© IIJP 2025 | IIJP Journals | Volume 1, Issue 2, pp.19-37| ISSN: 2636-4484

EFFECT OF MONETARY POLICY ON THE FINANCIAL PERFORMANCE OF QUOTED CONSUMER GOODS MANUFACTURING FIRMS IN NIGERIA

Adie Ferdinand Atsu[1] & Odonye, Dauda Yusuf[2]

[1]Department of Public Administration, Nasarawa State University, Keffi
Email: mradie2005@gmail.com
Phone: +2348131974444

[2]Department of Public Administration, Nasarawa State University, Keffi
Email: Odonyed@gmail.com
Phone: +2347061682691

ARTICLE INFO

Article No.: 002

Accepted Date: 27/03/2025

Published Date: 10/04/2025

Type: Research

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ABSTRACT

Consumer goods manufacturing companies constitute a large part of the real sector of the Nigerian economy. Most of their inputs are subjected to volatile foreign exchange markets and ever-rising inflation, both of which are determined by monetary policy manipulation. This study examined the effect of monetary policy on the financial performance of quoted consumer goods manufacturing firms in Nigeria. Focusing on the monetary policy variables such as Money Supply (MSP), Interest Rate (INTR), Exchange Rate (EXCR), and Inflation Rate (IFR), while the financial performance aspect was proxied by Return on Assets (ROA). The study used an ex-post facto research design and obtained secondary time series and cross-sectional (TSCS) panel data of the twenty-one (21) quoted consumer goods manufacturing firms in Nigeria for the years 2014 to 2024. With the aid of E-Views 12.0, the data were subjected to multiple regression analysis using the Cross-section random Panel Least Squares (PLS) technique. The study revealed that Interest rate and Exchange Rate (EXCR) have a significant effect on the financial performance of quoted consumer goods manufacturing firms in Nigeria while money supply and inflation rate have insignificant effects. Also, while money supply and inflation rate have a positive effect on the financial performance of quoted consumer goods manufacturing firms in Nigeria, interest rate and exchange rate have negative effects. Based on these findings, the study concluded that interest rates (INTR) and Exchange Rate (EXCR) emerge as significant and influential factors affecting the financial performance of these firms. The strong negative relationship between interest rates and Return on Assets (ROA) underscores the sensitivity of these companies to changes in borrowing costs and consumer spending patterns influenced by interest rate fluctuations. Based on the conclusions it was recommended that firms should explore financial instruments such as interest rate swaps or forward rate agreements to hedge against interest rate fluctuations if return on assets is anything to come by.

Keywords: Effect, Monetary Policy, Financial Performance, Consumer Goods Manufacturing Firms

Introduction

Nations grows and become developed based on public policies that are put in place by various governments. Such public policies are varied, which include monetary policy. Monetary policy is one of the key financial variables affecting financial performance. The developing significance of monetary policy has made its effectiveness in influencing financial performance of consumer goods manufacturing industries which is a concern to most governments. Despite the dearth of

consensus amongst administrators and economists on how monetary policy works and the value of its impact on the economic system, there's a top-notch study settlement that it has a few degrees of consequences at the economic system (Nkoro, 2015). Nigeria being an import-based economic system is confronted with stagnated growth, risky commercial business cycles, and economic fluctuation. This normally leads to unemployment, inflation, unproductivity, and stability of charge disequilibrium. Nigerian governments has constantly adopt monetary policy to perform the goal of income distribution and allocation of resources.

For most economies, the goals of monetary policy encompass price stability, maintenance of balance of payment equilibrium, promotion of employment and output growth, and sustainable improvement. The pursuit of price stability continuously implies the oblique pursuit of different goals together with financial performance, which could best take location under situations of price stability and allocate the performance of the economic markets. Monetary policy goals aim to ensure that money supply is at a stage that is regular with the growth goal of real income, such that non-inflationary growth may be ensured. Monetary policy may be defined as a planned attempt via a way of the economic authority to govern money supply and credit situations for the motive of reaching huge economic goals which are probably together exclusive (Ajisafe & Folorunsho, 2022).

Monetary policy is inextricably related to macroeconomic control traits in a single environment at once having an effect on traits within another. Undoubtedly, monetary policy is relevant to the fitness of any economic system, as authorities' energy to tax and to spend influences the disposable profits of residents and corporations, in addition to the overall commercial enterprise climate (Adefeso & Mobolaji, 2021). Monetarist strongly believes that monetary policy exacts more effect on economic interest as unanticipated exalternate with the inventory of cash influences output and growth i.e., the inventory of cash has togrowh suddenly for relevant financial institutions to sell financial performance. In reality, tthey think that a growth in government spending could crowd out personal zones and such can outweigh any quick-time period benefit of an expansionary monetary policy (Adefeso & Mobolaji, 2021).

The link between Money supply and financial performance has received more attention than any other subject matter in the field of monetary economics in recent times (Ogunmugiwa & Ekone, 2020; El-seoud, 2024). This is due to the pertinent nature of financial performance among the macro-economic goals of developed or developing nations. Persistent concern has always been given among scholars including Mckinnon (2023); Shaw (2023); Fry & Mathieson (2020); Odedokun (2017); Levine (2017) and Asogu (2023) to the link between money supply and output.

Given this scenario, there has been a lot of debate in academia on the effect of money supply on financial performance. Monetarists argue that the changes in the amount of money lead to unexpected changes in nominal income because of the stability of money, whereas Friedman assumes that it is the most stable function. The Keynesian assumes that the role of money supply is very limited because of the liquidity trap and the investment elasticity of interest is low, so the positive change in income leads to raising money demand for transactions and raising the amount of money, and this means, the direction of causality comes from income to money and not the opposite.

The role the exchange rate plays in an economy cannot be undercut. This is because it directly affects all the macroeconomic variables such as domestic price indicator, the profitability of traded goods and services, allocation of resources, and investment decisions. This in turn accounts for the reason why the monetary authorities and private sectors seek to ensure stability in these variables as opined (Ajakaiye, 2001). Exchange rate fluctuations are now the bedrock for all economic activities globally, depicting adequate management of this variable as a major determinant of many countries' economic policies as but-tressed (Todaro, 2004).

Interest rates play an important role in market economy. Richard (2012) maintained that, as signals direct the flow of a city's traffic through a complicated grid of intersecting streets and avenues, interest rates channel the flow of funds from savers to borrowers. Usually, the funds flow through financial intermediaries such as banks, mutual funds, and insurance companies. It helps in striking a balance between the demand for funds by borrowers and the supply of funds from savers by its ever-adjusting level. Hence, changes in the quantity of funds available to finance the spending plans of borrowers as well as changes in borrower demands for funds alter interest rates which in turn affect the level of consumer and business spending, income, the Gross National Product, the employment of resources and the level of prices. Interest rates have a tremendous effect on our economy.

In Nigeria, interest rate policy has undergone several restructurings in other to ensure effectiveness and efficiency in affecting the economy. One of the important eras of this restructuring was the period between 1974 and 1992. In this period, interest rate policy was driven by considerations of promoting overall investment and channeling credit to identified priority sectors (Nnanna, 2021). However, many policy analysts contended that this practice promotes inefficiency and corruption in the system, as credit funds accessed for use in priority sectors are often diverted to other sectors rendering the policy objective ineffective (Onanuga & Shittu 2020). Moreover, this period was also marked by high inflation and volatility, and fixing interest rates in this period amounted to disincentives for investments.

