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Financial Stability Of Deposit Money Banks In Nigeria (2011-2020)

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Abstract
There are persuasive evidence that financial stability provide an environment that will be favourable for allocation of resources efficiently and more rapid economic growth and development. In view of this, this study seek to analyze the trend of financial stability of deposit money banks in Nigeria for a period of 2011-2020 adopting Ex post facto research design. The study adopted secondary data. The population is the 13 Deposit Money Banks listed on the Nigerian Exchange Group as at 31 October 2022. The sample comprised 12 deposit money banks which were Purposively selected because they reported their financial statements in Naira. Data on variable such as: financial stability were sourced from sampled banks' audited financial reports, the Nigerian Exchange Group Factbook and Central Bank of Nigeria. Statistical Bulletin. Data collected were analyzed using simple percentages and table. The results showed that Nigerian Deposit Money Bank's financial stability marked an upward trend throughout the study period, except for the period of 2013 through 2015 when it reduced from sector average of 25.81% to 18.92% . This study concluded that, financial stability of Deposit Money Banks in Nigeria trend upward during the period of 2011-2020.
Keywords: Financial Stability, Trend Analysis, Return on Assets, Return on Equity

1. Introduction

Over the last three decades, the financial industry in Nigeria have witnessed series of major experiences ranging from the merger and acquisition of Deposit Money Banks (DMBs) from the total of 89 banks down to 25 banks in the year 2005 to restructuring of the banking sector. Between 2007 and 2009, there was also a major financial crisis globally (Noman et al., 2017), Nigeria inclusive. All these experiences have affected the DMBs in Nigeria, thus, bringing down the number of banks in Nigeria. Although, the reform in the Nigerian financial industry initiated in the year 2005 brought about great anticipation, that, there would be an enhancement in the operation of banking system that will lead to a reduction in intermediation spreads. This was expected to bring about improvement in financial service access.

The stability of DMBs is crucial for the stability of any financial system in the world. The financial sector regulators understands the negative consequence that losing confidence in the banking sector of economy can have on the whole financial system. As a result of this, banks' financial stability have always been prioritized. It is worthy to note that a distressed Deposit money bank that is not financially stable will affect bot the micro and macro part of the economy. However, the burden will affect both the household and business and by extension harm the entire economy, because movement of fund to viable investments will be hindered thus leading to credit crises. Hence, it is very important for banks that want to effectively carry out its intermediary and other functions to put in place policies that will help guide against financial instability so as to guarantee sound financial system.

So far, many researchers have carried out research in the area of financial stability of DMBs, under their studies, they focused on how different independent variables such as competition, tax evasion, diversification affect financial stability. Bamigboye et al**.,** **(**2022**)** and Leroy and Lucotte (2017) worked on how competition affects financial stability of DMBs. Ozili (2020) worked on how tax evasion affects Financial stability. In addition to this, researches on the impact of diversification on financial stability of Deposit Money Banks have been done by Mudeer et al., (2021); Ferreira et al., (2019); and Xiaohui et al., (2017). Lastly, Ozili (2019); Githinji (2016); and Alshubiri (2017) worked on the determinants of financial stability of DMBs in various economies. This study thus add to the literature by examining the financial stability of DMBs in Nigeria, as this will help to identify the trend of the financial stability of banks in the country. Lastly, The need to carry out this study was also premised on the benefits accruable to various stakeholders in Nigeria banking industry, such as deposit money banks, financial regulators, policy makers and investors.

2. Literature Review

Financial stability is a situation in which the whole mechanisms used in the economy, for pricing, allocation and management of financial risk (liquidity, credit, market, counterparty etc.) are functioning properly and perfectly to add and contribute to the economic performance of a system (Schinasi 2004). In addition to this, financial stability is described as the capability of essential financial institutions and all the markets that come together to form a financial system to withstand a financial shock. Ozili (2020) described Financial Stability as a condition in which the financial sector has the ability to withstand shock and has capability to correct financial mismatch, thereby decreasing the probability of impairment in the process of financial service intermediation which might be severe enough to disrupt allocation of savings significantly. Deutsche (2003) defined financial stability as a condition whereby the financial industry of an economy perfectly and efficiently discharges its core function of resources allocation, risk spreading and settlement of payments at all times, even in the midst of stressed situation, event of shocks and a period when there is a structural change. Duisenberg (2001) also defined financial stability as situation whereby the financial system's key elements are functioning smoothly in the absence of deflation and inflation. When an economy is financially stable, it implies that the general price level is stable. Financial stability describes a situation in which the smooth running of the financial intermediation function build confidence among users in an economy.

Furthermore, Mishkin (1999) also described financial stability by defining financial instability as a situation where there is an interference between financial system and the flow of information. This leads to the inability of the financial institution to perform its role of channeling of funds to people with opportunities to invest in a productive business. In the work of Foot (2003), he described financial stability as an economic condition whereby monetary system is stable, employment level is high, there is confidence in the operations of the market and financial institution in the economy and lastly, where there is absence of relative movement of prices of either financial or real assets within the economic system. Wellink (2002) of Nederlandsche Bank, also defined financial stability in the context of stable financial system thus: financial stability is capable of allocating resources efficiently and has ability to absorb shocks which will lead to a non-disruptive impact on the economy and the remaining financial system.

