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ABSTRACT

The objective of this study was to examine the macro-economic factors affecting performance of firms listed in Nairobi Securities Exchange. The study targeted the firms listed in NSE. The study was anchored on flow oriented model, Mckinnon and shaw theory and Keynesian economic theory. Specifically the study looked at how money supply, inflation rate, exchange rate and interest rate affect performance of firms listed in NSE. The study adopted a descriptive survey research design. The population of this research consisted of the 20 companies listed and included in the Nairobi Securities Exchange 20 Share Index. A sample of 95 respondents was derived using formula proposed by Yamane. Data collection was done through the use of closed-ended questionnaires. The data was summarized and tabulated using descriptive measures. Data was analysed using descriptive statistics and inferential statistics where multiple regression analysis and correlation analysis was done on the data. SPSS version 23 was used to generate quantitative reports. From the research findings, the study established that supply of money in the market inversely affects performance of the firm. The study concluded that the government had put measures to curtail depreciation of Kenyan currency. The study concluded that exchange rate depreciation can cause decline in stock returns and that stable currency creates confidence in investors. Finally, the study concluded that interest rate causes efficient utilization of resources in the promotion of economic growth and development. The study recommended that the listed firms should lobby the government through Central Bank to plan in advance and influence supply of money in the market so as to ensure that there is enough money to conduct trade in the economy.

Key Words: money supply, inflation rate, exchange rate, interest rate, Firm Performance

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INTRODUCTION

Globally greater efforts have been exerted to liberalize financial markets which have made stock returns and the macroeconomic variables to closely relate (Munga, 2015). The macroeconomic variables which include exchange rate, interest rate, inflation and gross domestic product, have been regarded as the major significant determinants of the behaviour of stock market. This is because they are applied to gauge the macro economy state that must be monitored by an investor and forecast with a view to make prudential investment decisions (Junkin, 2014). Economic development is influenced by stock markets since it provides public companies with a platform to acquire long-term capital and provide avenue for investors to invest their excess funds. The stock markets motivate investors with excess funds to invest them in financial instruments that satisfy their risk appetite and liquidity preferences.

More funds are need as a result of economic development to satisfy rapid development and as such stock markets serves as an intermediary to mobilize and allocate savings among competing interests that are critical to the economic growth. Returns from such equity investments are subject to vary owing to the movement of share prices, which depend on various factors which could be internal or firm specific such as earnings per share, dividends and book value or external factors such as interest rate, GDP, inflation, government regulations and Foreign Exchange Rate (FOREX) (Hayford, 2014). Munga (2015) asserts that stock market plays a major role in the growth and development of any economy. It provides companies with facility to raise capital for expansion and growth through the selling off of shares to the public or offering additional shares to shareholders through a rights issue. This is very crucial for the business as it offers them a cheaper and a competitive way of raising additional capital.

Kenya being one of the emerging economies in Africa, its stock market performance is highly dependent on

the nature of the macroeconomic variables. These variables are considered to be causes of stock return volatility existing in NSE and may lead to stock market crisis (Odhiambo, 2014) as cited in Kirui *et al.*, (2016). According to the International Finance Corporation (IFC), all markets in the developing countries are treated as emerging. Kenya's capital market, the Nairobi securities Exchange Limited (NSE) is thus one of the emerging markets of the world. The market is characterized by; low trading volume, low turnover ratios, few listed companies, and inefficient information delivery (Nairobi Stock Exchange, 2016).

The NSE was constituted as a voluntary association of stockbrokers registered under the Societies Act in 1954 with the mandate to develop and regulate trading activities. This was necessitated by the need to accelerate economic development and offer private firms access to long term capital in addition to providing an opportunity to the Government to access the much required resources through long-term bonds (Ngugi, 2017). During the first year of operation, the NSE experienced low activities due to the uncertainty surrounding the future of Kenya after its independence and the fact that most of the people had no knowledge of the market operations. In 1996, the Government offered one of the largest share issues in the history of NSE, the privatization of Kenya Airways which saw the Government reduce its shareholding from 74% to 23% and where more than 110,000 shareholders acquired a stake in the airline. This together with the increased knowledge of the market operation provided a new widow of investment to both institutions and individuals.