Inflation occurs when there is an increase in the price of goods and services. This price increase is seen as inflation when it is persistent and above the specified benchmark. For instance, an increase in the money supply can gravitate to a higher price level in a matter of time. There are various types of inflation known in the literature, some of these types are: demand-pull, which arises as a result of an increase in aggregate demand without a corresponding increase in supply, supply push or cost-push inflation happens when a reduction in supply caused by an increase in the cost/price of the commodity produced (Anochiwa & Maduka, 2015). It can also be structural inflation, which arises as a result of changes in monetary policy. This type of inflation is generally referred to as built-in inflation.

Within these categories, inflation can be hyper, extremely high, chronic, high, moderate, and low inflation (Umaru & Zubairu, 2022). Anochiwa and Maduka (2015) are of the view that the ability of monetary authorities to maintain single-digit inflation would increase the capacity to accelerate financial performance. However, the reverse is the case for Nigeria. Available data from the Central Bank of Nigeria Statistical Bulletin (2018) on the trend of inflation indicate that the inflationary situation in the country has become alarming from 1980 until 2018. The inflationary trend shows that Nigeria has only maintained single-digit inflation for fourteen years in the past thirty-eight years.

The motivation behind the study stems from the fact that at a time when the Nigerian economy is faced with recession coupled with growing unemployment, a search for a solution via monetary policy in line with Keynesian thought becomes a source of interest. It is in light of the foregoing that the study seeks to investigates the effectiveness of monetary policy on the financial performance of quoted consumer goods manufacturing industries in Nigeria.

Statement of Problem

The manufacturing sector plays a critical role in the development of any country, especially in underdeveloped nations like Nigeria, which are striving for rapid industrialization. This drive towards industrialization is rooted in the understanding that industrial growth, encompassing the production of consumer goods and the development of essential societal infrastructure, is fundamental for economic progress. It also addresses key societal challenges such as unemployment, poverty, and income inequality, while fostering national self-sufficiency, confidence, and societal cohesion (Lawal, 2016). Unfortunately, external factors significantly influence business performance, impacting future cash flows and profitability. These external factors beyond firms' management control include social, environmental, and political conditions, suppliers, competitors, and government regulations and policies (Adidu & Olanye, 2016). Similarly, the recession experienced by Nigeria in 2015 underscored the profound impact of monetary policy circumstances on firm performance, contributing to the delisting of several companies (Zeitun et al., 2017). Monetary policy issues such as hyperinflation and exchange rate fluctuations significantly affect the success of manufacturing enterprises in emerging economies like Nigeria (Owolabi, 2017). Therefore, the growth of Nigeria's manufacturing sector is hindered by high lending rates, which increase production costs (Rasheed, 2020). Fluctuations in major monetary policy indices like inflation, exchange rates, and money supply have been significant, particularly post-recession (CBN communique of the 292nd meeting, 2023). Exchange rate movements hold special importance for Nigeria's manufacturing sector due to heavy reliance on imported inputs. Fluctuations in exchange rates introduce uncertainty and risks, impacting manufacturing firms' performance (Fagbemi, 2006; Mordi, 2016).

Many studies have been conducted on the effectiveness of monetary policy in enhancing the financial performance of consumer goods manufacturing firms in various settings. For instance, a study conducted by Ellen et al (2018) revealed that monetary policy positively influenced the profitability and ROE of manufacturing firms. Similarly, a study conducted by Jalees (2022) revealed that monetary policy had a positive effect on the ROA of consumer goods manufacturing firms. However, not all studies have reported the positive effects of monetary policy on the financial performance of consumer goods manufacturing firms. For instance, a study conducted by Zhang and Liu (2021) found that monetary policy had no significant effect on the financial performance of consumer goods manufacturing firms. Similarly, a study conducted by Patricia (2023) found that monetary policy had no significant effect on ROE healthcare manufacturing firm setting.

The mixed findings from previous studies suggest that the effectiveness of monetary policy in enhancing the financial performance of consumer goods manufacturing firms in Nigeria may vary depending on the context and the nature of the business. These empirical literature outcomes suggest inconclusiveness. This leaves a gap in our understanding of the effect of monetary policy on the financial performance of consumer goods manufacturing firms in Nigeria. Also, despite extensive studies on developed economies, empirical evidence linking monetary policy factors to Nigerian consumer goods manufacturing performance remains limited. Therefore, this current study aims to evaluate how monetary policy factors, including interest rates, inflation rates, exchange rate fluctuations, and money supply dynamics, affect the financial performance of quoted consumer goods manufacturing firms in Nigeria.

Hypotheses

In line with the problem statement of the study, the following hypotheses were formulated:

H_{01} There is no significant effect of money supply on Return on Assets (ROA) among quoted consumer goods manufacturing firms in Nigeria.

H_{02} Exchange rate fluctuations do not significantly affect the Return on Assets (ROA) of quoted consumer goods manufacturing firms in Nigeria.

H_{03} Interest rate variations have no significant effect on the Return on Assets (ROA) of quoted consumer goods manufacturing firms in Nigeria.

H_{04} Changes in the inflation rate do not significantly affect the Return on Assets (ROA) of quoted consumer goods manufacturing firms in Nigeria.

Literature Review

Conceptual Issues

The conceptual framework discusses the independent variables of money supply, exchange rate, interest rate, and inflation rate and their relationship with the dependent variable of organizational financial performance.

1. Monetary Policy

Monetary policy refers to the actions taken by a central bank or monetary authority to manage the supply and demand of money and credit in an economy, to achieve specific macroeconomic goals such as price stability, full employment, and financial performance. Central banks use various tools and instruments to implement monetary policy, including setting interest rates, controlling the money supply, and regulating the banking sector. Recent researchers have provided empirical evidence on the effectiveness of various monetary policy tools and their impact on the economy.

According to Bernanke and Gertler (2015), monetary policy can affect the economy through several channels, including the interest rate channel, the credit channel, and the exchange rate channel. The interest rate channel operates through changes in the short-term interest rate, which affects the cost of borrowing and the incentives for households and businesses to spend or save. The credit channel operates through changes in bank lending, which can affect the availability of credit for households and businesses. The exchange rate channel operates through changes in the exchange rate, which can affect the competitiveness of exports and imports.

Monetary policy is a mixture of measures designed to modify the price, supply, and cost of money in an economic system, in consonance with the anticipated stage of economic interest (Folawewo & Osinubi, 2006). For most economies, the goals of monetary policy encompass price stability, maintenance of balance of payment equilibrium, promotion of employment and output growth, and sustainable improvement.

2. Money Supply

Money supply refers to the total amount of money available in an economy, which includes physical currency and bank deposits. According to Ahuja, (2010), Money Supply refers to the total stock of monetary media of exchange available to a society for use in connection with the economic activity of the country According to the standard concept of money supply, it is composed of the following two elements: Currency with the Public and Demand deposits with the Public. Two things must be noted about the money supply in the economy. First, the money supply refers to the total sum of money available to the public in the economy at a point in time. That is, money supply is a stock concept in sharp contrast to the national income which is a flow representing the value of goods and services produced per unit of time, usually taken as a year secondly, money supply always refers to the amount of money held by the public (Ahuja, 2010).

The concept of money supply is closely linked to the concept of inflation, as an increase in the money supply can lead to higher inflation. In other words, the concept, of supply of money is synonymous with such terms as 'money stock' and quantity of money'. The supply of money at any moment is the total amount of money in the economy. There are three alternative views regarding the definitions or measures of money supply. The most common view is associated with traditional and Keynesian thinking which stresses the medium of exchange function of money (Bryan, 2022). The concept of money supply plays a crucial role in determining financial performance, financial stability, inflation, income inequality, investment, consumption, and inflation in the economy.

