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Macro-Economic Variables and Financial Performance of Islamic Banks in Kenya

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Abstract

Islamic banks are financial institutions that adhere to the principles and guidelines of Islamic law, also known as sharia law. Based on economic theories and other practical considerations, Interest rates and inflation rates complement one another on the effects of the financial results posted by banks. Exchange rates have been found to have negative effects on performance outcomes posted by Islamic banks in Kenya. The study focused on the effect of interest rate, inflation and exchange rates fluctuations on financial performance of Islamic banks in Kenya. Four theories served as the study's foundation; demand pull theory, Purchasing power parity theory, Productivity Theory and Irving Fisher's theory. The study shall focus on three licensed Islamic banks. A descriptive design was adopted. Secondary data template was used to collect data for the study. The study utilized a data collection schedule as its research instrument, gathering information over a period of 13 years (2009-2021). The descriptive data statistics such as mean; standard deviation were used to analyse quantitative data. Inferential statistics were used to draw conclusions on the link between macroeconomic variables and performance. There result was presented using tables, graphs and charts. The study found that interest rate, inflation rate and exchange rate fluctuation all had statistically significant effect the financial performance. It was concluded that macro-economic variables are significant predictors of financial performance of Islamic banks in Kenya. The study recommends that policy makers working at the Central Bank of Kenya should leverage the existing monetary policies in order to manage inflationary pressure in the country. It is necessary for CBK's policymakers to review the existing monetary policies to counter interest rates which have been found to have significant implication on financial performance. The senior managers working among Islamic banks in Kenya should leverage the macroeconomic variables in order to enhance the financial positions of their banks. The Islamic banks in Kenya should develop adaptive strategies to manage the impact of macroeconomic variables on their financial performance.

Keywords: *Islamic Banking, Financial Performance, Macro-Economic Variables, Kenyan Economy, Sharia-Compliant Finance*

1.0 Introduction

The utilisation of Islamic (*Shariah*) law principles in the banking system has become increasingly prominent in Kenya and globally. Islamic finance is based on two major tenets: division of profit and loss between the bank and the borrower (customer) and the prohibition on payment and collection of interest. Islamic banking adheres to the principles and teachings of the Islamic religion. In addition to the established regulations regarding risk management and governance, supplementary regulations have been formulated to ensure that their operations are in accordance with Islamic Shari'ah principles (Iqbal and Mirakhor, 2007). The key principle is their prohibition of charging interest on amounts extended as loans which is the primary means of funding for the conventional banks. To enable Islamic banks, assess their financial performance, a new way of measuring their performance was designed taking into account the provisions of Islamic law. Therefore, their financial services are operated outside the framework of interest. As such interest based financial services do not exist in these banks. Additionally, Islamic law prohibits unethical practices especially those that go against the provisions of Islamic economy (Henry and Wilson, 2004).

Furthermore, apart from adhering to conventional corporate management and portfolio management principles, it is subject to oversight by a regulatory agency in compliance with Islamic Shari'ah (Henry and Wilson, 2004; Iqbal and Mirakhor, 2007). A limited set of banking practices or mechanisms that did not charge interest were examined by interest-free banking. The common method was anticipated to take part in achieving the goals and objectives of an Islamic economy, avert immoral conduct, and refrain from interest-based operations, which are forbidden by Islamic Shari'ah. It promotes the concept of risk-sharing where in case a bank makes a loss, the same is shared with their customers. The Islamic law has provisions on how individuals need to handle physical commodities, their stock, contracts related to leasing and general constructions. Different financial products for each of these categories have been developed to support customers prophesying Islamic faith. Therefore, Islamic banks 0btained their income from asset management. The banks had established different sources of income that were considered Halal (lawful) while at the same time the customers who put their deposits in the bank also received Halal income that was stable.

Another key variable in performance of Islamic banks is the exchange rate because they deal in international business where they send and receive money internationally. As noted by Mansur and Elyasia (1995), the effect of the rates in which currencies exchanged for another was limited effect on amount of money that the banks extended as loans to their customers. However, pronounced effect felt on the activities that involved financing within the banks as it affected stock prices and real output. Another observation by Adebola et al. (2011) showed an association between real effective rate at which currencies exchanged and the level of financing among Islamic banks. The relationship was however established to be insignificant in the long run. From the above findings and explanations, there is an important concern on the Islamic banks operations in Kenya which will help in determining whether their profits were really affected by the macroeconomic variables. Therefore, this research focused primarily on the effects of the macroeconomic variables on performance of Islamic banks in Kenya.

