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Effect of Exchange Rate and Inflation Rate on the Financial Performance of Banks in Kenyan: A Case of Co. Bank Limited

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ABSTRACT

The study's primary objective was to determine the effect of macroeconomic variables (Exchange Rate and Inflation Rate) on bank performance. Numerous studies on the effects of macroeconomic factors on the banking business in Kenya and globally have been undertaken, all with divergent findings and conclusions. The study was guided by the following objectives: To what extent has exchange rate and inflation rate affected the Co. Bank of Kenya Limited's performance. Liquidity preference theory, efficient market theory, and current portfolio theory were adopted in the study. The study used a descriptive research approach to examine the relationship between the independent variables of Exchange Rate and inflation rate and the dependent variable of bank performance. The study surveyed a total of 120 respondents from the Co. Bank of Kenya limited, including branch managers, credit managers, finance officials, accountants, staff, and consumers. The study drew conclusions about the research issue using both primary and secondary data. The study collected main data via questionnaires and secondary data through data collecting forms. Secondary data was derived from the Co. Bank of Kenya's annual financial reports from 2016 through the first quarter of 2022, CBK, Kenya Bureau of statistics, World Bank reports. This information is presented using pie charts, graphs and tables. The study further explores the dependent variable and presents response from respondents on the extent to which independent variables affect dependent variables in form of graphs and tables. The study also explores each independent variable. It starts with Exchange rate and Inflation rate respectively. For every independent variable the researcher used five statements to ascertain the effect of each variable on bank performance. The research also utilized secondary data to compute trend analysis for each independent variable and to formulate multiple regression equation and regression coefficients. The last part of the study entails a summary of the research findings. The summary provides an illustration of each independent variable and its effect on the dependent variable in line with the findings of the study. The study further looks at overall research conclusions, provides recommendation on what needs to be done to minimize the effects of the independent variables on the dependent variable.

Keywords: Gross Domestic product, Gross National Product, Efficiency Structure Theory, Market Structure Theory, International Monetary fund, Return on Assets, Return on Equity, Return on Investment, Bank Performance, Macroeconomic variables, Interest Rates, Exchange Rate, Inflation rate

INTRODUCTION

According to (Mankiw, 2009) macroeconomics is a branch of economics that studies the economy as a whole rather than the individual household. Macroeconomic variables are also called economic indicators or main signposts signalling the current trends in the economy. (Wepukhulu, 2019) Opines that macroeconomic variables are external elements that influence the firm's performance and are out of the dominance of the bank management power to control. They are external variables that exert an indirect effect on the financial performance of a bank. Macroeconomic variables are closely monitored and checked by the government since they affect many of the population (Khalid et al., 2012).

According to (Kwon and Shin, 1999), macroeconomic variables such as GDP, currency exchange rates, interest rates, inflation, and market risk all have a substantial impact on bank performance. This study examines the following macroeconomic variables:

Inflation

Inflation, according to (Romer 2019), is the gradual or average increase in the prices of goods and services in a certain economy over time. Cost-push Inflation impacts bank performance through increasing overhead costs, primarily salaries and operating expenditures (Revell 1979). Bank profitability suffers as a result of high Inflation, which raises wages and operational costs. Bank management can effectively manage fully forecast inflation by appropriately adjusting interest rates to boost revenue faster than costs. Profitability of the bank will improve as a result.

Exchange rate

The exchange rate is a term that relates to the value of a currency in relation to other currencies. It expresses the national currency's exchange rate in relation to foreign currencies (Azid, Jamil, and Kousar, 2005). Exchange rate fluctuations erode investor trust and result in capital flight. Bank activities, according to (Adler and Dumas 1980), are sensitive to exchange rates due to the volatility of asset values. (Chamberlain et al, 1997) demonstrate how currency exchange rates directly affect banks by affecting international competition, loan demand, and other banking conditions. Exchange rates can also have an indirect effect on banks by affecting foreign competitiveness, loan demand, and other factors affecting banking conditions. Because domestic costs of produced goods fall and foreign demand increases, a lower exchange rate increases corporate competitiveness (Luehrman, 1991). Bank earnings increase in lockstep with loan and deposit growth. Because imported goods become more expensive, a lower exchange rate reduces the purchasing power of domestic consumers. As a result, loan losses grow, reducing bank profitability. Macroeconomic variables are important in determining the economic growth of a given country and are important in determining the financial performance of financial intermediaries in a given country. The macroeconomic factors may have both negative and positive effects on banks' future cash flows and profitability; therefore, financial institutions should be aware of these factors to reduce their impact on their businesses. If a country's financial institutions are performing well, this will eventually improve economic growth and development. A well-performing financial institution promotes a certain level of capital formation in a country. It thus encourages investment by identifying and financing productive business opportunities that may result in a high G.N.P. of a nation. (Schumpeter 1911) opines that those services provided by financial intermediaries are vital for economic growth and development.

Banks are crucial to economic progress in Kenya and are influenced by economic conditions (Gikombo 2018). Bank financial performance is vital to its stakeholders: owners' investors' management, customers, and the government. (Gikombo, 2018) Asserts that Banks profitability and general performance can be affected by external and internal factors. The internal variables are bank-specific, which means that they impact the bank's performance, which is primarily determined by management and board of directors' choices. The external variables are those factors beyond the company's control and negatively affect bank financial performance or the so-called macroeconomic variables. Studies that other researchers have carried out denote a significant relationship between macroeconomic variables and firm performance. In most of their conclusions, the performance of a firm is influenced by macroeconomic variables.

The interrelationship between macroeconomic and bank performance is of great importance. Many scholars have vested interest in determining how these factors affect bank performance and the general economic growth of a country. (Wepukhulu, 2019) Concluded that an increase in the pricing of products and services available in an economy result in a decline in the economy's growth. Additionally, he determined that the spread between interest rates had a little effect on the economy's long- and short-run development. He says that increasing the exchange rate by one unit boosts the economy's growth rate. As a crucial sector in determining Kenya's economic growth, we can say that macroeconomic variables indirectly affect bank performance. For instance, these variables may harm investors' investments; thus, they will affect investors' decisions on investment.

Bank performance

According to (Ongore, 2013) the World Bank first issued a structural loan in 1980 to Kenya and other countries (Balassa 1989). After the I.M.F. and the World Bank implemented the structural adjustment policies, which were a requirement for countries with high national debts, they could continue getting loans from these international financial institutions. The structural adjustment loans required that a government requiring the loan should reorganize state economies by privatizing the state companies, liberalizing trade and capital flows, and deregulation of national economies. Financial markets deregulation, globalization, trade liberalization, and technological progress have changed banks operating scope. This has resulted in increased market competition and has created a need for bank performance evaluation and management.

Studies on bank performance date back to the 1980s (Ongore, 2013). (Olweny and Shipho, 2011). Market Power (M.P.T.) and Efficiency Structure (E.S.T.) theories were used to achieve this. According to the M.P. theory, rising external market forces lead to profit. This means that only companies with significant market shares and well-differentiated portfolios may obtain a competitive advantage over their rivals and profit from a monopoly. Simultaneously, the Efficient Structure hypothesis states that increased managerial and scale efficiency leads to more concentration and greater profitability. From these two theories, we can assert that internal and external factors influence bank performance. External factors include; G.D.P., inflation rate, interest rates, exchange rate, and credit growth. Some internal factors that influence bank performance include; bank size, management efficiency, and capital and risk management capacity.