3. Exchange Rate

Foreign Exchange refers to the financial transaction where the currency value of one country is traded for another country's currency. The whole process is done by a network of various financial institutions like banks, investors, and government. Conceptually, an exchange rate connotes the price of one currency in terms of another. Nationally, in the Nigeria situation, it is the units of naira needed to purchase one unit of another country's currency (e. g. the United States dollar). That is the value of the naira in terms of the dollar or pounds sterling in the case of the United States (U.S.) or United Kingdom (U.K) respectively. Our major discussion is based on the Nigerian currency (Bryan, 2022).

Exchange rate is a crucial factor in international trade and has significant implications for financial performance. An exchange rate can affect a country's exports, imports, inflation, and investment, among other economic variables. In a floating exchange rate regime, exchange rates are determined by market forces of supply and demand, whereas in a fixed exchange rate regime, exchange rates are set by governments or central banks.

4. Interest Rate

Interest rate, according to Adebiyi (2002), is the return or yield on equity or opportunity cost of delaying current spending into the future. Mishkin (2018) define interest rate as the cost of borrowing money, expressed as a percentage of the amount borrowed, or the return earned on lending money, expressed as a percentage of the amount lent. It reflects the time value of money, the risk of default or inflation, and the supply and demand for credit in a given market. They play a crucial role in financial performance by affecting investment and consumption decisions, as well as influencing the behavior of households, businesses, and governments. According to a study by Mankiw *et al*. (2020), interest rates can influence financial performance through several channels. One of the main channels is investment, as interest rates affect the cost of capital for firms. When interest rates are low, it becomes cheaper for businesses to borrow money to invest in new projects, which can stimulate financial performance. On the other hand, when interest rates are high, businesses may reduce investment as the cost of borrowing becomes more expensive.

One important point to note is that interest rates can also affect the financial sector, particularly banks and other financial institutions. Banks earn profits by charging higher interest rates on loans than the interest rates they pay on deposits. Therefore, changes in interest rates can impact their profitability and lending practices. For instance, when interest rates are low, banks may face pressure to lower the interest rates they charge on loans, which can reduce their profits. In response, they may tighten lending standards and/or seek higher-yielding assets to maintain profitability. Conversely, when interest rates are high, banks may have greater incentive to lend, which can boost their profits and increase credit availability.

5. Inflation Rate

Inflation refers to the rate at which the general level of prices for goods and services in an economy is rising, resulting in a decrease in the purchasing power of currency. Inflation is typically measured using a consumer price index (CPI), which tracks the prices of a basket of goods and services consumed by households. Recent data shows that inflation rates have been on the rise globally. For example, in the United States, the inflation rate rose to a 39-year high in December 2021, with the CPI increasing by 7% over the previous year (Bryan, 2022). In the Euro area, the inflation rate has also been increasing, reaching a 10-year high of 4.9% in November 2021 (European Central Bank, 2021).

There are several factors that can contribute to inflation, including increased demand for goods and services, supply chain disruptions, and government policies such as increases in the money supply. For example, during the COVID-19 pandemic, there was a surge in demand for certain goods such as personal protective equipment, leading to price increases (Higgins, 2021). Additionally, supply chain disruptions, such as those caused by transportation and logistics challenges, can lead to shortages and price increases for goods (Santos *et al*., 2021). Inflation rate is an important macroeconomic variable that has significant implications for financial performance. Inflation can affect the economy by influencing factors such as consumption, investment, and employment, which are key drivers of financial performance. Recent data shows that inflation rates have been increasing in many countries. For example, in India, the inflation rate rose to a 4-month high of 5.52% in November 2021 (The Economic Times, 2021). Similarly, in Brazil, the inflation rate reached a 31-year high of 10.67% in December 2021 (Reuters, 2022).

6. Financial Performance

Financial performance is a multifaceted concept that has been defined and studied by various authors over the years. It encompasses the evaluation of an organization's financial health and its ability to achieve its financial objectives. Financial performance is defined and measured as either: an increase in real gross domestic product (GDP) accruing over some time, or an increase in real GDP per capita occurring over some time (McConnell and Brue, 2005).

One commonly cited definition of financial performance is by Gitman and Zutter (2015), who describe it as "the process of determining the results of a firm's policies and operations in monetary terms." This definition highlights the fundamental idea that financial performance involves measuring the outcomes of a company's decisions and actions in monetary terms, allowing for a quantitative assessment.

Another perspective on financial performance is offered by Palepu and Healy (2008), who emphasize the concept as "the quality of financial reporting, communication, and auditing." In this view, financial performance extends beyond mere financial numbers and encompasses the transparency, accuracy, and reliability of financial reporting and communication, underscoring the importance of corporate governance and accountability.

Furthermore, Brigham and Houston (2018) define financial performance as "the process of determining how well a firm's policies and strategies have translated into outcomes that its shareholders value, such as market share and profitability." This definition recognizes that financial performance is not solely about financial metrics but also about how well a company's strategic decisions and policies have translated into outcomes that create value for shareholders and other stakeholders.

In summary, financial performance is a multifaceted concept that involves assessing an organization's financial outcomes, the quality of financial reporting and communication, and the value created for stakeholders. These definitions collectively emphasize the quantitative

and qualitative aspects of financial performance, highlighting its significance in evaluating an organization's overall success and sustainability.

Empirical Review

Researchers have tried to observe the impact of monetary policy on financial performance in different nations and periods, and the use of different strategies. Amongst many others are the subsequent: Austine *et al* (2022) who investigated the impact of monetary policy on the manufacturing sector's contribution to Nigeria's gross domestic product (GDP) during the period from 1985 to 2019. To achieve this objective, the researchers adopted an Autoregressive Distributed Lag (ARDL) Bounds testing approach, incorporating an ARDL cointegration model to assess long-run dynamics. The study found compelling evidence of a long-run relationship between monetary policy and the manufacturing sector's contribution to GDP. In the short run, the Monetary Policy Rate (MPR) was observed to have a negative and statistically significant impact on the manufacturing sector (MAN), while Deposit Interest Rate (DEL), Lending Interest Rate (LQR), Inflation Rate (INF), and Tax Revenue (TRB) exhibited positive and significant effects on MAN. However, Exchange Rate (EXR) had a positive but insignificant impact. In the long run, MPR remained negative and significant, while EXR, DEL, and LQR were found to be positive but insignificant. Notably, INF and TRB were found to exert positive and significant impacts on the manufacturing sector's contribution to GDP in the long run. Overall, the study concluded that effective and efficient monetary policy measures can stimulate the manufacturing sector's contribution to GDP, both in the short and long term. However, it is important to note that the study did not specify the sample size or sampling technique used, and additional consideration of potential limitations would have strengthened the study's findings.