Financial performance measures the efficiency which individuals involved in the running of business operations have utilized resources to generate wealth for shareholders as they

meet the expectations of other stakeholders. Many firms measure performance in financial terms by looking into the revenue generated from utilization of land labour, capital and management at their disposal. It also evaluates the returns generated from assets (ROA), returns generated from equity (ROE), and operating profit margin (OPM) (Miller et al, 2000). The profitability of the firm was weighed by ROA in accordance to total assets employed. The more the ROA, the more the performance of an organization is considered to be better. Other measures adopted in measurement of performance include cash flow which looks into liquidity as businesses strive to fulfill their financial commitments as they become due within the short term without affecting normal operations (Dobbins *et al.,* 2000).

According to Dobbins et al (2000), liquidity (cash flow) was the capability of a business to pay debts when they become due in the short term, while the normal activities of the business. According to Mongeri et al (2011) solvency looked a company's capacity to fulfill its debt responsibilities in circumstances when all its assets are liquidated and continue operating normally following occurrence of a financial adversity. Some of the commonly applied measures of performance is the ratio of debt to assets; debt to equity and equity to assets. The absolute measure of profit (or loss) was net profit, which was irrelative to initial investments made to ensure that a given performance target is obtained in profitability. Cash flow was the amount of money easily accessible to acquire the financial obligations of the company.

The general business environment in an economy is defined by macroeconomic variables because of their effects on money supply, supply of good and demand (Pervan and Pavic, 2010). However, these variables may affect business operations at the firm, industry and country or macro level. Therefore, as different variables change at each of these levels, performance results of insurance companies in Croatia changed respectively in the same direction (Curak et al., 2011). An inverse though significant relationship resulted from changes in ownership, inflation, profitability and overall expenses ratio. According to Curak et al. (2011), the level of risk underwritten, firm size as measured by assets, general increase in price of commodities and ROE resulted in composite insurance firm performance.

In a separate study, Ugur and Ramazan (2005) observed that inflation expectations had an impact on the stock returns of companies listed on the Turkish exchange. There was an inverse correlation between inflation and stock returns due to the presence of inflation in the economy. Li (2006) states that high inflation leads to reduced financial performance due to the decline in the currency's purchasing power. The outcome is the emphasised overall performance of an economy due to aggregated factors. The transmission channels of inflation to impact economic growth are also influenced by exchange rates, particularly in cases where an economy engages in international trade. According to Muchiri's (2012) research, the performance outcomes of firms listed on the NSE are influenced by macroeconomic variables. Variables such as money supply and inflation have an impact on the overall demand and supply of goods and services produced by companies, thereby influencing the prices of their equity (shares). The impact of the interest rate on share prices was both negative and negligible. Nevertheless, fluctuations in currency exchange rates exerted the most significant influence on share prices.

According to Harris (2012), in Kenya Islamic banking was growing very fast as more and more commercial banks embrace it. It was noted started until the year 2005 when Barclays

Bank of Kenya gave it a try by offering differentiated products through Islamic window. The product attracted many customers prophesying Islamic faith to the extent that two fully fledged Islamic banks were regulated by the CBK in 2007: Gulf African Bank and First Community Bank. The growth of these banks has been phenomenal to the extent that they now control a market share of about one percent in Kenya's banking sector. Seeing the potential that this market offered its customers, other conventional banks have also joined the band wagon to offer Shariah compliant products by creating Islamic divisions and windows. The market allocated to conventional banks offering Islamic banking accounts for about 0.25% of Kenya's banking market share thus bringing the total market share controlled by Islamic banking to 1.25%.

1.1 Statement of the Problem

Over time, the majority of countries worldwide have embraced Islamic banking. The unexplained fluctuations in profits earned by these banks have posed a challenge for scholars, shareholders, and management in understanding their underlying causes. Islamic banks in Kenya and other countries have frequently encountered economic volatility, resulting in fluctuating levels of profitability over time. This has prompted numerous scholars and researchers to conduct various studies on both conventional and Islamic banking to ascertain the reasons behind the fluctuating profits. These studies have established a correlation between macroeconomic factors and the profitability of banks, particularly in the context of Islamic banking. According to Harris (2012), Islamic banking in Kenya experienced rapid growth after being first introduced in 2007 by Barclays Bank of Kenya. The company began by providing banking products that complied with Shariah principles. In response to increasing demand for their products, a greater number of independent Islamic banks were granted licences in the year 2008. As of December 2021, the banks have achieved remarkable expansion, currently holding approximately one percent of control. Additionally, other traditional banks have established Islamic banking divisions in order to access those sources of revenue. These various efforts have resulted in capturing a market share of 1.25%.

