

Effect of Monetary Policy on Financial Services: Insurance Industry Perspective in Nigeria

Onuoha, Donatus Chinedu ¹ & Okparaka, Vincent Chukwuka PhD ²

^{1 & 2} *Department of Insurance and Risk Management,*

Enugu State University of Science and Technology (ESUT), Enugu State, Nigeria.

¹ eduonuoha@yahoo.com; +234 806 4553 995

² Vincent.Okparaka@esut.ng; +234 (0) 8035985711

Abstract

Research Objective: This study examined the effect of monetary policy on financial services, specifically focusing on the insurance industry in Nigeria. It investigated the extent to which money supply affects the Nigerian insurance industry and assessed the impact of interest rates on insurance and financial services in the country.

Methodology: An econometric model was developed using the Ordinary Least Squares (OLS) estimation technique. In this model, financial services, measured as a percentage of commercial exports, were regressed on interest rates and money supply (MS) to determine the relationship between these variables.

Findings: The results showed a positive but insignificant relationship between interest rates (INTR) and financial services. Additionally, there was a negative and insignificant relationship between money supply and financial services. This suggests that neither interest rates nor money supply have a significant direct effect on the financial services sector, particularly the insurance industry.

Conclusion: The study concluded that monetary policy, specifically money supply and interest rates, does not have a significant impact on the financial services sector in Nigeria. However, the findings highlight the importance of effective monetary management for broader economic stability.

Recommendation: The study recommends that the monetary authorities focus on prudent management of money supply to foster economic growth. Additionally, the government should take proactive measures in addressing interest rate issues, as these could have significant implications for the functioning of financial services, particularly the insurance industry.

Key words: *Monetary Policy, Financial Services, Money supply, Interest rate.*

1.0 INTRODUCTION

Monetary policy is a set of tools often employed by a country's monetary authority to ensure stable prices, achieve rapid economic growth through effective manipulation of total money

supply in circulation within a period of time. (Mansaray & Swaray 2013) defined “monetary policy as encompassing all monetary decisions and measures irrespective of whether the aims are monetary or non-monetary, and all monetary decisions that aim at affecting the monetary system.

Gutu (2015) argues that is a work that is used to control the money supply by the central bank as a tool to achieve the objectives of economic policy”. According to Kanwal and Nadeem (2013), “monetary policy is the process of overseeing a nation's money supply to complete specific objectives such as restraining inflation, or achieving full employment, which usually involve setting interest rates, margin requirements, cash reserve ratio, reserve requirement, capitalization standards for banks and non-banking institutions (insurance firms), and acting as the lender of last resort”. Monetary policies are either expansionary or contractionary in nature. Expansionary policy is often employed to stimulate general economic activity when a country is faced with a high unemployment rate as a result of downturn/recession (Shirvani & Bayram, 2014). This is done by reducing interest rates to enable investors access more loans for investment purposes at a lower rate, thereby discouraging savings and encouraging spending, and by doing so boost investment and overall consumers’ spending. On the other hand, contractionary measure is adopted to increase interest rates in order to slow down the volume of money supply, reduce inflationary trend and indirectly increase unemployment rate, nevertheless, it remains a veritable tool for stabilizing the economy and effectively keep prices under check (Bain & Howells 2003).

Furthermore, the research department of the central bank of Nigeria states that Monetary policy refers to any conscious or deliberate actions of the monetary authorities, mostly central banks, to control (change) the quantity, availability or cost of money in an economy in order to achieve laid down goals/objectives. It is also a combination of policy measures designed by a central bank to control the quantity of money and cost of credit in the economy in consonance with the expected level of economic activity. In other words,(Bain & Howells 2003) posits that monetary policy is the process by which the central bank or monetary authorities of a country controls the supply, availability and cost of money in order to attain a set of objectives, usually geared towards promoting national economic goals. It is, therefore, archived through proper interest rates regulation and money supply which affects the general operations of the financial services.

Financial services encompass a broad range of activities provided by institutions, including banks, investment firms, and insurance companies (Jhingan, 2008). These services include banking, investment, insurance, and other related activities that facilitate the management of money and financial assets. Monetary policy, controlled by central banks, influences financial services in several ways. Interest rates, a key tool in monetary policy, impact borrowing costs. When central banks adjust interest rates, it affects the cost of loans for individuals and businesses, influencing spending and investment decisions. Additionally, changes in the money supply, controlled through various monetary policy mechanisms, impact liquidity in financial markets. Adequate liquidity supports smooth financial transactions, while scarcity

can lead to increased borrowing costs and market volatility. However, noting the significance of interest rates and money supply as a monetary policy tool to influence the financial service sector such as insurance will be detailed below so as to analyze its significant relationship to insurance practices in Nigeria.