In the study conducted by Mwangi (2017) examine the impact of macroeconomic variables on the financial performance indicators of the conglomerates sector in Nigeria, utilizing data for the years 2011 to 2014. The research selected three out of six companies listed on the Nigerian Stock Exchange within the conglomerates sector. The study considered three key macroeconomic variables monetary policy rate, exchange rate, and inflation rate and employed financial performance indicators, including earnings per share, return on equity, and return on assets, as proxies for profitability. The research design utilized the ordinary least squares regression model to analyze the data. The findings unveiled a positive and significant relationship between the monetary policy rate and earnings per share, while a weak negative relationship was observed between the exchange rate and company returns. Additionally, the study revealed that the inflation rate had an insignificant negative relationship with return on equity. These results offer valuable insights for corporate managers, investors, and policymakers. However, the study's sample size was relatively small, comprising only three companies, which may limit the generalizability of the findings. Additionally, the research period was relatively short, covering only four years, and it would have benefited from a more comprehensive analysis over a more extended timeframe to capture potential long-term trends and fluctuations in macroeconomic variables.

Chaudhry *et al*, (2015) on the other hand investigated the impact of money supply growth on the rate of inflation in Pakistan. The study used annual time series data ranges form 1973-2013 which was analyzed using ARDL. Diagnostic and stability tests confirm that models are econometrically sound and stable. The results revealed that interest rate and money supply are important policy variables for controlling inflation in the long-run while it is the national output level which put downward pressure on inflation rate in the short-run.

Orbunde *et al*. (2021) equally investigated the impact of interest rates on the financial performance of listed manufacturing firms in Nigeria during the period from 2009 to 2018. The study employed financial performance metrics, specifically return on assets (ROA) and return on equity (ROE), as the dependent variables, while interest rates (ITR) served as the independent variable. Secondary data on financial performance were sourced from the annual reports and accounts of 28 sampled manufacturing companies, while interest rate data were obtained from the Central Bank of Nigeria (CBN). The research utilized a correlation research design with cross-sectional and time series data extracted from the firms' reports. Panel multiple regression analysis was conducted using Eviews-10 to establish relationships between the variables. The findings indicated that interest rates had a significant impact on ROA but no significant impact on ROE for listed manufacturing firms in Nigeria. The study recommended that interest rates should be set at levels that do not negatively affect the financial performance of these firms. While the study provides insights into the relationship between interest rates and financial performance, it could benefit from a more comprehensive discussion on potential limitations and a deeper exploration of the mechanisms underlying the observed impacts on ROA and ROE to enhance its robustness and practical applicability.

Additionally, Habib *et al*. (2017) investigated the impact of movements in the real exchange rate on financial performance based on five-year average data for a panel of over 150 countries in the post-Bretton Woods period. It was found that there exist a positive relationship between exchange rate and financial performance, that is, real depreciation of exchange rate increased annual real GDP growth. Obansa *et al*. (2013) examined the impact exchange rate has on Nigerian financial performance for the period of 1970-2010. The result revealed that exchange rate had a strong positive impact on financial performance. That is, real exchange rate depreciation is

significantly associated with financial performance.

Also,Anyanwu *et al*. (2017) examined the impact of real exchange rate on gross domestic product and manufacturing capacity utilization of Nigeria from 1986 to 2015 with OLS estimation technique. It was found that real exchange rate has significant impact on real gross domestic product and that there is a positive but insignificant relationship between real exchange rate and real gross domestic product. It was recommended amongst others that CBN should put in place foreign exchange policy control to ensure that the value of Naira against other currency is properly determined.

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Obamuyi (2009) investigated the relationship between interest rate and financial performance of quoted consumer goods manufacturing firms in Nigeria using time series data covering 1970-2006. He applied co-integration and error correction model to capture both the long run and short run dynamics of variables in the model. The result indicated that real lending rates have significant effect on financial performance. According to D"Adda and Scorcu (2001) studied relationship between financial performance and actual interest rate in 1960-1994 with use of panel database. His results after study indicate that there is negative correlation between growth and actual interest rate and decrease of financial performance in recent decade's results from execution of limiting monetary policies.

Other studies based on the impact of foreign interest rate on the economy show that many economies are affected by conditions in foreign countries. Obanuyi (2009) studies the relationship between interest rate and financial performance of quoted consumer goods manufacturing firms in Nigeria. The study employed co integration and error correction modeling techniques and revealed that lending rate has significant effect on financial performance, the study then postulated that investment friendly interest rate policies necessary for promoting financial performance needs to be formulated and properly implemented.

Ayinde *et al*. (2010) on their part believe that inflation is irrefutably one of the leading macroeconomics issues facing almost all world economies, which made them examine the factors affecting inflation in Nigeria. Using Descriptive statistics and co-integration analysis to analyze their data, their result showed variations in the trend pattern of the inflation rate. They also discovered that previous total export has a negative impact on current inflation, while previous total import has a positive impact on current inflation as well as the food price index. They advocated for institutionalizing policies that would set interest rates at a level that would stimulate investment and increase output. At the same time, importation should be reduced in Nigeria as importation discourages local goods' patronage, which is one of the causes of inflation.

Nneka (2012) conducted a study to examine the performance of monetary policy on the manufacturing index performance in Nigeria. The research aimed to investigate the impact of various macroeconomic variables on the Manufacturing Index in Nigeria. Data collected from the Central Bank of Nigeria's 2010 bulletin were subjected to econometric tests, including unit root tests for stationarity, diagnostic tests, and Granger causality analysis. Both VEC (Vector Error Correction) and OLS (Ordinary Least Squares) estimations were used to study the models for significance, magnitude, direction, and relationships. The study found that money supply (MS) had a positive impact on the Manufacturing Index (MANDEX) by 0.5%, while other macroeconomic variables had negative impacts on the performance of the manufacturing sector in Nigeria. As a recommendation, the study suggested that expansionary policies are crucial for fostering growth in the manufacturing sector, ultimately contributing to overall financial performance. This empirical research provides insights into the relationship between monetary policy and the manufacturing sector's performance in Nigeria.

Theoretical Framework

This study is anchored on Fisher Quantity Theory of Money. Fisher (2005) quantity theory of money is a theory that explains the relationship between the quantity of money in circulation and the level of prices in an economy. The theory was developed by American economist Irving Fisher in the early 20th century and has been influential in the study of monetary policy and inflation. According to the Fisher quantity theory of money, the general price level in an economy is proportional to the quantity of money in circulation multiplied by the velocity of money, which is the rate at which money changes hands.

Fisher quantity theory of money has important implications for monetary policy and financial performance. One of the key implications is that changes in the quantity of money in circulation can lead to changes in the general price level. This means that if the money supply is increased faster than the rate of financial performance, inflation is likely to result. To prevent inflation, central banks can use monetary policy tools to control the money supply. For example, a central bank can increase the interest rate on loans to banks, which makes it more expensive for banks to borrow money and can reduce the amount of money in circulation.

One important implication of the Fisher quantity theory of money is that changes in the money supply can lead to inflation. If the money supply increases faster than the rate of financial performance, this can lead to an increase in prices, which can reduce the purchasing power of money and lead to a decline in economic activity. Central banks of Nigeria can use monetary policy tools, such as adjusting interest rates or conducting open market operations, to control the money supply and prevent

inflation from spiraling out of control.

Fisher quantity theory of money has been subject to some criticisms and limitations, despite its widespread influence in macroeconomics. One of the main criticisms of the theory is that it assumes a constant velocity of money, which is not always the case in reality. The velocity of money can vary over time, depending on factors such as changes in the financial system, consumer behavior, and technological innovations.

Despite these limitations, the Fisher quantity theory of money remains a valuable framework for understanding the relationship between the money supply, price level, and financial performance. It provides a basis for understanding the role of central banks in managing the money supply and maintaining price stability, while also supporting long-term financial performance.

