IMPACT OF CENTRAL BANK OF NIGERIA ON NIGERIAN ECONOMIC STABILISATION

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ABSTRACT

This research looked at how the policy management of the Central Bank of Nigeria (CBN) affects economic stability in the country, specifically, how CBN's reserve requirements (RR) influence economic stability (ES), the connection between the exchange rate (ER) and economic stability (ES), and the impact of interest rates (IR) on economic stability (ES). The study used an ex post facto design and gathered information from sources such as the CBN statistical bulletin and the Economic Development Integration report (2000-2022). The findings showed that reserve requirements and the exchange rate positively influence the country's economic stabilization, while interest rates have a strong negative impact. In conclusion, the study determined that CBN policy management significantly contributes to economic stabilization in Nigeria. It recommended that CBN continues refining its monetary policy tools to control inflation effectively and support economic growth. The study also suggested regularly assessing the impact of interest rates, reserve requirements, and open market operations to arrive at CBN policy and management that strikes the right balance between price stability and economic activity.

Keywords: *Economic stabilization, Reserve Requirements, Exchange Rate, Interest Rate.*

INTRODUCTION
Macroeconomic theory from the 20th century served as the foundation for economic stabilization, which rose to prominence after World War II and the Depression. The advent of Keynesian theory, which emphasizes government involvement through fiscal policies, and the increasing significance

of monetary policy, which makes use of interest rates and the money supply, are two significant developments. Globally, central banks and governments place a high priority on economic stabilization, forming policies after much discussion and study (O'Sullivan, et al., 2021).

In the early 1980s, Nigeria implemented economic stabilization measures in response to the volatility that followed the oil boom. The administration put policies in place to rein in inflation, cut spending, and promote foreign investment in accordance with IMF guidelines. Challenges have remained in spite of continuous efforts through a significant informal sector, a high dependency on oil, and security issues (Economic Intelligence Unit, 2021).

Actions typically undertaken by the government or central bank to achieve or maintain economic stability have included achieving stable employment, inflation, and growth. Monetary, fiscal, and regulatory policies are among the strategies used to try to offset changes in the economic cycle. For international governments and central banks, a robust and stable economy is the ultimate goal (Mankiw, 2019).

Economic stabilization initiatives in Nigeria have sought to reduce inflation and maintain stable currency rates in order to promote investment and commerce. Notwithstanding the benefits of such policies, there are still obstacles to overcome, such as business cycles, external shocks, policy coordination, globalization, economic structure, volatility in oil prices, corruption, insufficient infrastructure, and unstable political environments (O'Sullivan et al., 2021).

Since its founding in 1958, the Central Bank of Nigeria (CBN) has functioned as the nation's central monetary authority, supervising the financial industry, controlling the value of the national currency, and developing monetary policies for price stability and long-term economic expansion. Under the direction of the Governor, who appoints the Board of Directors, the CBN oversees financial institutions and bank, and running its operations through a number of divisions. According to CBN website, the bank has put policies in place to improve financial stability, promote economic expansion, and assist small and medium-sized businesses, payment systems, and financial inclusion.

The main aim of the study is to determine the impact of CBN's policy management on economic stabilisation in Nigeria. The specific objectives are to investigate the impact of CBN's reserve requirements (RR) on the economic stability (ES), examine the relationship between the exchange rate (ER) and the economy's stability (ES), and analyze the effect of interest rates (IR) on the economy's stability (ES). A major significance of this study is understanding bank rate policy and streamlining delivery patterns beneficial to financial institutions so as to promote national economic stability and growth.

LITERATURE REVIEW

Central Bank of Nigeria (CBN)

The CBN, which was founded in 1958, is in charge of managing the national currency and supervising the financial industry. It controls financial institution operations and carries out policies for sustainable economic growth and price stability. Under the direction of a board of directors, the CBN is run by several divisions. The CBN Act of 1991 was noteworthy for granting autonomy. The Act outlines the CBN's primary goals as advising the federal government, preserving external reserves, and advancing monetary stability. The CBN Governor is empowered to issue licenses, rules, and directions by the Banks and Other Financial Institutions Act, 2020. 15.; BOFIA 2020; Okoroa (2012). Monetary policy is a crucial tool for the CBN, aligning with global objectives such as price stability, aimed at maintaining a 2 percent inflation rate for balanced economic growth.