Statement of the Problem

The stock market plays a vital role in economic development of a nation, since it acts as mediator between borrowers and lenders. A well-functioning stock market will contribute to development of an economy through two important channels; boosting savings and allowing for more efficient allocation of resources (Junkin, 2015). However, companies which

are quoted on the Nairobi Securities Exchange Limited have been experiencing high stock returns volatility with the highest record of 21.1% in the history of NSE in 2000 (Kalui, 2016). In 2014, share prices dropped due to adverse economic conditions which were greatly contributed by depreciation of Kenya shillings touching a low of Sh107 against US dollar (Nairobi Securities Exchange Limited, 2016). Also, according to Economic Survey, (2014), the average interest rate on 91-day treasury bills fell to 6.82 % in December 2009 from 8.59% in December 2008. Inflation rate volatility has also been evident in the country in the past decade. Inflation eased from 16.2% in 2008 to 9.2% in 2009 (KNBS, 2014). The average annual inflation was 4.1 percent in 2010 down from a high of 10.5 percent recorded in 2009 (KNBS, 2014).

Furthermore, extant of literature on macro-economic factors and firm performance have found a positive relationship (Maku and Atanda, 2016; Ting *et al.*, 2014; Mehwish, 2015; Jahur *et al.*, 2014) while other studies (Aduda, Masila, and Onsongo, 2016; Mongeri, 2015; Songole, 2014; Ochieng and Adhiambo, 2016; Kimani and Mutuku, 2016) showed that there is a negative relationship between examined macro-economic variables and stock market performance in Kenya. The empirical evidences emerging from various studies about the relationship between macro-economic factors and firm performance have so far yielded mixed results that are inconclusive and contradictory. Because of these contradictory results (Garcia & Liu, 2015) the relationship between diversification and performance is controversial. Thus, this study sought to address the literature gap by using holistic approach to examine the macro-economic factors affecting performance of firms listed in Nairobi Securities Exchange.

Research Objectives

The general objective of the study was to establish the macro-economic factors affecting performance of

firms listed in the Nairobi Securities Exchange. The specific objectives were:-

- To establish the effect of money supply on performance of firms listed in Nairobi Securities Exchange
- To determine the effect of inflation on performance of firms listed in Nairobi Securities Exchange
- To assess the effect of exchange rate on performance of firms listed in Nairobi Securities Exchange
- To ascertain effect of interest rates on performance of firms listed in Nairobi Securities Exchange

The study was guided by the following null hypothesis;

- **H₀₁:** There is no significant effect of money supply on performance of firms listed in Nairobi Securities Exchange
- **H₀₂:** There is no significant effect of inflation on performance of firms listed in Nairobi Securities Exchange
- **H₀₃:** There is no significant effect of exchange rate on performance of firms listed in Nairobi Securities Exchange
- **H₀₄:** There is no significant effect of interest rates on performance of firms listed in Nairobi Securities Exchange

LITERATURE REVIEW

Keynesian Economic Theory

Keynes in 1930, in his Treatise on Money, argued for the importance of the banking sector in economic growth. He suggested that bank credit “is the pavement along which production travels, and the bankers if they knew their duty, would provide the transport facilities to just the extent that is required in order that the productive powers of the community can be employed at their full capacity”. Keynesian economics focuses on immediate results in economic theories.

Keynesian theory on inflation proposed that changes in money supply do not directly affect prices and that visible inflation is the result of economic pressures in the economy expressing themselves in prices. Keynesians argue that the government needs to actively intervene to stabilize the economy. Otherwise, the uncertainty caused by unpredictable fluctuations will be very damaging to investment and hence long term economic growth. If demand fluctuates, in the way Keynesians claim, and if the policy of having money supply or inflation rule is adhered to, interest rates must fluctuate. Targeting inflation alone may make it a poor indicator of an economy's state because the money supply will adapt to changes in the inflationary expectations.