Insurance serves as a financial service provider by offering risk mitigation through policies. Policyholders pay premiums to the insurer, which, in turn, provides coverage against specified risks. The industry plays a crucial role in promoting financial stability and protecting individuals, businesses, and assets. Interest rates impact the insurance industry in several ways. Insurers often invest premiums in various financial instruments, and the returns generated are influenced by prevailing interest rates. Low interest rates may lead to lower investment income for insurers, affecting their profitability. On the other hand, higher interest rates can increase investment returns but may also lead to higher liability costs for certain insurance products. Money supply fluctuations can influence the insurance industry by affecting economic conditions. A growing economy typically leads to increased demand for insurance products, as individuals and businesses seek more coverage. Conversely, a contraction in the money supply or economic downturn may result in reduced demand for insurance.

The impact of monetary policy on the insurance industry is a complex and multifaceted topic. Various studies have explored the relationship between monetary policy measures, such as interest rates and inflation, and the performance of financial services, particularly within the insurance sector. One significant challenge in researching this topic is the inherent difficulty in isolating the effects of monetary policy from other macroeconomic factors. Many studies have acknowledged this limitation, as they grapple with the interconnectedness of economic variables. The insurance industry is influenced not only by monetary policy but also by fiscal policy, market conditions, and regulatory changes. Researchers have frequently highlighted the sensitivity of insurance companies to interest rate fluctuations. In a low-interest-rate environment, insurance firms may face challenges in generating sufficient returns on their investments, affecting their profitability and overall financial stability. Conversely, a sudden increase in interest rates can lead to changes in the valuation of insurance liabilities, posing a risk to solvency. Some scholars have criticized existing research for overlooking the nuances within the insurance industry, emphasizing the diverse nature of insurance products and business models. One-size-fits-all analyses may fail to capture the heterogeneity among insurers, thereby limiting the generalizability of findings.

Moreover, shortcomings in the existing literature often extend to the consideration of global economic conditions. The insurance industry is increasingly interconnected across borders, and studies that focus solely on domestic monetary policy may neglect the broader international dynamics that impact insurers. Another critical aspect that deserves attention is the regulatory environment. Changes in monetary policy can interact with regulatory frameworks, affecting the risk management practices and capital requirements of insurance companies. Failure to account for regulatory dynamics can undermine the comprehensiveness

of research in this area. While research on the impact of monetary policy on the insurance industry is valuable, scholars must navigate the complexities of isolating variables, consider the diverse nature of insurers, account for global economic dynamics, and integrate regulatory influences to provide a comprehensive understanding of this intricate relationship and this necessitated determining the relative impact of monetary policy on financial services sector of insurance industries.

The broad objective of the study is to examine the impact of monetary policy on the financial services sector of insurance industries 1980-2020. Specifically, the objectives seek to investigate the extent money supply affects the Nigerian insurance industry and also to examine the impact of interest rate on Nigeria insurance and financial services.

2.0 REVIEW OF RELATED LITERATURE

2.1 Conceptual Review

Money supply

Money supply refers to the total amount of money in circulation or in existence in a country. There are several standard measures of the money supply, including the monetary base, M1, and M2 (Shrestha & Subedi, 2014). Money supply also refers to the total amount of monetary assets available in an economy at a specific time. An increase in money supply leads to inflation (or expected inflation) in the economy, which in turn increases the discount rate and lowers the stock market returns. Use of a high expected rate of return will decrease the value of the firm and will result in lower performance of firms (Bakare, 2011). The money supply is typically represented by various measures, denoted as M0, M1, M2, and so on. These are defined as follows:

M0 (MB - Monetary Base): Currency in circulation + Bank reserves with the central bank.

$M0 = \text{Currency} + \text{Reserves}$

M1 (MB + Demand Deposits): M0 + Demand deposits (checking accounts).

$M1 = M0 + \text{Demand Deposits}$

M2 (M1 + Savings Deposits, Time Deposits): M1 + Savings deposits + Time deposits.

$M2 = M1 + \text{Savings Deposits} + \text{Time Deposits}$

These expressions provide a simplified view of the money supply, helping to understand the different forms of money in an economy.

