An Investigation of Interest Rate Sensitivity on Borrowing Behaviour of Individuals, Firms and Businesses in Access Bank Plc

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ABSTRACT

Interest rates play a crucial role in shaping the behaviors of individuals, businesses, and governments within financial markets. The primary focus of this research lies in exploring the impact of interest rate sensitivity on the borrowing patterns of Individuals, firms, and businesses within Access Bank PLC. Notably, the level of interest rate sensitivity regarding borrowing behaviors in retail banks significantly influences their financial stability and profitability. Through the utilization of an ex-post-facto research methodology, this study compiles data from secondary sources to delve into the interest rate sensitivity experienced by Individuals, Firms, and Businesses operating within Access Bank Plc. Insights drawn from a myriad of studies, articles, and reports contribute to this examination. The dataset spanning 13 years of interest rate regimes (2010-2022) was extracted from the Access Bank Annual Financial Reports, enabling a comprehensive assessment of interest rate sensitivity on the borrowing behaviors of individuals, firms, and businesses within Access Bank PLC. Descriptive statistics were employed to discern behavioral trends. Ultimately, the research posits that investment decisions are influenced by factors beyond mere interest rates, with investments occasionally displaying insensitivity to interest rate fluctuations. Noteworthy is the observation that firms and businesses do not necessarily falter in response to rising interest rates, thereby mitigating concerns of crowding out effects. This phenomenon stems from the interplay of money demand with income, interest rates, and price levels. The study advocates for the development of a robust regulatory framework for interest rate deregulation, anchored by the Monetary Policy Rate (MPR) to govern the operations of commercial banks. Furthermore, it underscores the importance of synchronized macroeconomic policy adoption by governmental, private, and other stakeholders.

Keywords: Sensitivity, Interest Rates, Borrowing, Firms, Businesses, Individuals

INTRODUCTION

Interest rates play a pivotal role in influencing the behavior of individuals, businesses, and governments within financial markets. The interest rate essentially represents the cost of borrowing money, particularly from the perspective of the lender. Within the financial system, commercial banks have a significant function in mobilizing and distributing funds from those with surplus to those with deficits. The impact of interest rates on banking operations is substantial, given that they directly influence the cost and accessibility of funds. Consequently, the level of interest rate sensitivity in borrowing behavior among money deposit banks has implications for their profitability and overall financial stability.

An essential element of planned investment expenditure that demonstrates considerable responsiveness to fluctuations in interest rates is the act of borrowing from financial institutions. Typically, businesses and investments secure financing from entities like money deposit banks. In Nigeria, the banking sector holds a critical position in fostering the country's economic progress and advancement. Interest rate sensitivity underscores the extent to which planned investment expenditure reacts to variations in interest rates, serving as a metric for evaluating the value of fixed income assets. Various determinants, including economic and political factors, influence the interest rate sensitivity regarding borrowing behavior within the Nigerian commercial banking sector. The banking industry witnessed significant transformations following the financial sector

reforms of 2005, spearheaded by Professor Charles Soludo, resulting in industry consolidation, heightened competition, and reduced interest margins. The Central Bank of Nigeria has also adopted a restrictive monetary policy approach to manage money supply, curb inflation, and stabilize the exchange rate. Nevertheless, the efficacy of monetary policy in Nigeria faces limitations due to factors such as fiscal policy, institutional weaknesses, corruption, and political instability. The concept of crowding out effect hinges on how planned investment expenditure responds to changes in interest rates. Challenges encountered by the Nigerian banking industry include issues like crowding out effect, insensitivity to interest rates in managing borrowing activities, decreased investments by corporations, and firms. For instance, in the case of Access Bank, higher interest rates have led to reduced investments and borrowing activities. Consequently, Nigerian commercial banks have observed a decline in borrowing by firms and businesses amidst elevated interest rates. This study aims to explore the influence of interest rate sensitivity on the borrowing behavior of individuals, firms, and businesses within Access Bank PLC.

