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Financial Market Openness and Liquidity of Quoted Commercial Banks in Nigeria

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ABSTRACT

This study examined the effect of financial market openness on the liquidity of quoted commercial banks in Nigeria. Time series data were sourced from Central Bank of Nigeria Statistical Bulletin while panel data were sourced from Statement of financial position of the quoted commercial banks. Liquidity was modeled as the function of foreign exchange market openness, current account openness and capital market openness. Panel data ordinary least square was used as data analysis methods. The study established that exchange rate and current account openness are negatively related to liquidity of the quoted commercial banks while capital market is positively rate to liquidity. From the findings, the study conclude that exchange rate and current account openness have negative effect on liquidity of the quoted commercial banks while capital market openness have negative effect on the liquidity of the quoted commercial banks over the periods covered in this study. It recommends the need for effective macroeconomic policies that can stabilize the exchange rate in Nigeria to enhance the liquidity of the quoted commercial banks, the monetary authorities should advance it policy framework concerning balance of payment to enhance macroeconomic policies that affect positively the present negative values of current account balance of balance of payment and the operational efficiency of the capital market should be deepened to enhance effective equity trading and attract foreign portfolio investment for better liquidity of the commercial banks in Nigeria.

Keywords: Financial Market, Openness, Liquidity, Commercial Banks, Nigeria

INTRODUCTION

The banking sector plays significant role for the growth and development of the economy. It is the transmission channel for monetary policy and enhances efficient payment system (Aspachs, Nier and Tiesset, 2015). The intermediate functions include deposit mobilization and credit allocation, liquidity creation and risk management. Banks have to hold optimal level of liquidity that can maximize their profit and enable them to meet their obligation. The liberalization of the financial market determines its operational efficiency and liquidity of the banking industry as cross boarder capital can influence the depth of the financial market. Liquidity in commercial banks is one of the most important functions in bank management. The concept can is measured as liquid assets ratio, net loans to total deposit ratio, net loan to total customer's deposit, and inter-bank asset to total liquidity. Management ensures the ratio within the regulatory benchmark (Berger & Bouwman, 2008). It determines the solvency and failure of the institutions. Illiquidity in commercial banks does not only affect the banks but the economy at large. Illiquidity is a prerequisite for bank run (Diamond & Dybvig, 1983).

The opinion that financial sector openness can enhance operational efficiency of the financial sector can be traced to McKinnon (1973) and Shaw (1973). The theory advocated that financial liberalization is

necessary to address the problems caused by the repressive financial policies of developing economies. McKinnon (1973) emphasized a fundamental way on the financial savings that guarantees growth and its further emphasize that governments must remove all barriers faced by financial intermediaries. According to Shaw (1973), financial openness is characterized by easing the functioning of the financial market by removing all obstacles as described by McKinnon (1973). And this goal is achieved primarily through a policy of financial liberalization in the context of perfect financial markets, which replaces the policy of financial repression as adopted by several developing economies.

Financial openness is the readiness of any country to implement liberalized policies regarding business and trading with other countries in international trade. It often entails complete withdrawal of control and regulations by state on ownership of the means of production and encouragement of private sector participation. It shows the level of a country's participation in the global trading system. Financial markets globalization leading to international financial integration of stock markets has positively impacted and accelerated the rate of capital markets development in African emerging markets and Nigeria inclusive (Olotu & Jegbefume, 2011). These developments according to Olotu and Jegbefume (2011) were reinforced by the demand for long-term financing by the private sectors as well as the willingness of governments to provide the institutional frameworks needed for the effective and efficient regulation of the capital markets. Till date, pension funds administrators, insurance companies and investment houses remain the major players in the Nigerian capital market.

Financial openness refers to an individual country's approach to foreign investments in corporations within its jurisdiction, to the policies of each country with respect to regulating exports of specified goods and services, and to each government's policy on what is called capital flows (Sahoo & Sethi, 2020). Financial openness is referred to as the openness of the financial market of a country to other countries. It allows people to trade and carry out various financial transactions in its domestic market, which is called financial market openness and financial transaction admittance.

There are divergence opinions on financial sector openness, McKinnon (1973) argued that financial sector openness is a necessary ingredient in the generation of high saving rates and investment. Shaw (1973) further argued that the subsequent real growth in the financial institutions provides domestic investors with the incentive to borrow and save, thus enabling them to accumulate more equity thereby lowering the cost of borrowing. The same view is echoed by Posner and Coleman (2009) who argued that financial sector openness is necessary for financial markets to operate efficiently and to provide new opportunities for financing in the existing economy. Gibson and Tsakalotos (2012) defined financial sector openness as the elimination of a series of impediments in the financial sector in order to bring it in line with that of the developed economies. There are principally three types of financial sector openness. Firstly, this term may be used to describe domestic financial sector reforms such as privatisation and increases in credit extension to the private sector. Despite a surge of global investor interest in the 1980s and 1990s, Africa has been bypassed by the massive international capital flowing to developing economies.

