



The Effect of Banking Sector Reforms on the Efficiency of the Nigerian Stock Market

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Abstract: This study sought to evaluate the effect of banking sector reforms on the efficiency of Nigerian stock market. The specific objectives are to; determine the effect of bank recapitalisation on the stock market efficiency in Nigeria, analyse the effect of prime interest rate on the stock market efficiency in Nigeria. The population of the study was the activities of all the Nigeria Stock Exchange Market as a single unit for twenty years (20) from 2005 to 2024. Data got were analysed using panel regression with the aid of the fixed effect model as a tool for data analysis. The study found that bank recapitalisation has significant effect on Nigeria stock market efficiency and interest rate has no significant effect on Nigeria stock market efficiency. The study recommends that Central Bank of Nigeria (CBN) should continue to strengthen the regulatory framework to ensure that banks maintain adequate capital buffer; investors and policy makers should closely monitor other macroeconomic factors such as inflation exchange rates, and GDP growth which may have a more significant impact on stock market regulators and policymakers should consider implementing alternative measure to enhance stock market efficiency.

Key Words: Banking Sector Reforms, Recapitalisation, Prime Interest Rate, Stock Market

INTRODUCTION

The banking industry is a key unit of the financial system, all over the world, which plays fundamental role in the development and growth of any economy and the world at large by acting as bulldozers in the mobilisation of funds and the creation of wealth. The effectiveness and the efficiency of performing its roles, particularly the intermediation between the surplus and the deficit units of the economy, depended largely on the level of development of the financial system and so banking reform is imperative when existing structures are defective as was the case in Nigeria's pre-reform era. It is with the intent to ensuring its soundness that the financial sector appears to be the most regulated and controlled by the government and its agencies. There is therefore no doubt why the consensus opinion has been that such a formidable sector must be kept healthy and steadily forceful through regular reforms. Accordingly, it observed that the success of other reforms depends on the health of the financial system (World Bank, 2016).

Abba et al (2023) noted that the banking sector has undergone significant reform globally, driven by the need to enhance financial stability, improve regulatory frameworks, promote competition with innovation, and strengthen risk management and governance. The global finance reforms have undergone three stages which are; the pre-crisis era (1980s-2007) which

covered with the deregulation by many countries of their banking sectors, allowing banks to expand their activities and increase their risk-taking, and the globalisation in which banks beginning to expand internationally, creating complex global financial systems.

Then, came the global financial crisis (2007-2009) which was cloud with systemic risk, excessive risk-taking, poor regulation, and global interconnectedness leading to a system crisis, threatening the stability of the global financial system. Then came governments and central banks interventions with massive bailouts, guarantees, and monetary policy easing to prevent a complete collapse. The third phase was the post-crisis reforms which are from 2010 to date with major global reforms as Basel III that saw the Basel committee on banking supervision introduced new capital requirements to strengthen banks resilience. The Dodd-Frank Act (US) was the US sweeping reforms, including stricter capital requirements, stress testing, and enhanced supervision. The European Union (EU) Reforms included banking union, capital requirement directive, and bank recovery and resolution directive. The International Monetary Fund (IMF) and Financial Stability Board (FSB) are playing key roles in promoting global cooperation and coordination on financial stability and regulatory issues (Binary & Sneha 2023)

In Africa, reforms came also in three phases: Pre-reform era (1960s-1980s) saw that many African countries had underdeveloped banking systems, with limited access to financial services. The Structural Adjustment Programs (SAPs) that came up in the 1980s and 1990s: the International Monetary Fund (IMF) and World Bank introduced SAPs, which aimed to liberalise and privatise African economies, including the banking sector. Banking Sector Reforms (1990s-2000s) which saw many African countries implementing the banking sector reform that includes liberalisation of interest rates, privatisation of state-owned banks, strengthening of regulatory frameworks, and introduction of prudential guidelines (Nisar, et al., 2021). This Africa reform was also watered down to Nigeria as Pre-Reform Era (1960s-2004) that saw Nigeria's banking sector characterised by limited access to financial services too as the African reform, high levels of non-performing loans, and weak regulatory framework. Banking Sector Consolidation (2004-2006) ;the Central Bank of Nigeria (CBN) introduced a consolidation programme, which aimed to reduce the number of banks from 89 to 25, increase the minimum capital requirement from N2 billion to N25 billion, and improve the overall stability of the banking sector. Post-Consolidation Reforms (2007- present;) the CBN has continued to implement reforms such as; introduction of the cashless policy (2012), implementation of the Bank Verification Number (BVN) system (2014), and also strengthening of the anti-money laundering (AML) and combating the financing of terrorism (CFT) framework (Ibe 2023).