McKinnon and Shaw Theory

McKinnon in 1973 and Shaw in 1973 argued that if real interest rates are kept below the market equilibrium, this could increase the demand for investment but not the actual investment. Low interest rates are insufficient to generate savings; it can even reduce savings especially if substitution effects dominate the income effect for households. On the other hand, low rates raise the expected profitability of investment projects by raising the net present value of future earnings from the project. The theory rests on the assumptions that saving is an increasing function of real rate of interest on deposits and real rate of growth in output and that investment is a decreasing function of the real loan rate of interest and an increasing function of the growth rate.

The theory posits that the nominal interest rate should be administratively fixed. They advance that emerging economies are fragmented; hence there is a greater likelihood of having investments that are less productive. Capital accumulation is discouraged by the fact that for a high inflation rate, nominal interest rates are set too low and thus real interest rates could be negative. As capital supply of banking sector is limited and banks have only specialized credit

activities, people have to finance their investment projects by themselves or have to go to the informal sector where interest rates are often usurious. This theory is relevant to the current study in establishing the influence of interest rates on firm performance.

Flow Oriented Model

This model was developed by Dornbusch and Fisher in 1980. The model claims that changes in exchange rates alter the international competitiveness of a firm as well as the balance of trade position, and thus exchange rate changes affect real income and output in a country. Share prices of companies are influenced by exchange rate changes and future cash flows of firms. This implies that exchange rate changes lead to stock price returns, and that they are positively correlated. The flow oriented model maintains that a causal relationship, which runs from the exchange rate to the stock prices. This simply means that exchange rate changes affect the competitiveness of firms as a result of its effect on input and output prices (Joseph, 2015).

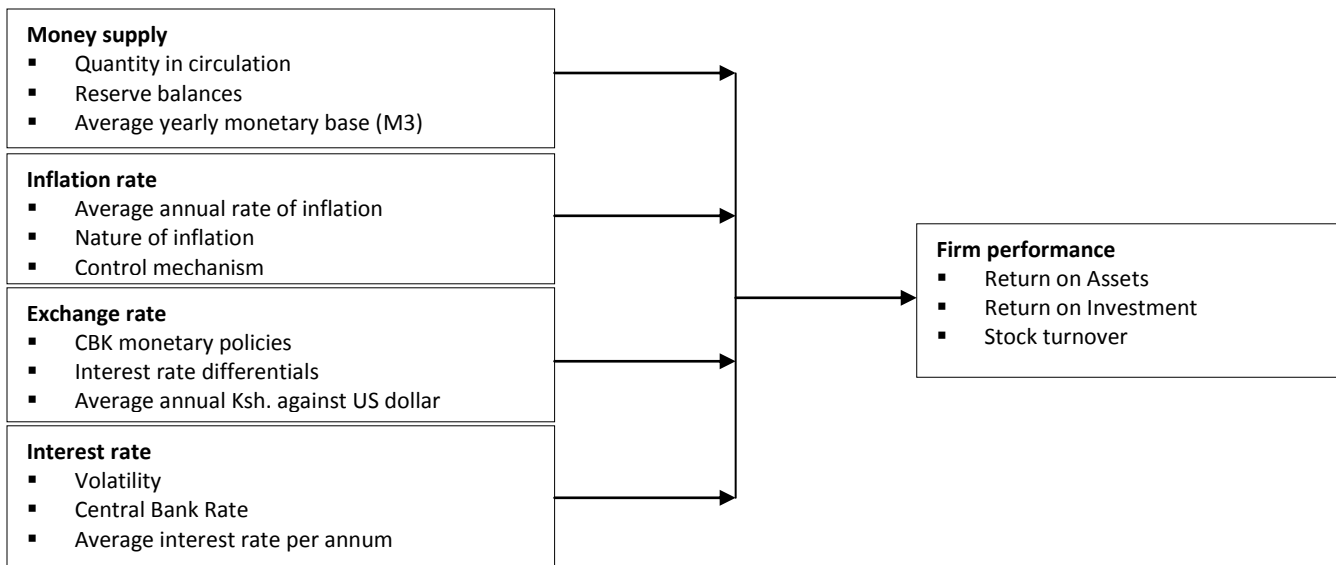
It follows therefore that if exchange rate appreciates, exporters are likely to be affected negatively. In the same regard an appreciation of the currency is likely to cause goods and services to be dearer on the international market. This will therefore bring about a decline in exports, as they will be seen as expensive by buyers on the international market. It means that such goods will lose their competitiveness internationally. Consequently, their profits will drop and if profits decrease the firms will lose competitiveness on the domestic stock market (Joseph, 2015). Their attractiveness on the domestic stock market will decrease and this will result in their stock prices decreasing in value. This model is relevant to the study since it relates to macroeconomic variables being studied that is exchange rates on the firm performance.

