak. Inflation erodes the value of debt in businesses to the detriment of anyone who has lent money. Although there is no formal link established interest rates tend to be higher when inflation is high since lenders must be compensated for the uncertainty inflation brings. Inflation makes people favor physical assets over money (Barro, 2013).

Bradley and Moles (2002) defined exchange rate as the price of a unit of foreign currency against domestic currency. According to Reid and Joshua (2004), exchange rate is the value of the one unit of foreign currency against local currency. Omagwa (2005) posit that exchange rates like any other commodity are explained by the law of demand and supply. Supply of currency is explained by changes in fiscal policies whereas currency demand in influenced by a wide range of factors such as inflation rates and interest rates. Murthy and Sree (2003) argued that exchange rate enables comparison of prices of commodities quoted in diverse currencies. Adetayo, Dionco and Oladejo (2004), explain that exchange rate variation is significant in determining a country's balance of trade. According to Omagwa (2005), fluctuations in exchange rates impacts on prices of imports directly thus inversely affecting a country's external sector. Murthy and Sree (2003) postulated that country's foreign debt is significantly affected by the fluctuations in exchange rates. The central bank typically under a fixed exchange rate system will set a par value between foreign and domestic currencies (Reid and Joshua, 2004).

Liquidity is the term used to describe how easy it is to convert assets to cash (Jenkinson, 2008). According to Stein (2012) the most liquid asset, and what everything else is compared to, is cash. This is because it can always be used easily and immediately. Liquid assets are important to have in times of crisis or emergency because they are so easily converted into cash. Without liquidity, money can become tied up in systems that are difficult to cash out of and even more difficult to assess for actual cash value (Kimari, 2013). During times of emergency, large commercial banks shut down, making it difficult for people to access the cash they need to buy essentials like food, gasoline and other emergency supplies (Chaplin, Emblow & Michael, 2000). Liquidity is also used to determine the financial health of a business or personal investment portfolio. Three liquidity ratios are used for this purpose, including the current ratio, the quick ratio and the capital ratio. According to Maaka (2013), liquidity not only helps ensure that a person or business always has a reliable supply of cash close at hand, but it is a powerful tool when it comes to determining the financial health of future investments as well.

Empirical Review

Studies on bank liquidity have been done both internationally and locally. Vossen (2010), in a

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study on Bank liquidity management noted that banks face two central issues concerning liquidity. Vossen (2010) used descriptive design and probabilistic sampling to select banks. Vossen (2010) found that banks are responsible for managing liquidity creation and liquidity risk. The conclusion was that banks must change how to balance their liquidity risk and their role as liquidity providers by restructuring their liquidity management strategies. Liquidity risk exposes banks to financial challenges. However, the study did not determine the influence of macroeconomic variables on liquidity of commercial banks in Kenya.

Ioan Trenca et al (2015) analyzed the impact of macroeconomic factors on bank liquidity for a particular group of countries recently affected by adverse economic and financial conditions. They studied Greece, Portugal, Spain, Italy, Croatia and Cyprus. They used General Method of Moments (GMM) on a panel of 40 commercial banks over the period 2005-2011 and found that macroeconomic factors that determine liquidity level are inflation rate, public deficit, unemployment rate, gross domestic product and liquidity ratio from the previous period. Inflation rate and liquidity in the previous period have the most significant impact while gross domestic product has the least impact. This study did not address interest rate and average exchange rate.

Nzula (2016) examined the effects of short-term interest rates on liquidity of listed commercial banks in Kenya. The theories used in this study included: Liquidity Preference Theory, The Real Theory (Model) of Interest Rate and Fisher's Theory of Interest. The study employed the use of both descriptive survey and historical research designs. The target population for this study was all the 44 listed commercial banks in Kenya as at December 2015. The study employed the use of document analysis of secondary data. The study extracted reports on various variables for the last five financial years (2011 to 2015). The study used one way ANOVA to test the level of significant of the independent variables on the dependent variable at 95% level of significance. The one way ANOVA was used to test whether there exists any significant difference between the study variables. The study found weak positive correlation between banks liquidity of commercial banks and debt to equity ratio. A negative correlation between banks liquidity of commercial banks and Operating Expense / Revenue was established. The study therefore concluded that short term interest rates, debt to equity ratio and Operating Expense / Revenue are not major determinants of bank liquidity in Kenya.