According to Abdullahi and Fakunmoju (2019) it is incontrovertible that the banking system is the engine of growth in any economy, given its function of financial intermediation. Through this function, banks facilitate capital formation; lubricate the production engine turbines and promote economic growth. However, banks ability to engender economic growth and development depends on the health, soundness and stability of the system. The need for a strong, reliable and viable banking system is underscored by the fact that the industry is one of the few sectors in which the shareholders fund is only a small proportion of the liabilities of the enterprise. It is, therefore, not surprising that the banking industry is one of the most regulated sectors in any economy. The primary objective of the reforms is to guarantee an efficient and sound financial system. The reforms are designed to enable the banking system develop the required resilience to support the economic development of the

nation by efficiently performing its functions as the fulcrum of financial intermediation. Thus, the reforms were to ensure the safety of depositors' money, position banks to play active developmental roles in the Nigerian economy, and become major players in the sub-regional, regional and global financial markets.

Recently, the Nigerian capital market has become very volatile as a result of various banking sector reforms in an attempt to keep pace with the global economic phenomenon; this has caused a downward trend in the prices of stocks in the Nigeria stock exchange especially banking stocks. This downward trend in the prices of banking stocks must have had some effects on the capital market capitalisation rate (Bayrakdaroglu, et al., 2017).

Banking sector reforms are policy prescriptions which are age-long phenomena. They represent the various transformations and policy adjustments that are directed at the art, practice, and activities of financial institutions and markets overtime in response to the nominal need for operational improvement and growth of both the institutions and the general economy. They could be internal or external in nature, reflecting critical-cum comprehensive amendments, restructuring, and/or additions to the existing body of laws, guidelines and policies (Li, et al., 2020). In Nigeria, the ability of the financial subsector to play its role has been periodically punctuated by its vulnerability to systemic distress and macro-economic volatility, and policy fine tuning inevitability (Kama 2016). Consequently, the financial reforms were focused on further liberalisation of banking business; ensuring competition and safety of the system; and proactively positioning the industry to perform the role of intermediation and playing a catalytic role in economic development

The Central Bank of Nigeria is the pinnacle of financial progress. The formation of the Central Bank in 1958 marked the start of a series of financial developments in Nigeria. Since then, the CBN has evolved into a dynamic force in the economy, acting as a stimulus for investment and economic growth. Despite the fact that central banks' activities vary greatly around the world, the implementation of monetary policy is the central bank's most ubiquitous impact on the economy. Central banks can use monetary policy to influence a wide range of macroeconomic variables, including inflation, employment, growth, prime interest rates, currency rates, recapitalisation, and the balance of payments (Erb, 2019). The CBN has been able to execute monetary and exchange actions aimed at building the financial system's institutional architecture and developing the embryonic domestic financial markets, in addition to its conventional functions of issuing means of payment and controlling the money supply.

According to Omonkhanlen (2022), the universal banking model embraced over the years through banking reforms, authorising banks to carry out all sorts of financial services, has been shown to subject them to high operational risks. With the new model, deposit money banks have now been categorised by the CBN into service classes such as international banking, regional banking, national banking, merchant banking and microfinance.

The focus of reforms is to improve the financial sector's efficacy and efficiency (Sanusi 2014). Because financial reforms aim to positively improve all financial sectors, banking reform is expected to have a positive impact on the banking industry and, as a result, efficiency. When the focus and direction of the stock market sectors deviates from the original or desired goal or aims, this reforms tend to tie down fund of the stock market because of increase in the recapitalisation, interest rate, monetary policy rate (MPR) that give less efficiency for stock market investment (Ubom 2018 in Akpan 2022). Based on the above

that study tend to find out on the effect of banking sector reforms on the efficiency of the Nigeria stock market.

OBJECTIVES OF THE STUDY

To study is guided by the following objectives:

- i. To analyse the effect of prime interest rate on the stock market efficiency in Nigeria

HYPOTHESES OF THE STUDY

H₀: Bank recapitalisation has no significant effect on stock market efficiency in Nigeria

H₁: Prime interest rate has no significant effect on stock market efficiency in Nigeria

LITERATURE REVIEW

Banking Sector Reforms

According to Oni (2019), reforms have been a regular feature of the Nigerian banking industry. They have been introduced either in response to challenges posed by developments within the economy or those from outside the economy such as the imminence of system distress, deregulation, liberalisation and globalization. Recently, Nigeria had experienced two major banking reforms, the first one in July, 2004 and the ongoing reform that started in June, 2009.

Okonjo and Osafo (2017) elaborated that Nigerian banking sector prior to July, 2004 was weak and fragmented, often financing short-term arbitrage opportunities rather than productive private investments. The authors reiterated further that the roots of the financial sector weakness may be traced to its poorly managed liberalization during the Structural Adjustment Programme (SAP) of the 1980s. The financial system was repressed before the SAP largely because of the imposition of interest rate ceilings that resulted in negative real interest rates. Initial attempts at financial liberalisation, however, yielded poor results. Supervision remained weak and there was evidence that many banks had bad balance sheets. Many of them conducted only limited lending to the private sector, while engaging predominantly in more lucrative short-term arbitrage foreign exchange “round tripping” activities. Consolidation and improved supervision of the sector were, therefore, needed to strengthen the financial sector.