LITERATURE AND CONCEPTUAL REVIEW

Interest rates play a pivotal role in the determination of whether to lend or borrow funds. The responsiveness of borrowing to interest rates stands as a fundamental concept within the realms of finance and economics. The impact of interest rates extends to the cost and accessibility of credit, consequently shaping the borrowing patterns of commercial banks. Various elements come into play in influencing the interest rate sensitivity of commercial banks, encompassing macroeconomic indicators, bank-specific determinants, and regulatory frameworks.

Prior research endeavors have delved into the examination of interest rate sensitivity within the Nigerian landscape, yielding varied outcomes.

A study by Adejumobi (2013) scrutinized the influence of interest rates on bank lending activities in Nigeria spanning from 1986 to 2010. The findings revealed an inverse correlation between interest rates and lending behavior, signaling that heightened interest rates translated to decreased borrowing within the banking sphere.

Ukaegbu (2014) delved into the credit management tactics employed by Nigerian banks, identifying interest rates as a pivotal factor in loan pricing and borrowing tendencies. The research underscored that interest rate sensitivity played a decisive role in shaping the credit management strategies adopted by banks in Nigeria.

In a study by Akinola & Lawal (2019), the focus was on evaluating the repercussions of liquidity and capital ratios on the lending behavior of commercial banks in Nigeria. The research unveiled that banks boasting elevated liquidity and capital ratios showcased diminished interest rate sensitivity, thereby enabling them to lower their lending rates to allure clientele.

Turning attention to regulatory policies, Raphael & Hassan (2014) explored the ramifications of monetary policy on lending behavior in Nigeria. The study unraveled that the stringent monetary policy stance adopted by the Central Bank wielded an influence on banks' lending conduct by modifying the cost and accessibility of credit.

Kolapo & Dapo (2015) scrutinized the impact of interest rate risk on the performance of deposit money banks in Nigeria. Employing the fixed effect regression method, the study concluded that each measure of interest rate risk exhibited an insignificant impact on bank performance. Furthermore, it was ascertained that interest rate risk predominantly governed fluctuations in return on assets, thereby lacking substantial sway on bank performance.

In an investigation by Felix, Ihuoma & Odim (2015), the focus shifted towards exploring the nexus between interest rates and the lending operations of commercial banks in Nigeria through a structural break analysis employing the chow test. The empirical findings during the interest rate regulation era unveiled that interest rate spread and statutory liquidity ratio bore adverse and significant effects on the quantum of loans extended by commercial banks. Conversely, the fixed exchange rate yielded a negative and inconsequential influence on banks' loans and advances. Additionally, it was observed that the Monetary Policy Rate (MPR) and inflation rate exerted a positive and substantial impact on banks' loans during the review period. The study culminated in the assertion and recommendation for the monetary authority to devise a guided interest rate deregulation

framework, with an increasing reliance on MPR for steering the activities of commercial banks in the realm of loans and advances.

Concept of Interest Rate Sensitivity

According to Turhani & Hoda (2016), Interest rate sensitivity regarding borrowing pertains to the capacity of commercial banks to effectively navigate fluctuations in interest rates while still meeting the financial requirements of their borrowers. The adjustments made by the Central Bank of Nigeria to monetary policy rates impact the cost of funds for commercial banks, subsequently influencing the lending rates imposed on borrowers and the overall profitability of the banks.

In Nigeria, the interest rate landscape has been marked by considerable volatility and ambiguity (Akinola & Lawal, 2019). This scenario has presented challenges for commercial banks in terms of mitigating interest rate risks and upholding their profitability. The proficient management of these risks is paramount for banks as they strive to strike a balance between seeking higher returns and the potential risk of borrower default (Jimoh, 2016).

As posited by Iwendi & Onwuegbu (2014), multiple factors contribute to the interest rate sensitivity observed in commercial banks in Nigeria. Initially, the creditworthiness of borrowers plays a pivotal role in determining the interest rates set by banks. Borrowers deemed to have a higher risk of default typically attract elevated interest rates, thereby exposing banks to increased default risk. Furthermore, fluctuations in macroeconomic elements such as inflation, market liquidity, and exchange rates can impact the interest rate environment, necessitating banks to prudently manage their funding and lending operations. Finally, the regulatory framework, notably the monetary policy formulated by the Central Bank, also influences the interest rate environment and exposes banks to policy risk (Ikechukwu, 2015).