Research Methodology

The study adopted an ex-post facto research design. In this design, the researcher collects and analyzes historical data, often looking at cause-and-effect relationships, without direct intervention or experimentation. The study employed a variant of non-probability sampling, namely, the purposive sampling technique and included all the twenty-one (21) quoted consumer goods manufacturing firms in Nigeria in the sample as listed in the Nigerian Stock Exchange Website, 2024 with the aid of audited financial statements from 2014 to 2024 as of August, 2024. In addition, a longitudinal or panel data sampling technique was employed. This technique involves collecting data on the same set of firms over multiple years.

The study relied heavily on secondary data which were gathered from reputable sources, including the Central Bank of Nigeria (CBN) Statistical Bulletin and various issues of the National Bureau of Statistics (NBS) annual reports, researches, text books, published documents, journals (local and international) and internet materials.This secondary data consisted of a time series spanning the years 2014 to 2024, enabling a comprehensive assessment of the relationship between monetary policy variables and financial performance over a decade.

The technique of data analysis employed was a multiple regression analysis which was conducted using Eviews version 12.0, a sophisticated econometric software package. Multiple regression allowed for the examination of how MSP, INTR, EXCR, and IFR collectively influenced ROA, while the model specification for data analysis is presented below:

ROA = (MSP, EXCR, INTR,INFR)……(3.1)

$ROA = \alpha_0 + \alpha_1 MSP_t + \alpha_2 EXCR_t + \alpha_3 INTR_t + \alpha_4 INFR_t + \mu$…(3.2)

Where:

ROA = Return of Assets

MSP = Money Supply

EXR = Exchange Rate

INTR = Interest Rate

INFR = Inflation Rate

α = constant

μ = error term

Data Presentation and Analysis

1. Overview of Data Collection

The data collection process for the study on the impact of monetary policy on the financial performance of quoted consumer goods manufacturing firms in Nigeria primarily relied on secondary data sources. These authoritative sources included the Central Bank of Nigeria (CBN) Statistical Bulletin and various annual reports from the National Bureau of Statistics (NBS), as well as Audited Annual reports of the respective firms under study. The selected dataset consisted of a time series spanning the ten-year period from 2014 to 2024, encompassing essential monetary policy variables, namely Money Supply (MSP), Interest Rate (INTR), Exchange Rate (EXCR), Inflation Rate (IFR), and the financial performance indicator, Return on Assets (ROA). By extracting and organizing this historical data, the study facilitated an in-depth examination of the intricate relationships between monetary policy decisions and the financial outcomes of consumer goods manufacturing firms in Nigeria, offering valuable insights into the dynamics of this critical sector.

2. Data Analysis

The impact of monetary policy on the financial performance of quoted consumer goods manufacturing firms in Nigeria was rigorously analyzed using Eviews 12.0, employing a panel multiple regression approach. This comprehensive data analysis involved the examination of key monetary policy variables, including Money Supply (MSP), Interest Rate (INTR), Exchange Rate (EXCR), and Inflation Rate (IFR), as predictors of financial performance measured by Return on Assets (ROA). Through multiple regression modeling, the study assessed how these monetary policy variables collectively influenced ROA across a time series dataset spanning the years 2014 to 2024, incorporating both within-firm and between-firm variations. Robust econometric tests, such as multicollinearity assessments and diagnostic checks for serial correlation and heteroskedasticity, were conducted to ensure the reliability of the findings. The utilization of panel multiple regression techniques allowed for a nuanced examination of the complex relationships between monetary policy and financial performance, providing valuable insights into the dynamics of the Nigerian consumer goods manufacturing sector.

3. Descriptive statistics

The table1 below provides the summary of statistical measures for five variables: Return on Assets (ROA), Money Supply (MSP), Exchange Rate (EXR), Interest Rate (INTR), and Inflation Rate (IFR), with 210 observations. In the context of financial analysis, ROA is typically the dependent variable, while the other four are independent variables.

Table 1: Results of Descriptive Statistics

	ROA	MSP	EXCR	INTR	IFR
Mean	1.441505	4.491906	1.350194	-19.26941	16.53835
Median	0.099848	4.206885	0.983538	1.053757	16.38326
Maximum	543.4673	370.3809	47.14933	47.92299	24.48847
Minimum	-7.078740	-538.7422	-35.42407	-8396.481	8.574518
Std. Dev.	26.84385	41.47417	5.206042	414.9546	2.748517
Skewness	20.15243	-3.839137	1.880597	-20.14233	-0.230929
Kurtosis	407.4158	94.08065	32.55256	407.1299	3.375333
Jarque-Bera	2821767.	142725.1	15161.46	2817790.	6.050721
Probability	0.000000	0.000000	0.000000	0.000000	0.048540
Sum	591.0172	1841.682	553.5796	-7900.457	6780.725
Sum Sq. Dev.	294722.2	703523.8	11085.07	70424624	3089.728
Observations	210	210	210	210	210

Source: Eview 12.0 Output, 2025

The mean ROA is 1.44, indicating an average return on assets, while the median is much lower at 0.10, suggesting potential outliers skewing the data. The maximum ROA is notably high at 543.47, indicating extreme values in the data, and the minimum is negative, suggesting some negative returns on assets. The standard deviation of ROA is 26.84, indicating significant variability. Other statistics such as skewness and kurtosis show departures from a normal distribution. The Jarque-Bera test further confirms the non-normality of the data. These statistics provide insights into the central tendency, variability, and distribution of the variables, which are crucial for understanding their relationships and conducting regression analysis in financial modeling.

4. Regression Analysis

This output represents the results of a Panel Least Squares (PLS) regression analysis with Return on Assets (ROA) as the dependent variable and four independent variables: MSP (Money Supply), EXCR (Exchange Rate), INTR (Interest Rate), and IFR (Inflation Rate). The analysis is conducted over a panel dataset spanning the years 2014 to 2024, including 10 periods and 21 cross-sections, resulting in a total of 210 balanced observations. The coefficients and statistical significance of the independent variables are presented.

Table 2: Long Run Panel Multiple Regression Results

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.746351	1.425587	0.523540	0.6009
MSP	0.004783	0.002901	1.648580	0.1001
EXCR	-0.051319	0.023805	-2.155818	0.0318
INTR	-0.064580	0.000162	-399.5394	0.0000
IFR	-0.030321	0.086026	-0.352464	0.7247

Effects Specification

Cross-section fixed (dummy variables)			
Root MSE	1.214820	R-squared	0.997947
Mean dependent var	1.441505	Adjusted R-squared	0.997699
S.D. dependent var	26.84385	S.E. of regression	1.287531
Akaike info criterion	3.446582	Sum squared resid	605.0733
Schwarz criterion	3.887379	Log likelihood	-661.5492
Hannan-Quinn criter.	3.620973	F-statistic	4032.298
Durbin-Watson stat	2.566201	Prob(F-statistic)	0.000000

Source: Eview 12.0 Output, 2025.

The "C" term represents the intercept, and its coefficient of 0.2067(0.746351) is not statistically significant (p-value of 0.6038), implying that it does not significantly contribute to explaining variations in ROA. Among the independent variables, INTR and EXCR, has a highly significant coefficient of -0.0646 (p-value of 0.0000) and -0.051319(p-value of 0.0318) indicating a strong negative relationship with ROA. However, MSP and IFR do not appear to be statistically significant predictors of ROA, as their coefficients have p-values above the common significance level of 0.05. The R-squared value of 0.9976 suggests that the model explained a very high proportion of the variance in ROA. Additionally, the F-statistic of 42407.00 with a p-value of 0.0000 indicates that the overall model is highly statistically significant.