Syed and Shafique (2011) evaluated five foreign economic parameters, including the GDP, industrialization rate, interest rate, hyperinflation, and joblessness, in their study on the factors that determine the viability of Islamic banks in Pakistan. They studied the 6 traded banks for a period from 2003 to2009. Profitability was determined through ROA and ROE. They came to the conclusion that, of the 5 financial indicators, the rate of return was the sole one that significantly affected the profitability of Islamic banks. Nienhaus (1983) there was a relationship between the profitability and market structure among banks adhering to Islamic banking provisions. The study identified a model used by Islamic banks in profits between customers and the banks to be positive. However, since the profit was too low, it was recommended that it would be better to benchmark profits to interest rates for better returns for investors. Aligning profit sharing ratio to interest rates charged by conventional banks would have improved bank performance.

Base lending rates set by the CBK normally affects the general level of inflation in an economy negatively (Muhammad, Khizer and Shama, 2011). As inflation goes up, individuals will be forced to spend more to meet their normal expenses thus eat into their savings. According to Athukorala and Tsai (2003), inflation negatively affected the savings whereas the cost of borrowing expressed as interest positively correlates to savings. If the interest on deposit is increased, more and more individuals will be attracted

to save hence increase in savings. The same way fluctuations in exchange rates for different currencies affect the lending patterns adopted by banks in Nigeria (Mbutor, 2010). In another study, Mansur and Elyasiani (1995) noted that changes in currency equivalents have limited effect if any on lending patterns in banks though they affected activities related to financing especially stock prices.

The earlier studies have built up possible association between the macro-economic variables considered in this study and financial performance of Islamic banking. However, it had failed to be clear to scholars and the management of Islamic banking in Kenya since there are very few studies that have been carried out in Kenya. In these few studies they did not focus on all the macro-economic variables that featured in this study. Therefore, these studies had failed to give a clear picture on the effects of the macro-economic variables on the profitability of Islamic banking.

1.2 Research objectives

The study was guided by the following objectives;

i. To ascertain the effect of interest rate on the financial performance of Islamic banks in Kenya.
ii. To assess the effect of inflation on the financial performance of Islamic banks in Kenya.
iii. To ascertain effect of exchange rates fluctuations on the financial performance of Islamic banks in Kenya.

1.3 Research Hypotheses

The study tested the following hypotheses;

$H_0$1: Interest rate has no appreciable impact on the monetary success of Islamic banks in Kenya

$H_0$2: Inflation rate has no appreciable impact on the monetary success of Islamic banks in Kenya

$H_0$3: Exchange rate fluctuation has no appreciable impact on the monetary success of Islamic banks in Kenya**.**

2.0 Literature Review

This section outlines the theories that are applicable to this research, the empirical review on the effects of interest rates, inflation rates and exchange rates on Islamic banking. It also gives the gap left by researchers on this study and the conceptual frame work.

2.1 Theoretical Review

2.1.1 Demand Pull Theory

This theory is accredited to John Maynard Keynes in the 1940s. According to this theory it is perceived that inflation occurs in incidences when demand for goods and services exceed existing supply. This means that people compete to get goods and services because the supply is limited. Roland Herrmann *(*2006*)* noted that a number of innovative actions brought about by changes in demand and market structures. Other factors have also come into play to influence the rate at which demand pulls production. As a result more new products and services have been invented to meet the changing customer needs. Whenever demand for products and services surpass supply, the immediate reaction of suppliers is to

increase prices of such goods. This means that only a few individuals can afford them hence creating a balance between supply and demand. Unlike the conventional banking belief that money has intrinsic value, Islamic banking money possesses no fundamental worth save being a medium of exchange and storing value (Taqi, 1999). As such, it can neither be sold nor rented out to generate value which they term as surplus or profit on its own. Islam believes that money is only intended to be utilized as a tool for communication exchange and storage of value. This theory helped in determining the profit sharing ratio between lenders and borrowers in Islamic banks. It was theoretically and practically assumed that the suppliers could raise the consideration paid for goods and services in order to control the demand for them, especially when the government does not control the price of commodities. When this scenario was noticed by the lenders, they increased the profit-sharing ratio. Therefore, in this study, the theory assisted in determining the causes of fluctuations in inflation rates.