Abolo (2019) pointed out a number of outcomes of the consolidation exercise which include; Reforms are predicated upon the need for reorientation and reposition of existing status quo in order to attain an effective and efficient state (Ajayi 2014). Compos and Esfahani (2022) stressed that policy reform means “a renegotiation of contracts that entails direct government involvement in production towards more efficient market-oriented ones” Also, Okeke (2023) posits that reforms are deliberate actions by the government to fast track, jump start and consolidate specified sector of the economy to achieve desired objectives. Financial reforms, according to Ebong (2023), are deliberate policy response to correct perceived or impending financial crises and subsequent failure. Reforms in the financial industry are aimed at addressing issues such as governance, risk management and operational inefficiencies. The vortex of most financial reforms is around firming up capitalisation. Specifically, financial reforms are primarily driven by the need to achieve the objective of consolidation, competition and convergence in the financial architecture (Deccan 2014). Like other emerging economies, Nigeria has been involved in financial reforms on a regular basis aimed

at responding to the challenges posed by some factors and developments such as systemic crisis, deregulation, globalisation and technological innovations, or acted proactively both to strengthen the financial system and prevent systemic problems as in the case in the current (Imala 2014). The rationale behind banking reforms in Nigeria was for achievement of macroeconomic goals of price stability, full employment, high economic performance and internal and external balances. However, the reforms were expected to play actual role in financial intermediation, financial stability and confidence in the system (CBN, 2022). The backdrop of correcting structural and operational weakness in the year 2014, which was the fourth phase of banking reform in Nigeria, was the revitalisation of financial intermediation in the sector.

Recapitalisation

Recapitalisation is an aspect of the ongoing reforms in the banking industry. Ajayi (2015) viewed recapitalisation as an important component of reforms in the banking industry, owing to the fact that a bank with a strong capital base has the ability to absolve losses arising from non performing liabilities (NPL). He identified three means by which recapitalisation can be achieved. These are through consolidation, convergence and capital market. While consolidation involves mergers and acquisition between and among banks, convergence involves the consolidation of banking and other types of financial service like securities and insurance. However, convergence was identified to be less frequently embarked on as a means of recapitalisation (Ferguson 2022). The capital market, on the other hand, provides a conduit for investment fund and devolution of the ownership structure through offer for subscription by either private placements or public offers.

Uchendu (2015) noted that the banking sector reforms and its sub component, recapitalisation vis-à-vis consolidation, convergence and capital market activities have emerged as a result of a deliberate policy in response to correct the perceived or impending banking sector crises and subsequent failure. Banking sector crisis can be triggered by the preponderance of weak banks characterized by persistent illiquidity, insolvency, under-capitalisation, high level of nonperforming loans and weak co-operate governance. Banking crises usually start with banks inability to meet their financial obligation to their stakeholders Uchendu (2015) stressed further that not all bank consolidation is as a result of a banking crises. Consolidation is implemented to strengthen the banking system, embrace globalization, improve healthy competition, exploit economies of scale, raise efficiency and improve profitability. Despite all the above expected benefits, Uchendu (2015) was quick to point out that the banking sectors reform has their associated costs. He identified job losses which would have nevertheless occurred if remedial measures were not taken; Gross country cost estimates to national economies resulting from banking sector reform are enormous, ranging from a 12% of GDP for Malaysia, 15% of GDP for Korea to 45% of GDP for Indonesia. However, in spite of the above huge sums spent on banking sector reforms, the benefits have been seen to outweigh the cost in medium to long term.

Ogunbunka (2015) also identified three reasons for continued reforms in the banking sector. These are structural reason, recapitalisation reasons and ownership issues. He however emphasised that the scope of such reform programmes and the strategies adopted in the execution vary from one country to another. Imala (2015) identified four rationales behind banking system reform. These are low capital base of banks, a large number of small banks with relatively few branches, the dominance of a few banks and poor rating of a number of banks. Adedipe (2015) argued that the most fundamental reason for the consolidation of

banks via recapitalisation was the observed growing distress in the industry which was identified as a real threat of imminent bank failure. Adedipe (2015) identified the fact that there is a general consensus that change of fundamental nature was necessary to redirect the banking system towards its traditional role of providing effective intermediation and financing economic growth.

Prime interest rate

The Prime Consumer Lending Rate is 24 per cent, but some banks process at 26 per cent, which is $PLR + 2$ for individuals and commercial customers. For government, the PLR is 22 per cent, but processed at 20 per cent, which is $PLR - 2$.