The Monetarist Model

Hubbard and Obrien (2014) explain that The Monetarist model –also known as the Neo-Quantity Theory of Money Model-was developed beginning in the 1940s by Milton Friedman. Friedman argued that Keynesian approach overstates the amount of macroeconomic instability in the economy. He argued that the economy will ordinarily be at potential real GDP. He argued that most fluctuations in real output were caused by fluctuations in the money supply rather than fluctuation in consumption spending or investment spending. He argued that the severity of the great depression in the United States was caused

by the Federal Reserve’s allowing the quantity of money in the economy to fall by more than 25% between 1929 and 1933.

Hubbard and Obrien (2014) reports Friedman argument that the Federal reserves should change its practices and adopt a monetary growth rule which is a plan for increasing the quantity of money at a fixed rate. Friedman believed that adopting monetary growth rule would reduce fluctuations in real GDP, employment and inflation. The above theory is applicable to the effects of Money supply on the firm performance of Nairobi Securities Exchange.



Independent variables

Dependent variable

Figure 1: Conceptual framework

Empirical Review

Gallagher and Taylor (2015), found evidence that equity returns are negatively affected by both expected and unexpected inflation. These studies tend to explain the negative linkage among equity market performance and inflation to be linked to money demand and the quantity theory of money. Hondroyiannis and Papapetrou, (2014) studied the relationship between real stock returns and inflation in Greece. They observed that Price changes affect equity market returns through two channels. In

channel 1, an increase in inflation negatively affects economic growth since it adversely affects investment and production. This creates uncertainty in the economy with negative impact on real economic activity. The result is a negative relationship between market returns and inflation.

Maku and Atanda (2014) conducted a critical analysis of the long-run macroeconomic determinants of stock market performance in Nigeria between 1984 and 2007. The Augmented Engle-Granger Co-integration test result revealed that the stock market

performance in Nigeria is mainly affected by macroeconomic forces in the long-run. However, the empirical analysis showed that the Nigerian Stock Exchange all share index is more responsive to changes in exchange rate, inflation rate, money supply, and real output. The study recommended that investors should pay close attention to exchange rate, inflation, money supply, and economic growth rather than Treasury bill rate in the long-run in their investment decision.

Stavarek (2015) examined the nature of casual relation between equity prices and exchange rate in four old EU countries (Austria, France, Germany and the UK) and the four new members (Czech Republic, Hungary, Poland and Slovakia) and in the USA. The data varies for each county depending upon the availability. There were several tests used like Co integration analysis, vector error correction modeling standard Granger casualty test to find out the linkage between exchange rate and equity market performance and they concluded that there was no long run relationship existing in first analyzed period covering from 1970 to 1992. In the period from 1993 to 2003 much stronger casualty found out in old EU members and USA because of their strong equity market and exchange rate development. Long run equilibrium does not exist in new EU members due to relative under development markets.