2.1.2 Purchasing Power Parity Theory

This line of thinking was discovered by the School of Salamanca in the 16th century, and was revised by Gustav Cassel in 1916, in today's way of foreign trade. According to the information that is currently available, the buying power of the currencies affects the rate at which they are exchanged between two countries. The quantity of goods and services that can be secured by equal amount of currency of each country gives the exchange rate. To ensure that there is equal basket of goods and services that can be gotten with similar value, exchange rates come into play. This theory elaborates the possible relationship between prices charged on goods and services and exchange rates. According to Shapiro and Rotenberg (1976), the regime of an exchange rate left to forces of demand and supply combined with changes in purchasing power parity between two currencies computed as a price ratio against traded volumes of goods would in most cases be estimated by change in rate at equilibrium. This means that at the long run it affected the profitability of banks particularly to this study the Islamic banks in Kenya. As the value of one currency varies thus purchasing power especially on imported goods and services. This made it hard for Islamic banks to come up with the exact ratio to use when sharing the profits with the borrower. Therefore, this theory is very useful in determination of the ratio in which a lender and a borrower share profits earned. This the manner in which interest rates is transmitted into financial performance among banking institutions. By describing the assortment of products and services that may be purchased in connection to supply and demand, it assists in determining the value of a particular currency in relation to the currency of another country.

2.1.3 Irving Fisher's Theory

The theory was developed by Irving Fisher in the 20th century where, It gives a description on the relationship between general price increase and interest rates. It highlights that the real interest rate is gotten by getting the difference between nominal interest rate and the expected inflation rate (Giddy, 1977). It is argued that the result gotten after subtracting nominal rates of the two countries gives a picture on the likely fluctuations in exchange rate. The Irving Fisher's line of thinking appreciated the role played by interest rates in appreciating currencies which normally tend to be low whereas in depreciating currencies, tend to be high. This is important in explanation of currency gains and losses encountered in international business. It can therefore be concluded that foreign exchange rates factor in expectations of interest changes together with differentials in purchasing power of the

currencies involved. This provides some of the explanations advanced in explaining why exchange risk may be absent as per the Capital Asset Pricing Model (CAPM). This theory is very useful because it gives further explanations on the entire macroeconomic variables as used in this study. It shows how they complement each other which are very useful in determining how they influence the performance of Islamic banks.

2.2 Empirical Review

The empirical review encompassed an examination of existing literature. Syed and Shaniqua (2011) analyzed five external economic parameters, including the GDP, factory output rate, interest rate, inflation, and joblessness, that have an effect on the viability of Islamic banks in Pakistan. Between 2003 and 2009, they examined Pakistan's six publicly traded Islamic banks. The measurement of profitability used ROA and ROE. According to the study's findings, just one of the five economic parameters had a discernible impact on the profitability of Islamic banks: mortgage rate. In a different study, Nienhaus (1983) focuses on the possible nexus between profitability and market structure within Islamic banks. He documented that the ratio adopted in sharing out profits in these banks was informed more by the lending rates used by conventional banks. It was more like Islamic banks adopted interest rate in setting the profit sharing proportions. Interest rates served as a basis in calculating that desired ratio. However in the recommendations, it was noted that it is important to equalize profit-sharing ratio and interest rates as charged by conventional banks. Kipng'etich (2011) extended this knowledge by examining the extent that interest rates affected performance of banks in Kenya through secondary data running from 2006 to 2010. The study discovered that a positive relationship existed within the Kenyan context. This study was undertaken more than ten years ago. The contextual setting and banking practices have significantly changed hence limiting the possibility of applying the findings of this study.

Kibe (2003) discovered a beneficial connection in his investigation of the link between interest rate spread and the success of Kenyan commercial banks,. The cost of debt to a borrower was quantified through interest rates. The higher the interest rate the higher the profits made by banks. According to Tariq and Mash (2016), their research into how interest rates affect bank deposits revealed that they have no discernible effect on the degree of risk depending on interest rates. Deposits in Islamic banks. Mushtag and Siddiqui (2016) on their study looking at ways that interest rate related to savings pattern together with investment capabilities in Islamic and non Islamic countries. The study did a comparative analysis where it was established that cost of borrowing loans bore little though significant effect on savings among countries prophesying Islamic faith. Non Muslim countries exhibited positive and significant impact. The study noted the need to develop diverse policies among Islamic countries as religious issues and beliefs influenced cost of borrowing and amount set aside as savings among countries that prophesy Islamic religion. Islamic religion forbids dealing interest rates whenever money is involved. This concept is supported by Siaw and Lawer (2015) within the Ghanaian context by examining how interest rate offered on deposits together with inflation affected overall deposits. The study further noted that growth in money supply positively impacted profitability.