Audo (2017) carried out a study that sought to establish the relationship between the inflation rates and the liquidity of commercial banks in Kenya. The aim of the study was to establish whether the liquidity of commercial banks is affected by the inflation. The study used secondary data obtained from audited financial statements of the banks at the end of the years of study. The study used descriptive statistics and regression analysis to establish the relationship between the study variables. Inflation rate was the independent variable while liquidity ratio was the dependent variable. Regression analysis found no significant relationship between inflation and liquidity ratio of commercial banks. Audo (2017) concluded that inflation is not a significant macro-economic variable that influences liquidity ratio of commercial banks. Audo (2017) focused on one macroeconomic variable, inflation. There is need to expand the number of variables to assess overall impact on liquidity.

Mwendwa (2012) did a study on relationship between profitability and liquidity of banks in Kenya. This study used secondary and primary data. Mwendwa opined that liquidity is of major importance to both the internal and external analysts because of its close relationship with day to day operations of a business. A weak liquidity position poses a threat to the solvency as well as profitability of a firm and makes it unsafe and unsound.

Although several studies have been done as enumerated above, none of these studies have

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determined the influence of macroeconomic variables namely Interest Rate, Inflation and Average Exchange rate on liquidity of commercial banks of Kenya, thus my motivation to submit this proposal.

METHODOLOGY

Mixed research design was used to carry out this study. This encompassed descriptive survey and correlational research techniques. The target population of the study was 43 commercial banks of Kenya according to Central Bank of Kenya 2018 annual report. The sampling frame of the proposed study was entire 43 commercial banks in Kenya as per Central bank of Kenya annual report of 2018. The study adopted mixed research method in data collection. The study used secondary financial data for the five financial years from 2014 to 2018 and it was done by the researcher through the aid of computer. The data was sourced from financial reports, library, company website, journals as well as publications relevant to the banks. Primary data was collected by aid of informants that collected and provided data from the finance officer of the 43 commercial banks in Kenya operational between financial years' 2014 and 2018. The data was analyzed using SPSS version 22.0 and financial ratios were used to analyze data retrieved from the 43 commercial banks website. Analysis was based on statistical tools like regression and descriptive statistic. Correlation analysis was conducted to show the degree of relationship between the variables under the study.

FINDINGS AND DISCUSSION

Interest Rate Capping

The study sought to assess the influence of interest rate capping on liquidity of commercial banks in Kenya. This ranged from banking regulations on interest rate capping and monetary policy committee determination of interest rate with a view of determining whether these regulatory guidelines have influenced liquidity of commercial banks hence impacting on their ability to make more investments as a direct result of available loanable funds. The following series of findings, discussions and tables showing the results of the Likert scale on various interest rate capping influences.

It was observed that 50.0% of the respondent disagree that the interest rate capping led to their banks borrowing more while 26.5% are neutral. However, 17.6% agreed and 5.9% strongly agreed. This yielded a cumulative of 76.5% for those who were neutral and disagreed compared to 23.5% for those who strongly agreed and agreed meaning that interest rate capping does not affect borrowing. The study agreed with Central Bank of Kenya (2016) which state that following interest rate capping, a number of borrowers have been shunned by banks. Since the commencement of the interest rate capping law in September 2016, the number of loan accounts has declined significantly between October 2016 and June 2017, thereby resulting in rising average loan size, by 36.7 percent over the period. Furthermore, it also concurred with Cytonn research report (2019) which state that the decision to repeal the rate cap law will be a boost to the economy because a free market, where interest rates are set by the forces of demand and supply coupled with increased competition from non-bank financial institutions for funding.

The study determined the interest rate capping and the rate of investment. It was observed that 52.9% of the respondents disagreed that interest rate capping led to increased rate of investment in the financial institutions, while 14.7% strongly disagree to it. This yielded a cumulative of 67.6% of the respondents who disagreed that interest rate capping increased investment. However, 8.8% of the respondent agreed while 23.5% were neutral.

The findings were in line with Ng'ang'a (2017) whose study revealed that banks were opting for different modes of making money as opposed to relying on the margins made through interest rate yield.

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It was observed that 48.6% of the respondents agreed that Central bank's monetary policy committee determination of banks' lending rates ceiling has reduced loanable funds in their organization, while 17.1% strongly agree to it. This yielded a cumulative 65.7% of the respondents agreeing that Central bank's monetary policy committee determination of banks' lending rates ceiling has reduced loanable funds in my organization. However, 11.4% of the respondent disagreed, while 17.9% were neutral and 2.9 strongly disagree.