If Banks in an economy are not performing well, this will harm the overall growth and development of the country. Deficient bank performance means bank runs and bank failures. Bank runs when all bank customers withdraw their money from the bank as a precaution because they believe that the bank will cease to carry out its function shortly. (Muriithi, 2017). According to this theory, bank failure occurs when banks cannot satisfy their financial obligations as and when they become due to their creditors, resulting in the liquidation of depositors. (Ongore, 2013) Profit, according to the author, is the driving force behind the banking industry. Any strategies and policies put in place are designed to ensure that the ultimate goal of profit maximization is achieved.

Statement of the Problem

Since September 2016, when the Banking Act was passed, interest lending rates have been capped at 4% above the C.B.R., and deposit rates have been set at 70% of the C.B.R. (Cytonn Investment, 2019), it has resulted to more harm than good. Firstly, the private sector credit growth has been declining

at a special rate, especially for small-medium enterprises (S.M.E.s), because banks perceived S.M.E.s as risky borrowers. This diverted banks into investing in asset classes that yielded higher returns on a risk-adjusted basis, for example, government securities. Secondly, following the enactment of the banking act, banks have had to change their operating models to mitigate the effects of the legislation. The legislation has led to reduced interest income of the commercial banks, thus affecting their financial performance. (Gikombo, 2018) As a measure of commercial bank profitability and overall financial performance, the real interest rate has a considerable impact on ROA and R.O.E. Thirdly, due to the decline in the private sector credit growth, Kenya has experienced rapid growth in the alternative credit markets as experienced by Mobile Financial Services, for example, M – Tiwari, Branch, Tala, among many others (Cytonn Investment, 2019).

There have always been variations in the foreign exchange market and recently increased concerns over the potential economic downfall due to the spread of the Covid- 19 pandemic in Kenya and around the globe. Due to the lockdown and curfew implemented to stop the spread of the virus, the Kenyan shilling has been under strain. Due to a lack of exports, the Kenyan shilling has become weak and has almost lost its value (H. Erkekoglu, 2020). Appreciation of foreign exchange minimizes equity values and thus hampers the bank's financial performance. Exchange rates fluctuations directly impact the prices of goods and significantly influence the production cost of domestically produced commodities. Exchange rates may generate gains or losses depending on their movements. Inflation is defined as a sustained increase in the general price of goods and services over a long period of time. As Inflation falls, banks' financial performance improves, and as Inflation rises, banks' financial performance declines. The study will determine how the increasing inflation rate affects banks' financial performance during this time of the Covid-19 pandemic.

(Osamwonyi and Michael 2014) identified a favourable association between G.D.P. and return on equity (R.O.E.). It was shown that the rate of return on equity was adversely associated with both interest rates and inflation rates. Previous research on the effects of macroeconomic variables such as G.D.P., interest rates, and Inflation on financial institution progress has focused on the individual variable influence of a macroeconomic factor on bank financial performance. The effect of macroeconomic variables in Kenya has not been fully investigated. As a result, this research aims to find out how G.D.P., Inflation, interest rates, the real exchange rate, and credit growth affect financial performance for the past five years and during the covid-19 period.

Objectives

The general objective of the study is to determine the effect of macroeconomic variables on the financial performance of Kenyan banks.

Specific objectives

i. To investigate the effects of Exchange Rates on bank financial performance at Co. Bank.

ii. To examine how inflation rate affect bank financial performance at Co. Bank.

Significance of the Study

This study will contribute to the current body of knowledge regarding the influence of macroeconomic variables on bank performance. All stakeholders in the macro economy, whose operations are affected by fluctuations in inflation, interest rates, currency rates, and the country's gross domestic product (G.D.P.), can benefit from the information in this study. This information will be most valuable too; commercial bank stakeholders, the government, business firms, researchers, scholars, and any other non-banking financial institution in formulating policies that can curb the effects of macroeconomic variables.

Government agencies such as the C.B.K. and the national Treasury will use the information to regulate macroeconomic variables. The research will assist them in making decisions, particularly when coming up with policies. For example, the C.B.K. is responsible for formulating monetary policies that assist regulate the quantity of money circulating in the economy, so influencing interest rates and inflation. Economic policies also have an effect on business expansion, net exports, and the cost of debt, both positively and negatively.

Commercial bank stakeholders, i.e., the management, will use the information to determine whether the Treasury is making viable investments. The study's findings will be tremendously beneficial for management in terms of gaining a better grasp of the relationship between risk-adjusted returns and macroeconomic variables.

The study will provide insight for future research to academics and scholars, particularly for individuals interested in contributing to this field, who will find the study a helpful resource for bridging gaps in the literature and research.

LITERATURE REVIEW

A theoretical framework is a set of guidelines for conducting research (Grant and Osanloo, 2014). A theoretical framework is related to and reflects the research questions and is based on current theories in the subject of study. It is the bedrock upon which research is built. It assists researchers in locating and contextualising formal theories in their studies.

Liquidity Preference Theory

John Maynard Keynes invented the Liquidity Preference Theory. Keynes used liquidity preference to influence interest rates in his very influential General Theory in 1936. Before introducing the Liquidity Preference Theory, the classical theory of interest claimed that interest rates were driven by two fundamental factors: investment demand and savings supply. Interest rate is the opportunity cost incurred for holding money. The interest rate, according to Keynes, is regulated by the demand for and supply of money, not by saving and investment. The need to keep the money to enable transactions is known as demand for money, and it is made up of three motives, according to Keynes transactional motivation, precautionary motive, and speculative motive. The first two motives are largely determined by income, whereas interest rate levels largely determine the speculative motive. The money supply is the quantity of money in circulation in an economy at a given point in time, as determined by the central bank. The interest rate is a price that makes the amount of money the public wants to hold equal to the amount of money already exists.

According to (Gikombo, 2018) Keynes, in the liquidity preference theory, considers monetary policies which the government should come up with to manage interest rates. Keynes, on the other hand, feels that additional factors influence the investment demand timetable. As a result, monetary policy alone cannot accomplish the necessary level of investment while simultaneously maintaining full employment in the economy.

Long-term bonds are encouraged to be held since they pay higher interest than short-term bonds. As a result, the yield curve will always be upward sloping. In comparison to short-term bonds, long-term bonds yield more. This is because investors prefer short-term securities. They are, after all, more liquid and may be readily changed to cash with a lower risk of losing the principal invested. Borrowers, on the other hand, will typically react in the opposite direction, preferring long-term debt over short-term debt, as the latter exposes them to the risk of having to repay the debt in tough times (Choudhry, 2011).

The bank performs liquidity and risk transformation. Improved bank performance is revealed through an examination of banks' involvement in producing liquidity and, as a result, improving economic growth. (Adam Smith 1776) (Michalski, 2009). According to this view, banks increase liquidity on their balance sheets by financing relatively illiquid assets with relatively liquid liabilities. According to Keynes, central banks adjust interest rates to influence money demand in order to manage asset values. This concept is critical because it elucidates how real interest rates affect investors' willingness to retain assets and, consequently, bank performance.