Enquiries from commercial banks managers about lending rates for commercial deposit banks confirmed that the interest rates are high. The claim is that treasury bills are somewhere between 14 per cent and 15 per cent which encouraged bigger banks to shift their loanable funds to investment in treasury bills. This scenario curtailed the willingness of bigger banks to give out loans; even if they choose to, it will definitely be at higher rate. Businesses continue to lament the dearth of credit facilities and high interest rates. Lending rate is an important economic cost of capital; it has fundamental implications for the economy whether seen from the point of view of cost of capital or from the perspective of opportunity cost of funds (Acha, 2011)

The rate varies little among banks, and adjustments are generally made by banks at the same time, although this does not happen with frequency. The interest rate is important because it affects efficiency in the financial markets. As direct relationship between lending rate and profitability is well established, the important role of lending rate cannot be down played. It is extremely important for financial institutions that seek to grow, to understand the influence of lending rate on the performance parameters of commercial banks (Ferrer & Tang 2016).

Stock Exchange Market

Generally, stocks are facilities traded in the stock exchange markets for prospective investors to buy and sell all over the world. Nigeria stock market is a principal financial market that provides these facilities in Nigeria for mobilising medium- and long-term funds to listed companies for economic development and growth, (Udochuku, 2017). The market has been described as a framework of institutions that arrange for the mobilisation and channelisation of funds from the surplus units to the deficit units of the economy for long-term productive investment (Adaramola, 2022). All Stakeholders have clearly defined motives for participating in the game-like market. The Intermediaries are out for immediate gains and commissions (a fixed percentage of deals that passed through them to the floor of the stock exchange market), the fund users aimed at profit-making - when the fund obtained is effectively turned-around while the Shareholders benefit is in form of returns obtained from the stocks - dividends and capital gains.

History had shown that change in the price of shares is an important part of dynamism of stock market of any Nation. It influences stakeholder response and actions towards stock business in the stock exchange market. According to Yerima (2022), 81% of trading that goes on the floor of Nigeria stock exchange markets are done by foreign investors leaving 19% to a population of over 200 million people. In this line, an economy where the stock market performance is declining it is usually considered as an emerging one. In fact, the stock market is usually considered as the primary indicator of economic strength and development of any country (Abu, 2019).

Muhammad (2017), described the Nigerian equity market as the fastest growing in the emerging markets universe. Capitalisation of the Stock Exchange increased by 141% in 2017 and crossed \$85 billion (N8.262 trillion) in July of that year. In 2018, Daily Average Trades (gross) averaged over N10 billion, compared to just over N200 million five years before. In 2017 trades topped N2 trillion - 50% more than in 2009. As at then, the value of new equity issues increased at a compound annual growth rate (CAGR) of 87% but by the middle of 2018, the total market capitalisation which has increased up to over 90% from a peak in March 2018. Share market capitalisation went into a spiralling decline, dropping at 45.8% by the end of the year and since then, investors had been lamenting and are in search of Messiah.

According Ifuero and Esther (2020) clearly, Nigeria's capital market is at a crossroads. The general belief is that fall in share market Capitalisation was due to the global financial crisis of 2008 - an external factor which was singled out as the sole cause of capital market crisis all over the world, but share index – a measure of market average performance revealed that during the global economic meltdown all share prices fell together but they are not rising together in Nigeria Stock Exchange Markets aftermath. The cause of not rising together has been attributed to other factors such as ineffective market regulation, inadvertent supervision, weak institutions, improper corporate governance, lack of regulatory pro-activity cohesion, unregulated margin financing and lots of inadequacies about transparency of the dealings among operators in most emerging Stock Exchange Market – which are problems that can be solved internally by sound regulations and reforms.

Efficiency of the Stock Market

What is an efficient market? What does it imply for investment and valuation models? Clearly, market efficiency is a concept that is controversial and attracts strong views, pro and con, partly because of differences between individuals about what it really means, and partly because it is a core belief that in large part determines how an investor approaches investing. This chapter provides a simple definition of market efficiency, considers the implications of an efficient market for investors and summarises some of the basic approaches that are used to test investment schemes, thereby proving or disproving market efficiency. It also provides a summary of the voluminous research on whether markets are efficient. Market Efficiency and Investment Valuation; the question of whether markets are efficient, and if not, where the inefficiencies lie, is central to investment valuation. If markets are, in fact, efficient, the market price provides the best estimate of value, and the process of valuation becomes one of justifying the market price. If markets are not efficient, the market price may deviate from the true value, and the process of valuation is directed towards obtaining a reasonable estimate of this value. Those who do valuation well, then, will then be able to make 'higher' returns than other investors, because of their capacity to spot under and overvalued firms. To make these higher returns, though, markets have to correct their mistakes – i.e. become efficient – over time. Whether these corrections occur over six months or five years they have a profound impact in which valuation approach an investor chooses to use and the time horizon that is needed for it to succeed.