This finding agrees with central bank of Kenya report (2018) which studied the impact of interest rate capping on the Kenyan economy and found evidence of reduced financial intermediation by commercial banks, as exemplified by the significant increase in the average loan size arising from declining loans accounts, mainly driven by the large banks, thus shunning the smaller borrowers. Further, small banks have experienced significant decline in profitability in recent months, which may complicate their viability.

Inflation

The study sort to establish the influence of inflation on liquidity of commercial banks in Kenya. This was to find answers to whether the fiscal policies in Kenya has led to increase in taxation rates, whether fiscal policies in Kenya has slowed investment in banks, if taxation has affected the profitability of banks and finally influence of taxation regime on the organization liquidity ratio in Kenya's banking sector. The following are discussions of findings from Likert questions responses.

From the finding, 5.9% of the respondents strongly agreed that fiscal policies in Kenya had led to increase in taxation rate while 8.8% of the respondents agree, this results to a cumulative of 14.7% of those who agrees that fiscal in Kenya has led to increase in taxation rates by Kenyan government. 17.6% were neutral. However, 29.4% disagree and 38.2% strongly disagree bringing a total of those who disagreed to 67.6%, this concluded that fiscal policies in Kenya haven't led to increase in taxation rates.

This finding agreed with findings by M'Amanja & Morrissey. (2005) who studied Fiscal Policy and Economic Growth in Kenya and found that fiscal policies have no influence on tax revenue hence neutral to growth.

The study determined if fiscal policies in Kenya had slowed investment in the organization. From the respondent 38.2% of the respondent agreed that the Fiscal policies in Kenya had slowed investment in the organization while 35.3% were neutral. 14.7% strongly disagreed & 11.8% of the respondents disagree bringing a total of 26.5% of those who disagree that fiscal policies in Kenya had slowed investments in their organization.

The findings were in line with Muchai and Muchai, (2016) who argued that external debt, taxation, and expenditure practices under different political regimes have significant effects on capital flight and investments.

The study determined if organization operated profitably under current tax regime in Kenya. From the findings 38.2% of the respondent disagreed that organizations operated profitably under current tax regime in Kenya whereas 8.8% strongly disagreed bringing a total to those who disagree to 47.0%. However, 11.8% strongly agreed and 23.5% agreed bringing a total of those who agreed to this statement to 35.3%. 17.6% the respondents were neutral. This finding suggested that organizations are not operating profitably under current tax regime in Kenya.

The above findings were in line with a Kipkemoi, Atambo & Mogwambo (2016) study whose findings concluded study concluded that profitability of commercial banks in Kenya is largely affected by the fiscal policies that the Economy applies to stabilize other macroeconomic factors.

The study if taxation regime in Kenya improved organization liquidity ratio. From the respondent, 29.4% of the respondent disagree whereas 8.8% strongly disagree to the statement that taxation

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regime in Kenya has improved organization liquidity. This brings those who do not agree to this statement to 38.2%. 11.8% strongly agree whereas 14.7% agrees to this statement brining a total of those who agree to 26.5%. However, 35.5% of the respondent where neutral about the statement.

This finding concurred with findings of Kamandea, Zablonb & Ariemba (2017), who examined the effect of Bank Specific Factors on Financial Performance of Commercial Banks in Kenya with independent variables being capital adequacy, taxes, asset quality, management efficiency, earnings ability and liquidity where they found that Asset quality of the bank have the highest influence on return on assets of banks.

Foreign Exchange Rate Factor

The study further sort to determine the influence of foreign exchange rate on the liquidity ratio of commercial banks in Kenya. This considered factors ranging from; if prevailing foreign exchange rate in Kenya has encouraged organization to invest in imports; Prevailing foreign exchange rates in Kenya has encouraged organization to invest on exports. Prevailing foreign exchange rates in Kenya has made organization to scale down imports; prevailing foreign exchange rates in Kenya has made my organization to scale down exports. Majority of the respondent where neutral 41.2% on the question of whether prevailing foreign exchange in Kenya that encourage organizations to invest on imports whereas 23.5 and 2.9 of the respondents disagree and strongly disagree respectively. However, 29.4% agrees and 2.9% strongly agrees. This showed that majority of the respondent where neutral and cannot judge if prevailing foreign exchange rate in Kenya has encourage organization to invest in imports.