Modern portfolio theory

Harry Markowitz founded the Modern Portfolio Theory in 1952. (M.P.T.) This is often one of the major significant and influential economic theories in investments and finance. The idea was further developed by William Sharpe in 1966, alongside Merton Miller. Modern portfolio theory is an investment theory that aims to maximize predicted portfolio returns for a given degree of risk. In addition, the theory aims to reduce the risk for a given level of projected returns. Investors, according to Markowitz, should make portfolio decisions only on the basis of expected returns and standard deviations. Investors should analyze the expected return and standard deviation of each portfolio before selecting the one with the best combination of these two qualities. Harry Markowitz assumed that the majority of investors are risk-averse. They are hesitant to invest because they need to take the least amount of risk feasible to earn the best potential return by maximizing returns to risk ratios and carefully selecting the quantities of various assets. M.P.T. has numerous practical applications, such as lowering volatility in a stock portfolio.

According to (Gikombo 2018) (Omisore et al. 2011), a portfolio is a collection of all investments made by an individual or institution, including stocks, bonds, real estate, options, futures, and alternative assets. Portfolio risk refers to the possibility that a combination of assets or units within a single group of investments may fail to meet financial objectives. Successful diversification can theoretically eliminate portfolio risk, allowing investors to make informed decisions about how, where, and when to invest to attain the lowest possible risks and the highest possible gains. A portfolio that is efficient has the highest expected return for a given level of risk or the lowest expected return for a given level of risk. It is possible to get a low correlation of returns by selecting low correlation assets (Omisore et al..., 2011).

The portfolio theory (M.P.T.) approach is composed on four fundamental procedures: Asset allocation decision-making- defining how purchases should be allocated among asset classes, such as stocks or bonds; security valuation- characterizing a universe of assets in terms of expected return and expected risk; security valuation- Portfolio optimization is the process of balancing risk and return when selecting securities to include, such as determining which stock portfolio provides the best return for a given level of risk, and performance measurement, which entails categorizing each stock's performance (risk) into market-related (systematic) and industry/security-related (unsystematic) categories (Brodie, 2009).

None of the macroeconomic variables can be predicted precisely, yet they all have an effect on the rate of return on an asset. M.P.T. seeks to enhance the risk-reward connection by constructing portfolios of assets based on their returns, risks, covariance or correlation with other assets. M.P.T. establishes a paradigm in which any expected return is dangerous due to the uncertainty surrounding future events, and in which this risk-reward relationship can be optimized by diversification. The theory is significant to this research because it explains how investors might mitigate risk exposures in response to changes in macroeconomic economic parameters such as inflation, exchange rates, interest rates, and gross domestic product, all of which have an effect on bank performance in Kenya.

Efficient Market Hypothesis

Eugene Fama championed the Efficient Market Hypothesis, which is based on the idea that investors act rationally, maximize expected utility properly, and process all available information (Shiller, 1998). An efficient market is defined by (Fama 1965) as a market for assets in which, given all available information, actual prices represent excellent estimates of intrinsic values at all times. Many rational profit maximizers actively compete with one another in the market, attempting to anticipate future market values of particular securities, and vital current information is readily available to all or any players (Fama, 1965). When new information becomes available, it spreads swiftly and is instantly absorbed into the prices of securities.

According to (Vincent Okoth Ongore, 2013), three varieties of EM hypotheses exist: weak, semi-strong, and strong. The flimsy E.M.H. asserts that the values of traded assets, such as stocks, bonds, or real estate, already reflect all previously known information. Trading techniques based on price or return history do not allow investors to make abnormal profits. Mishra (2009; Mishra, 2009; Mishra, 2009). According to the semi-strong E.M.H., prices reflect all publicly available information, and price changes reflect new public information. Investors that base their selections on publicly available data are unable to achieve above-average returns.

Furthermore, according to the E.M.H., prices reflect information in real-time. It contains information gathered by agents and groups in weak, semi-strong, and private firms that are not accessible to the general public. Information that is available to the public includes stock market statistics, earnings announcements, dividend payments, price-to-earnings ratios, dividend yield ratios, price-book value ratios, stock splits, economic news, and the political stability of an economy, among other things.

When it comes to the effects of macroeconomic variables such as gross domestic product, inflation, exchange rates, and interest rates on stock prices, the efficient market hypothesis suggests that competition among profit-maximizing investors in an efficient market will ensure that all relevant information currently known about changes in macroeconomic variables is fully reflected in the price of stock securities (Ramin Cooper Maysam, 2004).

Market efficiency is a critical topic for financial managers to understand since it is directly related to their ability to know the mechanism of stock markets, as well as their performance and contribution to the development of the relevant economy. If the stock market is efficient, the price of a stock will reflect the true worth of the stock. The meager savings will be correctly allocated to productive investment, which will help both individual investors and the overall economy of the country in the long run (Copeland and Weston, 1988: Mustafa, 2004). This model is based on the assumption that the participants have all of the information they require regarding macroeconomic variables that affect stock prices. The source of stock price changes is determined by macroeconomic variables such as inflation, interest rates, gross domestic product (GDP), and the currency rate. (Mayasami and Sims, 2002; Fama, 1981; Chen et al., 1986; Fama, 1981; Chen et al., 1986; Fama, 1981) According to this research, the efficient market hypothesis is relevant because it provides conclusions about how changes in key macroeconomic characteristics affect the performance of commercial banks.

Empirical Literature Review

Inflation and Bank performance

The influence of Inflation on bank profitability has been conceptualized by (Jeevitha R et al. 2019). The study used descriptive research to attain the goal. Secondary data sources from public sector banks were used in the study. The study discovered no link between Inflation and bank R.O.E., ROA, or net profit. The study found that Inflation does not influence the selected public sector banks' R.O.E., ROA, or net profit. According to the study, Inflation has no effect on bank performance, because other important factors such as G.D.P., interest rate, currency rate, and internal bank variables (bank-specific factors) have a greater impact. According to the research, banks can improve their profitability by increasing their asset base, increasing their size, and boosting bank deposits.

(Maria Shahid et al. 2014) conducted research in Pakistan to look into the effects of inflationary trends on bank performance. The data for the study came from banking segments classified by Pakistan's central bank. Interviews with credit officers and managers at the selected banks yielded more information. Inflationary trends and Bank performance metrics have a beneficial association to R.O.E., ROA, and NIM. The study also found out that when there is high Inflation, banks' savings become less, and very few loans are approved to reduce default risk. Inflation thus negatively affects bank performance because when there is high Inflation, the rate of return is decreased. The study recommended that the impact of inflationary trends should be conducted on all banks, including Islamic banks, so that the overall outcome would reflect the overall banking sector performance.

(Chioma et al. 2014) did an empirical study in Nigeria on the effects of Inflation on bank performance. The study used linear regression to relate Inflation to the reported profits of banks in Nigeria and its implications on banks' lending decisions. The study was carried out on all commercial banks regulated by Nigeria's central bank from 2004 to 2014. Ex post facto research was used in this study. The data came from the financial statements of the banks that were sampled. The study found a good but not statistically significant association between Inflation and investment decisions, indicating that Inflation had a positive impact on commercial bank investment decisions. However, during the study time, the effect was not substantial. The study concluded that Inflation impacts investment decisions of firms that are banks, but the effect has no significant effect on Bank performance.