Aggregate capital flows to developing countries have been rapidly exceeding official development assistance flows since 1980s. However, Africa remains the only developing region in which development assistance flows exceeds private capital flows (Jalata, 2013). This was mainly attributed to the lack or absence of a well-developed financial sector (capital markets, banks, finance companies, life insurance companies, and insurance companies) and the poor economic policies and institutions in Sub-Saharan African countries. Generally, the trend towards financial openness is part of a broader trend towards reduced direct intervention of the state in the economy. Financial liberalization is also a deliberate attempt to move away from "financial repression" as a policy to fund government fiscal imbalances and subsidize priority sectors, a move strongly advocated by the influential work of McKinnon (1973) and Shaw (1973).

The literature on boom-bust cycles and bubbles in asset prices suggests that the ability of financial liberalization to increase foreign investment by expanding opportunities to undertake riskier investments is higher in less economically and developed countries (Tornell and Westermmann, 2005). Allen and Gale (2000) show that financial liberalization may trigger a financial crisis when there is uncertainty about the

future course of credit creation in the economy and the risk-shifting problem leads investors to push up the prices of risky assets in fixed supply above their fundamental value, creating a bubble. Tornell and Westermann (2005) argued that these distortions are more prevalent in emerging markets. Kaminsky and Schmukler (2008) showed that liberalization is followed by large financial cycles in the short run only in emerging economies whereas institutions improve and financial markets tend to stabilize in the long run. Demirgüç-Kunt and Detragiache (1999) also find evidence that a weak institutional environment makes liberalization of capital market more likely to lead to a financial crisis. The above analysis has been tested and proven in the advanced financial market; this study examined how Nigeria financial sector openness affects liquidity of quoted commercial banks in Nigeria.

LITERATURE REVIEW

Financial Openness

Financial openness is the readiness of any country to implement liberalized policies regarding business and trading with other countries in international trade. It often entails complete withdrawal of control and regulations by state on ownership of the means of production and encouragement of private sector participation. It shows the level of a country's participation in the global trading system and its relationship with other countries of the world (Kannan, 2010). Kaminsky and Schmukler (2003) noted that financial openness as a complete deregulation of a country's financial system to global financial flows: but to Johnston and Sundararajan (1999), it is an operational reforms policy aimed at opening up the entire financial system with a view to having market-oriented system that would assured rapid economic growth, banking sector development and enhancement of quality of institutions at the end of the day (Bekaert, Harvey & Lundblad, 2011).

Financial openness refers to the willingness of a nation to adopt liberalized policies regarding business and commerce (Petram, 2014). Financial openness refers to an individual country's approach to foreign investments in corporations within its jurisdiction, to the policies of each country with respect to regulating exports of specified goods and services, and to each government's policy on what is called capital flow (Lena, 2012). Financial openness, which can be defined as integration into international financial markets, can cause significant changes in countries' production structures and in the methods of doing business through the quantity and quality of international capital flows. (Serdaroğlu, 2015) Almost all countries maintain some level of control over the amount of wealth that can be transferred abroad (e.g. requirements that citizens declare, upon leaving their country for any period of time, whether they are transporting a certain amount of cash), types of investments, corporate mergers and acquisitions that can be carried out by foreign commercial or governmental entities (for example, regulations that require prospective foreign purchases of American businesses that involve the transfer of militarily or commercially-sensitive technologies or "know-how") and the level of control foreign businesses or governments can exercise over a country's financial institutions, basically, the fewer such regulations or restrictions, the more "open" the country in question (William, 2011). Controls on the movement of goods, services, and wealth are considered vital to most countries' ability to secure their economies and people from foreign threats that could develop as a result of certain types of foreign acquisitions, mergers, or investments.

Financial sector liberalization

Financial openness is the removal of all restrictions, controls, regulations and distortions imposed by the government on financial assets and its prices. Okpara (2010) observed that, financial liberalization grants market forces a dominant role in setting financial asset prices and returns, allocating credit, and developing a wider array of financial instruments and intermediaries. He also noted that, the wave of liberalization in many developing countries in the 1980s was characterized by more attention given to market forces in allocating credit through freely determined interest rates. Khazri and Djelassi (2011) asserted that financial liberalization policy would increase savings which consequently spurs investment and induce economic growth and development. They also argued that higher interest rates brought about liberalization that will lead to a more efficient allocation of resources, higher level of investment,

economic growth and development. The focus of liberalization has been to replace the severely constrained command and control system with a relatively liberalized regime with prices reflecting economic costs (Ogwumike and Ikenna 2012).