Full Employment
Achieving full employment was a top priority for central banks in the past. However, this objective has become complicated because of the growing demand of welfare state to provide some economic security for the economically disadvantaged population. Still, it is crucial to ensure full employment, which is why central banks will step in if unemployment rises. Usually, they cut interest rates to make credit more accessible to companies in order to spur investment and growth for the creation of jobs (Berry, et al.,1995).

Economic Growth
Economic growth is given priority by central banks since it is linked to employment and living standards. Increased demand, growth in corporate investment, and better job prospects are frequently associated with economic expansion. It may not be the main goal for central banks but it still connected to their policy creation and management. They need to acknowledge that occasionally regulating prices and inflation may be more important than boosting the economy. However, if feasible, central banks seek to maintain price stability while bolstering the economy (Mazur, 2023).

Exchange Rate Stability
A country may suffer from a currency shock, which is characterized by a sharp drop in the demand for its currency for a variety of reasons such as financial or political problems stemming from within the country that can lead to market instability requiring central banks to address. Changes in exchange rates have the potential to undermine corporate confidence and impede strategic planning and investment, particularly in today's globalized economies that depend on transnational supply chains. Central banks may decide to buy the home currency in order to counter a major decline in the value of the exchange rate. This would increase demand for the local currency and promote market stability, which will have an impact on importers, exporters, and the supply chain. (Soukotta, et al., 2023).

The CBN has used a number of strategies in their financial and economic management—such as monetary policy, foreign exchange management, open market operations (OMO), and modifications of the cash reserve ratio (CRR)—to stabilize the Nigerian economy. Its policies and management of them can affect inflation, investment levels, and borrowing prices through monetary policy. The CBN could intervene in foreign exchange currency value in regulating trade. It could finance projects for development, give priority sectors targeted funding, and enforce regulatory frameworks to guarantee stability and good financial practices. Initiatives for financial inclusion increase service accessibility, promoting inclusive development (Omotosho, et al., 2016). Together, these actions seek to manage financial system risks, promote growth, preserve price stability, and stabilize the economy.

CBN and Nigeria Economy Stabilization
The CBN is essential to managing economic stability in the nation. It accomplishes this by putting into practice policies that protect price stability, support a strong financial system, and promote general economic growth. Interest rates, reserve requirements, and exchange rate management are just a few of the instruments the CBN uses to control the money supply and manage economic stability. It also encourages financial inclusion, supervises financial institutions, and bases its monetary policy choices on an inflation targeting framework.

The CBN, like central banks of other countries, has historically made calculated interventions when the economy has been struggling. With the economy in decline, limited foreign reserves, and inflation in the 1980s, the CBN and the IMF worked together to conduct the Structural Adjustment Program (SAP). Through market-oriented reforms like trade liberalization, currency depreciation, and fiscal restraint, this strategy sought to address structural imbalances.

Similar difficulties faced by Nigeria's banking industry in the early 2000s included non-performing loans, a weak capital base, and inadequate corporate governance. As a result, the CBN enacted a number of financial reforms, including tightening prudential regulations, enforcing corporate governance standards, and increasing the minimum capital requirements for banks. Achieving financial stability and regaining trust in Nigeria's banking system were made possible in large part by these efforts.

In 2020–2021, the CBN also acted proactively to lessen the impact of the global COVID-19 pandemic on the nation's economy. Their policies included cutting interest rates, giving borrowers loan forbearance, and putting in place stimulus plans to help businesses and people. Such policies add to the range of management functions of CBN to achieve and preserve economic stability.

Theoretical framework of Keynesian Economics
The core of John Maynard Keynes's Keynesian economics from the 1930s is the influence of aggregate demand on economic activity. Instability can result from changes in net exports, government spending, investment, and consumption as a whole. Keynesian philosophy recommends government intervention during recessions through expansionary fiscal measures like higher spending and lower taxes to boost demand. On the other hand, contractionary fiscal measures lower aggregate demand during inflation.