In Nigeria, the Central Bank defines money supply as comprising narrow and broad money. The definition of narrow money (M1) includes currency in circulation with non-bank public and demand deposits or current accounts in the banks. The broad money (M2) includes narrow money plus savings and time deposits, as well as foreign denominated deposits. The broad money measures the total volume of money supply in the economy. Thus, excess money supply (or liquidity) may arise in the economy when the amount of broad money is over and above the level of total output in the economy. The need to regulate money supply is

based on the knowledge that there is a stable relationship between the quantity of money supply and economic activity and that if its supply is not limited to what is required to support productive activities; it will result in undesirable effects such as high prices or inflation.

Interest rates

Interest rate is the percentage at which interest is paid on borrowed money or invested funds. It's the cost of borrowing money or the return on investment (GUȚU 2015). Interest rates are a price for the use of funds and if rapid monetary expansion contributes to excessive demand and inflation, it also contributes to rising interest rates. The Central Bank's role under the interest rate instrument is to set a short-term official rate of interest, which indicates the price at which it will make liquidity available to the banking system as a lender of last resort. In Nigeria, this rate is called the Central Bank Rate.. In using interest rates, first the Central Bank sets a target inflation rate and then interest rates are steered to move inflation to its intended levels. In this case, interest rates are increased when the inflation rate is above the target rate, and reduced when inflation is below the target rate. A reduction in the official rate, for instance, encourages the commercial banks to borrow money from the Central Bank, thereby increasing money supply in the economy.

Interest rates play a significant role in shaping the landscape of Nigerian insurance and financial services. When interest rates rise, it tends to increase the cost of capital for insurers and financial institutions, impacting their profitability. On the other hand, higher interest rates may attract more investment, positively affecting insurers' investment income.

Conversely, lower interest rates can stimulate economic activity but may compress profit margins for insurers relying on investment returns. Overall, the impact of interest rates on the insurance and financial services sector in Nigeria is intricate, involving a delicate equilibrium between investment returns, operational costs, and market demand.

Furthermore, in the context of Nigeria, where the economy is diverse and dynamic, the impact of interest rates on insurance and financial services extends beyond profitability but also includes;

- **Investment Income and Portfolio Management:** Insurers heavily rely on investment income to offset underwriting losses. Changes in interest rates influence the performance of their investment portfolios, comprising government securities and other interest-sensitive assets.
- **Fluctuations in interest rates** can lead insurers to reassess their investment strategies, potentially impacting the overall risk-return profile of their portfolios.
- **Consumer Behavior and Demand for Financial Products:** Interest rates affect consumer behavior. Higher rates might encourage saving, while lower rates could stimulate spending and borrowing. This dynamic influences the demand for various insurance and financial products, such as life insurance, savings plans, and loans.

- **Economic Growth and Stability:** Interest rates are closely tied to overall economic growth. A stable and growing economy generally fosters a favorable environment for the insurance and financial services sector, as it implies higher income levels and increased demand for various financial products.

Financial Services

Finance services, comprises a person or company licensed to carry out finance company business. Finance Company Business means the business of providing financial services for consumers and to industrial, commercial, or agricultural enterprises (Lone and Yadav 2016). Such services include: Funds management; Equipment leasing; Hire-purchase; Debts factoring and securitization; Project financing or consultancy; Debt administration; LPO financing; Project financing; Export financing; Financial consultancy; and Issuing of vouchers, coupons, credit cards and token stamps and such other businesses as the CBN may, from time to time, assign.

Finance is the process of channeling these funds in the form of credit, loans, or invested capital to those economic entities that require finances or can put them to the most productive use (Jhingan, 2008). These institutions act as financial intermediaries and they include commercial banks, savings banks, savings and loan finance associations, and such non bank institutions as credit unions, insurance companies, pension funds, investment companies, and finance companies.

In the context of insurance, service exports encompass the international trade of insurance products and related services. This involves the transfer of risk and financial protection across borders, including policies for life, health, property, and liability insurance. Interest rates and money supply can significantly impact international trade, including service exports like insurance. Higher interest rates may attract foreign capital seeking better returns, affecting exchange rates and potentially making exports more expensive. Conversely, lower interest rates may stimulate economic activity and make exports more competitive. Changes in money supply can influence inflation and exchange rates, further impacting the cost and attractiveness of exported services. For insurance, currency fluctuations may affect the affordability of premiums and the overall competitiveness of insurance products in the global market. Additionally, interest rates can influence investment returns for insurance companies, impacting their financial performance in the international arena.