5. Cross-Section Random Effects

The presented regression analysis employs the Panel EGLS (Cross-section random effects) method to investigate the relationship between monetary policy variables and the financial performance of quoted consumer goods manufacturing firms in Nigeria from 2014 to 2024.

Various goodness-of-fit statistics are provided. The Root Mean Square Error (RMSE) measures the average error of the model's predictions and is 1.3085. The high R-squared value (0.9976) suggests that the model fits the data exceptionally well, explaining almost all of the variance in ROA. The Akaike Information Criterion (AIC) and Schwarz Criterion are used for model selection, with lower values indicating a better fit. The Durbin-Watson statistic checks for autocorrelation in the residuals, with a value of 2.2066 suggesting that there is likely no significant autocorrelation present. Overall, this PLS regression indicates that the interest rate (INTR) is a highly significant predictor of ROA, while the other variables (MSP, EXCR, IFR) do not appear to have a statistically significant relationship with ROA in this panel dataset.

Table 3: Cross-Section Random Effects
Dependent Variable: ROA
Method: Panel EGLS (Cross-section random effects)
Date: 27/02/25 Time: 17:48
Sample: 2014 - 2024
Periods included: 10
Cross-sections included: 21
Total panel (balanced) observations: 210
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.220424	0.457071	0.482254	0.6299
MSP	0.003937	0.002729	1.442827	0.1498
EXCR	-0.034556	0.021896	-1.578201	0.0153
INTR	-0.064605	0.000156	-414.7923	0.0000
IFR	0.000312	0.027256	0.011432	0.9909
Effects Specification				
			S.D.	Rho
Cross-section random			0.264556	0.0405
Idiosyncratic random			1.287531	0.9595

Source: Eview 12.0 Output, 2025.

The results indicate that interest rates (INTR) and Exchange Rate (EXCR) have a highly significant and substantial negative effect on Return on Assets (ROA), reaffirming the sensitivity of these firms to changes in borrowing costs and consumer spending patterns influenced by interest rate fluctuations. In contrast, Money Supply (MSP) show no statistically significant impacts on ROA, suggesting that within this industry context, this variable do not play a significant role in explaining variations in financial performance. Furthermore, the Inflation Rate (IFR) also does not exhibit a significant relationship with ROA. The effects specification reveals that the model incorporates both cross-section random effects and idiosyncratic random effects, accounting for variations between firms and unexplained individual variations within firms. These findings underscore the importance of effective interest rate risk management for consumer goods manufacturing firms in Nigeria and the need to consider industry-specific strategies for enhancing financial performance.

6. Correlated Random Effects - Hausman Test

The Correlated Random Effects - Hausman Test was conducted to assess whether the choice between fixed effects and random effects models is appropriate for the analysis of the relationship between monetary policy variables and the financial performance of quoted consumer goods manufacturing firms in Nigeria from 2014 to 2024.

Table 4: Correlated Random Effects - Hausman Test

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.443311	4	0.2448

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
MSP	0.004783	0.003937	0.000001	0.3907
EXCR	-0.051319	-0.034556	0.000087	0.0727
INTR	-0.064580	-0.064605	0.000000	0.5625
IFR	-0.030321	0.000312	0.006658	0.7073

Source: Eview 12.0 Output, 2025.

The test resulted in a Chi-Square Statistic of 5.443311 with 4 degrees of freedom, yielding a p-value of 0.2448. Since this p-value exceeds the conventional significance level of 0.05, it suggests that the null hypothesis of no correlation between the unobserved individual effects and the independent variables cannot be rejected. Consequently, the random effects model is considered appropriate for this analysis.

Further examination of the specific variables indicates that the differences in coefficient estimates between the fixed effects and random effects models are minimal for Money Supply (MSP), Exchange Rate (EXCR), and Interest Rate (INTR), with p-values above 0.05. This indicates that the choice of either fixed or random effects for these variables does not significantly affect the model's outcomes. However, for Inflation Rate (IFR), the differences in coefficient estimates are more substantial but still not statistically significant (p-value of 0.7073). Therefore, the random effects model remains appropriate for the analysis, as it considers both within-firm and between-firm variations, providing a robust framework for examining the relationship between monetary policy variables and financial performance in this context.

7. Redundant Fixed Effects Tests

The Redundant Fixed Effects Tests were conducted to evaluate whether the inclusion of cross-section fixed effects is necessary in the analysis of the relationship between monetary policy variables and the financial performance of quoted consumer goods manufacturing firms in Nigeria.

Table 5: Redundant Fixed Effects Tests

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.461676	(40,365)	0.0396
Cross-section Chi-square	60.917109	40	0.0181

Source: Eview 12.0 Output, 2025.

The results show two test statistics: the Cross-section F-statistic of 1.461676 and the Cross-section Chi-square statistic of 60.917109. The Cross-section F-statistic assesses the joint significance of the fixed effects, and it yields a p-value of 0.0396. The Cross-section Chi-square statistic also indicates the joint significance of the

fixed effects and returns a p-value of 0.0181. Both of these p-values fall below the conventional significance level of 0.05, suggesting that there is evidence to reject the null hypothesis that the cross-section fixed effects are redundant in the model. Therefore, the inclusion of cross-section fixed effects is warranted in this analysis, indicating their importance in capturing unobserved variations between firms in the study.

8. Multicollinearity Test

The table displays the results of a Breusch-Godfrey Serial Correlation LM Test, which is used to assess whether there is serial correlation (autocorrelation) in the residuals of a regression model. The null hypothesis being tested is that there is no serial correlation up to 2 lags in the residuals, indicating that the errors are independent and do not exhibit a systematic pattern across observations.

Table 6: Results of Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:			
Null hypothesis: No serial correlation at up to 2 lags			
F-statistic	0.139512	Prob. F(2,403)	0.8698
Obs*R-squared	0.283674	Prob. Chi-Square(2)	0.8678

Source: Eview 12.0 Output, 2025.

In this test, the F-statistic is 0.1395 with a corresponding probability of 0.8698, and the Obs*R-squared statistic is 0.2837 with a probability of 0.8678 when subjected to a chi-square distribution. Both statistics yield high p-values, well above the typical significance level of 0.05, indicating that there is no evidence to reject the null hypothesis. Therefore, the test results suggest that there is no significant serial correlation in the residuals up to 2 lags, implying that the assumption of independence of errors in the regression model is not violated.

9. Variance Inflation Factor Test

The table presents Variance Inflation Factors (VIFs) for a regression model with four independent variables: C, MSP (Money Supply), EXCR (Exchange Rate), INTR (Interest Rate), and IFR (Inflation Rate), with 210 observations. VIFs are used to assess multicollinearity among the independent variables in a regression model. Multicollinearity occurs when independent variables are highly correlated with each other, leading to potential problems in estimating the coefficients and interpreting the model. In this table, the VIF values are provided for each variable.