There is also much that can be learnt from studies of market efficiency, which highlight segments where the market seems to be inefficient. These 'inefficiencies' can provide the basis for screening the universe of stocks to come up with a sub-sample that is more likely to have undervalued stocks. Given the size of the universe of stocks, this not only saves time for the analyst, but increases the odds significantly of finding under and overvalued stocks. For instance, some efficiency studies suggest that stocks that are 'neglected' be it institutional

investors are more likely to be undervalued and earn excess returns. A strategy that screens firms for low institutional investment (as a percentage of the outstanding stock) may yield a sub-sample of neglected firms, which can then be valued using valuation models, to arrive at a portfolio of undervalued firms. If the research is correct the odds of finding undervalued firms should increase in this sub-sample.

THEORETICAL REVIEW

Goldsmith Theory of Financial Development

This theory was propounded by Goldsmith in the year 1969. The Peak of Goldsmith's theory is the recognition that financial development matters in turning the economic fortunes of nations as it lowers market imbalance which in essence increase the domestic savings rate and attract foreign capital.

Supporting this assertion, Goldsmith analysed the total assets of various financial institutions, trends in their types and allocation, in relation to long-run economic performance. According to Goldsmith, this helps indicate the extent and character of financial interrelations, which in turn helps to determine how capital expenditures are funded and how existing assets are shifted among others. Explaining his position, Goldsmith opined that as a result of the fact that in the first quarter of the 20th century, the financial transactions of other financial institutions increased in relation to the funds mobilised by commercial banks, the central bank's ability to control or direct financial performance was weakened. There is also a theoretical link between financial policy reforms and money market operations. In the conventional Keynesian theory and policy, impact of monetary policy can be transmitted to the rest of the economy through the monetary system. For instance, there is the assumption that in the presence of an efficient money market, interest rate elasticity permits the distribution of funds among competing uses in an efficient way. It is believed therefore, that liberalisation of interest rate, accompanied by price competitiveness of the banking system would stimulate the rate of savings in a given level of income and hence supply of domestic capital (Ndekwe2002).

EMPIRICAL REVIEW

Olafin et al., (2024) examined the relationship between liquidity risk and the profitability of Nigeria's listed deposit money banks in Nigeria over a 16 years' period from 2008 to 2023. Panel data on cash reserve ratio, liquidity ratio, loan to deposit ratio, and return on equity were collected from the annual reports and financial statements of the five systemic banks listed on Nigerian Exchange Group from 2008 to 2023. Ordinary least square regression analysis, panel unit root test, Hausman test were used in analysing the data. The study found a significant positive relationship between the cash reserve ratio, loan to deposit ratio and profitability of Nigerian deposit money banks. But liquidity ratio has a negative but insignificant relationship with profitability of deposit money banks in Nigeria. Based on the findings, the research recommends that the Central Bank of Nigeria (CBN) must act quickly to lower cash reserve ratios in order to help Nigeria's deposits banks operate more effectively. Banks should engage competent and qualified personnel in order to ensure that right decisions are adopted with regard to the optimal level of liquidity and the loan-to-deposit ratio should be fully utilised by banks to support sales initiatives.

Odey et al., (2023) examined financial indicators and stock market performance in Nigeria. The low performance of the stock market has been attributed to so many factors, ranging

from financial, macroeconomic to political and institutional. Hence, the study examined the relationship between financial indicators and stock market performance, using the econometric analytical technique. Annual time series data sourced from the Central Bank of Nigeria and Nigerian Stock Exchange were employed. Stock market performance was measured by all-share index while financial indicators were represented by stock market profitability, efficiency. The bound testing and Autoregressive Distributed Lag model estimation techniques were employed for the analysis. It was revealed that a long run relationship exists among the variables in the estimated model. A positive relationship exists between market profitability, liquidity, efficiency and stock market performance in Nigeria with coefficients of 58.98, 879.58 and 5152.51, respectively. The implication of the findings is that market profitability, market liquidity and market efficiency have positive impact on stock market performance in Nigeria. Hence, the study recommends that; there is need for implementing policy such as good corporate governance that will maximise profit for investors in the market.

Also make it attractive and hence deepen the Nigerian stock exchange market; the provision of windows for firms to raise cash through issuance of new shares, debentures, loans and deposits, when needed and enhance the ability of the firms to convert assets to cash to pay its current liabilities and its debt capacity; while a high trading volume should be maintained to enhance efficiency of the Nigerian capital market.

Usman, et al., (2023) examined the effect of capital market reforms on the efficiency of Nigerian stock market. Secondary data were used for this study. The relevant data were sourced from Securities and Exchange Commission Statistics and Central Bank of Nigeria between 1982 and 2021. The results of the DEA showed that of the period of forty (40) years examined, the Nigerian stock market was efficient for sixteen (16) years considering the capital market reforms in existence with efficiency scores varying between 0.969 and 1. It was recommended that the regulatory authorities of the capital market should continue to make concerted efforts towards cushioning the effects of the global financial meltdown on the Nigerian Exchange Group which has significantly affected its performance. This will help to restore investor's confidence and revival in the market.