2.2 Theoretical framework

Milton Friedman and Monetarism theory

Monetarism is closely associated with economist Milton Friedman in the year 1960. The theory argued based on the quantity theory of money that the government should keep the money supply fairly steady, expanding it slightly each year to allow for the natural growth of the economy. Due to the inflationary effects that can be brought about by the excessive expansion of the money supply, Friedman, who formulated the theory of monetarism,

asserted that monetary policy should be done by targeting the growth rate of the money supply to maintain economic and price stability.

2.3 Empirical Literature

Shirvani and Bayram (2014) examined the determinants of money supply in the United States (US). The Johansen co-integration and Dominance methods of analysis were employed. The study establishes that excess reserve and currency ratios are important determinants of money supply in the US. In India, Lodha and Lodha (2012) studied the money multiplier and high-powered money as the determinants of money stock. The study showed that the high-powered money and money multiplier positively contributed to the growth in money supply between 1981 and 2012.

Lone and Yadav (2016) researched the money stock determination in India. The research suggests the high-powered money and the money multiplier determine money supply in India. In Nepal, Shrestha (2013) studied the process of the money supply. The research identified high-powered-money as the core determinants of the stock of money. Currency ratio and the Multiplier also affect the supply of money. Similarly, Tiwari (2016) examined the money supply determinants in Nepal. The estimation technique adopted was the OLS method. The study identified reserved money as the most important money supply determinants in Nepal.

Muhammad and Islam (2010) empirically study the money stock function using autocorrelation correction Ordinary Least Square (OLS) approach. The research establishes that the Bank rate, financial liberalization and external resources control the level of money stock. In Ghana, Sanusi (2010) examines money supply determination. The study suggests that prior to the 1990s, fiscal deficits determine money supply; but, in the aftermath of the 1990s, the bank's net foreign assets are the major determinant of the supply of money.

Odior (2013) analyzed the supply of money. The study adopted a time-series GMM model. The study presumed that broad money supply depends upon changes in monetary base and the money multiplier. The results revealed a positive but partially stable relationship between the base money and money supply, and money multiplier and money supply. Bakare (2011) accessed the supply of money determinants with its impact on inflation. The research adopted a quasi-experimental research method for its analysis. The outcome of the study suggested that credit to the private individuals or sector is a positive determinant of money supply.

Chigbu and Okorontah (2013) explore whether the supply of money is exogenous. The research utilized annual data between 1970 and 2008 and the 2-Stage Least Square (2SLS), co-integration (Johansen), as well as the Granger-causality methods were used. The research confirmed that the real income and the interest rate co-integrate with the supply of money. The study equally showed that the money stock is controlled endogenously through a change in the level of real income, real rate of interest and value of money. Consequently, the study argued that although the monetary authority could influence the supply of money, it is the economic activity; however, that exerts a larger influence on the money stock variations.

Guțu (2015) explored the microeconomic factors affecting bank's financial performance of commercial banks in Romania. The study focused on 11 entities for the period between 2003 and 2013. The study measured performance-using return on assets and the micro economic variables included bank's size, financial leverage, loans to assets ratio, deposits to assets ratio, number of employees, liquidity, net result and monetary policy rate. The results of the study established that bank's size, loans to assets ratio and liquidity had no significant impact on performance whereas financial leverage had a negative impact while the number of employees, deposits to assets ratio and net result had a positive effect on financial performance.

3.0 METHODOLOGY

3.1 Theoretical Framework

"The Monetarist Theory" will be adopted for this study. Monetary theory was an integral part of classical value theory. The values of money and commodities were similarly explained for the simple reason that, in classical analysis, money was a commodity. The monetarist theory is associated with the work of Milton Friedman.

Model Specification

This study on the effect of monetary policy on financial services shall follow the model specification approach adopted in Gutu (2015) while exploring the microeconomic factors affecting bank's financial performance of commercial banks in Romania. The data analysis technique employed in this study involves the use of the Ordinary Least Square (OLS) regression technique. However, the estimation of the model specified may yield spurious regression if the variables are not stationary. Thus the unit root test using the Augmented Dickey Fuller test (ADF) was employed in order to check this problem. Also the Co-integration test was carried out so as to test for long-run equilibrium relationship between the series of the same order of integration. To ascertain the effect, financial services were regressed on money supply and interest rate. It was expressed in the function;

$$FS = f(MS, INR) \dots \dots \dots (1)$$

Econometrically, the above equation 1, becomes

$$FS = a_0 + a_1MS + a_2INTR + \mu \dots \dots \dots (2)$$

Where

FS= Financial services (percentage of commercial service export)

MS= Money Supply

INTR= Interest Rate

a_0, a_1, a_2 , = Parameters

μ = Error term.