Keynesian philosophy, which ruled after World War II until the 1970s, struggled with stagflation or inflation and sluggish growth. It arose in reaction to the Great Depression, arguing against the notion that markets would adjust on their own and in favor of government intervention to spur economic growth. The term "Keynes" has come to associate with government intervention.

Keynesian economics has an impact on economic policymaking by emphasizing concepts like aggregate demand, the role of the government, fiscal and monetary policy, and countercyclical measures. Despite critics' warning of fiscal imbalances and inflation from excessive intervention, it underscores the government's role in managing stability and growth.

Keynesian theory allows for an examination of the relationship between cash flows and the monetary policy of the CBN and how aggregate demand affects economic stabilization. The expansionary or contractionary policies of the CBN have a direct impact on cash flow, which boosts aggregate demand. The relationship between excessive money creation, inflation, and economic contraction is emphasized by monetarism. Monetarists emphasize the importance of the money supply and contend that prices and aggregate demand are affected by the CBN's monetary policy instruments and management, which include interest rates, reserve requirements, and open market operations.

Empirical Review
He and Zou (2019) assessed the degree to which the Central Bank Independence (CBI) affected inflation using the monetary Schumpeterian model. Their analysis showed that it was unable to forecast a monotonic relationship between inflation and CBI. They also disclosed that CBI had a positive influence on inflation when labor supply elasticity was high, a circumstance that is

probably associated with developed countries. On the other hand, CBI had a negative or no effect on inflation when labor supply elasticity was low, a situation prevalent in developing countries.

Arnone and Romelli (2013) found that the degree of central bank independence has a significant impact on the inflation rate in their study on the dynamic CBI indices and inflation rate. Their results confirmed that there a negative correlation between inflation and CBI dynamic. However, Martin (2015) studied the connection between CBI, inflation, and debt and found that a central bank's independence from the government only works to reduce inflation temporarily before losing its ability to do so over time.

In 2020, Garriga and Rodriguez assessed how legal CBI affected inflation in developing nations. Higher CBI led to a lower inflation rate, according to the study's findings. Also in 2020, Kokoszczynski and Mackiewicz-Łyziak investigated the connection between inflation and central bank independence. The analysis of the study was conducted using the generalized method of moment. The study's findings showed that the CBI significantly and negatively affected inflation. Strong (2021) investigated the connection between inflation, central bank independence, and political clout in Africa. The study's findings demonstrated that a higher turnover rate corresponds with higher inflation. The results held up well when the turnover rates were broken down into quarterly replacements and annual removals.

The inverse relationship between interest rates and GDP in Nigeria between 1986 and 2014 was examined by Acha and Acha (2011). who concluded that the correlation was not statistically significant. Their analysis suggested implementing measures to promote economic expansion. It was also shown that while deposit interest rates demonstrated a positive and substantial link with GDP, inflation and exchange rates had a negative and minor effect.

In Nigeria, Gbadebo and Mohammed (2015) looked into the connection between monetary impulses and inflation between 1980 and 2012. According to their results, the main factors causing inflation were the money supply, oil prices, interest rates, and exchange rates as a result of the CBN's open market operations. The study demonstrated the money supply's strong, long-term positive influence on inflation.

Acha and Acha (2011) used information from the Central Bank of Nigeria to examine how interest rates affected investments and savings in Nigeria. Using regression and Pearson's correlation coefficient, their analysis suggested that bank loans were frequently not used for profitable endeavors and showed interest rates to be poor predictors of savings and investment. The report suggested using bank loans to finance profitable ventures in order to boost the Nigerian economy.

Afrogha and Afrogha (2022). investigated how Nigeria's economic development between 1986 and 2016 was impacted by the interest rate mechanism. Through the application of OLS, Co-integration, Granger-causality, and Error Correction model data analysis methodologies, the study concluded that monetary policy rates and interest rates, among other discount rate instruments, had a considerable impact on GDP. Reducing government fiat in monetary rate determination and making discount rates more business-friendly were among the recommendations.

METHODOLOGY
An ex post facto research strategy was used in this study since it was deemed appropriate for elucidating how independent variables affected the dependent variable. This quasi-experimental design looks at the relationship between an independent variable and a dependent variable that existed before the investigation.