General increases in prices of commodities in an economy affects interest income among commercial banks because of its influence on returns for the depositors. According to Revell (1980), increase in price of commodities could affect profitability of banks through variations. Bourke (1989) and Molyneux and Thornton (1992) set out to test the

hypotheses through consumer price index (CPI) where it was established that profitability varied great at various levels of CPI. Anticipation of high inflation has been found to bring about higher nominal interest rate as they seek to maintain existing real interest rate. According to Muhammad, Khizer and Shama (2011), the cost incurred on borrowing money from financial institutions affects deposits because they move in a similar direction. According to Athukorala and Tsai (2003) in their study on savings determinants in Moroccan banks, found out that general increase in prices bore negative impact on amounts set aside by people in banks and interest rate bore positive effect.

In a study, Mbutor (2010) examined the nexus between lending rates in banks, exchange rates and volatility in stocks prices using the context of Nigeria. It started by providing a detailed explanation on how fluctuations in exchange rates affect lending patterns among banks which was found to be negative. Lending patterns were established to depend largely on demand for loans and money supply. In another study, Mansur and Elyasiani (1995) established that changes in exchange rate bore no effect directly on lending patterns adopted by commercial banks. However, it played a role in financing activities as it affected real output and stock prices. This is further confirmed by Adebola et al. (2011) among Islamic bank financing in long run. Wong, Wong and Leung (2008) examined the extent to which foreign exchange exposure affected profitability reporting among commercial banks in China. The study applied the capital market approach together with equity price on listed banks. Secondary data was obtained from financial statements together with other publications. According to study results, the size of the bank as expressed by assets and its reliance on foreign currency were strongly correlated. The banks in change engaged in huge volumes of international trade where foreign exchange exposure was massive. A review of empirical literature posted that average foreign exchange exposures among state owned banks was higher than in Hong Kong.

Several studies have been undertaken on financial performance of Islamic Banks. For instance, Hawaldar, Rahman, Tm and Kumar (2017) noted that measuring financial performance of Islamic banks using profitability and liquidity posted no different results from those posted by conventional banking institutions in Bahrain. Islamic banks posted impressive ratios despite them being new comers in the industry. Additionally, Islamic banks seemed to be exposed to reduced credit risk in general compared to that of conventional banks. This showed that the policies implemented by Islamic banks boosted their financial performance besides reducing their risk exposure. In addition, the researcher used metrics like net operating income, earnings before interest and taxes, profit after taxes, and net asset value. In another study, Milhem and Istaiteyeh (2015) examined the difference between financial performance of conventional and Islamic banks using data drawn from Jordan for the period ranging from 2009-2013. The study specifically looked at the following financial ratios: valuations, flexibility, risk and solvency, and effectiveness. From the findings, differences were noted between the performance of Islamic and Conventional banks. However, results on the analysis of Islamic banks in the Middle Eastern and Asian countries indicated that they operating inefficiently resulting in a decreasing returns to scale. Further analysis indicated that they were well capitalized, possessed higher asset quality and could withstand shocks related to banking crisis. In comparison to their traditional counterparts, Islamic banks were generally judged to be more lucrative, more liquid, and more capitalized.

In Kenya, Qamar (2018) examined the extent to which Islamic products affected financial performance of banks operating on Islamic policies in Kenya. The analysis comprised of

data collected from two banks: Gulf African Bank and the First Community Bank. From the analysis of secondary data, it was established that Islamic banking g products positively influenced financial performance. They improved financial performance of banks.

2.3 Conceptual Framework

The conceptual framework was designed to illustrate the relationship between the macroeconomic variables and the financial performance of Islamic banking.

A diagrammatical representation of a conceptual framework demonstrates the connection between dependent and independent variables. The structure makes it easier for the reader to quickly identify the intended graphic or diagrammatic correlations between the study's variables. Figure 1 presents the conceptual framework.