Oladipo (2000) defined financial openness as less administered interest rate structure, more competition among financial intermediaries, more market-based activity, more openings to cross border capital flows and less financial repression. Financial Liberalization is the deliberate and systematic removal of regulatory control, structures and operational guidelines which may be considered inhibitive to orderly growth, competition and efficient allocation of resources in the financial system. Financial liberalization which is also known as the financial sector liberalization or financial deregulation is viewed by McKinnon as the only game in town as far as successful economic development is concerned (McKinnon, 1973).

Capital Account Liberalization

Omoruyi (2006) is of the view that capital account liberalization is the process of removing restrictions from international transactions related to the movement of capital. It involves allowing not only foreign direct investment (FDI) but also capital inflows to bond and equity markets and to the banking sector. It can apply to both inflows and outflows of capital. Capital account restrictions can take various forms including:

- i. limiting domestic banks' foreign borrowing;
- ii. Controlling foreign capital coming into the economy;
- iii. Limiting the sectors of industry in which foreigners can invest; and
- iv. Restricting the ability of foreign investors to repatriate money earned from investment in the domestic economy (Omoruyi, 2006).

Adedipe (2006) pointed that liberal economists have argued against capital restriction for years. This is notwithstanding, they appreciate the dangers of badly handled liberalization. These dangers have been evidenced in the financial crises that erupted in most of the emerging economies that attempted liberalization without the supporting initial conditions. Adedipe argued further that, in the developed economies, with deep and diversified financial markets, honest and competent regulators and macroeconomic policies that keep public borrowing and inflation in check, liberal regime for capital flow works best. It works so well that the policy virtually elicits no debate. However, in developing economies, he stated that liberalization of the capital account has proved very costly when combined with interest rate liberalization against the backdrop of weak macroeconomic policy environment and financial markets (Onwumere, Okore and Ibe (2012).

Oduola (2006) stated that the theoretical benefits of the linkages between capital account liberalization and the overall economic growth have been well referred to in the literature (Obadan, 2004; and Le Fort, 2005). The much mentioned benefit of capital account liberalization is the opportunity of increasing the array of assets available in the local markets as well as efficiency and competition in the provision of financial assets.

Capital account liberalization can play an important role in attracting foreign investment to an economy and in helping to manage the macroeconomic implications of such capital flows (Oyejide, 2006). Ojo (2006) put forward that, capital account liberalization engenders competition which induces more efficient financial sector and greater international productivity. Through capital movements, a nation's economy derives more income from the opportunities created by the diversification of portfolio investments and sharing of risks. Higher incomes will encourage more savings, investment and economic growth. Capital flows also facilitate the transfer of technology and commercial know-how through properly negotiated technical agreements thus creating further welfare gains.

Foreign Exchange Openness

Foreign exchange refers to the revenue earned by a country in convertible currencies from exports of goods and services. It should be noted that the Nigeria's principal source of foreign exchange earnings is from the export of crude oil. Other sources of foreign exchange flows include non-oil exports, capital importation, foreign investment flows, service income, other invisible items such as external borrowings

and foreign aids. Writers like Olukole (2012) many others have argued that the recent economic crises in Nigeria have been attributed to the misappropriation of money from the oil boom in the 70s. After the oil boom in the 1970s, Nigeria's official foreign exchange reserves also experience an unprecedented growth when its figure stood at about US\$10 billion.

Capital Market Liberalization

Central to the capital market liberalization debates its impact on economic development. As Omoyele (2004) Observed the case for international financial liberalization is the same as the case for domestic financial liberalization. This question is now put forth him that: "if domestic financial markets can be counted on to deliver an efficient allocation of resources, why cannot international financial markets. The review of globalization, capital market and the current global meltdown may look myopic and insufficient if their evolution and how they are conceptualized by both local and foreign scholars are not given cursory outfit. Globalization and global meltdown which had its way into the economic literature of Nigeria as a result of the introduction of Structural Adjustment Programme in 1986 this has generated controversies among various scholars. The ambiguity and vagueness of the concept make every attempt to define them (globalization, and Global meltdown) a subject of intense controversy among the experts.

In the specific case of Nigeria, it has been observed that the capital market is still in the process of being internationalized and integrated into the world capital market. The major challenge of financial liberalization in Nigeria is that of how to institute a regime of supervision that would be efficient, effective, up-to-date, and relevant to the changing complexities of modern banking and finance (Okonkwo and Afolabi 1998).