The findings agreed with findings of Nyambariga (2017) who studied effects of exchange rates volatility on imports and exports in Kenya and found that increased exchange rate uncertainty has no effect in the long-run on imports.

The study determined if prevailing foreign exchange rates in Kenya had encouraged organizations to invest on exports. From the finding, majority of the respondent were neutral at 35.3% that prevailing foreign exchange rate has encouraged organizations to invest on exports whereas 26.5% of the respondent disagrees. Conversely, 26.5% of the respondents agreed to this statement whereas 11.8% of them strongly disagrees. This formed a cumulative percentage of 38.3% of those who agrees. This showed that majority of the respondent did agree that prevailing foreign exchange encourages their organizations to invest in exports.

The findings agreed with findings of Nyambariga (2017) who studied effects of exchange rates volatility on imports and exports in Kenya and found that increased exchange rate uncertainty has substantial adverse effects in the long-run on export function.

The study determined if prevailing foreign exchange rates in Kenya has made organizations to scale down imports. Majority of the respondent where neutral 50.0% on the question of whether prevailing foreign exchange in Kenya has made organizations to scale down on imports whereas 20.6% and 11.8% of the respondents disagree and strongly disagree, respectively . However, 5.9% agrees and 11.8% strongly agrees. This shows that majority of the respondent where neutral and cannot judge if prevailing foreign exchange rate in Kenya has made organization to scale down on imports.

Above findings agreed with Osano (2016) whose study found that there existed a weak positive relationship between exchange rate volatility and financial performance of listed commercial banks' performance using Return on Equity as a performance indicator; this study further concluded that Kenya being an exporter had suffered export losses that may have had significant economic implications.

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The research determined if the prevailing foreign exchange rates in Kenya had made my organization to scale down exports. From the finding, majority of the respondent were neutral at 32.4% that prevailing foreign exchange rates in Kenya has encouraged organizations to scale down on exports whereas 20.6% and 2.9% of the respondent disagreed and strongly disagreed respectively. On the contrary, 26.5% of the respondents agreed to this statement whereas 17.6% of them strongly disagrees. Cumulatively, the respondents who agreed to the statement makes up a total of percentage of 44.1%. This showed that majority of the respondent agreed that prevailing foreign exchange rates in Kenya has made organizations to scale down on exports.

These findings were on contrary to a study by Sibte (2017) who studied the impact of foreign exchange fluctuations on earnings from tea export in Kenya: a case of Kenya Tea Development Agency and found that company has had exposure to foreign exchange risks and transactional risk. However, the company has undertaken bold steps to increase the market share by entering "virgin" foreign market with no sales or operations before.

Liquidity of Commercial Banks in Kenya

The study also sought to examine the how banks in Kenya deals with liquidity ratio. This ranges from ability of organizations to settle current liabilities easily with cash without disposing non currents assets; influence of inflation rate fluctuation in Kenya on liquidity ratio of organizations; whether foreign exchange rate factors fluctuation in Kenya influences liquidity ratio of organization in Kenya and whether interest rate capping in Kenya influences liquidity ratio of organization in Kenya.

The study determined if organizations can settle current liabilities easily with cash without disposing non currents assets. The findings from this research found that majority of the respondent at 32.4% agreed while 8.8% strongly agreed. This yielded a cumulative percentage of 41.2% of those who agreed that organization can settle current liabilities easily without disposing noncurrent assists. Cumulatively, the respondents who strongly agreed and neutral formed a total of 52.9% hence a majority agreed with the statement. However, 11.8% of the respondent were neutral while 26.5% and 20.6% disagreed and strongly disagreed respectively yielding a cumulative of 47.1% of those who disagrees.

The study determined if inflation rates fluctuation in Kenya influences liquidity ratio of organizations. Majority of the respondent were neutral at 50.0% that the inflation rate fluctuation in Kenya influence liquidity ratio of organizations. 17.6% agreed while none strongly agree hence cumulatively, those who agreed were 17.6. Subsequently 26.5% and 5.9% of the respondents disagreed and strongly disagreed respectively yielding a cumulative of 32.4% of those who agreed.

The findings agreed with findings of Audo (2014) who found that inflation is not a significant macro-economic variable that influences liquidity ratio of commercial banks.