Commercial banks in Nigeria have adopted various strategies to effectively handle interest rate sensitivity in borrowing. One such approach involves diversifying funding sources to reduce dependency on short-term deposits susceptible to swift withdrawals, hence mitigating liquidity risk. Additionally, banks monitor and manage the creditworthiness of borrowers, especially those with heightened default risk, through robust credit risk evaluation, loan restructuring, and recovery initiatives.

According to a scrutiny of Nigeria's banking principles (2019), Access Bank extends loan offerings to diverse customer segments, including:

- Individual Loans: These are tailored loan products aimed at individuals seeking financial assistance for personal endeavors such as education, medical expenses, leisure trips, and other personal requirements. - Corporate Loans: Access Bank also furnishes loan facilities to corporate entities for funding operational activities, capital expenditures, and other business necessities. - SME Loans: Access Bank provides a range of loan products specifically designed for small and medium-sized enterprises (SMEs) to bolster their development, expansion, and sustainability. These loan products typically feature lower interest rates, collateral requirements, and flexible repayment terms tailored to the unique needs of SMEs.

Interest rate is defined as the additional amount imposed on the principal sum that the borrower must reimburse to the lender, calculated as a percentage and paid at regular intervals (Rapheal & Hassan, 2015).

Components of Interest Rate

The real interest rate is when a lender offers funds to a borrower with the expectation of receiving a return, which is referred to as the real interest rate.

Inflation rate, as another element in the interest rate, pertains to the variations in the price level and is directly linked to the rates of interest; when the inflation rate decreases, so do the rates of interest.

Credit risk is a component of the interest rate where the lender faces the risk of not receiving repayment of the loan on the agreed-upon date.

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THEORETICAL REVIEW

Classical Theory of Interest Rate

The classical theory of interest rate, dating back to the nineteenth and twentieth centuries, was formulated by British economists and further developed by Irving Fisher in 1930. According to this theory, the equilibrium interest rate is determined by the interplay of demand and supply in a perfectly competitive market. Savings are supplied by households, while the demand for investment and capital is driven by the business sector. The theory views interest payments as a reward for postponing current consumption in exchange for greater consumption in the future. Moreover, a higher interest rate incentivizes more savings relative to consumption expenditure, leading to an increase in the volume of savings in the economy.

Fisher's Theory

Fisher's theory, introduced by Irving Fisher in 1930, attributes change in short-term interest rates to fluctuations in the expected inflation rate. It assumes that market agents' expectations regarding inflation rates are largely accurate. The theory posits that in competitive financial markets, nominal interest rates on deposits will be positive in real terms to encourage savers to hold financial assets rather than real assets, which typically grow nominally at the inflation rate. Consequently, the nominal interest rate should equal the anticipated inflation rate plus a primary real rate. Lending rates, in turn, will be positive in real terms as they are derived from deposit costs along with a premium to cover intermediation expenses, reserve requirements, taxes, and risk management costs. To maintain low nominal interest rates, it is essential to keep inflation levels low. One critique of Fisher's theory is its reliance on partial equilibrium analysis, limiting its scope to capital markets and assuming predetermined prices for goods and services.

Keynes' Liquidity Preference

Theory posited by Keynes (1936) asserts that investors exhibit a greater inclination towards short-term securities compared to long-term securities. In situations of uncertainty, savings and investment decisions are predominantly shaped by expectations and external shocks rather than underlying real forces. Keynes suggested that risk-averse savers might alter the composition of their financial wealth and the liquidity of their portfolios based on their perceived expectations of asset prices. He viewed the interest rate as contingent on the current money supply and the demand for immediate claim on money relative to deferred claim. According to Keynes, the impact of interest rates on planned investment spending is the primary mechanism through which the level of aggregate output is influenced. Additionally, Keynes not only emphasized the significance of interest rates in determining investment demand but also advocated for monetary policy to focus on influencing interest rates. He argued that achieving the desired investment levels for maintaining full employment necessitates supplementary policies targeting investment demand. Keynes, however, overlooked the role of interest rates in allocating funds not only for investment purposes but also for consumption. Sustaining a preferred real interest rate below the market rate would inevitably entail a progressively higher rate of monetary expansion over time.