(Ongore and Berhanu, 2013) did a study to look into the factors that influence commercial banks' financial performance in Kenya. The study examined performance indexes for banks, bank-specific features, and macroeconomic factors affecting bank performance. Between 2001 and 2010, secondary data were acquired from published statements of all Kenyan commercial banks, the Central Bank of Kenya, the International Monetary Fund, and the World Bank. In Kenya, the study discovered a pretty strong negative correlation between inflation and bank performance as compared to G.D.P.

Exchange rates and Bank performance

An empirical study by (Hossin and Fazlu 2020) investigated the effects of exchange rate variations on the financial performance of Bangladesh's state-owned commercial banks. The research used a descriptive survey of all Bangladeshi financial institutions. For ten years, from 2009 to 2018, the study employed secondary data from the World Bank's development indicators, the bank's consolidated financial statements, and reports from Bangladesh's central bank. Exchange rate variations were found to have a weak negative relationship with bank performance in the study. This negative association was because the Bangladesh currency was depreciating against the dollar throughout the study. The depreciation has a detrimental impact on the profits of banks. The study suggested that banks implement efficient monetary and fiscal policies to help curb the significant deficit on the balance of payment and safeguard domestic currency. This will help reduce frequent fluctuations.

An investigation done by (Nafiseh Keshtgar et al. 2020) on the influence of exchange rate volatility on bank performance in Iran was studied using R.O.I. and the loan-to-deposit ratio, and it was discovered that exchange rate volatility had a considerable beneficial effect on the loan-to-deposit balance. This means that increasing the exchange rate and the potential increase in the benefits of the foreign exchange market will lead to a situation in which a portion of the banking resources is channeled to the foreign exchange market and, as a result, leads to the increase of loans to deposit ratio. The study further found that exchange rate fluctuations also positively affect increasing the lending ratio to a total bank deposit. It leads to an increase in the financial gap and creates the credit risk of banks. Uncertainty in exchange rate variability leads to credit expansion and a decline in deposits, leading to deepening the financial gap. The exchange rate may pose various risks to the banking sector, resulting in reduced profitability of banks.

(Tursoy and Moyo, 2020) performed research into the influence of Inflation and the currency rate on the bank performance of South African commercial banks. The research was conducted over sixteen years, from 2003 to 2019. The exchange rate has a substantial positive link with return on equity, according to the study. The report says that an increase or drop in the exchange rate will affect commercial banks' return on equity.

(Nyandema and Carolyn, 2016) aimed to investigate the effects of fluctuating foreign exchange rates on the bank performance of companies listed on the Nairobi Stock Exchange. For eight years, from 2006 to 2013, the study used a descriptive time series correlation research design to look at all commercial banks registered on the Nairobi Stock Exchange. Only ten (10) banks were listed on the Nairobi Stock Exchange at the time. According to the findings, the exchange rate has a significant positive impact on bank financial performance in Kenya. The link depicts how exchange rate variations and volatility affect bank profitability growth. This can be attributed to the fact that many imports are settled by locals using dollars; thus, if shillings keep weakening against the dollar, the banks can make arbitrage profits. The study recommended that the government put more measures to increase the country's exports as this will help improve the performance of commercial banks in Kenya.

Conceptual Framework

Dickson et al., 2018) defines conceptual framework as a structure that the researcher believes will best describe the natural course of the topic under investigation. The theoretical review, empirical research, and other significant concepts can be linked to the conceptual framework to enhance and systemise the researcher's knowledge (Peshkin, 1993). It explains how the statement of the problem will be explored. The conceptual framework depicts an integrated approach to an issue under investigation (Liehr and Smith, 1999). Based on the literature review discussed above, the relationship between the variables can be depicted by the diagram below to guide the research.

Fig 1 Conceptual framework

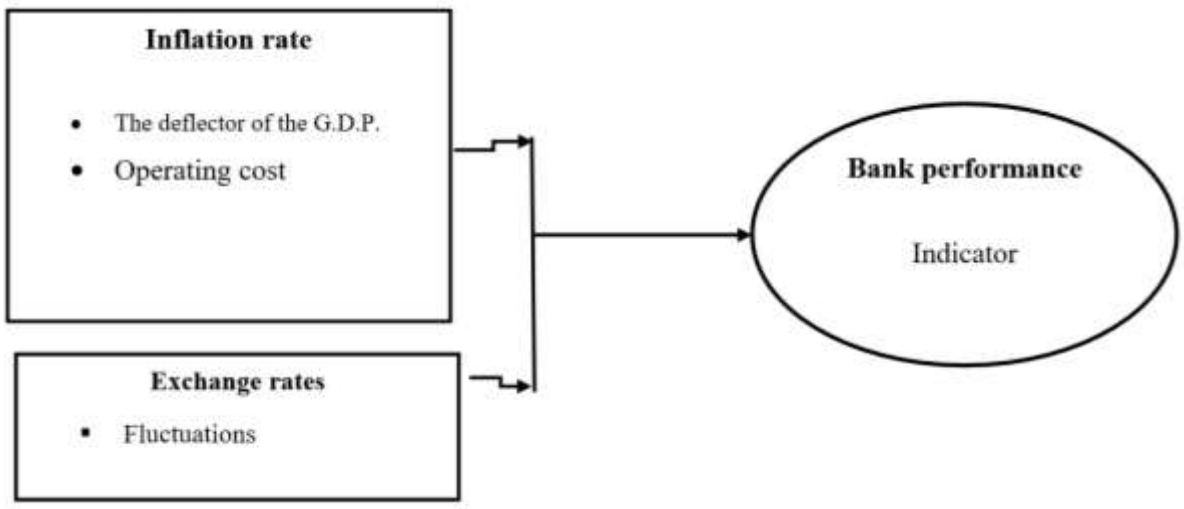


Table 1 Operationalization of variable

Variables	Type of variable	Indicators	Measurement scale	Data type
Bank performance	Dependent variable	• Return on Assets • Return on equity • Net Interest margin	Measurement scale of 1-5 1-Strongly agree to 5-Strongly disagree	Qualitative and Quantitative data
Exchange rates	Independent variable	• Fluctuations	Measurement scale of 1-5 1-Strongly agree to 5-Strongly disagree	Qualitative and Quantitative data
Inflation rate	Independent variable	• The deflector of G.D.P.	Measurement scale of 1-5 1-Strongly agree to 5-Strongly disagree	Qualitative and Quantitative data

RESEARCH METHODOLOGY

Research design

(Kothari, 2004) Considers research design as a set of conditions for data collection and analysis that balances relevance to the study purpose with the procedural economy. He argues that a research design is a conceptual framework for conducting research that acts as the blueprint for data collection, measurement, and analysis. The study design will show the techniques to be followed for obtaining relevant data and the tactics to be applied in their investigation.

The research designs used in this study were descriptive and diagnostic. Descriptive research design is a form of investigation that is based on scientific principles. Data is collected and examined to characterise current events, terminology, or relationships relevant to a problem in a certain subject (Mugenda and Mugenda, 2003). According to (Kothari 2004), a descriptive research design is focused on defining the characteristics of a single person or group. On the other hand, the diagnostic research design is focused on determining how frequently something occurs or how it relates to something else.