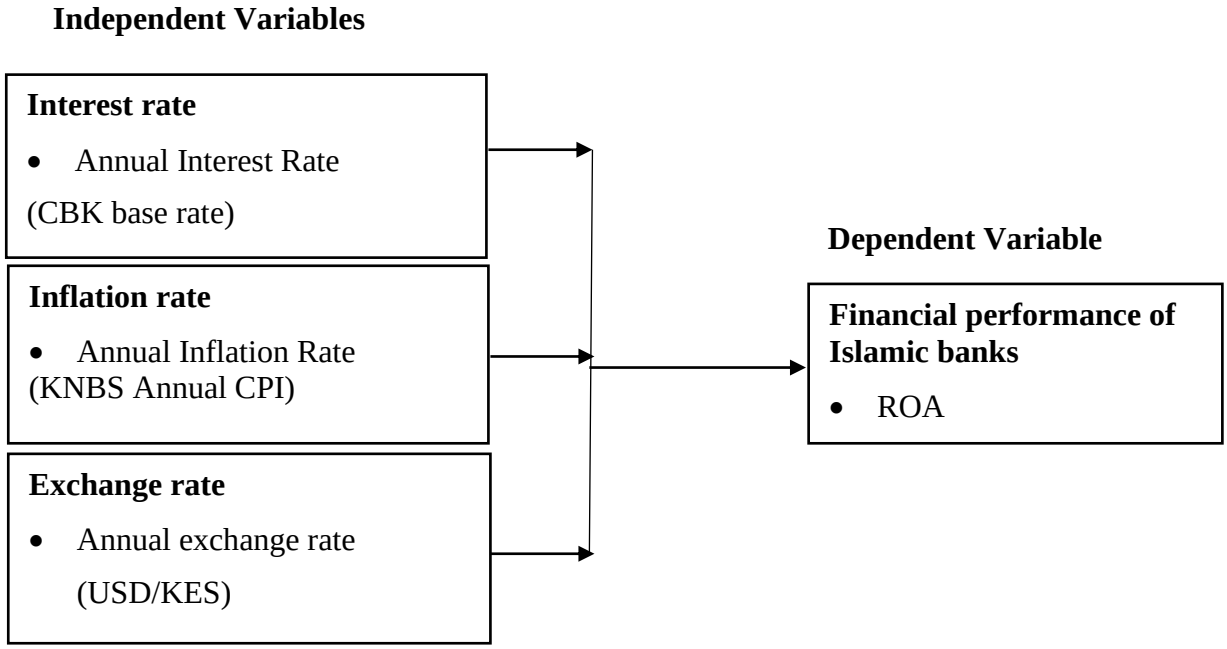

Figure 1: Conceptual Framework

Source: Researcher (2023)

3.0 Research Methodology

This study utilized a descriptive design to gather detailed information for profiling the elements under investigation. This approach aligns with Mugenda and Mugenda (2003), who advocate for descriptive design when creating profiles of study subjects. This method has been effectively used in past research by Mushtag and Siddiqui (2016), Muhammad, Khizer, and Shama (2011), Mbutor (2010), and Wong et al. (2008) to explore the relationship between macroeconomic variables and firm performance. The study's target population comprised three fully-fledged Islamic banks operating in Kenya as of December 2021. A census method was employed to systematically collect data from these institutions, which were chosen for their ease of access to data through their websites and head offices in Nairobi City County. Secondary data on annual inflation rate, exchange rate, interest rate, and net profit margin were collected, along with financial performance

data from published reports of the three banks. The bank management provided access to these reports for academic purposes only. Additional data on inflation, interest rate, and exchange rate were obtained from the Kenya National Bureau of Statistics (KNBS) and the Central Bank of Kenya (CBK). Data analysis was performed using SPSS Version 24.0, employing descriptive statistics such as percentages, means, frequencies, and standard deviation for preliminary analysis, and inferential statistics like correlational and regression analysis for deeper insights. The results were presented in tables, graphs, and charts. To ensure the data was suitable for regression analysis, diagnostic tests including autocorrelation, collinearity, and normality tests were conducted.

4.0 Research Findings and Discussion

4.1 Diagnostic Test

To verify the regression analysis's underlying assumptions, diagnostic tests were carried out. These included autocorrelation, collinearity and normality tests.

4.1.1 Autocorrelation Test

The findings of autocorrelation test were determined and summarized as exhibited in Table 1.

Table 1: Autocorrelation Test

Model	Durbin-Watson
1	2.286

The results in Table 1 demonstrate the value of Durbin Watson as 2.286. Holgersson (2004) shared that when conducting this test, the statistic values closer or equal to 2 signify absence of serial correlation in the sample data.

4.1.2Collinearity Test

This test was conducted through computation of the Variance of Inflation factor values and Table 2 is a breakdown of findings.

Table 2: Collinearity Test

	Collinearity Statistics	
	Tolerance	VIF
Interest rate	.897	1.115
Inflation	.891	1.122
Foreign exchange rate fluctuations	.990	1.010
Average	.926	1.082

From Table 2 the mean VIF value is given as 1.082. This is in line with the assertion of Midi, Sarkar and Rana (2010) who noted that when testing for colinearity using VIFs, values within range of 1-10 signify absence of this assumption.

4.1.3 Normality Test

The results of the determination of normality are described in Table 3.

Table 2: Normality Test

		Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Interest rate	39	.498	.378	-.394	.741
Inflation	39	1.496	.378	2.120	.741
Exchange rates fluctuations	39	1.724	.378	1.642	.741
Financial performance	39	-1.761	.378	1.432	.741

The findings in Table 3 indicate the values of Skewness and Kurtosis as being less than negative or plus 2. This concurs with Akobeng (2007) who shared that such values within range of + or -3 signify the presence of a normal distribution of the data.