It has been suggested that capital market liberalizations more beneficial in more financially developed and strong economic. Quinn (2000) finds scant evidence that capital market liberalization had a positive impact on growth in the poorest countries but some strong positive evidence for middle-income countries, especially those that have characteristics, such as strong financial system, likely to make them attractive to foreign investors. In an attempt to substantiate the view that countries with strong financial system, effective prudential supervision and quality policies and institutional likely to have positive effects of financial liberalization, Kraay (1998) tested directly the hypothesis that the effects of capital market liberalization depend on the strength of the financial system, the effectiveness of prudential supervision and regulation, and the quality of policy and institution with financial globalization is almost never positive and significant, and it is sometimes significantly negative. Klein and Olivei (1999) found that capital market liberalization stimulates financial depth (measured variously as change in the ratios of liquid liabilities to GDP, claims on the non-financial private sector). But the correlation between capital market liberalization and financial depth has been found limited in less developed countries; the relationship fails when these countries are excluded from the sample.

Theory of Financial Liberalization

The study is anchored on theory of financial liberalization. This theory originated from the work of Patrick (1966). The theory focused on the association existing between financial growth and development of the economy. This theory proposed two theoretical approaches namely; demand following and supply - leading approaches. The demand - following technique proposes that as economies begin to develop, development of financial institutions takes place; whereas supply-leading technique states that the prevalent increase of financial institutions pilots growth of an economy (Arestis, 2005). Shaw (1973) and McKinnon (1973) supported this theory when they stated that financial deregulations can wield an encouraging influence on the rate of growth as interest rate levels rise in the direction of their competitive market equilibrium, at the same time as resources are proficiently allocated. In the view of Arestis (2005), the correlation existing amid the development of financial sector and the growth of the economy has gained prominence all through the contemporary history of economics.

Moreover, there is an armful of empirical works that made available sufficient proof signifying a positively connected relationship between financial market and growth of the economy. However, the discourse is now about spotting out the means via which financial markets are allied to the real economy.

Pagano (1993, as cited in Bekaert, et al., 1995), pointed out that there are three major ways through which financial institution and economic growth are associated simultaneously. The number one means he pointed was that a well performed financial market enhances savings proportion that is channeled to investments. The next one was that financial market transforms the saving rate, which in turn influences Investment and the last point noted was that capital allocation efficiency is augmented by the financial market. a good number of the literatures on hand argues that the most imperative of all is the second and last channel, by which the financial market intermingles with the real economy, i.e. by the efficiency in capital allocation (Beakaert and Harvey, 1997).The relevance of the theory to this work is that stock market is a financial institution in Nigeria, which its expansion in investment portfolios and development could contribute to the growth of the economy.

In spite of lack of consistent evidence, several recommendations were made on the conditions for successful financial liberalization. Some of which include effective supervision of deposit money banks (DMB), price stability, fiscal discipline that is enhanced by sustainable domestic borrowing, adequate competition by commercial banks in a profit maximizing environment, institutional development, macroeconomic stability and a nondiscriminatory tax system on financial intermediaries. It has been argued that financial liberalization leads to an increase in net capital inflows. Pursuant to this, there are certain implications that are inevitable. Firstly, the capital inflows are not sustainable for periods more than three years, unless they are reinforced by other institutional reforms.

Secondly, capital inflows may lead to excessive borrowing thus increasing the probability for financial crises. The general consensus is that financial liberalization has no significant effect on credit constraints. There are basically two main reasons that have been advanced in respect to this general finding. In the first instance, countries where inflation was high during the period of assessment, lack of clarity of the real cost of borrowing has been cited as a possible reason. Also, incoming foreign investors may borrow excessively in the domestic financial sector thereby restricting credit constraints further. Evidence is mixed regarding the effects of financial liberalization on the capital structure. Despite this, it reveals a substitution of equity for debt, especially for developing countries. This is because of increased portfolio flows into the previously restricted capital market. It has also been discovered that large firms access more long-term financing when compared to their smaller counterparts. Financial liberalization is a gradual process; the dating may be a difficult issue.

Most studies utilize dates of official liberalization of the stock market by policy decree while other studies use the dates when an event occurred. Researchers such as Agbaeze & Onwuka, (2014) and Rolle & Olabisi, (2016) have worked recently on this theory. This theory was adopted because, McKinnon (1973) and Rolle & Olabisi (2016) confirmed no significant relationship between financial liberalisation and credit constraints. Since credit constraint reduces money available to investors which consequently reduces both investment and return on investment. The theory deals explicitly on the working relationship between stock return, as well as credit constraint which is a determinamnt of the amount of return available, above it all it support the opinion that foreign portfolio would be increased.