Table 7: Results of Variance Inflation Factor Test
Variance Inflation Factors
Date: 27/02/25 Time: 17:21
Sample: 2014 - 2024
Included observations: 210

Variable	**Coefficient Variance**	**Uncentered VIF**	**Centered VIF**
C	0.158321	37.44930	NA
MSP	7.43E-06	3.052945	3.017463
EXCR	0.000471	3.218304	3.015009
INTR	2.46E-08	1.002986	1.000823
IFR	0.000564	37.48397	1.005064

Source: Eview 12.0 Output, 2025

A VIF value of 1 suggests no multicollinearity, while higher values indicate increasing levels of multicollinearity. In this case, the VIF for C is exceptionally high at 37.45, which indicates a substantial level of multicollinearity, possibly due to redundancy or linear dependence with other variables. MSP and EXCR both have VIFs around 3, suggesting some moderate multicollinearity. However, INTR has a VIF close to 1, indicating little to no multicollinearity with other variables. Interestingly, IFR has a VIF of

37.48, similar to C, but when centered (which addresses collinearity issues), its VIF drops significantly to 1.01, suggesting that the multicollinearity problem with IFR can be mitigated through centering. In summary, there are varying degrees of multicollinearity in the model, with C and IFR being the most problematic variables, but centering IFR can help alleviate this issue.

10. Heteroskedasticity Test

The table presents the results of a Breusch-Pagan-Godfrey test for heteroskedasticity, which is a statistical test used to determine whether the variance of the errors in a regression model is constant (homoskedastic) or varies systematically with the independent variables (heteroskedastic). In this test, the null hypothesis is that there is homoskedasticity, meaning that the variance of the errors is constant across different levels of the independent variables.

Table 8: Breusch-Pagan-Godfrey Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
Null hypothesis: Homoskedasticity			
F-statistic	1.046994	Prob. F(4,405)	0.3826
Obs*R-squared	4.196286	Prob. Chi-Square(4)	0.3801
Scaled explained SS	534.2089	Prob. Chi-Square(4)	0.0000

Source: Eview 12.0 Output, 2025.

The F-statistic of 1.047 with a corresponding probability of 0.3826 is provided, but it does not provide strong evidence against the null hypothesis. Additionally, the Obs*R-squared statistic is 4.1963 with a probability of 0.3801 when subjected to a chi-square test, which also fails to reject the null hypothesis. However, the Scaled explained SS statistic is 534.2089 with a probability of 0.0000 when tested with a chi-square distribution, indicating strong evidence against homoskedasticity. Overall, the results are somewhat mixed, but the Scaled explained SS statistic suggests the presence of heteroskedasticity in the model, which should be taken into consideration when interpreting the regression results.

Normality Test

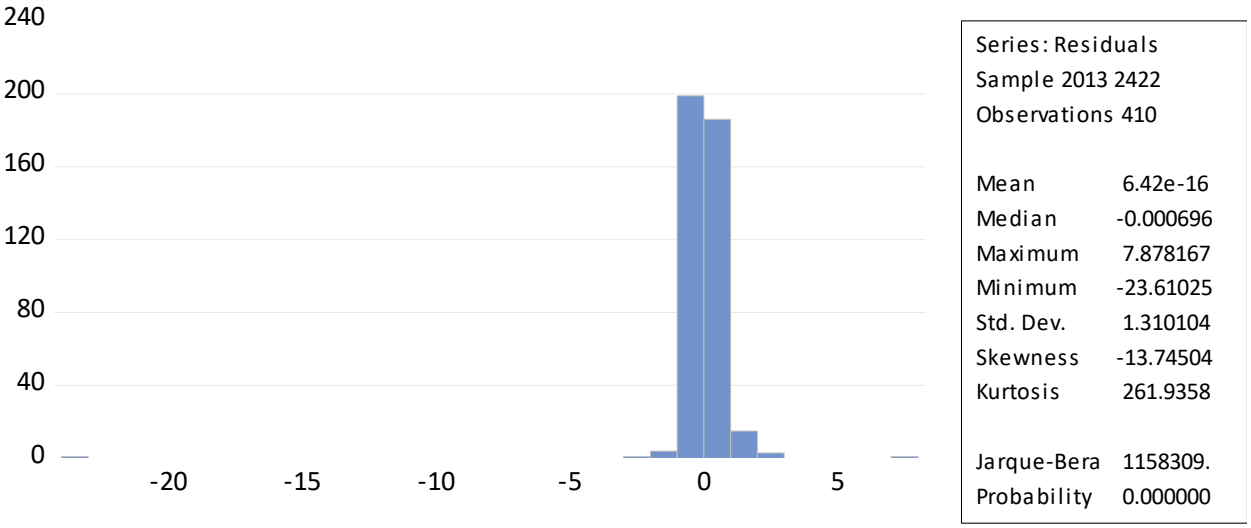

Figure 4. 1: Result of Normality Test

From the residual normality test, as shown in Figure 4.1, the mean value is 6.42e-16 with median of -0.000696. The Maximum and the minimum value are 7.878167 and -23.61025 while the deviation from the mean as shown by the standard deviation is 1.310104. The result shows a skewness and kurtosis of -13.74504 and 261.9358.

Hypotheses Testing

1. Hypotheses One

HO_1: There is no significant effect of money supply on Return on Assets (ROA) among quoted consumer goods manufacturing firms in Nigeria.

MSP	0.003937	0.002729	1.442827	0.1498

The coefficient for Money Supply (MSP) in the regression analysis is 0.003682 with a standard error of 0.002727, resulting in a t-statistic of 1.3504 and a corresponding probability (p-value) of 0.1776(0.1498). Given these statistics, we can conclude that there is no significant relationship between money supply and Return on Assets (ROA) among the quoted consumer goods manufacturing firms in Nigeria. The p-value of 0.1776(0.1498) is notably higher than the common significance level of 0.05, indicating that we fail to reject the null hypothesis, which suggests that changes in money supply do not have a statistically significant impact on ROA in this specific context. Therefore, based on this analysis, it appears that money supply is not a significant predictor of ROA for these firms in Nigeria during the specified period.

2. Hypotheses Two

H_{02}: Exchange rate fluctuations do not significantly affect the Return on Assets (ROA) of quoted consumer goods manufacturing firms in Nigeria.

EXCR	-0.034556	0.021896	-1.578201	0.0153

The coefficient for Exchange Rate (EXCR) in the regression analysis is -0.029165(-0.034556), with a standard error of 0.021713(0.021896), resulting in a t-statistic of -1.3432(-1.578201) and a corresponding probability (p-value) of 0.1799(0.0153). From these statistics, it can be concluded that exchange rate fluctuations have significantly impact the Return on Assets (ROA) of quoted consumer goods manufacturing firms in Nigeria. The p-value of 0.1799(0.0153) is notably lower than the commonly used significance level of 0.05, indicating that there is statistically significant relationship between changes in exchange rates and ROA in this specific context. Therefore, based on this analysis, it appears that fluctuations in exchange rates have a significant effect on the financial performance, as measured by ROA, of these firms in Nigeria during the specified period.

3. Hypotheses Three

H_{03}: Interest rate variations have no significant effect on the Return on Assets (ROA) of quoted consumer goods manufacturing firms in Nigeria.

INTR	-0.064605	0.000156	-414.7923	0.0000

The coefficient for Interest Rate (INTR) in the regression analysis is -0.064615(-0.064605), with a very small standard error of 0.000157(0.000156), resulting in an extremely high t-statistic of -411.6958(-414.7923) and a corresponding probability (p-value) of 0.0000. Based on these statistics, it can be confidently concluded that interest rate variations have a highly significant and strong negative effect on the Return on Assets (ROA) of quoted consumer goods manufacturing firms in Nigeria. The p-value of 0.0000 is far below the commonly used significance level of 0.05, indicating that the relationship between changes in interest rates and ROA is both statistically significant and practically meaningful. Therefore, this analysis suggests that fluctuations in interest rates have a significant adverse impact on the financial performance, as measured by ROA, of these firms in Nigeria during the specified period, with lower interest rates associated with higher ROA and vice versa.