Target population

According to (Kothari 2004), a population is a complete enumeration of all the objects under research study; it comprises all of the items under examination. According to (Mugenda and Mugenda, 2003), a population is essentially a group of humans, events, or things that have common characteristics. (Museum of the Arts, 2009) Defines target demographic as an indicator of the study's target and accessible population and attempts to define and limit the study's scope.

The target population for the study was limited to 750 people. Table 2 shows The population:

Table 2 Population

Category	Frequency	percentage
Top managers	45	6%
Middle level managers	90	12%
Lower level managers	540	72%
Customers	75	10%
Total	**750**	**100%**

The population for this study included the: chief Executive, credit managers, finance officers, accountants, employees, and customers. The financial statements of this bank also constituted a unit of analysis and observation of the study, respectively.

Sample and sampling technique

A sample is defined by (M.U.A. 2009) as a portion of the population chosen according to a set of rules and a strategy. A sample is a smaller representation of the people, according to (Kothari 2004). A sample is taken from the population using a sampling design or procedure, which can be simple and based

on convenience or sophisticated and random numbers. According to (Sudman 1976), each main group or subgroup in the sample requires a minimum of one hundred (100) elements. For a descriptive studies according to (Mugenda and Mugenda, 2008) at least 10%-20% of the target population is enough. This study aimed for a sample size of 120 respondents. The study selected 120 respondents using a simple random selection procedure, as indicated below.

Table 3 Sample size

Categories	Respondents	Percentage
Bank Branch managers	2	2%
Credit managers	6	5%
Finance Officers	24	20%
Accountants	12	10%
Employees	42	35%
Customers	34	28%
Total	**120**	**100**

Data collection Instruments

The primary and secondary data were used for this research. (Kothari, 2004) define primary data as new and first-time data collected and thus original data. (Kothari, 2004) The research used questionnaires to gain basic information on views by several respondents regarding the effects on bank performance of macroeconomic variables. The primary data for the study was obtained from the top managers, middle-level managers, employees, and customers. The study's questionnaires contained open questions and close-end questions for respondents to find the appropriate answers based on their research goals. These questionnaires were chosen to reduce the time required to complete the survey and collect qualitative and quantitative data. In addition, (Kothari 2004) defines secondary data as information collected already and passed over by a statistical procedure by another person. Secondary data of this research study have their origin from books, journal articles, newspapers, websites, C.B.K. reports, financial cooperative bank reports dated from 2015 to the first quarter of 2021, and World Bank reports.

Data collection procedure

The data collecting process is a systematic procedure for acquiring and quantifying information on variables of interest in order to address research questions, test hypotheses, and evaluate outcomes (Kabir, 2016). Open and closed-ended questionnaires were used for this study. The target respondents were: a branch bank manager, Credit Manager, Finance Officer, Accountants, Employees, and Customers. The respondents were selected mainly because they are directly or indirectly involved in managing the organisation's affairs and therefore have a broader understanding of its affairs. Closed-ended questions consist of more structured responses, which will help bring out tangible recommendations. Ratings on various attributes will be tested using closed-ended questions, which will help reduce reactions related to obtaining information that is varied.

The additional information will be captured using open-ended questions, which will aid in getting a better understanding of the effects of macroeconomic variables on bank performance. The research instruments will be administered by the researcher to the target respondents. The researcher will keep a record of the questionnaires to ensure that all issued questionnaires are returned. The study also utilised secondary data ranging from the period 2016 to the first quarter of 2022.

Data analysis and presentation

Data analysis is the process of transforming and modelling all collected data in order to elicit important information, recommendations, and conclusions that may be used to aid in decision-making (Vicario 2013). Data analysis entails various techniques and methods; the study employed both quantitative and qualitative data to determine the relationship between variables from obtained data by examining the simultaneous effects of independent variables on dependent variables, macroeconomic variables, and bank performance, respectively. The data from this study were analysed using an excel spreadsheet and SPSS version 21 of the Statistical Package for the Social Sciences (SPSS). Mean, standard deviation, frequencies, and percentages were used as descriptive statistics. Also, the study employed inferential statistics such as regression analysis to test the relationship between the study variables. Regression analysis is used to determine whether an independent variable predicts a given dependent variable (Zinkmund, 2003). Data for the study was presented using graphs, tables, and pie charts, which will help understand and summarise the study's findings. The study employed the multiple linear regression below.

Ethical considerations

Ethical Research considerations refer to norms and standards which are supposed and expected to be adhered to before, during, and after research (Mugenda and Mugenda, 2013). Stipulated professional standards and ethical considerations govern all researches. The study ensured confidentiality, privacy and anonymity of information gathered from the respondents. The research also provided for a voluntary participation of the respondents. The

respondents' names, location, and way of life were not captured in the questionnaire; neither was any information obtained from the respondents disclosed to a third party. This research was mainly carried out for academic

RESEARCH FINDINGS AND DISCUSSION

Effects of inflation rate on bank performance at Co-op bank.

This section presents a descriptive statistic on the effects of inflation on bank performance as shown on table 4.

Extent of the effect of inflation rate on bank performance at Co-op bank

To ascertain the effect of inflation rate on the performance of Cooperative Bank of Kenya limited, respondents were asked to indicate the extent to which they thought the inflation rate had affected Co-op bank performance. The results showed that 46% of the respondents indicated that inflation rate affects performance of Co-op bank to a very large extent, 26% of the respondents indicated inflation affects Co-op bank performance to a large extent, 16% to a small extent, 7% indicated neutral extent and 5% indicated that inflation had no effect on Co-op bank performance at all. Fig 2 below gives an illustration on the findings.

Extent of the effect of inflation rate on Bank performance at Co-op bank

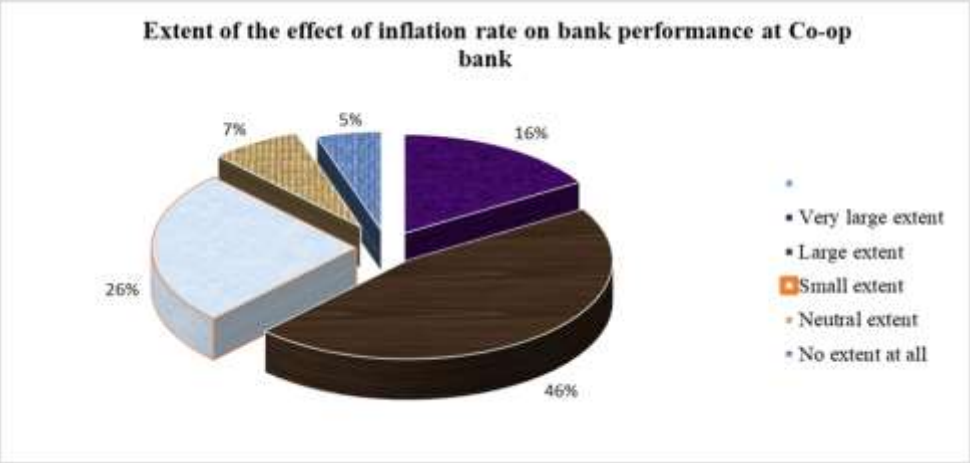


Table 4 shows an investigation done on the effects of inflation on bank performance. According to the findings, most respondents agreed to the statement that Inflation does not affect bank performance because there are other major factors such as GDP, interest rate, exchange rate, as well as internal bank variables that affect performance of banks to a larger extent (Mean = 2.27, std. deviation = 0.86), when there is high inflation, savings of banks become less and very few loans are approved to reduce default risk (Mean = 2.49, std. deviation = 0.99). The study further found out that respondents conflicted with the statement that Inflation impacts investment decisions of banks but the impact has no significant effect on Bank performance (Mean = 3.00, std. deviation =1.49), Performance of banks can be improved by increasing the asset base of banks, increasing the size of the banks and increasing bank deposits and inflation has insignificant effect on bank performance (Mean = 2.76, std. deviation = 1.19). Finally, respondents agreed to the statement that Inflation has negative effects on the performance of commercial banks which affects the overall banking sector performance.