4.0 DATA ANALYSIS AND PRESENTATION OF RESULTS

Having tested the null hypothesis (H0) that monetary policy variables have no significant relationship on financial services in Nigeria, we present the result obtained. The study employed secondary data obtained from the Central Bank of Nigeria Statistical Bulletin 2020.

Table 4.1: Descriptive Statistics

	FS	INTR	MS
Mean	3.474634	0.337561	23.53561
Median	0.850000	4.310000	19.41000
Maximum	26.00000	18.18000	87.76000
Minimum	0.110000	-65.86000	-0.790000
Std. Dev.	5.635460	14.27269	18.11939
Skewness	2.480123	-2.685830	1.376825
Kurtosis	8.865210	12.77548	5.369674
Jarque-Bera	100.7997	212.5418	22.54648
Probability	0.000000	0.000000	0.000013
Sum	142.4600	13.84000	964.9600
Sum Sq. Dev.	1270.336	8148.392	13132.50
Observations	41	41	41

Source E-view10.0 (2024)

From the result established in table 4.1 the Jarque-Bera statistics of the three variables indicated normal distribution given that all the variables produced a probability fewer than 0.005 benchmarks.



Figure1: Graphs on FS, INTR, and MS: 1980-2020

The graph above shows a stochastic trend since the direction meanders. This conforms to the stylized fact of times series data.

Table 4.2 UNIT ROOT RESULT

Variable	Variable at level form			Order of integration
	ADF Stat.	Lag	5%	
FS	3.247679	2	-2.941145	1(0)
MS	-4.618544	0	-2.936942	1(0)
INTR	-3.835729	0	-2.936942	1(0)

RESIDUAL	-3.309280	0	-1.949319	1(0)
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Source E-view10.0 (2024)

From the result established in table 4.2, all the variables do not unit roots at the level form. This is because the ADF statistics for each of the variables are greater than the critical levels at 5%. Therefore, the variables are stationary. More so, at level form, the residual (error term) became stationary to confirm the long run relationship between the dependent and independent variables using cointegration ADF (CADF) test.

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TABLE 4.3.0

Variable	Coefficient	Std. Error	t-Statistic
C	5.424343	1.433558	3.783832
INTR	0.027890	0.061538	0.453220
MS	-0.083241	0.048474	-1.717236

Source E-view10.0 (2023)

4.3.1 Evaluation Based On Economic Criteria

The OLS regression applied the Linear Model in order to determine the relative change in the dependent variable from a relative change in each of the explanatory variables.

The result established a positive and insignificant relationship between interest rate (INTR) and financial services. This suggests that as interest rate increases by one unit, financial services increases by 0.027890 units.

The result revealed a negative and insignificant relationship between money supply and financial services. This implies that as money supply increases by one unit, the financial sector decreases by -0.083241 units.

Multicollinearity result

This test was carried out through the use of correlation matrix. It suggests that if the pair-wise correlation coefficient between two regressors is high, say in excess of 0.80, then multicollinearity is a serious problem (Gujarati, 2009). From the result, the existence of collinearity cannot be found among the explanatory variables. Thus, we can conclude that multicollinearity is not a problem in the model thus, the highest value is -0.268530

5.0 SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

This study has shown that there exists a long run relationship between the variables used. Thus, financial service depends on money supply, interest rate among others in the long run. The result established a positive and insignificant relationship between interest rate (INTR) and financial services. Again, the result revealed a negative and insignificant relationship between money supply and financial services. The reason for this relationship can possibly be traceable to volatile nature: the interest rate has become overtime and money multiplier effect in Nigeria. The study concludes that there exist insignificant effects of interest rate and money supply on financial services over time in Nigeria. Though they have a long run relationship between the independent variables and dependent variables. Based on the findings of the study, the following recommendations are made: Firstly, the government needs to be proactive in addressing the issues of interest rate since it could make or mar the activities of financial services. Lastly, it is imperative to enhance the necessary transparency and accountability required for supply of money to foster the economy.

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