The target audience of the research consists of pertinent parties such investors in financial markets, commercial banks, and manufacturing sectors impacted by CBN policies. The Nigeria Stock Exchange, the Dangote Sugar production industry, and three commercial banks (Access Bank, Zenith Bank, and GT Bank) make up the sample size. These entities were chosen using non-random selection with an emphasis on their importance and profitability to the Nigerian economy.

This analysis only uses secondary data, which was taken from economic development integration reports, CBN bulletins covering the years 2000–2022, and published yearly reports. The relationship between the CBN and Nigeria's economic stabilization was examined using a straightforward regression analysis technique. The interest rate, reserve requirement, and exchange rate are proxies for the CBN. Investment, employment, and financial stability are all proxies for economic stability. See Appendix A.

Model Specification
The following model was created because various central bank proxies were in use. Thus, the following model was created and used for this research (reserve requirements, exchange rate, and interest rate):

$$ES = a_0 + a_1RR + a_2ER + a_3IR + \ldots \mu \text{ Where:}$$
ES=Economy Stability (dependent variable)
a_0 = Parameters to be estimated (the average amount of dependent variable increases when independent variable increases by 1 unit)
$a_1 – a_3$= Regression coefficient attached to variable
RR= Reserve Requirements
ER =Exchange Rate
IR= Interest Rate
μ = error term (unexplained variable)

This research has three hypotheses. Hypothesis 1 states that the amount of reserve requirements Nigeria has do not affect Nigeria's economic stability. Hypothesis 2 states that Nigeria's exchange rate does not influence its economic stability. And Hypothesis 3 states that the country's interest rate does not impact its economic stability

FINDINGS

Table 1: Descriptive Statistics

Variable	Obs	Mean Std.	Dev.	Min	Max
ES	22	68668.36	51509.02	7062.75	176075.5
RR	22	3.07E+10	1.48E+10	5.65E+09	5.30E+10
IR	22	17.61909	2.967054	11.48	24.77
ER	22	188.8832	89.82321	101.7	405.58

Source: Author's Computation (2023)

Descriptive data are shown in Table 1 for the following four variables: interest rate (IR), exchange rate (ER), reserve requirements (RR), and economy stability (ES). The mean value of Economy Stability (ES) is $68,668.36, while the standard deviation is $51,509.02. There is a minimum of

$7,062.75 and a maximum of $176,075.5 for the values. With a standard deviation of $1.48E+10 (14.8 billion), the mean value of Reserve Requirements (RR) is $3.07E+10 (30.7 billion), ranging from the minimum of 5.65E+09 (5.65 billion) and a maximum of $5.30E+10 (53.0 billion). The mean value of the interest rate (IR) is 17.62, while the standard deviation is 2.97 with a minimum value of 11.48 and a maximum of 24.77. The standard deviation of the Exchange Rate (ER) is 89.82 and its mean value is 188.88, ranging from 101.7 as the minimum value and 405.58 as the maximum.

Correlation Analysis

Table 2: Correlation Analysis

	ES	RR	IR	ER
ES	1			
RR	0.5275	1		
IR	-0.7652	-0.6782	1	
ER	0.9405	0.3178	-0.6457	1

Source: Author's Computation (2023)

Reserve Requirements (RR) and Exchange Rate (ER) exhibit a significant positive association (r = 0.9405) with Economy Stability (ES), showing a moderate positive correlation (r = 0.5275). Reserve Requirements (RR) exhibits a modest positive association (r = 0.3178) with Exchange Rate (ER) and a moderately positive correlation (r = 0.5275) with Economy Stability (ES). There is a moderate negative correlation (r = -0.6457) between Interest Rate (IR) and Exchange Rate (ER), and a significant negative correlation (r = -0.7652) between Interest Rate (IR) and Economy Stability (ES). The Exchange Rate (ER) shows a mild positive association (r = 0.3178) with Reserve Requirements (RR) and a significant positive correlation (r = 0.9405) with Economy Stability (ES). It does, however, exhibit a somewhat negative connection (r = -0.6457) with the interest rate (IR).

Test of Hypotheses

The findings of a regression analysis (Model 1) utilizing data from 2001 to 2022 (T = 22) and ordinary least squares (OLS) are shown in Table 3 (next page). Economy Stability (ES) is the dependent variable in this analysis, and Reserve Requirements (RR), Exchange Rate (ER), and Interest Rate (IR) are the independent variables.