Empirical Review

Okafor, Nwakoby, Adigwe, and Ezu (2021) examined the nexus between financial openness and capital market development in Sub-Saharan African Countries for 30 years period ranging from 1990 – 2019, the study proxied financial openness with capital account balance ratio, private capital inflow ratio, number of listed companies, external finance through foreign capital market and per capita income ratio while capital market development was measured with market capitalization ratio. The study employed secondary data collected from World Development Indicators, Securities and Exchange Commission statistical bulletin, and Stock Exchange fact books of the respective countries. The study adopted ex-post facto research design while the time series data were analyzed using descriptive statistics, correlation, unit root test, granger causality test, Johansen co-integration and error correction model via E-Views 10. The result revealed that there is a significant positive relationship between capital account balance ratio and market capitalization ratio in South Africa; no significant relationship between capital account balance

ratio and market capitalization ratio in Nigeria; a significant negative relationship between capital account balance ratio and market capitalization ratio in Zimbabwe; a significant positive relationship between private capital inflow ratio and market capitalization ratio in South Africa; a significant positive relationship between private capital inflow ratio and market capitalization ratio in Nigeria; a significant negative relationship between capital account balance ratio and market capitalization ratio in Zimbabwe; a significant positive relationship between number of listed companies and market capitalization ratio in South Africa; a significant positive relationship between number of listed companies and market capitalization ratio in Nigeria; a significant positive relationship between number of listed companies and market capitalization ratio in Zimbabwe; a non-significant negative relationship between external finance through foreign capital market and market capitalization ratio in South Africa; a significant negative relationship between external finance through foreign capital market and market capitalization ratio in Nigeria; a significant positive relationship between external finance through foreign capital market and market capitalization ratio in Zimbabwe; a significant positive relationship between per capita income ratio and market capitalization ratio in South Africa; a significant positive relationship between per capita income ratio and market capitalization ratio in Nigeria; a significant positive relationship between per capita income ratio and market capitalization ratio in Zimbabwe at 5% level of significance respectively.

Kehinde (2022) investigated the link between financial deepening and the development of the stock market over the period of 1981 and 2019 using Bound test cointegration ARDL approach on the ground that Nigeria's financial sector is still shallow and lacks the necessary liquidity and capital to bring about the required development of stock markets in Nigeria. The Bounds cointegration test revealed that cointegration existed among the variables under investigation. As a result, both the short and long term models were empirically examined. In the long run, the significant drivers of stock market development in Nigeria are financial development, domestic saving as a ratio of GDP, broad money diversification and GDP as they are all significant determinants in term of signs, magnitude and size. This result parallels the findings of Okeya and Dare (2019). However, from 1981 to 2019, a considerable inverse relationship was seen between broad money diversification and stock market performance, contrary to projections. By implication, Nigerian financial sector lacks financial diversification in the long run. However, the finding supports the popular consensus that money is neutral in the long run as stock market mirrors economic condition of the country it represents. Nonetheless, the short run counterpart of the regression model showed that stock market development follows adaptive expectation in Nigeria as its previous values significantly determined the present values. However, unlike in the long run, financial development indicator exerts negative influence to stock market and but only becomes significant after some lags. This therefore reinforces the reality that private sectors lacks enough liquidity, limiting its beneficial contribution to the development of the stock market in the near term. This, by inference, confirms the shallowness of the Nigerian financial sector, as it lacks sufficient liquidity in the short run. Besides, regardless of model considered be it long run or short run, total domestic saving ratio of GDP has been a good candidate driving stock market development in Nigeria. Based on this conclusion, the Central Bank of Nigeria (CBN) is enjoined to liberate interest rate so as to allow for more robust operations of financial sectors in Nigeria.

Aye (2015) employed both the conventional Granger Causality and a bootstrap modified Granger Causality to evaluate the link between financial deepening and economic development in Nigeria. Money supply as a ratio of nominal GDP and real GDP per capita for the period 1961 to 2012 were used as the data. There is no evidence of a causal association between the two series, according to the results. However, the boot strap rolling window results show evidence of a causal direction from financial deepening to economic growth for the years 1973 to 1974 and 1970, and from economic growth to financial deepening for the years 1980 to 1982, 1985 to 1986, 1995 to 1996, 1998, 2000, 2004, 2008, and 2011. Okoli (2012) investigates the relationship between financial deepening and stock market returns and volatility in the Nigerian stock market from 1980 to 2010 using the GARCH methodological framework and time series data such as stock market prices, the ratio of the value of stock traded to GDP, and the ratio of market capitalization to GDP. The major findings show that the ratio of the value of