METHODOLOGY

The research adopted an ex-post-facto research design to explore the impact of interest rate sensitivity on borrowing behavior in selected commercial banks in Nigeria. Specifically, the study concentrated on Access Bank PLC, a prominent commercial bank in Nigeria, utilizing secondary data from the bank's annual financial reports. Descriptive and inferential statistics were employed to analyze the data, incorporating measures such as mean, standard deviation, and percentage distribution to evaluate the influence of interest rates on borrowing behavior. Furthermore, the study examined trends in the variables, visually represented in distinct figures, to identify any distinctive characteristics of the variables throughout the specified period.

Model of the Study

The investigation employed a robust least square regression (RLS) model which was adapted by Ikechukwu (2015) to analyze the sensitivity of sectorial output in Nigeria to interest rates and credit. The modified model

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is presented as follows;

ABL = f (IRIL, IFRCL, CRPL) .....(3.1)

Where

ABL = represents access bank Loan

IRIL = signifies the interest rate on individual loans

IFRCL = denotes the inflation rate on corporate loans

CRPL = stands for the credit risk rate on personal loans

ABL = β0 + 1 + β 2 + β 3 + u.....(3.2)

ABL = β0 + β1 IRIL + β2 IFRCL + β3 CRPL + u.....(3.3)

A priori expectation

β 1, β 2 β 3 > 0

RESULT AND DISCUSSION OF FINDINGS

Table 1: Raw Data

YEAR	IRIL	IFRCL	CRPL
2010	17.56	13.7	114.2
2011	16.02	10.3	126
2012	16.79	12.1	141.1
2013	16.73	8.5	152.29
2014	16.55	8.05	164.44
2015	16.85	9.01	180.15
2016	16.87	15.7	213.56
2017	15.37	16.5	246.38
2018	16.91	12.1	274.57
2019	15.37	11.4	307.47
2020	13.63	13.62	355.91
2021	11.49	16.95	411.52
2022	12.34	18.85	499.36

Source: Access Bank Financial Report, (2023)

Table 2: Descriptive Statistics

	IRIL	IFRCL	CRPL
Mean	15.57538	12.02923	245.1500
Median	16.55000	12.10000	213.5600

Maximum	17.56000	18.85000	499.3600
Minimum	11.49000	8.050000	114.2000
Std. Dev.	1.914931	3.439996	119.6702
Skewness	-1.119765	0.205858	0.807888
Kurtosis	2.896986	1.923903	2.578176
Jarque-Bera	2.722474	0.719059	1.510529
Probability	0.256343	0.698005	0.469886
Sum	202.4800	166.7800	3186.950
Sum Sq. Dev.	44.00352	142.0029	171851.3
Observations	13	13	13

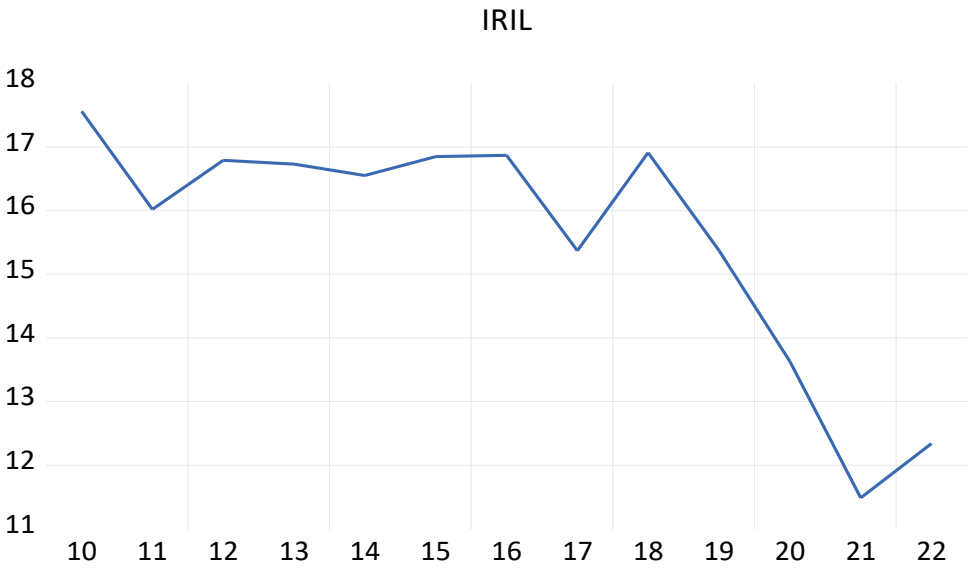
Source: Author's Computation 2024, using E-view 10 version