Table 4 Effects of inflation rate on bank performance

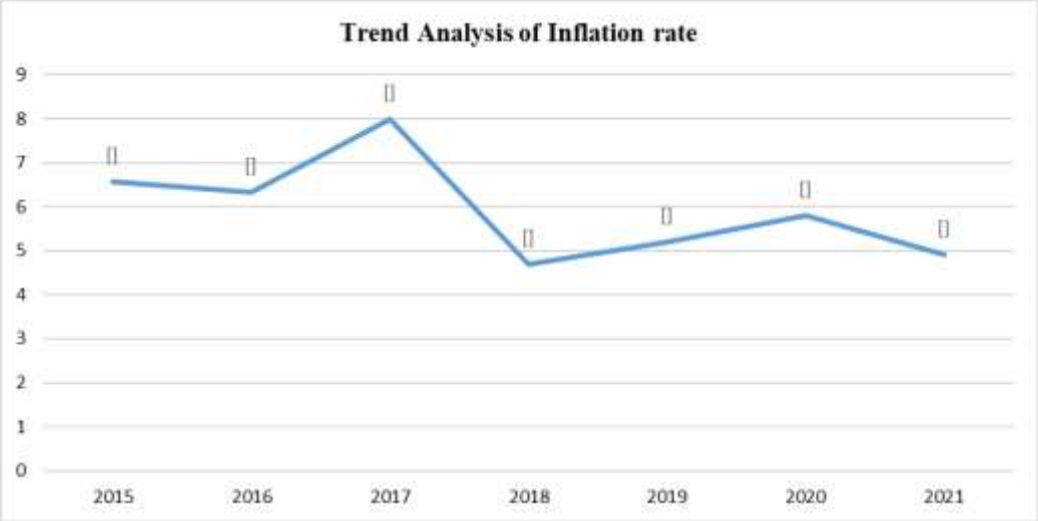
Statements	N	Mean	Standard deviation
Inflation does not affect bank performance because there are other major factors such as GDP, interest rate, exchange rate, as well as internal bank variables that affect performance of banks to a larger extent.	98	2.27	0.86
When there is high inflation, savings of banks become less and very few loans are approved to reduce default risk.	98	2.49	0.99
Inflation impacts investment decisions of banks but the impact has no significant effect on Bank performance.	98	3.00	1.49
Inflation has negative effects on the performance of commercial banks which affects the overall banking sector performance.	98	2.51	1.04

Performance of banks can be improved by increasing the asset base of banks, increasing the size of the banks and increasing bank deposits and inflation has insignificant effect on bank performance.	98	2.76	1.19

Trend Analysis of inflation rate

Inflation is very crucial to bank performance since when inflation is very high, it reduces the purchasing power of consumer and savings of banks become less and very few loans are approved to reduce default risk. Inflation rate decreased from 6.58% in 2015 to 6.32% in 2016. However, the inflation rate increased to 7.99% in 2017. In 2018 inflation rate within the economy declined to 4.69%. From 2018, inflation rate has been rising steadily that is 5.2% in 2019, 5.8% in 2020 and at 4.9% as at 1st July 2021.

Fig 3 Trend Analysis of inflation rate



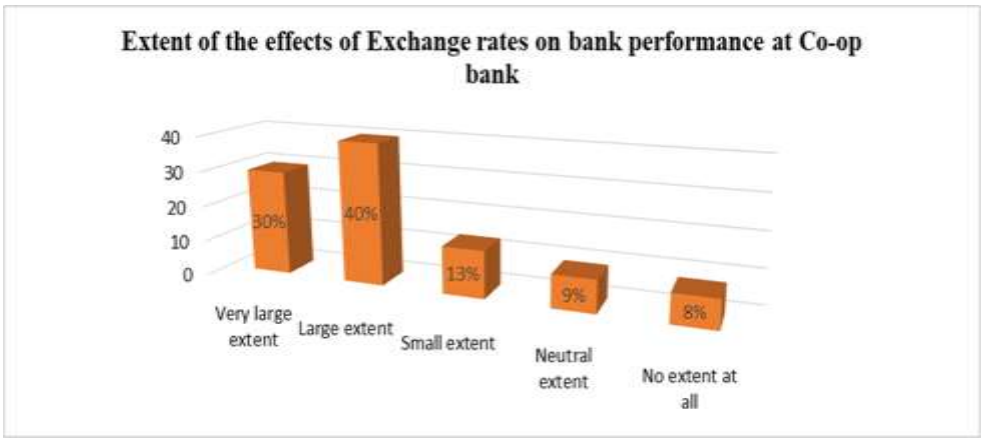
Effects of exchange rates on bank performance

This section provides a descriptive statistic on the effects of exchange rates on bank performance.

4.6.1 Extent of the effect of Exchange rates on bank performance at Co-op bank

To investigate the extent of the effects of exchange rates on Bank Performance at Co-op bank, respondents were asked to indicate the extent they believed Exchange rates affected bank performance at Co-op bank. The results showed that 30% of the respondents indicated that exchange rates affects bank performance to a very large extent, 40% indicated exchange rates affects bank performance to a large extent, 13% indicated to a small extent, 9% indicated neutral extent and 8% indicated no extent at all. The results are presented in Fig 4

Fig 4 Extent of the effect of Exchange rates on bank performance at Co-op bank



Source: Research data (2021)

Table 5 below shows an investigation undertaken on the effects of exchange rates on bank performance. According to the results of the investigation, respondents agreed with the statement that the exchange rate has a strong positive effect on Bank financial performance in Kenya (Mean = 2.65, Std. Deviation = 1.16), Banks ought to implement efficient monetary and fiscal policies to help curb the significant deficit on the balance of payment and safeguard domestic currency (Mean = 2.69, Std. Deviation = 1.19). However, the respondents seemed to have neutral opinion with regard to the statement that an increase or decrease in the exchange rate will increase or decrease the return on equity of commercial banks (Mean = 3.05, Std. Deviation = 1.63). The results further showed that respondent strongly agreed to the statement that uncertainty in exchange rate variability leads to credit expansion and a decline in deposits, leading to deepening the financial gap (Mean = 1.68, Std. Deviation = 0.63), Depreciation of Kenyan currency value against the dollar has a negative effect on banks' returns (Mean = 1.66, Std. Deviation = 0.62).