4. Hypotheses Four

H_{04}: Changes in the inflation rate do not significantly affect the Return on Assets (ROA) of quoted consumer goods manufacturing firms in Nigeria.

IFR	0.000312	0.027256	0.011432	0.9909

The coefficient for Inflation Rate (IFR) in the regression analysis is 0.000762(0.000312), with a standard error of 0.023745(0.027256), resulting in a t-statistic of 0.0321(0.011432) and a corresponding probability (p-value) of 0.9744(0.9909). From these statistics, it can be concluded that changes in the inflation rate do not significantly affect the Return on Assets (ROA) of quoted consumer goods manufacturing firms in Nigeria. The p-value of 0.9744 is considerably higher than the commonly used significance level of 0.05, indicating that there is no statistically significant relationship between variations in the inflation rate and ROA in this specific context. Therefore, based on this analysis, it appears that fluctuations in the inflation rate have no significant impact on the financial performance, as measured by ROA, of these firms in Nigeria during the specified period.

Discussion of Findings

The results of the Panel Least Squares (PLS) regression analysis offer significant insights into the factors influencing the financial performance of quoted consumer goods manufacturing firms in Nigeria during the years 2014 to 2024. The most striking finding is the strong negative relationship between interest rates (INTR) and Return on Assets (ROA). The highly significant coefficient for interest rates indicates that higher interest rates are associated with lower ROA for these firms. This suggests that fluctuations in interest rates have a substantial impact on the profitability of these companies, possibly due to increased borrowing costs or decreased consumer spending associated with higher interest rates (Olabode, 2018) and (Egbunike & Okerekeoti, 2018). This finding underscores the importance of monitoring and managing interest rate risk for firms operating in this sector.

Similarly, the study finding revealed that there is a statistically significant effect of exchange rates on ROA in this specific context. This suggests that fluctuations in exchange rates significantly affect the financial performance, as measured by ROA, of these firms in Nigeria during the specified period. The finding that exchange rate fluctuations significantly impact the Return on Assets (ROA) of consumer manufacturing firms implies that these companies should closely monitor and manage their exposure to currency risk. They may need to implement risk management strategies, such as hedging, to mitigate the adverse effects of currency fluctuations on their financial performance. Additionally, they should consider diversifying their revenue streams and sourcing strategies to reduce dependency on foreign exchange rates.

On the other hand, the analysis reveals that Money Supply (MSP), and Inflation Rate (IFR) do not have statistically significant effects on ROA for the quoted consumer goods manufacturing firms in Nigeria during the specified period. This suggests that changes in the money supply, exchange rates, and inflation rates do not significantly impact the financial performance of these firms. This finding is in line with finding of (Orbunde *et al*., 2021). While these variables are important for macroeconomic analysis and policy considerations, they may not be the primary drivers of profitability for companies in this specific industry. Overall, these findings provide valuable insights for both corporate decision-makers and policymakers, highlighting the critical role of interest rates in shaping the financial outcomes of consumer goods manufacturing firms in Nigeria, while also emphasizing the limited impact of other macroeconomic factors examined in the study.

The implications of the findings from the Panel Least Squares (PLS) regression analysis are twofold. First, the strong negative relationship between interest rates (INTR) and Return on Assets (ROA) underscores the critical importance of interest rate risk management for quoted consumer goods manufacturing firms in Nigeria. These companies should closely monitor and strategize to mitigate the adverse impact of rising interest rates on their profitability, potentially by optimizing their debt structures or exploring ways to improve operational efficiency. Second, the non-significant effects of Money Supply (MSP) and Inflation Rate (IFR) on ROA suggest that while these macroeconomic factors are essential for economic policy considerations, they may not be the primary drivers of financial performance for firms in this industry. Therefore, businesses and policymakers should focus on addressing other industry-specific challenges and opportunities to enhance the financial health and competitiveness of consumer goods manufacturing firms in Nigeria.

Conclusion

Based on the study findings, the results of the Panel Least Squares (PLS) regression analysis for consumer goods manufacturing firms in Nigeria from 2014 to 2024 offer several important conclusions. Firstly, interest rates (INTR) and Exchange Rate (EXCR) emerge as a significant and influential factor affecting

the financial performance of these firms. The strong negative relationship between interest rates and Return on Assets (ROA) underscores the sensitivity of these companies to changes in borrowing costs and consumer spending patterns influenced by interest rate fluctuations. Therefore, firms in this sector must prioritize effective interest rate risk management strategies to safeguard profitability and financial stability.

Secondly, the non-significant effects of Money Supply (MSP), and Inflation Rate (IFR) on ROA suggest that these macroeconomic variables do not play a prominent role in explaining variations in financial performance within this industry context. While these factors remain important considerations for broader economic policy, corporate decision-makers in consumer goods manufacturing should direct their attention to industry-specific factors and strategies to enhance their competitiveness.

Lastly, the overall model fit of the regression analysis is exceptionally strong, indicating that the independent variables used in the model explain a substantial portion of the variation in ROA. This implies that the results are reliable and robust for decision-making purposes.

These conclusions underline the importance of managing interest rate risk effectively and adopting industry-specific growth and cost-efficiency strategies for consumer goods manufacturing firms in Nigeria. They also emphasize the need for a nuanced approach to financial management and strategic planning in this specific industry context, where interest rates hold substantial sway over financial performance.

Recommendations

Based on the findings of this study, here are recommendations divided into five key areas:

First, the strong and significant negative relationship between interest rates (INTR) and Return on Assets (ROA), it is imperative for firms in the consumer goods manufacturing sector in Nigeria to implement robust interest rate risk management strategies.

Second, the consumer goods manufacturing Firms should explore financial instruments such as interest rate swaps or forward rate agreements to hedge against interest rate fluctuations. These tools can help mitigate the adverse impact of rising interest rates on borrowing costs. Consider diversifying debt structures to include long-term financing options. This diversification can provide stability in financing and reduce vulnerability to short-term interest rate fluctuations.

Regularly monitor interest rate trends and economic forecasts to proactively adjust financial strategies in response to changing interest rate environments.

Thirdly, given the significant impact of exchange rate fluctuations, Consumer goods manufacturing firms should consider implementing currency risk management strategies such as hedging to protect against adverse currency movements. Diversify their sales channels to reduce dependency on a single currency or market, which can help mitigate the impact of exchange rate fluctuations.

Fourth, since changes in money supply do not significantly impact ROA, Consumer goods manufacturing firms can diversify their funding sources. This may involve seeking alternative financing options beyond relying on monetary policy changes.

Fifth, since inflation does not significantly affect ROA, Consumer goods manufacturing firms can maintain a focus on efficient cost management. Streamlining operations and eliminating wasteful expenditures can help mitigate the impact of inflation on their bottom line.

Lastly, incorporating these recommendations into their strategies can assist consumer goods manufacturing firms in Nigeria in enhancing their financial performance, managing risks effectively, and maintaining competitiveness in a dynamic market environment. These tailored strategies take into account the significant influence of interest rates and the limited impact of broader macroeconomic variables in this specific industry context.

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How to Cite This: Adie, F. A., & Odonye, D. Y. (2025). Effect of monetary policy on the financial performance of quoted consumer goods manufacturing firms in Nigeria. *IIJP Journals*, *1*(2), 19–37.