The outcomes presented in table 2 above offer additional insights into the characteristics of each variable. Each variable exhibits both positive maximum and minimum values throughout the analyzed period, with distributions that are skewed to the right, indicating asymmetry. Moreover, their means surpass their medians in nominal values exceeding 1.96. To summarize, the descriptive statistics demonstrate that all datasets follow a normal distribution.

Trend analysis

The subsequent section illustrates the trends observed in each variable under investigation, providing valuable insights into any distinctive features exhibited by the variables during the study period.

Figure 1: Trend in Interest Rate on Individual Loan (IRIL)



Source: Author's Computation 2024, using E-view 10 software.

From the illustration provided in Figure 1, the trend of Interest Rate on Individual Loan (IRIL) exhibits a consistent increase over the time period, with notable declines observed in the years 2017 and 2021. This phenomenon can be attributed to the implementation of expansionary monetary measures by the Central Bank of Nigeria (CBN) aimed at bolstering economic activity. According to economic principles, a surge in the money

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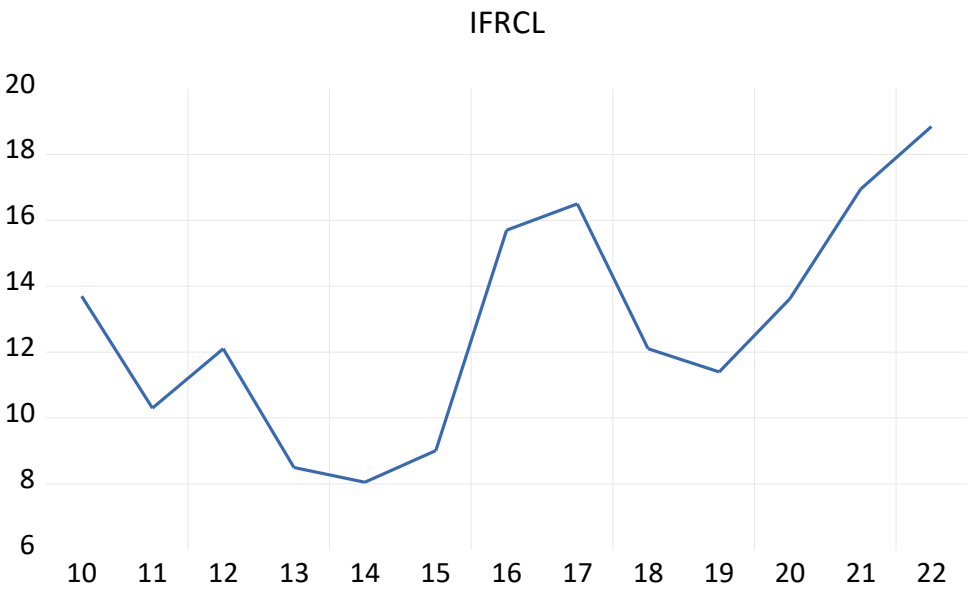
supply results in a decrease in interest rates. Consequently, lower interest rates prompt an upsurge in planned investment. Subsequently, the rise in planned investment expenditure leads to heightened aggregate expenditure, thereby fostering increased output. Moreover, the escalation in output (income) triggers a surge in the demand for money (borrowing) and a boost in savings within the economy.