Table 5 Effects of Exchange rates on bank performance

Statements	**N**	**Mean**	**Standard deviation**
The exchange rate has a strong positive effect on Bank financial performance in Kenya.	98	2.65	1.16
Banks ought to implement efficient monetary and fiscal policies to help curb the significant deficit on the balance of payment and safeguard domestic currency.	98	2.69	1.19
An increase or decrease in the exchange rate will increase or decrease the return on equity of commercial banks.	98	3.05	1.63
Uncertainty in exchange rate variability leads to credit expansion and a decline in deposits, leading to deepening the financial gap.	98	1.68	0.63
Depreciation of Kenyan currency value against the dollar has a negative effect on banks' returns.	98	1.66	0.62

Trend analysis of Exchange Rates

Table 6 shows a trend analysis of the exchange rates within the economy under the period of study. The average Exchange rate stood at 103.08 while the standard deviation at 3.50, skewness at 0.49, kurtosis at -0.15 while 98.24 and 108.68 represented minimum and maximum values respectively.

Table 6 Trend analysis of Exchange Rates

	Descriptive statistics						
	Obs.	Mean	Std. Deviation	Skewness	Kurtosis	Minimum	Maximum
		Statistics	Statistics	Statistics	Statistics	Statistics	Statistics
Exchange rate	**7**	**103.08**	**3.50**	**0.49**	**-0.15**	**98.24**	**108.68**

Table 7 shows a summary of the average mean and standard deviation for the statement of each study variable used in the study. Inflation rates (Mean 2.73, Std. deviation 1.23) and Exchange rates (Mean 2.35, Std. deviation 1.05)

Table 7 Summary of descriptive statistics Aggregate mean and Std. deviation

Variables	**Mean**	**Std. Deviation**	**N**
Inflation Rates	2.73	1.23	98
Exchange Rates	2.35	1.05	98

Table 8 illustrate multiple regression analysis which was conducted to determine the extent of the effects of macroeconomic variables on bank performance. The independent variables include: Inflation rates and Exchange rates.

Table 8 multiple linear regression analysis summary

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
	.981	**.963**	**.889**	**.431**
a. Predictors: (Constant), Inflation rates, Exchange rates				

In Table 9 the beta coefficients show that inflation have a positive relation with Bank performance while Exchange rates had a negative relationship with Bank performance. Variable used were statistically significant with a p- value of less than 0.05.

Table 9 shows all coefficients of dependent and independent variable.

Table 9 Regression Coefficients for ROA

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.324	.963		3.83	.034
	Inflation rates	-.318	.117	.585	2.54	.002
	Exchange rates	.439	.132	-.769	-2.60	.005
a. Dependent Variable: Bank Performance						

as: Bank Performance = 4.324+-.547*GDP +0.461*Interest + -.318*Inflation rates + 0.439* Exchange rates

Limitation of the study

Limitations are defined as impediments that impair the outcome of research. This study focused exclusively on a single commercial bank in Kenya. This means that the study findings may not be sufficiently generalizable to the performance of commercial banks in Kenya. Foreign and Islamic banks were not included in the study. Not all respondents responded to the questionnaires that were distributed. The study had an 81.7 percent response rate. To compensate for non-respondents, the study analyzed secondary data, which provided additional insight into the research questions.

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Summary of the findings

The study's primary objective was to ascertain the impact of macroeconomic factors on Co-operative Bank of Kenya Limited's performance. The following particular goals were explored in the study: To ascertain the influence of the actual exchange rate on Co. Bank's financial performance, To examine the effect of inflation on Co. Bank's financial performance. To examine the influence of loan expansion on Co. Bank's financial performance.

The study was conducted using a descriptive research design. The researcher analyzed both primary and secondary data in order to ascertain the effect of macroeconomic variables on bank performance. The study collected primary data from a population of 750 people, from which a random sample of 120 respondents was drawn using a simple random sampling technique. The secondary data collection period was from 2016 to 2022. Microsoft Excel 2013, and SPSS version 21 were used to evaluate secondary data. The study's data analysis was mostly performed using inferential and descriptive statistics, with the results provided in the form of tables and figures to make the raw data more comprehensible.

Additionally, the study conducted a regression analysis, which revealed that 96.3 percent of the variance in bank performance was explained by macroeconomic variables (R2 =.963), with a P-value < 0.05 indicating that the data was statistically significant.

Effects of Inflation rates on bank performance at Co-op bank

According to the research findings, the majority of respondents held divergent views on the effect of inflation on bank performance (Aggregate mean 2.73, Std. Deviation 1.23). The standard deviation represents the degree of opinion variability among respondents. Secondary data suggested that inflation was not steady throughout the research period. According to the regression analysis, inflation exhibited an insignificant negative connection with bank performance at the 0.05 level of significance during the research period. Individuals' purchasing power is eroded by high inflation rates, and as a result, they are unable to save.

Effects of Exchange rates on bank performance at Co-op bank

To ascertain the impact of exchange rates on bank performance, the researcher used statements to elicit responses from respondents regarding the impact of exchange rates on bank performance. The majority of respondents believed that exchange rates had a significant effect on bank performance (Aggregate mean 2.35, Std. Deviation 1.05). According to secondary sources, exchange rates remained steady during the study period (Mean 103.08, Std. Deviation 3.50). The regression study revealed a substantial positive link between exchange rate and bank performance. A depreciation of the Kenyan shillings in relation to the US dollar can result in a decrease in bank profitability. This indicates that changes in foreign exchange rates have an effect on the liquid assets held by banks in the local market, either directly or indirectly.

Conclusion

Inflation is unavoidable and has an indirect effect on the entire banking sector. It erodes an individual's purchasing power, impairing their ability to save and invest. Reduced saving and investment impairs bank performance to a degree and may have an effect on bank performance in general. Inflation influence bank performance to a large extent.

Exchange rates are another important part of macroeconomics that should not be disregarded. Kenya shilling exchange rate fluctuations have an effect on bank performance. A depreciation of the Kenyan currency against the dollar may result in a fall in bank profits. Currency depreciation could be a result of translation exposure risk. The danger arises as a result of converting foreign currency-denominated bank financial statements into domestic currency. Exchange rates fluctuations influence bank performance to a large extent.

5.3 Recommendations

Based on the study findings, the study recommends that, with the impact of Covid-19, the government should create an enabling environment for financial institutions to expand their financial capacity and ease the burden of restrictive policies that impede bank performance.

The CBK should develop monetary measures that will effectively neutralize the influence of inflation and exchange rates on bank performance. Appropriate monetary policies will help to maintain the economy's inflation and currency exchange rates stable. Commercial banks' managerial efficiency should be enhanced, which will result in increased performance.

5.5 Recommendation for further research

The study analyzed only four macroeconomic variables; these are external variables that account for a relatively modest proportion of all factors affecting bank performance. Other variables, such as internal factors and external factors such as money supply, should be employed to ascertain the effects of macroeconomic variables on bank performance with the assistance of intervening variables. A study should be done on the Post-Covid-19 difficulties confronting commercial banks and the impact of macroeconomic variable changes on bank performance.

REFERENCES

Afzal Ahmed, R. R. (2018). Interest Rates and Financial Performance of Banks in Pakistan. *International Journal of Applied Economics, Finance and Accounting Vol 2*, 1-7.