stocks traded to GDP has no effect on stock market performance. Using a two-stage least squares approach, Nzotta and Okereke (2009) investigate the link between financial deepening and economic development in Nigeria. They used series that spanned the years 1986 to 2002. They discover that Nigeria has a low degree of financial deepening and that loan rates, financial savings ratios, cheques/GDP ratios, and deposit money banks/GDP ratios all have a strong association with financial deepening. Within the context of multiple regression, Omole (1999) investigates the link between financial depth and stock market development in Nigeria. The sample ranges from 1970 to 1994. The study hypothesizes that the stock market's development is influenced by the money supply, interest rate, and exchange rate. The findings suggest that, while financial depth in Nigeria is limited due to the magnitude of total economic activity, it has the potential to boost the development of the stock market. According to Nnanna (2014), there is a positive association between the ratio of market capitalization to GDP and stock market returns, whereas there is a strong relationship between the value of traded stocks to GDP and stock market returns. The discovery is similar to that of Alenoghena et al (2014). However, according to Okeya and Dare (2020), financial deepening is only in the long run significantly and favorably associated to stock market development in Nigeria. Balogun, Dahalan, and Hassan (2016) use a panel dataset spanning 1990-2013 to study the long-run impacts of interest rate liberalization and institutional quality on the growth of stock markets in seven chosen Sub-Saharan African (SSA) nations. The dynamic heterogeneous panel approach with the pooled mean group methodology was used. The findings show that, on average, interest rate liberalization has a negative long-run influence on the growth of stock markets in the seven chosen SSA economies. Songole (2012) also discovered a negative association between market capitalization and the market interest rate, consumer price index, and exchange rate. On the contrary, Jahur, Quadir, and Khan (2014) found that macroeconomic factors such as the consumer price index and interest rates had a considerable influence on market capitalisation. Only a handful of the papers examined focused on financial depth and stock market development, particularly in the Nigerian setting. They were largely concerned with economic growth. In fact, those who concentrated on stock market development were particularly concerned about the causal link. Furthermore, given the dynamic character of financial variables, they did not use proper approaches and procedures; the bulk of them used identical methodologies (Johansen cointegration test, Engle Granger test, Ordinary Least Squares (OLS), etc.) and reached similar findings. Most also considered narrow money (M1) as a proxy for financial diversity. Furthermore, earlier research evaluated paid less attention to liquidity availability and the degree of financial diversification in the Nigerian environment. Overall, the current study fills identified gaps and contributes to knowledge by assessing the level of financial diversity and depth to stock market development in Nigeria, both in the short and long run, utilizing acceptable methodology of autoregressive distributed lag model.

Oyesiji, Yinusa kolawole; Sikiru, Isiaka Olawale and Oladeji Emmanuel Olayinka (2023) examined the effect of financial liberalization on stock market return in Nigeria, Monthly time series data from January 2007 to July 2017 were sourced from the Central Bank of Nigeria Statistical Bulletin, Nigeria Stock Exchange publications and National Bureau of Statistical Bulletin. The ARCH effect was tested on stock market returns using the Breusch Pagan Heteroskedasticity test. The result revealed that stock market returns during this period exhibits volatility which led to employing Generalized Autoregressive Conditional Heteroskedasticity in mean (GARCH-M) model and found that credit to private sector have negative effect on stock returns at p- value of (0.0069), while foreign portfolio investment, exchange rate and financial liberalization have positive effects on stock returns at p-value of (0.0117,0.0072,0.0129) respectively. While trade volume and oil price have statistically insignificant effect on stock market return in Nigeria. The study concluded that financial liberalization is very important to have an improved stock market returns and recommended that the Authority saddled with the regulations of the stock market in Nigeria (Security and Exchange Commission and Nigeria Stock Exchange) should create a conducive environment that will improve the liberalization of the financial sectors. Restrictive policies also need to be relaxed in order to have an efficiently performing financial market which is also a driving force of the capital market

Literature Gap

Financial openness became a useful and important monetary policy in many countries following the directive from the Washington Consensus or Bretton Woods. Financial repression, as argued by McKinnon (1973) and Shaw (1973) is the existence of interest rates ceilings, high reserve ratios, regulated lending, restriction to entry and exit in the banking activities, restriction of foreign currency transactions and directed ceilings in an economy. Nigeria financial sector openness in the last quarter of 1986 was a macroeconomic reform aimed at repositioning Nigeria financial sector to be an active player in the global financial market rather than a spectator. However, the effect of the financial sector liberalization on the Nigeria financial market remain controversial among scholars as some authors found positive while other found negative effect of the financial sector liberalization. Furthermore, there are various strands of research on the effect of Nigeria financial sector openness. Some group of researchers examined the effect financial sector openness on the growth of Nigeria economic; other examined the effect of the openness on the performance of the capital market. The effect of the openness on the inflow of foreign portfolio investment is lacking in literature, therefore this paper examined the effect of the financial sector openness on quoted commercial banks liquidity in Nigeria.