Approximately 91.5% of the variability in Economy Stability can be attributed to the independent variables, according to the R-squared value of 0.94784, which represents the proportion of the variance in Economy Stability explained by the independent factors. With the sample size and number of independent variables taken into account, the adjusted R-squared value comes out to 0.900581, which is a more cautious estimate of the explanatory power of the model.

Table 3: Regression Analysis

Model 1: OLS, using observations 2001-2022 (T = 22)

Dependent variable: ES

	Coefficient	Std. Error	t-ratio	p-value	
Const	−5.89976	3.97613	-1.4838	0.15516	
l_RR	0.694963	0.14269	4.8704	0.00012	***
ER	0.00526746	0.000994815	5.2949	0.00005	***
IR	−0.0559254	0.0401771	-1.3920	0.18089	

Mean dependent var	10.76696	S.D. dependent var	0.982480
Sum squared resid	1.727381	S.E. of regression	0.309783
R-squared	0.914784	Adjusted R-squared	0.900581
F(3, 18)	64.40923	P-value(F)	8.02e-10
Log-likelihood	−3.227850	Akaike criterion	14.45570
Schwarz criterion	18.81987	Hannan-Quinn	15.48377
Rho	0.804434	Durbin-Watson	1.433254

Source: Author's Computation (2023)

By contrasting the explained variance with the residual variation, the F-statistic evaluates the model's overall significance. The model is statistically significant at a very high confidence level, as indicated by the computed F-statistic of 64.40923 and associated p-value of 8.02e-10. The residuals are tested for autocorrelation using the Durbin-Watson statistic. The Durbin-Watson statistic in this analysis is 1.433254. The table indicates that the exchange rate and reserve requirements are statistically significant indicators of the stability of the economy. Nevertheless, there isn't much proof that the interest rate and economic stability are related.

Hypothesis 1

Reserve Requirements (RR): 0.694963 is the coefficient, while 0.14269 is the standard error. The p-value is 0.00012 and the t-ratio is 4.8704. The coefficient shows a positive correlation between reserve requirements and economy stability, and it is statistically significant at a high confidence level ($p < 0.01$).

Hypothesis 2

Exchange Rate (ER): 0.00526746 is the coefficient, while 0.000994815 is the standard error. The p-value is 0.00005 and the t-ratio is 5.2949. At a high degree of confidence ($p < 0.01$), the coefficient is statistically significant, indicating a positive correlation between exchange rate and economy stability.

Hypothesis 3

Interest Rate (IR): -0.0559254 is the coefficient, while 0.0401771 is the standard error. The p-value is 0.18089 and the t-ratio is -1.3920. There isn't much proof that the interest rate and economy stability are related, as the coefficient is not statistically significant at traditional significance levels.

Table 4.4: Summary of Results

Independent Variable	Coefficient	t-ratio	p-value	Impact	Decision
RR (Reserve Requirements)	0.694963	4.8704	0.00012***	Positive	Accept
ER (Exchange Rate)	0.00526746	5.2949	0.00005***	Positive	Accept
ER (Exchange Rate)	0.00526746	5.2949	0.00005***	Positive	Accept
IR (Interest Rate)	-0.0559254	-1.3920	0.18089	Negative	Reject

Source: Author's Computation (2023)

DISCUSSION OF FINDINGS

According to the analysis's findings, Reserve Requirements (RR) and Economy Stability (ES) have a positive association, indicating that raising RR makes the economy more stable. Furthermore, the results show a positive correlation between the exchange rate and economic stability, implying that an increase in the exchange rate is generally associated with an increase in economic stability. The research on interest rates in Nigeria that have been discussed offer a variety of findings (e.g. Gbadebo & Mohammed (2015). Highlight the interdependence of the Nigerian economy with local policies and global situations by arguing that interest rates are influenced by both home and foreign factors. Acha and Acha (2011) discovered that interest rates were a poor predictor of savings and investment in Nigeria, challenging the traditional wisdom that lower interest rates promoted investment and economic growth. Afrogha and Afrogha (2022) suggested that monetary policy can be used to either cool or stimulate the economy, supporting the notion that interest rates and monetary policy could have a major impact on GDP.