Boss, J. A. (2008). *Bank Performance. A Theoretical and Empirical Framework for the Analysis of Profitability, Competition, and Efficiency.* New York: Routledge.

Brown, S. J. (2020). The Efficient Market Hypothesis, The Financial Analyst Journal and the Professional Status of Investment Management. *Financial Analyst Journal*, 5-14.

Brown, S. J. (2020). The Efficient Market Hypothesis. *The financial analyst journal and the professional status of investment management*, 5-14.

Central Bank of Kenya. (2020). *Annual Reports and Financial Statements 2019/2020.* Nairobi: Central Bank of Kenya.

Chinoda, T. (2014). The Determinants of Commercial Banks Profitability in Zimbabwe (2009-2014). *IOSR Journal of Economics and Finance Vol 5*, 69-80.

Co-operative Bank. (2019). *2019 Integrated Report.* Nairobi: Cooperative bank.

Cooperative bank. (2020). *Co. Bank Press Release first quarter 2020.* Nairobi: Cooperative bank.

Cytonn Investment. (2019, 10 20). *End of Interest rate Caps.* Retrieved from Cytonn. Delivering to promise.

D. Oleka Chioma, S. E. (2014). Empirical Study of the Impact of Inflation on Bank Performance: Implication for Investment Decision Making in Banking Industry in Nigeria. *Humanity and Social Sciences Journal*, 61-71.

Dickson Adom, E. K. (2018). Theoretical and Conceptual Framework. *International Journal of Scientific Research vol 7*, 438-440.

Fanen Anande-Kur, A. F. (2020). Determinants of Bank Financial Performance: A Study of Nigerian Deposit Money Banks. *Journal of China and U.S.A. review Vol 19*, 103-114.

Ghosh, S. K. (2016). Financial Institutions and Economic Growth. *International Journal of Economics and Financial Issues*, 1003-1013.

Gikombo, E. M. (2018). Effects of selected Macroeconomic Variables on Performance of Listed Commercial Banks In Kenya. *International Academic Journal of Economics and Finance*, 80-109.

H. Erkekoglu, A. G. (2020). Modelling and Forecasting USD/UGX Volatility through GARCH Family Model: Evidence from Gaussian, T and Ged Distribution. *International Journal of Economics and Financial Issues*, 268-281.

Hailu, A. A. (2016). Determinants of Interest Rate spread: An Empirical evidence from Ethiopian Commercial banks. *International Journal of Management, I.T. and Engineering Vol 6*, 62-64.

Henry W. A, D. I. (2016). Effects of Selected Macroeconomic Variables on Commercial banks performance in Nigeria. *International Journal of Banking and Finance Research*, 72-73.

Henry, G. T. (2010). *Research Methodology.* Nairobi: The Olive Marketing and Publishing Company.

Investopedia. (2019, June 25). Retrieved May 18, 2021, from Banking: https://www.investopedia.com/ask/answers/041015/how-do-interest-rate-changes-affect-profitability-banking-sector.asp

Jeevitha R, B. M. (2019). Impact of Inflation on Bank Profitability. *Journal of Emerging Technologies and Innovative Research Vol 6*, 602-612.

Kabir, S. (2016). *Basic Guidelines for Research: An Introductory Approach for all Disciplines.* Bangladesh: Book Zone Publication.

K.I.M. (2009). *Fundamentals of Management Research Methods.* Nairobi: Printwell Industries Limited.

Kothari. C.R. (2004). *Research Methodology. Second Edition.* New Delhi: New Age International Publishers.

Mankiw, N. G. (2009). *Macroeconomics 7th Edition.* New York: Worth Publishers.

Maria Shahid, R. B. (2014). Impacts of inflationary Trends on Bank Performance (Large Bank segments) in Pakistan. *International Journal of Accounting and Financial Reporting Vol 4*, 296-305.

Mugenda, M. O. (2013). *Qualitative and Quantitative Research Methods.* Nairobi: Acts Press.

Mugenda, O. M. (1999). *Research Methods: Qualitative and Quantitative Approaches.* Nairobi: Acts Press.

Muriithi, M. G. (2017). Relationship between Bank Failure and Economic activities: A Review of Literature. *International Journal of Management, Accounting, and Economics*, 1136-1151.

Nafiseh Keshtgar, M. P. (2020). The Impact of Exchange rate volatility on Bank Performance. *International Journal of Business and Development Studies Vol 12*, 39-56.

National Council for Law Reporting. (2013). *Kenya Law.* Retrieved from Laws of Kenya: http://kenyalaw.org:8181/exist/kenyalex/actview.xql?actid=CAP.%20488

Nyandema, C. C. (2016). The Influence of Foreign Exchange rate Fluctuation on Banks Listed at the Nairobi Stock Exchange. *British Journal of Marketing Studies Vol 4*, 1-11.

Ochieng, O. (2016). The Determinants of Inflation in the Kenyan Economy. *International Journal of Economics*, 46-48.

Omisope Sunday J., D. A. (2020). The Financial Reforms (interest rates) and Financial Performance in Nigeria and Ghana. *International Journal of Scientific and Research publication Vol 10*, 792-808.

Ongore, V. O. (2013). Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial Issues*, 237-252.

Oyugi George Otieno, D. J. (2019). Effects of Macroeconomic Factors on Economic Growth in Kenya. *International Journal of Economics*, 43-67.

Ramin Cooper Maysam, L. C. (2004). Relationship between Macroeconomic Variables and Stock Market Indices: Cointegration Evidence from Stock Exchange of Singapore's All-S Sector Indices. *Journal Pengurusan*, 47-77.

Romer, D. (2019). *Advanced Macroeconomics 5th Edition.* New York: McGraw Hill Education.

Sanyal, R. (2019, Sseptember 1st). *Liquidity Preference Theory of Interest Rate Determination of JM Keynes.* Retrieved from Research Gate. com: http://www.researchgate.net/publication/335881211

Shakhaowat Hossin, F. M. (2020). Impact of Exchange rate Fluctuation on Financial Performance of state-owned commercial banks in Bangladesh. *Noble International Journal of Economic and Financial research Vol 5*, 92-101.

Sharbeh, M. T. (2017). The Impact of Banking Sector Development on Economic Growth: Empirical analysis from Palestinian economy. *Journal of Emerging Issues in Economics, Finance and Banking Vol 6*, 100- 117.

Tursoy, D. M. (2020). Impact of Inflation and Exchange rate on the Financial Performance of Commercial Banks in South Africa. *Journal of Applied Economic Sciences Vol XV*, 626-638.

Vincent Okoth Ongore, G. B. (2013). Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial Issues vol 3*, 237-252.

W. I. Nyabakora, J. M. (2020). How Macroeconomics Affect Bank Performance in Tanzania. *International Journal of Current Research*, 12404-12409.

Wambari, K. D. (2017). Effects of Interest Rates on the Financial Performance of Commercial Banks in Kenya. *International Journal of Finance and Accounting vol 2*, 19-35.

Wepukhulu, O. G. (2019). Effects of macroeconomic Factors on Economic Growth in Kenya. *International Journal of Economics*, 43-67.

World Bank. (2020, July 31). *Who We Are.* Retrieved from The World Bank: https://www.worldbank.org/en/country/kenya/overview