The study determined if foreign exchange rates factor fluctuation in Kenya influences liquidity ratio of my organization. From the finding, majority of the respondent 52.9% were neutral that foreign exchange rate factors fluctuation in Kenya influences liquidity of the organization. Those who disagreed were 23.5% whereas 5.9% strongly disagreed yielding a cumulative of 28.4% for the total for those who disagreed. However, 17.6% of the respondent agreed.

These findings were different from a study done by Ahmed (2015) which indicated that foreign exchange exposure has negative effect on the performance of listed commercial banks in Kenya.

The study determined if interest rate capping in Kenya influences liquidity ratio of organizations. Majority of the respondent 32.4% disagreed that interest rate capping in Kenya influences liquidity ratio of organizations whereas 29.4% strongly disagrees. This yielded a total of 51.8% for those respondents who disagreed. 17.6% of the respondent were neutral. Conversely, 5.9% of the

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respondents agreed and 14.7% strongly agreed respectively.

These findings were in contrast with findings of Amuhinda (2018) which found that the capping law had a positive effect on the performance of commercial banks in Kenya liquidity being one of performance measure. Further, these findings contradicted the study findings of Imbo (2018) where the results indicated that the interest cap is having significant impact on the Liquidity ratio and Lending rate of the commercial banks.

Inferential Statistics

Serial Correlation Test

To detect presence of autocorrelation in independent variables, the study employed Durbin-Watson test. The Durbin-Watson test produces a test statistic that ranges from 0 to 4. Values close to 2 (the middle of the range) suggest less autocorrelation. The test results presented in Auto-correlation Model Summary table 1 below indicated a Durbin-Watson test statistic of 1.336 which was between 0-4 hence suggest less autocorrelation for this study.

Table 1: Auto-correlation Model Summary

					Change Statistics					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.062[a]	0.004	-0.011	2.3206802	0.004	0.249	3	196	0.862	1.336

a. Predictors: (Constant), X3_Foreign_exchange_rate, X2_Inflation, X1_Interest_Rate

b. Dependent Variable: Y_Liquidity _of_Commercial_Banks

From the Regression results you can determine if the model is good and nicely fitted by using R square, which is a statistical determinant. A good and nicely fitted model should lie between 0% to 100% according to (William, 2008). R squared is at 0.004% away from 0%, hence indicating good model.

Model summary showed that the R Squares was 0.004. This implied that the independent variables (interest rate, inflation rate and foreign exchange rates) explained the variations on the liquidity of commercial banks in Kenya by 4%. The remaining 94% would be explained by other variables not included in the study.

Analysis of Variance (ANOVA)

The study used ANOVA to establish the significance of the regression model. The overall regression model was insignificant, F(,196)=0.249, P>001, R2=0.4. This showed that overall, our regression analysis was statistically insignificant when we take the three independent variables together (interest rate, inflation rate and foreign exchange rates), they predict liquidity ratio albeit insignificantly.

Table 2: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.029	3	1.343	.249	.862[b]
	Residual	1055.569	196	5.386		
	Total	1059.598	199			

a. Dependent Variable: Y_Liquidity _of_Commercial_Banks

b. Predictors: (Constant), X3_Foreign_exchange_rate, X2_Inflation, X1_Interest_Rate

Regression Analysis

Multiple regression analysis was used because it measures the relationship between independent and dependent variables by generating an equation which can be used to predict the dependent variable for some given independent variables. The researcher used SPSS V

20.0 to run a correlation and analyze the degree of relationship between dependent and individual independent variable and utilized a Pearson correlation coefficient (r), which yields a statistic that ranges from -1 to 1. Correlation analysis shows the strength of association between the variables under study. Warokka and Gallato (2012) provides that the correlation coefficient (r) ranging from 0.10 to 0.29 may be regarded as indicating a low degree of correlation, whereas r ranging from 0.30 to 0.49 may be considered as a moderate degree of correlation, and finally r ranging from 0.50 to 1.00 may be regarded as a high degree of correlation. The model summary from the regression output was shown below in table 3.

Table 3: Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
1 (Constant)	11.689	3.163		3.695	.000
X1_Interest_Rate	-0.118	0.142	-0.075	-0.831	.407
X2_Inflation	0.055	0.251	0.016	0.220	.826
X3_Foreign_exchange_rate	0.010	0.033	0.028	0.311	.756
a. Dependent Variable: Y_Liquidity _of_Commercial_Banks					

From the table, the following regression equation was established for the all the years 2014 to 2018 combined.