Mongeri (2016) examined the impact of foreign exchange rates and foreign exchange reserves on stock markets performance at NSE using monthly time series data of NSE share index, foreign exchange rates and reserves for the period 2003-2010. The study established that foreign exchange rates had negative significant impact on stock market performance. Also, the study established that foreign exchange reserves had positive significant impact on stock market performance. The study also revealed that there is no significant relationship between Foreign exchange rates and foreign exchange reserves.

Hamzah (2014) did study on relationship between equity market performance and money supply and found a positive dependence between money supply change and equity price evolution on Singapore Securities exchange. The causality between the money supply and Equity markets on emerging markets was investigated also by Brahmasrene, Jiranyakul (2013), specifically in their analysis of the Thai Equity market between 1992 and 2003, where they found positive relations between money supply and equity prices.

Ochieng and Oriwo (2016) conducted a study on the relationship between macroeconomic variables on NSE All share index (NASI) and goes further to determine whether changes in macroeconomic variables can be used to predict the future NASI and the three key macroeconomic variables are examined and they include lending interest rate, inflation rate and 91-day Treasury bill (T-bill) rate. The study concluded that 91-day T-bill rate has a negative relationship with the NASI while inflation has a weak positive relationship with the NASI.

Olweny and Kimani (2015) conducted a study on the causal relationship between stock market performance and economic growth in Kenya for the period 2001-2010, using quarterly secondary data. The authors concluded that variables were found to be cointegrated with at least one co-integrating vector. The findings implied that the causality between economic growth and stock market runs unilaterally or entirely in one direction from the NSE 20-share index to the GDP. From the results, it was inferred that the movement of stock prices in the Nairobi stock exchange reflect the macroeconomic condition of the country and can therefore be used to predict the future path of economic growth.

METHODOLOGY

This study followed a descriptive research design. Descriptive survey research design is a statistical method that quantitatively synthesizes the empirical

evidence of a specific field of research. The target population of this research consisted of the 20 companies listed and included in the Nairobi Securities Exchange 20 Share Index and it covered the period from the year 2015: Q2 to 2017: Q2 since data was available in those periods. The sampling frame of this study was 20 companies listed and included in the Nairobi Securities Exchange 20 Share Index in 2017. Stratified random sampling method was used to select relevant respondents from the target NSE20 Index firms. This study used quantitative data which was collected by use of a questionnaire. The study employed a questionnaire to collect data from the respondents. The questionnaire was structured in such a way that it captured respondents' profile and data pertinent to study objectives. Secondary data was obtained from the Nairobi Securities Exchange NSE (NSE 20 Share Index) financial reports, published journal, dissertations and internet. The researcher used secondary data because they use already existing information which saves time and money. The researcher used Statistical Package for Social Sciences (SPSS) version 25 to generate the descriptive statistics and also to generate inferential results. Regression analysis was used to demonstrate the relationship between the macroeconomic factors affecting performance of listed firms in NSE. The

multiple linear regression model adopted for the study was as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where:

Y is Firm performance

α is a constant, intercept of the equation

β_1 - β_4 is the regression coefficients of independent variables

X_1 is Money supply

X_2 is Inflation

X_3 is Exchange rates

X_4 is Interest rates

ϵ is error term. For computation purposes it is assumed to be 0.

Hypothesis was tested at 95% confidence level ($\alpha = 0.05$). A two tailed test was carried out.

RESULTS

Effect of Money Supply on Firm Performance

The study sought the views of respondents on the extent to which the given aspects of money supply affect firm performance as indicated by their level of agreement. A Likert scale data was collected rating the extent of agreement in a scale of 1 to 5 where 1 is the strongly disagree whereas 5 is the strongly agree indicator. The mean score for each item was calculated and the findings are shown in table 1.