METHODOLOGY

The research design or framework for this work is investigative research, which is geared towards studying relationship and causes and effects which involve rigorous econometric modeling and estimations. In simple terms, the study adopted the quasi-experimental research design. This is because the variable under study cannot be manipulated or is not under the control of researcher. The study is designed after correlation or regression research methodology. Here we try to see how two or more variables can relate or influence each other.

This study utilized secondary data. The data is described as time series data that is information on a variable of study over the periods of one year. We collected secondary data for estimation from the Central Bank of Nigeria financial stability report, Central Bank of Nigeria Economic reports and financial statement of the quoted commercial banks. Thus the data for this study are time series data 2014-2023. The data consist of yearly data of two dependent variables of liquidity of commercial banks and five independent variables that measures financial sector liberalization.

Model Specification

$$CBLIQ = f (EXRO, CMO, CAO) \tag{1}$$

To have the estimable version of above models 3.1 can be rewritten to have

$$CBLIQ = \beta_0 + \beta_1 EXRO + \beta_2 CMO + \beta_3 CAO + \mu \tag{2}$$

Where

CBLIQ = Commercial banks Liquidity

EXRO = Exchange Rate Openness as exchange rate liberalization

CMO = Capital market Openness measured by increase or decrease on foreign portfolio investment

CAO= Current account openness measured by net official finance

$\phi_0 \alpha_0 =$ Constant

$\beta_1 - \beta_5 =$ Coefficients of independent variables

$\mu_i =$ Error Term

A-Priori Expectation

Base on theories such as financial intermediation theory and empirical results examined in this study, the variables are expected to have a positive effect on the dependent variables. The mathematical implication is stated as follows: $\beta_1, \beta_1, \beta_1, \beta_1 > 0$

Appropriate levels of analysis were conducted, in each case ranging from the global analysis (that reveals the overall utility of the models) to analysis of relative statistics that test the hypotheses. This study applies unit root test first so as to uncover the true nature of stationary-properties of all the variables under consideration. This is necessary in order not to run into the problem of spurious regression since unit root problems are common features encountered in most time series studies. However, the simple regression model was employed as the estimation technique for this study. Johansen and Jusellius Co-integration Test was applied to determine the long run equilibrium of the variables in the model, while the Granger Causality Test was applied in checking the underlying structure of the causal relationship between the variables.

Ordinary least squares (OLS) are a method for estimating the unknown parameters in a linear regression model. Hutcheson (2011) defined ordinary least square (OLS) regression as a generalized linear modeling technique that may be used to model a single response variable which has been recorded on at least an interval scale. This method minimizes the sum of squared vertical distances between the observed responses in the dataset and the responses predicted by the linear approximation.

OLS technique may be applied to single or multiple explanatory variables and also categorical explanatory variables that have been appropriately coded. In single explanatory variables, the relationship between a continuous response variable (Y) and a continuous explanatory variable (X) may be represented using a line of best-fit, where Y is predicted, at least to some extent, by X. If this relationship is linear, it may be appropriately represented mathematically using the straight line equation 'Y = a + βx'. For the multiple explanatory variables additional variables are added to the equation. The form of the model is the same as in a single response variable (Y), but this time Y is predicted by multiple explanatory variables (X₁ to X₅).

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \tag{3}$$

The interpretation of the parameters (a and β) from the above model is basically the same as for the simple regression model, but the relationship cannot be graphed on a single scatter plot. A indicates the value of Y when all variables of the explanatory variables are zero. Each β parameter indicates the average change in Y that is associated with a unit change in X, whilst controlling for the other explanatory variables in the model. Model-fit can be accessed through comparing deviance measures of nested models. For example, the effect of variable X₃ on Y in the model can be calculated by comparing the nested models

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \tag{4}$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 \tag{5}$$

The change in deviance between these models indicates the effect that X₃ has on the prediction of Y when the effects of X₁ and X₂ have been accounted for (it is, therefore, the unique effect that X₃ has on Y after taking into account X₁ and X₂). The overall effect of all three explanatory variables on Y can be assessed by comparing the models

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \tag{6}$$

$$Y = a. \tag{7}$$

The significance of the change in the deviance scores can be accessed through the calculation of the F-statistic using the equation provided above (these are, however, provided as a matter of course by most software packages). As with the simple OLS regression, it is a simple matter to compute the R-square statistics.