Adeoye and Usman (2021) examined the impact of banking reforms on the efficiency of Nigerian stock market for the period 1981-2020. Data for the study were sourced from Central Bank of Nigeria Statistical Bulletin and Securities and Exchange Commission Statistics. Vector Auto Regressive (VAR) Model was used to analyse the determinants and the liquidity of the stock market while Data Envelopment Analysis (DEA) examined the efficiency level of the stock market. The results of the VAR Model showed that the stock market liquidity significantly responded to changes in the movement of the banking reform indicators. The results of the DEA showed that of the period of forty (40) years examined, the Nigerian stock market was efficient for seven (7) years which varied between 0.804 to 1 with mean score of 0.918. The SFA result revealed that out of the variables of the banking sector reforms, only financial deepening affected the operations of the stock market significantly but negative. For the half normal ($p=0.033$) @ 5% and for the truncated normal ($p=0.072$) @ 10%. The study concluded that a positive relationship exists between banking reforms and stock market liquidity. It was recommended that the monetary authorities should further increase the minimum capital base in order to strengthen the banks and have an improvement in the efficiency level of the stock market.

Bako et al (2021) examined the effect of banking sector reforms on the relationship between banking stocks and the stock market capitalisation rate. Based on simple linear regression, Multiple linear regression and correlational analysis the results obtained showed that banking sector capitalisation, and stock market capitalisation rate decreases as government prevailing interest rate on deposit by commercial banks increases. The study further revealed that there is a negative relationship between banking sector reforms and the stock market capitalisation rate. It was therefore recommended that the reforms by the Central Bank of Nigeria to sanitize the banking industry is welcome however, it has to be carefully implemented to ensure banks are better positions to perform their strategic roles in the Nigeria capital market.

Ibrahim and Segun (2019) examined the effect of market liquidity, inflation and exchange rates on stock return in Nigerian Stock Exchange market. The researchers used ex-post facto design and employed secondary data subjected to Auto-regressive Distributive Lag (ARDL) bound test method of analysis within the period of twenty-one years. Findings reveal that in the short run, stock turnover, trading volume, exchange, and inflation rates have affected stock return positively and significantly. In the long run, market turnover has a positive effect. However, inflation and exchange rates have affected stock return negatively and significantly. Then, trading volume has a negative but insignificant effect on stock return, which is all at 5% level of significance.

The researchers conclude that market liquidity, exchange, and inflation rates affect stock return. Therefore, the researchers recommend demutualisation and transparent structures and adaptive method stabilization in exchange rate policies to increase stock market patronage, minimise transaction costs, and mitigate the market uncertainties.

Tonye (2019) critically examined banking sector reforms impact on stock market performance in Nigeria considered from 2004 to 2018; with particular interest to proxy banking sector reforms: as broad money supply, domestic credit to the private sector and interest rate spread. The variables employed in the study were tested using an ADF, Johansen co-integration and model stability test, while the error correction mechanism (ECM) was used to estimate the individual parameters and to validate the hypothesis outlined in the study. The empirical results of the study found a collective insignificant impact of banking sector reforms on stock market performance for the period under study. The study further reveals that, broad money supply as a reform proxy has a linear relationship with stock market performance. The study strongly recommends the need for Central Bank of Nigeria (CBN) and other monetary authorities to periodically review and sustain existing banking sector reforms in consonance with current challenges in the banking sector so as to boost performance in the Nigerian stock market.

METHODOLOGY

The study followed a longitudinal research design. Longitudinal research design involves analysing data collected over a long period to examine trends or changes over time, it offers a powerful tool for researchers to explore complex phenomena and inform evidence-based practices. The study sought to examine the effect of banking sector reforms on the efficiency of Nigeria stock market. This allows the researcher to examine changes, trends, and patterns over time. Longitudinal research design was used to provide insight into changes and development over time frame of the efficiency of the Nigeria stock market. The data obtained from CBN Statistical Bulletin and Nigerian Stock Exchange (2005-2024) used to determine the effect of banking sector reforms on the efficiency of Nigeria stock market because they

are more involved with these banking reforms that are carried out the banking reforms and how it affects the Nigeria stock market efficiency. Longitudinal research design was used because it allowed the researchers to collect a large amount of data in a relatively short period of time, it is relatively less expensive than many other data collection techniques (focus groups, transactional tracking, experiments, observations and so on), creates a quick and easy penal date which is direct and used to collect information on a broad range of phenomenal; which include personal facts, attitudes, past and present behaviours, and opinions. Another reason is that the longitudinal research design allows for unbiased of surveys allowing data to offer a wealth of information, enabling researchers to explore various research questions.

Population and Sampling

The population of the study was the activities of all the Nigeria Stock Exchange Market as a single unit for twenty years (20) from 2005 to 2024.