Table 1: Money supply

Money supply	Mean	Std. Deviation
Money supply has an inverse relationship with firm performance	3.20	1.678
Increase in money supply causes equity market capitalization to increase	4.00	1.643
Level of money supply affects stock investments	4.22	1.304
The firm has no control mechanism on money supply	4.32	1.368

From table 1, the respondents disagreed that money supply has an inverse relationship with firm performance as indicated by a mean of 3.20 and standard deviation of 1.678. The respondents further agreed that an increase in money supply causes equity market capitalization to increase as shown by a mean of 4.00 with a standard deviation of 1.643. Findings also showed that majority of respondents

(mean = 4.22; std. dev. = 1.304) agreed that the level of money supply affects stock investments. Finally, majority of the respondents agreed that the firm has no control mechanism on money supply as indicated by a mean of 4.32 and a standard deviation of 1.368. The findings agree with Hamzah (2008) who did study on relationship between equity market performance and money supply and found a positive dependence

between money supply change and equity price evolution on Singapore Securities exchange.

Effect of Inflation on Firm Performance

With regard to the effect of inflation, data was collected through the Likert scale measuring the level

of agreement of the respondents with respect to the given aspects of inflation. The results are as presented in Table 2.

Table 2: Inflation

Inflation	Mean	Std. Deviation
Increase in inflation rate can cause the real income to decline thus affect firm performance	4.22	1.304
Inflation rate and stock performance have a linear relationship	4.48	1.236
Increase in inflation causes investors to sell their assets, including stocks to improve their buying power	4.28	1.443
The firm has no mechanism to control inflation	4.30	1.444

As shown in the table 2, the respondents agreed that increase in inflation rate can cause the real income to decline thus affect firm performance as indicated by a mean of 4.27 and standard deviation of .739. The respondents also agreed that inflation rate and stock performance have a linear relationship as shown by a mean of 4.48 and a standard deviation of 1.236. Further, the respondents agreed to a moderate extent that increase in inflation causes investors to sell their assets, including stocks to improve their buying power (mean=4.28). Finally the respondents

agreed that the firm had no mechanism to control inflation as indicated by a mean of 4.30 with a standard deviation of 1.444. The findings were supported by Hondroyiannis and Papapetrou, (2007) who studied the relationship between real stock returns and inflation in Greece and established that price changes affect equity market returns negatively.

Effect of Exchange Rate on Firm Performance

The study sought to determine the effect of exchange rate on firm performance. The results were presented in table 3.

Table 3: Exchange rate

Exchange rate	Mean	Std. Deviation
The government has put measures to curtail depreciation of Kenyan currency	4.22	1.304
Depreciation in the exchange rate leads to a decline in stock returns	4.28	1.443
When currency is stabilized, it will create the investors' confidence	4.22	1.304
The firm has no mechanism to control exchange rate	4.02	0.369

As shown in the table 3, the respondents agreed that the government has put measures to curtail depreciation of Kenyan currency as indicated by a mean of 4.22 and standard deviation of 1.304. The respondents also agreed that depreciation in the exchange rate leads to a decline in stock returns as shown by a mean of 4.28 and a standard deviation of 1.443. Further, the respondents agreed to a moderate extent that when currency is stabilized, it

will create the investors' confidence (mean=4.22). Finally the respondents agreed that the firm has no mechanism to control exchange rate as indicated by a mean of 4.02 with a standard deviation of 0.369. The findings were supported by Mongeri (2011) who examined the impact of foreign exchange rates and foreign exchange reserves on stock markets performance at NSE using monthly time series data of NSE share index, foreign exchange rates and reserves

for the period 2003-2010. The study established that foreign exchange rates had negative significant impact on stock market performance.

Effect of Interest Rates on Firm Performance

Table 4: Interest rates

Interest rates	Mean	Std. Deviation
Interest rates affect stock returns positively in NSE	4.27	1.449
Interest rates enable efficient utilization of resources in the promotion of economic growth and development	4.00	0.643
Interest rate spreads has a significant effect on the riskiness of capital-intensive industries	4.22	1.304
Interest rate does not have any relationship with firm performance	3.78	0.696