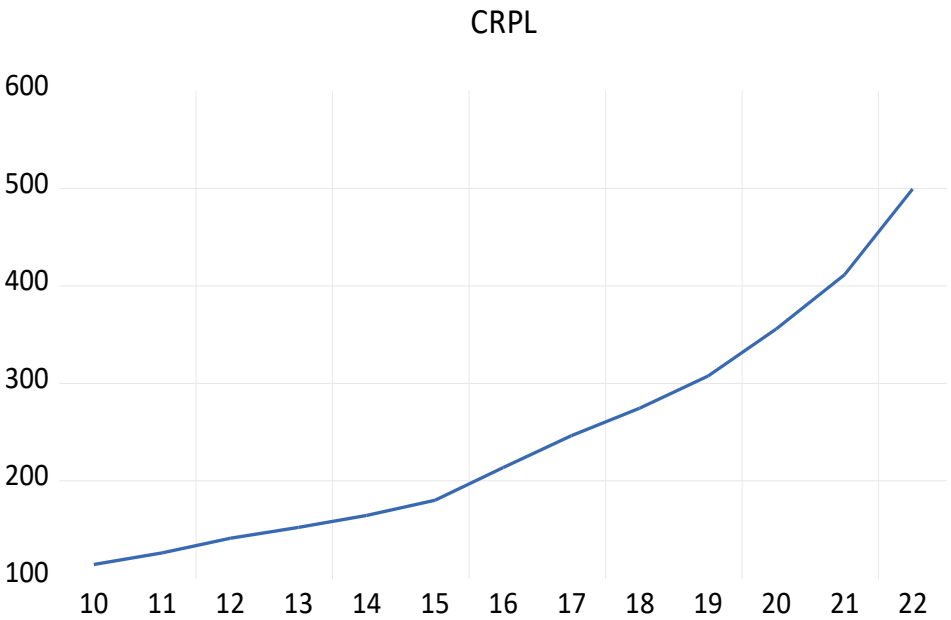
Figure 2: Trend in Inflation Rate on Corporate Loan (IFRCL)



Source: Author's Computation 2023, using E-view 10 software.

Figure 2 illustrates a notable upward trend in the inflation rate on corporate loans (IFRCL) during the period spanning from 2010 to 2022. There was a decline in inflation from 2012 until the end of 2014, followed by a subsequent increase from 2015 to 2017. This fluctuation can be attributed to a period of economic recession in the country, which was later mitigated by government-led economic recovery initiatives. However, the inflation rate on corporate loans exhibited a persistent rise from 2019 to 2022, primarily due to the impacts of the Covid-19 pandemic. Consequently, the analysis reveals that the inflation rate on corporate loans throughout the study period was characterized by significant volatility.

Figure 3: Trend in Credit Risk on Personal Loan (CRPL)



Source: Author's Computation 2023, using E-view 10 version

The analysis of Figure 3 indicates a consistent upward trajectory in Credit Risk on Personal Loans (CRPL) with minimal fluctuations over the study period. This observable trend suggests a continuous increase in Nigerian Credit Risk on Personal Loans over the specified duration. Such escalation can be linked to the enduring inflation rates within the country and the implementation of monetary policies by the central bank, including adjustments in cash reserves for deposit money banks and regular interest rate reviews.

CONCLUSION

In conclusion, this study posits that investment decisions are influenced by factors beyond mere variations in interest rates. Investments may exhibit insensitivity to interest rate adjustments, as evidenced by scenarios where planned investments remain unaffected by rising interest rates, thus negating any crowding-out effects. The demand for money, as determined by income, interest rates, and price levels, underscores the necessity for monetary authorities to establish a robust framework for interest rate deregulation, anchored by the Monetary Policy Rate (MPR), to effectively regulate commercial bank operations. Furthermore, it is imperative for governmental bodies, private sectors, and policymakers to concurrently adopt a cohesive macroeconomic policy approach.

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