Data Collection

The study adopted secondary data which are time series and quantitative in nature. The annual data was sourced from Central Bank of Nigeria (CBN) bulletin and statistics report which covered the recapitalisation and the prime interest rate. Also, the Nigerian Stock Exchange (NSE) comprising All Share Index for the efficiency of the stock market for the years under review (2005-2024)

Data Analysis Technique

The study adopted panel regression using the fixed effect model as a tool for data analysis. This method is relevant to the study and the data for the study is time series data. The penal regression fixed effect model was used to determine whether there is an effect relationship between banking sectors reforms and efficiency of the Nigeria stock exchange market. The correlation was used to establish the strength and degree of the relationship that exist between the variable and the decision rule was that, if coefficient of determination is +1 and -1, it implies that there are some associations between the dependent and independent variables. Also, if the result of the analysis indicates zero (0), it implies that there is no association between the dependent and independent variable. The study also, used the mean to establish the average of the number which is the calculated central value of a set of numbers and was used to represent the typical value of the variable and therefore, it served as the yardstick for all observations in the study. The standard deviation was used to quantify the amount of variation or dispersion of the set data values of the study. Statistical Package for the Social Sciences (SPSS) Version 25 was used to analyse the data got from the study

$$NSME = \beta_0 + \beta_1 R + \beta_2 PIR + E$$

Where:

NSML =	Nigeria Stock Market Efficiency
R =	Recapitalisation
PIR =	Prime Interest Rate
β_0 =	is the intercept of the regression model of Efficiency
E =	Error term associated with the model

$\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 are the rate of change of the bank sector reforms variables with respect to Nigeria stock exchange market variable

ANALYSIS

Descriptive Statistics of the Variables

	N	Minimum	Maximum	Sum	Mean	Std. Deviation	Skewness	Kurtosis
All Share Index	20	20773.98	100057.03	756784.75	37839.2375	18024.09156	2.358	7.079
Bank Capitalisation	20	1.08	1.60	27.16	1.3582	0.17112	-0.254	-0.986
Interest Rate	20	274.00	3475.00	24663.00	1233.1500	1018.34191	0.911	-0.288

Table 1: Descriptive Statistics

Source: SPSS 25, Output 2025

The Table 1 revealed the data used in the study with All Share Index having a mean value of 37839.2375 which means that All Share Index on an average is 37,839.2375. The deviation from the mean (standard deviation) was 18024.09156; this means that All Share Index was normally distributed because the standard deviation value was lower than the mean value. In like manner, the skewness and kurtosis of 2.358 and 7.079 respectively. The maximum All Share Index of stock market in Nigeria as at the period of study was 100057.02 which means that the highest All Share Index of stock market in Nigeria was more than 100,057 points, while the minimum of All Share Index of stock market for the period under study was 20773.98 meaning the lowest all share index is 20773 points.

Furthermore, bank capitalisation has a mean value of 48.7500 which means that Bank Capitalisation on an average is 48.7500 billion naira in Nigeria. The deviation from the mean (standard deviation) was 106.21323; this means that Bank Capitalisation was not normally distributed because the standard deviation value was higher than the mean value. The maximum Bank Capitalisation of stock market in Nigeria as at the period of study was 500.00 which means that the highest Bank Capitalisation market in Nigeria was more than 500 billion naira while the minimum of Bank Capitalisation of stock market for the period under study was 25 meaning the lowest was 25 billion naira.

Finally, interest rate has a mean value of 1.3582 which means that Interest Rate on an average for deposit is 1.3582% in Nigeria. The deviation from the mean (standard deviation) was 0.17112; this means that Interest Rate was normally distributed because the standard deviation value was lower than the mean value. In like manner, the skewness and kurtosis of -0.254 and -0.986 respectively. The maximum Interest Rate in the banking sector on deposit in Nigeria as at the period of study was 1.60 which means that the highest Interest Rate in the Nigeria banking sector was more than 1.60 while the minimum of Interest Rate for the period under study was 1.08 meaning the lowest interest rate for deposit was 1.08 percent.

Table 2: Tests of Between Subject Effects for Efficiency

Dependent Variable:	All Share Index					
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	4307509058.623a	2	2153754529.311	19.632	0.000	0.698
Intercept	1316142.072	1	1316142.072	0.012	0.914	0.001
BC	3022679355.189	1	3022679355.189	27.553	0.000	0.618
IR	232715686.441	1	232715686.441	2.121	0.163	0.111
Error	1864980594.711	17	109704740.865			
Total	34808647544.962	20				
Corrected Total	6172489653.334	19				

a. *R Squared* = .698 (*Adjusted R Squared* = .662)

Source: SPSS 25, Output 2025

Table 2 shows that the tests of between subject effects have the R square value as 0.698 which means that our independent variable which is banking sectors reform has 69.8% impact on the dependent variable which is the (efficiency) Nigeria stock market. This is to say 69.8% change in the (efficiency) that is Nigeria stock market efficiency are as a result of banking sector reforms in Nigeria. Also, disclosed the significant F-test of (19.632) and P-value of 0.000 which was found to be less than 0.05 ($P < 0.05$) thus, indicating that the overall prediction of independent variable to the dependent variable is statistically significant. This implies that the model has a good fit and there is a significant effect between the independent variable banking sectors reform (bank recapitalisation and interest rate) and the dependent variable of Nigeria stock market efficiency (All share index)