4.2 Descriptive Statistical Analysis

The findings of descriptive statistics on the variables of the study were determined and summarized as shown in Table 4.

Table 4: Descriptive Statistics

	n	Min	Max	Mean	Std. Dev
Interest rate	39	12.00	19.72	14.89	2.238
Inflation	39	3.96	14.02	7.03	2.579
Foreign exchange rate fluctuations	39	-4.30	13.03	1.01	5.057
Financial performance	39	-.32	.04	-.0104	.062

Source; Field Data, 2023

Table 4 demonstrate that the value of average on interest rate as 14.89% with the minimum, maximum and standard deviation value as 12.00%, 19.72% and 2.238 respectively. This means that on average, the interest rate among Kenyan commercial banks across the studied period hovered around 15% mark. The findings on inflationary pressure indicated an average value of 7.03%, with minimum, maximum and standard deviation values being 3.96%, 14.02% and 2.579. With respect to foreign exchange fluctuation, the study observed that a mean value of 1.01 with maximum, minimum and standard deviation values being -4.30, 13.03 and 5.057. On financial performance determined through ROA, the value of average stood at -0.0104 with minimum, maximum and standard deviation values -0.32, 0.04 and .062 respectively.

4.3 Inferential Statistical Analysis

4.3.1 Correlation analysis

Correlation analysis was conducted to predict the relationship between study variables as shown in Table 5.

Table 3: Correlation Matrix

		Financial performance	Interest rate	Inflation	Foreign exchange rate fluctuations
Financial performance	Pearson Correlation	1.000			
Interest rate	Pearson Correlation	.545	1.000		
Inflation	Pearson Correlation	-.703	.927	1.000	
Foreign exchange rate fluctuations	Pearson Correlation	.628	.832	.905	1.000

The results of Table 5 show that interest rates and financial success have a significant and favorable link (r=0.545). The finding agrees with Kipng'etich (2011) who extended this knowledge by examining the extent that interest rates affected performance of banks in Kenya through secondary data running from 2006 to 2010 where it was discovered that a positive relationship existed within the Kenyan context. In a similar vein, Kibe (2003) discovered a favorable association between interest rate spread and the profitability of banking institutions in Kenya. The association between inflation and financial performance was demonstrated to be considerable and adverse (r=-0.703). The finding agree with Athukorala and Tsai (2003) who found out that general increase in prices bore negative impact on amounts set aside by people in banks and interest rate bore positive effect. It was shown that foreign exchange rate fluctuations had strong and positive correlation with financial performance (r=0.628). Wong, et al (2008) examined the extent to which foreign exchange exposure affected profitability reporting among commercial banks in China and foreign exchange exposure related positively with financial performance.

4.3.2 Regression Analysis

Regression analysis was conducted to ascertain the effect of macroeconomic variables on financial performance. Table 6 is a breakdown of the model summary.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.759[a]	.577	.540	.10210

The findings from Table 6 indicate that on overall, 57.7% change in financial performance of Islamic banks is explained by macroeconomic variables. This suggests subsequent research should concentrate on factors other than macroeconomic variables that have an effect on economic growth.

4.3.3 Analysis of Variance (ANOVA)

The ANOVA findings were determined and summarized as exhibited in Table 7.

Table 5: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	.497	3	.166	15.883	.000[b]
Residual	.365	35	.010		
Total	**.862**	**38**			

The findings in Table 7 indicate that on overall, the regression model of the study was significant (F=15.883, p<0.05). The results on magnitude and beta coefficients were calculated and reported as given in Table 8.

Table 6: Beta Coefficients and Significance

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	.215	.209		1.032	.309
Interest rate	.051	.020	.761	2.596	.014
Inflation	-.079	.020	-1.476	-3.860	.000
Foreign exchange rate fluctuations	-.022	.007	-.074	3.143	.016

From Table 8, the following regression model is predicted between macroeconomic variables and financial performance:

$$Y=0.215+0.051X_1-0.079X_2-0.022X_3$$

Where:

Y = Financial Performance

X_1 = Interest Rate

X_2 = Inflation Rate

X_3 = Exchange Rate Flactuation

According to the study's analysis of the beta coefficients, a higher interest rate of one unit would result in a rise in financial performance of 0.051 units. It was observed that a gain in financial performance of 0.079 units would result from a unit drop in inflation. The study found that improving the financial performance of Kenya's Islamic banks by reducing exchange rate fluctuations by one unit.