Y=11.689-0.118X1+0.055X2+0.010X3

This study results found that, foreign exchange rate X3 (0.010) had less positive effect on the liquidity of commercial banks while inflation rate X2 (0.055) had greater positive effect. Interest rate X1 (-0.118) on the other side revealed negative relationship with liquidity of commercial banks over period of study. This regression result overall, indicates positive relationship between liquidity of commercial banks in Kenya with foreign exchange rate and inflation rate while interest rate revealed negative relationship.

CONCLUSION AND RECOMMENDATION

Based on the findings of the study, it was worth concluding that microeconomic variables indeed ultimately affect the liquidity of commercial banks in Kenya albeit low level of significance. Overall, there exists a low negative influence of interest rates on liquidity. This influence is at 5% level of significance. In addition, results on the influence of inflation liquidity of commercial banks in Kenya suggest that Mark-up theory is applicable based on the market credit demand. The excess of aggregate demand for credit by government, small, medium, and large enterprises results in wider investment opportunities hence banks were able to allocate investments to risk free government securities and collateralized loans to individuals and businesses thereby increasing their liquidity. The increase in prices levels stimulates production but increases demand for factors of production as well.

It was also evident that the impact of interest rate capping has a counterproductive effect liquidity hence supporting the loanable funds theory which was viewed to have great contribution to setting interest that favors both the borrower and the lenders of money.

Finally, the study focused on only the liquidity of commercial banks and ignored the microfinance institutions which can be of equal importance for managers and owners. Therefore, future studies should incorporate both commercial banks and microfinance institutions. Further the study only collected information from the company's financial statements and their employees but ignored other interested stakeholders and therefore there is need to bring on board views of other outside stakeholders and investors. Finally, the study centered the study on

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three selected macroeconomic variables and ignored other macroeconomic variables comprising, gross domestic product growth rate, unemployment rate, government debt to GDP, balance of trade, current account to GDP and credit rating. Future studies should incorporate more variables. Following the findings and conclusions made by the study, several recommendations are proposed.

Research indicated that macroeconomic variables studied influence on liquidity of commercial banks is mainly due to risks associated with interest capping and the ability of commercial banks to recoup their capital and interest in regulated environment. Therefore, the researcher recommended that policy makers including regulators balance between objectives of borrowers and providers of capital by creating enabling environment for healthy competition thereby creating robust demand and supply for capital as opposed to setting interest rate ceiling which has a counterproductive effect to larger part of economy players especially on medium size enterprises. The researcher further recommends that due to influence of inflation on liquidity, monetary policy committee decisions should be centered on ensuring that inflation is managed at manageable levels. The study finally recommends that adequate care must be taken in establishing policies within the bank to hedge against foreign exchange risk. Banking sector being a vital part of the Kenyan economy contributes immensely to the overall GDP in Kenya, therefore, monetary government should re-assess its trade policies to incorporate strategies that ensures preservation of the value of the domestic currency, maintenance of favorable external reserves position and ensuring external balance without compromising the need for internal balance. Finally, the researchers recommend that Commercial banks should diversify their investment portfolios to spread the risk of macroeconomic variables on liquidity thereby improving their financial performance.

This research recommended that commercial banks monitor macroeconomics variables behavior closely by developing risk monitoring and mitigation plans. Commercial banks should diversify their investment portfolios to spread the risk of macroeconomic variables on liquidity thereby improving their financial performance. Commercial banks should further monitor and anticipate regulatory bodies interventions in financial sector and ensure they are flexible to adapt to stringent regulations by creating innovative products that improves liquidity and thereby fostering profitability. Commercial Banks in Kenya should set up appropriate compliant liquidity ratios of deposits verses loans and risk management.

The research recommended that regulators such as Central Bank of Kenya sets up mandatory liquidity ratios that safeguard viable financial environment in Kenya. It further recommends policy makers such as national assembly to balance between objectives of borrowers and providers of capital by creating enabling environment for healthy competition thereby creating robust demand and supply for capital.

In carrying out its mandate, the research recommended monetary and fiscal policy committees set regulations that reduce variance and volatility of macroeconomic variable rates. Specifically, Central Bank of Kenya should set Central Bank Rate that reduces the risk to commercial banks and provide more liquidity for lending.

The study recommended scholars build on this research as references to improve their further studies, expand the study to cover all macroeconomic variables, expand the population to include microfinance institutions and enlarge the research to include stakeholders and shareholders.

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