TEST OF HYPOTHESES

Decision Rule

Accept the null hypothesis (H_0) and reject the alternate hypothesis (H_i) if the significant probability value is greater than 0.05 that is $PV > 0.05$, which implies that there is no significant relationship that exists with standardised coefficient of Beta. Reject the null hypothesis (H_0) and accept the alternate hypothesis (H_i) if the significant probability value is less than or equal 0.05 that is $PV \leq 0.05$, which implies that there is significant relationship that exists with standardised coefficient of Beta. The strength of the relationship is decided in three (3) ways firstly, if Beta positive it is a positive relationship. Secondly, if Beta is negative then it is a negative relationship. And finally, if Beta is equally 0 then there is no relationship.

Table 3: Parameter Estimates Efficiency

Dependent Variable:	All Share Index				95% Confidence Interval		
Parameter	B	Std. Error	t	Sig.	Lower Bound	Upper Bound	Partial Eta Squared
Intercept	2193.596	20027.093	0.110	0.914	-40059.876	44447.068	0.001
BC	126.105	24.024	5.249	0.000	75.418	176.792	0.618
IR	21718.159	14911.553	1.456	0.163	-9742.468	53178.787	0.111

Source: SPSS 25, Output 2025

The relative contribution of each independent variable in explaining the dependent variable is illustrated in Table 3. The parameter estimates table using beta (B) to indicate the degree of

relationship between each variable that represents the banking sector reforms and all share index.

Bank Recapitalisation on Nigeria Stock Market Efficiency

General linear model was conducted to examine whether bank recapitalisation has significant effect on Nigeria stock market efficiency, and the result in Table 3 show that Beta value for bank capitalisation has a Beta 2193.596 which denotes that for every one-unit increase in the independent variable of bank recapitalisation it will lead to 2193.596 increase in the Nigeria stock market efficiency. which also has a probability value of .000 at 5 percent level of significance, it thus falls in the rejection region of null hypothesis and hence, the alternate hypothesis was accepted which stated that bank recapitalisation has significant effect on Nigeria stock market efficiency.

Prime Interest Rate on Nigeria Stock Market Efficiency

General linear model was conducted to examine whether interest rate has significant effect on Nigeria stock market efficiency, and the result in Table 3 show that Beta value for interest rate has a Beta 126.105 which denotes that for every one-unit increase in the independent variable of interest rate it will lead to 126.105 increase in the Nigeria stock market efficiency, which also has a probability value of .163 at 5 percent level of significance. It thus falls in the rejection region of alternate hypothesis and hence, the null hypothesis was accepted which stated that interest rate has no significant effect on Nigeria stock market efficiency.

DISCUSSION OF FINDINGS

Result from hypothesis one revealed that bank recapitalisation has significant effect on Nigeria stock market efficiency. Thus, the researcher rejects the null hypothesis and accept the alternate. The finding is in agreement with that of Nathanael (2014) that investigates the impact of the banking sector reforms on the Nigerian economy.

The result showed that the minimum capital base which is at the heart of the banking sector reform has a positive and significant relationship with the level of economic growth. This is an indication that the banking sector recapitalisation has been beneficial and capable of generating the desired level of economic progress in Nigeria.

Result from hypothesis two revealed that interest rate has no significant effect on Nigeria stock market efficiency. Thus, the researcher accepts the null hypothesis and rejects the alternate. The finding is in line with that of Tonye (2019) that critically examined banking sector reforms impact on stock market performance in Nigeria considered from 2004 to 2018; with particular interest to proxy banking sector reforms: as broad money supply, domestic credit to the private sector and interest rate spread. The study found a collective insignificant impact of banking sector reforms on stock market performance for the period under study.

CONCLUSIONS

Bank recapitalisation has a significant effect on the Nigeria stock market efficiency. This implies that bank recapitalisation exercise in Nigeria has significantly impacted the stock market, driving increased investor activity and market growth. The recapitalisation process is expected to boost investor confidence, with bank perceived to have sold capital-raising strategies becoming investor favourites.

Interest rate has no significant effect on the Nigeria stock market efficiency. This implies that change in deposit interest rates may not be an effective tool for influencing stock market performance. Investors may need to focus on other factors such as company fundamentals and market trends when making investment decision.

RECOMMENDATIONS

Based on the conclusions of the study, the following recommendations are made:

1. The Central bank of Nigeria (CBN) should continue to strengthen the regulatory framework to ensure that banks maintain adequate capital buffer, which can contribute to a more efficient stock market.
2. Investors and policy makers should closely monitor other macroeconomic factors such as inflation exchange rates, and GDP growth which may have a more significant impact on stock market.

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