Findings presented in table 4 showed that interest rates affect stock returns positively in NSE. As indicated by a mean of 4.27 and standard deviation of 1.449. Findings further showed that interest rates enable efficient utilization of resources in the promotion of economic growth and development as indicated by a mean of 4.00 and standard deviation of 0.643. The findings also show that majority of the respondents agreed that interest rate spreads has a significant effect on the riskiness of capital-intensive industries (mean = 4.22; std. dev. = 1.304). Finally

The study presented results on how interest rates affect firm performance. The results were on means and standard deviation presenting the level of agreement of the respondents on the given aspects of interest rates. These were as presented in table 4.

respondents agreed that interest rate does not have any relationship with firm performance (mean = 3.78; std. dev. = .696). The findings resonated with Chen *et al.*, (2007) whose study indicated that interest rate had positive impact on stock return.

Firm Performance

The study results on firm performance were as presented in Table 5. The findings were on means and standard deviation showing the extent of the respondents' agreement on firm performance aspects given.

Table 5: Firm performance

Firm performance	Mean	Std. Deviation
Fluctuations of macroeconomic variables has adversely affected firm performance	4.48	1.236
Firm return on assets has increased over the last five years	4.32	1.368
Returns on investment has improved over time	4.31	.983

According to the findings in table 5, majority of respondents agreed that fluctuation of macroeconomic variables has adversely affected firm performance as indicated by a mean of 4.48 and standard deviation of 0.236. The respondents further agreed that the firm return on assets had increased over the last five years as indicated by a mean of 4.32 and standard deviation of 1.368. Finally, respondents agreed that Returns on investment had improved

over time as indicated by a mean of 4.31 and standard deviation of 0.983. The findings were supported by Maku and Atanda (2010) who conducted a critical analysis of the long-run macroeconomic determinants of stock market performance in Nigeria between 1984 and 2007 and the results revealed that the stock market performance is mainly affected by macroeconomic forces in the long-run.

Correlation Analysis

Table 6: Overall Pearson correlation coefficient

		Money supply	Inflation	Exchange rate	Interest rate	Firm performance
Money supply	Pearson Correlation	1				
	Sig. (2-tailed)					
Inflation	Pearson Correlation	.206	1			
	Sig. (2-tailed)	.026				
Exchange rate	Pearson Correlation	.299**	.674**	1		
	Sig. (2-tailed)	.007	.000			
Interest rate	Pearson Correlation	.317**	.518**	.525**	1	
	Sig. (2-tailed)	.004	.000	.000		
Firm performance	Pearson Correlation	.222*	.206	.581	.696	1
	Sig. (2-tailed)	.047	.040	.023	.004	
	N	81	81	81	81	81

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Linear Regression Analysis

Table 7: Overall Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.846 ^a	.715	.698	2.118

a. Predictors: (Constant), Interest rate, Money supply, Inflation, Exchange rate

Table 8: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	854.987	4	213.747	47.637	.001 ^b
	Residual	341.013	76	4.487		
	Total	1196.000	80			

a. Dependent Variable: Firm performance

b. Predictors: (Constant), Interest rate, Money supply, Inflation, Exchange rate

Table 9: Regression results

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	12.024	1.490		8.067	.000
	Money supply	.113	.046	.275	2.448	.010
	Inflation	.247	.097	.376	2.554	.005
	Exchange rate	.143	.062	.078	2.304	.014
	Interest rate	.261	.101	.337	2.584	.002

a. Dependent Variable: Firm performance

DISCUSSION

Regression analysis further formed a basis for testing the hypothesis adopted in this study. This was done by considering the p values corresponding to each variable of interest. The benchmark for this study for failure to reject or failure to accept the null hypothesis was a level of significance of 5 percent. If the p-value was less than 5 percent the null hypothesis failed to be accepted and the alternate hypothesis would fail to be rejected. Also, if the p-value was greater than 5 percent the null hypothesis failed to be rejected and the alternate hypothesis failed to be accepted, that is.