4.4 Hypotheses Testing

The first hypothesis $H_0 1$ was that interest rate has statistically significant effect on the financial performance of Islamic banks in Kenya. From the findings, interest rate had p-value ($p<0.05$), hence it was significant. Thus, the study accepts hypothesis $H_0 1$. This conclusion is in alignment with that of Syed and Shaniqua (2011), who looked at five external economic indicators, comprising GDP, factory output rate, interest rate, inflation, and joblessness, that have an effect on the profitability of Islamic banks in Pakistan. It was demonstrated that only one of the five economic elements had a discernible impact on the

profitability of Islamic banks: mortgage rate. The results, however, are at odds with those of Tariq and Mash (2016), who examined how interest rates affect bank deposits and discovered that they have no appreciable effect on the riskiness of Islamic bank deposits.

The second hypothesis of the study was $H_0$2 inflation rate has statistically significant effect the financial performance of Islamic banks in Kenya. The results were that inflation rate ($p<0.05$) and therefore it was significant. Hence, the study accepts hypothesis $H_0$2. The finding agrees with Revell (1980) who observed that an increase in price of commodities could affect profitability of banks through variations.

The last hypothesis was $H_0$3 which stated that exchange rate fluctuation has statistically significant effect the financial performance of Islamic banks in Kenya. The findings were that exchange rate fluctuation had $p<0.05$ and thus it was significant. Hence, the study accept hypothesis $H_0$3. The finding agree with Wong, et al (2008) who explored the extent to which foreign exchange exposure affected profitability reporting among commercial banks in China and foreign exchange exposure related significantly with financial performance.

4.5 Summary of the Study Findings

The goal of the study was to determine how interest rate, inflation, and exchange rate fluctuations affected the financial success of Islamic banks in Kenya. According to connection findings, interest rates and financial success showed a significant and favorable association. It was shown that inflation had strong and negative relationship with financial performance. It was demonstrated that changes in foreign exchange rates were strongly and favorably correlated with financial performance. Regression analysis was used to predict macroeconomic variables on financial performance. From the results, it emerged that the variance in financial performance of nearly half of Islamic banks in Kenya is due to macroeconomic variables. It has been demonstrated that interest rates significantly affect how well Islamic commercial banks function financially. It has been demonstrated that inflation was a highly reliable indicator of the financial success of Islamic commercial banks. The study found that the financial performance of Islamic commercial banks was significantly impacted by exchange rate fluctuations.

5.0 Conclusion

Based on correlation results, the study concludes that there was a high and favorable correlation between interest rate and financial performance. Inflation had a substantial and unfavorable association with financial performance. Foreign exchange rate fluctuations had strong and positive correlation with financial performance. The first hypothesis $H_0$1 was that interest rate has statistically significant effect on the financial performance of Islamic banks in Kenya. From the findings, the study accepts hypothesis $H_0$1. The second hypothesis of the study was $H_0$2 inflation rate has statistically significant effect the financial performance of Islamic banks in Kenya. From the results, the study accepts hypothesis $H_0$2. The last objective was $H_0$3 which stated that exchange rate fluctuation has statistically significant effect the financial performance of Islamic banks in Kenya. Based on regression results, the study accepts hypothesis $H_0$3.

6.0 Recommendations

The policy makers working at the Central Bank of Kenya should leverage the existing monetary policies in order to manage inflationary pressure in the country. There is need for policy makers at CBK to review the existing monetary policies to counter interest rates

which have been found to have significant implication on financial performance. It is recommended that CBK ought to formulate relevant policies and regulations that may contribute towards stabilization of exchange rates in the country. The senior managers working among Islamic banks in Kenya should leverage the macroeconomic variables in order to enhance the financial positions of their banks. The study recommends that Islamic banks in Kenya should develop adaptive strategies to manage the impact of macroeconomic variables on their financial performance. Specifically, these banks should closely monitor and strategically respond to changes in interest rates, as the positive correlation found in the study indicates that interest rate fluctuations significantly affect their profitability.

Furthermore, given the negative correlation between inflation and financial performance, Islamic banks should implement robust measures to mitigate the adverse effects of inflation. This could involve diversifying their investment portfolios or developing financial products that are resilient to inflationary trends. Additionally, with the observed positive impact of foreign exchange rate fluctuations on financial performance, these banks should enhance their foreign exchange risk management. Strategies such as employing hedging techniques and currency diversification can help capitalize on favorable exchange rate movements and protect against unfavorable ones. The study also suggests that, since macroeconomic variables account for a significant but not complete part of the variance in financial performance, Islamic banks should explore other factors that might influence their financial success. This includes focusing on internal management practices, technological advancements, and product innovation, as well as considering broader economic indicators and market trends beyond those studied.

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