RESULTS AND DISCUSSION

Table 4.4 Empirical Results on Financial Market Openness and Liquidity of Quoted Commercial Banks

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXRO	-0.098433	0.091550	-1.075189	0.2838
CMO	0.026968	0.029502	0.914120	0.3620
CAO	0.087050	0.127523	0.682619	0.4958
C	1.682581	0.679840	2.474967	0.0143
ECM(-1)	0.618335	0.065164	9.488846	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.587566	Mean dependent var		1.224677
Adjusted R-squared	0.523737	S.D. dependent var		1.200359
S.E. of regression	0.828389	Akaike info criterion		2.589220
Sum squared resid	115.2864	Schwarz criterion		3.042405
Log likelihood	-225.4490	Hannan-Quinn criter.		2.772709
F-statistic	9.205314	Durbin-Watson stat		1.845199
Prob(F-statistic)	0.000000			
EXRO	-0.238556	0.050001	-4.771029	0.0000
CMO	0.041191	0.025415	1.620709	0.1067
CAO	-0.006142	0.061558	-0.099775	0.9206
C	2.641868	0.390031	6.773487	0.0000
ECM(-1)	0.693425	0.052899	13.10842	0.0000
Effects Specification				
			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			0.828389	1.0000
Weighted Statistics				
R-squared	0.526800	Mean dependent var		1.224677
Adjusted R-squared	0.514281	S.D. dependent var		1.200359
S.E. of regression	0.836572	Sum squared resid		132.2723
F-statistic	42.08163	Durbin-Watson stat		1.753142
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.526800	Mean dependent var		1.224677
Sum squared resid	132.2723	Durbin-Watson stat		1.753142
Correlated Random Effects - Hausman Test				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		16.729270	5	0.0050

Source: E-Views output

From the table above the probability of the Hausman test is greater than 0.05, therefore, the study adopt the random effect model.

Analysis of Results

F-Test: The F-calculated value is 9.205314 from the fixed regression results while the P-value of F-statistic are 0.000000 at 5% level of significance, considering the P-value, the chosen level of significance $\alpha = 0.05$ [5%] is less than the P-value of F-statistic. It is concluded that the regression model is statistically significant. This means that the joint influence of the explanatory variables on the dependent variable is statistically significant.

Coefficient of Multiple Determinations (R^2): The computed coefficient of multiple determinations of 0.523737 from the fixed effect shows that 52.3 percent of the total variations in the net present value are accounted for, by the explanatory variables while the remainder is attributed to variable that is influenced by other factors not included in the regression model.

Durbin Watson statistics (DW): The computed DW is 1.845199 from the fixed results; show that at 5% level of significance with two explanatory variables and observations. The value of computed DW is greater than the lower limit. Therefore, there is no evidence of positive first order serial correlation.

Regression Coefficient and T-Statistics: The t-statistics shows that exchange rate and current account openness are negatively related to liquidity of the quoted commercial banks while capital market is positively rate to liquidity. The positive relationship between savings liberalization and total loans and advances to total assets confirm the objective of the financial sector liberalization which was to reposition Nigeria financial market to be global competition rather than a spectator (Toby, 2006). Also, the positive relationship between savings liberalization and liquid assets to total assets confirm the empirical findings of Owusu and Odhiambo (2013) whose study found long-run relationship between economic growth and financial liberalization but contrary to the findings of Bhattacharyya (2014) that the quality of information is a major determinant of volatility and deregulation has no association with volatility. Ben Rejeb and Boughara (2014) that financial liberalization does not lead to excessive volatility and Omankhanlen (2012) that the financial sector reforms in the financial sector are not solely responsible for the sector being better off. The negative relationship between variables and liquid assets to total assets contradict the empirical findings of Owusu and Odhiambo (2013) whose study found long-run relationship between economic growth and financial liberalization but confirm the findings of Bhattacharyya (2014) that the quality of information is a major determinant of volatility and deregulation has no association with volatility. Ben Rejeb and Boughara (2014) that financial liberalization does not lead to excessive volatility and Omankhanlen (2012) that the financial sector reforms in the financial sector are not solely responsible for the sector being better off.

CONCLUSION

This study examined the effect of financial market openness and liquidity of quoted commercial banks in Nigeria. Data were sourced from Central banks of Nigeria Statistical Bulletin and Statement of financial position of the quoted commercial banks. From the findings, the study conclude that exchange rate and current account openness have negative effect on liquidity of the quoted commercial banks while capital market openness have negative effect on the liquidity of the quoted commercial banks over the periods covered in this study.

RECOMMENDATIONS

- i. There is need for effective macroeconomic policies that can stabilize the exchange rate in Nigeria to enhance the liquidity of the quoted commercial banks
- ii. The monetary authorities should advance it policy framework concerning balance of payment to enhance macroeconomic policies that affect positively the present negative values of current account balance of balance of payment.
- iii. The operational efficiency of the capital market should be deepened to enhance effective equity trading and attract foreign portfolio investment for better liquidity of the commercial banks in Nigeria

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