Obamuyi et al., (2012). highlighted how real loan rates affected GDP and how borrowing costs influenced economic activity. According to Gbadebo and Mohammed (2015), the main drivers of inflation in Nigeria were the intricate interactions between interest rates, exchange rates, the money supply, and oil prices. Chukwu (2023) advocate managing the money supply in addition to interest rates in order to limit inflation. He proposed a concentration on quantity-based nominal anchors. According to McCallum and Nelson (2010), The Federal Reserve Board., regulating the money supply in a country has a mitigating effect on inflation, hence corroborating the efficacy of monetary measures in controlling inflation.

CONCLUSION AND RECOMMENDATIONS.

Conclusion

The data analysis and interpretation of results from 2000 to 2022 offer empirical evidence on the influence of the Central Bank of Nigeria (CBN) on economic stabilization. Reserve Requirements (RR) exhibit a weak positive correlation (r = 0.3178) with Exchange Rate (ER) and a substantial positive correlation (r = 0.5275) with Economy Stability (ES), as outlined in Table 4.2. Conversely, a moderate negative correlation (r = -0.6457) is observed between Interest Rate (IR) and Exchange Rate (ER), along with a significant negative correlation (r = -0.7652) between Interest Rate (IR) and Economy Stability (ES). Exchange Rate (ER) demonstrates a moderately negative connection (r = -0.6457) with Interest Rate (IR), a high positive correlation (r = 0.9405) with Economy Stability (ES), and a weak positive correlation (r = 0.3178) with Reserve Requirements (RR).

In conclusion, the analysis suggests that interest rates have minimal impact on economic stabilization, whereas CBN's reserve requirements play a more influential role. The significant impact of the exchange rate underscores its critical role in preserving economic stability. Therefore, while exchange rate policy emerges as a key instrument, adherence to CBN's reserve requirements is essential for stabilizing Nigeria's economy.

Recommendations

1. CBN should maintain a flexible interest rate policy, conducting periodic reviews to assess economic changes and potential impacts. Enhancing communication strategies is vital for transparently articulating the rationale behind interest rate decisions, managing expectations, and building confidence.

2. Continuous monitoring of the exchange rate is essential. CBN should proactively intervene in the foreign exchange market to maintain stability, diversify the economy to reduce oil dependency, and implement policies supporting non-oil sectors for a more resilient and stable exchange rate. CBN should also regularly assess and adjust reserve requirements based on evolving economic conditions. Collaborating with financial institutions ensures smooth implementation, minimizing disruptions to the financial system.

3. Policymakers should adopt a holistic and coordinated approach to economic stability, aligning monetary, fiscal, and structural policies. Enhancing data collection and analysis capabilities, regularly updating indicators, and practicing data-driven decision-making strengthen the effectiveness of policy measures.

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APPENDIX A

Year	ES	RR	IR	ER
2001	7,062.75	5649725441	21.27	101.70
2002	8,234.49	10099448198	23.44	111.23
2003	11,501.45	10646598366	24.77	120.58
2004	13,556.97	7566806239	20.71	129.22
2005	18,124.06	7415087386	19.18	132.89
2006	23,121.88	17256543969	17.95	131.27
2007	30,375.18	28279620717	16.89	128.65
2008	34,675.94	42298313133	16.94	125.81
2009	39,954.21	51333378336	15.14	118.57
2010	43,461.46	53000575307	18.99	148.88
2011	55,469.35	42382717738	17.59	150.30
2012	63,713.36	32339472716	16.02	153.86
2013	72,599.63	32639987436	16.79	157.50
2014	81,009.96	43830638132	16.72	157.31
2015	90,136.98	42847532138	16.55	158.55
2016	95,177.74	34241737874	16.85	192.44
2017	102,575.42	28283230144	16.87	253.49
2018	114,899.25	27232964319	17.55	305.79
2019	129,086.91	39608525296	16.90	306.08
2020	145,639.14	42838869125	15.38	306.92
2021	154,252.32	38335890479	13.64	358.81
2022	176,075.50	36729565818	11.48	405.58