Reject H₀: $\beta_x = 0$; if $p < 0.05$,

Otherwise fail to reject the H₀: $\beta_x = 0$

The study sought to achieve a number of objectives. First, the study sought to establish the effect of money supply on firm performance. Regression analysis conducted proved that there was a positively significant effect of money supply on firm performance as indicated by the values $\beta_1 = 0.113$, $t = 2.448$, $p < 0.05$. Hypothesis testing conducted at 95% confidence level on money supply confirmed its significant effect on firm performance hence the Null hypothesis is rejected.

Establishing the effect of inflation on firm performance was the second study objective. Regression analysis was conducted and the results postulated that there was positively significant effect of inflation on firm performance as indicated by the regression values $\beta_2 = 0.247$, $t = 2.554$, $p < 0.05$. Further hypothesis testing conducted at 95% confidence level on inflation confirmed that it had a statistical significant effect on firm performance hence the Null hypothesis is rejected.

Further, the study sought to establish the effect of exchange rate on firm performance. Regression analysis conducted proved that there was positively significant effect of exchange rate on firm performance as indicated by the values $\beta_3 = 0.143$, $t =$

$.521$, $p < 0.05$. Hypothesis testing was also conducted on this variable at 95% confidence level and it was found out that exchange rate had a statistical significant effect on firm performance hence the Null hypothesis is rejected.

Finally, the study sought to investigate the effect of interest rate on firm performance. Regression analysis conducted confirmed that there existed a positively significant effect of interest rate on firm performance as indicated by the values $\beta_4 = 0.261$, $t = 2.584$, $p < 0.05$. Conducting Hypothesis testing on this variable at 95% confidence interval concluded that interest rate had statistically significant effect on firm performance hence the Null hypothesis is rejected.

CONCLUSIONS

From the research findings, the study concluded that the supply of money in the market inversely affects performance of the firm. Also the study concluded that equity market capitalization increases with increase in money supply and that stock investments is affected by the supply of money. However, from the study findings, it was concluded that firms have no mechanism to control supply of money.

The study concluded that decline to real income as a result of inflation rate affects performance of the firm. The study concluded that stock performance and inflation rate are inversely related and that inflation causes investors to sell their assets, including stocks to improve their buying power. Finally, it is concluded that the firm has no mechanism to control inflation.

The study concluded that the government has put measures to curtail depreciation of Kenyan currency. The study concludes that exchange rate depreciation can cause decline in stock returns and that stable currency creates confidence in investors. Finally, it is concluded that the firms lack exchange rate control mechanism.

On interest rate, the study concluded that interest rate causes efficient utilization of resources in the promotion of economic growth and development. The study also concluded that interest rate spreads has a significant effect on the riskiness of capital-intensive industries. Finally, it was concluded that interest rate affects firm performance.

RECOMMENDATIONS

The study recommended that the listed firms should lobby the government through Central Bank to plan in advance and influence supply of money in the market so as ensure that there is enough money to conduct trade in the economy. Further, equity market capitalization should be regulated effectively so as to improve stock investments through increased money supply.

The study recommended that the listed firm management should advocate for the government policies which affect real income since it was established that inflation rate affects firm performance. The study recommended that during inflation, the firms' management should shed off surplus assets, including stocks to improve their buying power. The study recommended that the listed firms' management should lobby the

government to formulate effective measures to curtail depreciation of Kenyan currency since it was established to affect firm performance. The firms' management should mitigate on exchange rate depreciation since it causes decline in stock returns.

Finally, the study recommended that the firms' management should take advantage of reduced interest rates since it was established to cause efficient utilization of resources in the promotion of economic growth and development. Further, it was recommended that the management of listed firms should review interest rate policies since it was concluded that interest rate spreads has a significant effect on the riskiness of capital-intensive industries.

Areas of Further Research

The study recommends that further studies should be carried out to investigate on the specific factors affecting each of the current study variables. For example, future studies should seek to investigate the determinants of real gross domestic product per capita, supply of money, and consumer price index.

Future studies should also simultaneous compare the impact of the macro-economic variables on stock market performance. Different markets comparison could help in arriving at concrete conclusions with regard to the study subject.

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