The stability of an economy is the responsibility of the central bank. The instability of an economy has negative impact on the economy and it is always costly to all aspect of the country's activities. Hence the central bank of any country 'Central Bank of Nigeria' in the case of Nigeria must discharge the responsibility of promoting sound and efficient financial institutions by preserving the soundness and robustness of financial system and infrastructures, in order to withstand adverse economic cycles and shocks. These will however prevent disruption in the intermediary function and thus maintain confidence in the financial system. In summary, financial stability can be achieved via playing active regulatory and supervisory role on the licensed financial institutions by the Central Banks.

2.1 Approaches to ensuring Financial Stability

The previous section has discussed the various definition of financial stability and the importance of stability to an economy. This section will discuss the various approaches that can be adopted for the stability of an economy financial system. The focus will be on policies and regulations that can be put in place for prevention of economic shocks

2.1.1 Reliance on Market Forces

This implies that government intervention on the economic system can be avoided because when market participants such as depositors, managers, counterparties and other stakeholders of the financial system observed that they are "on their own", much degree of care will be exercised and this will force them to operate prudently with a more sound and due diligence and care. As a result, this will reduce the individual failure of participants which will make the systemic failure most likely not to occur. However, some natural and artificial cases of unpredictable occurrence that is capable of destabilizing the economic system such as outbreak of war, global economic crunch such as the one that occurred around 2007-2009, major earthquake or flood would force government to intervene by contributing and donating in order to revive the economy.

2.1.2 Safety Net

Financial Stability of an economy can be guaranteed if the market participants can be provided with explicit safety nets, which include but not limited to, provision of deposit insurance scheme and availability of the lender of last resort i.e. Central Bank, which is saddled with the responsibility of providing support to solvent but illiquid financial institutions in order to avert the possibility of liquidating their assets in a "Fire Sale" that would generate losses and lead to avoidable insolvency. However, moral hazard is the primary drawback of safety nets. This is as a result of the inability of the insured depositors, who might not have no incentives to monitor the financial institutions where their fund is placed.

2.1.3 Regulations

In the absence of safety nets, the availability of regulations would be justified by the need for protection of depositors' and creditors' interests. Regulations by the government can come in various approaches. They include, Regulation to protect Franchise Value- this involves government intervention in the prevention of excessive competition in the financial industry by controlling the entry of participants into the markets, restriction and coordination of interest rate alongside with toleration of cartel-type practices. Secondly, Regulation can be in form of Risk-based Capital Adequacy- this entails regulatory authority ensuring that banks are adequately capitalized against the risk they run. Here , the supervisor would divide assets into a number of "risk classes" and specified the amount of capital that will be held against each of the risk. Lastly, regulation can be to support market forces- this involve focusing on the ways of strengthening the incentives on various institutions to prudently manage their own and their counterparties affairs.

2.2 Theoretical review

2.2.1 Structure Conduct Performance Theory

This theory is centered on how bank competition affects its efficiency and stability. The theory can be traced to the study of (Bain, 1951). According to this theory, banks that are highly concentrated in market enjoy high amount of profit because of their market power and this will thus enhance their stability. The model states the structure of the market will define its conducts which will as an end result determine the stability, because the assumption of structure conduct performance theory is that, the market is exogenous. Previous studies using this theory regressed profitability with concentration ratio and the result suggested a positive association between the two variable, hence the theory explained that banks operating in a concentrated market always exercised market power to gain more profit by charging high prices on loans or offering lower interest on the deposit with the banks. Sherperd (1972), presented in his work that, concentration of banks may give them power to collude with other related companies that charge price. According to this hypothesis, the concentration determines the structure while competition determines the conduct. A concentrated bank implies a decrease in competition and vice versa. Bikker and Haaf (2002b). Berger, Demirguc-Kunt, Levine and Haubrich (2004) argue that under SCP theory, concentration of banks and other factors that impede competition make banks not to efficiently operate from a social point of view.

2.2.2 Efficiency theory

The Efficiency theory is also known as Efficient Structure Hypothesis (ESH**)**. It states that the competition among banks improves greatly the efficiency of their performance and the inefficient banks are weakened by competition. Contrary to SCP, it is the company's efficiency that determines the relationship between the firm's performance and its structure. Under the efficient structure hypothesis, the structure of a firm arises as a result of the firm's superior operating efficiency. Bikker and Haaf (2002) opine that the claim of ESH is that if a bank performs efficiently in relations to its competitors, maximization of profit will induce the bank to bring down its price in order to attract a larger market share of customers. As a result, a market share will increase which implies that the efficiency of the bank has brought about a natural concentration as a consequence of improved and better performance.

3. Methodology

This study focused on examining the financial stability of DMBs listed on Nigerian Exchange Group (NGX) over a period of 10 years (2011-2020) focusing on the 13 quoted DMBs in Nigeria. The base year, 2011, was chosen because, it followed closely the global economic crises of 2007-2009, that is, the period when the stock market lost approximately 70% of its value. More so, that was also the period that CBN had to inject ₦620 billion of liquidity into the banking sector. Eight (8) banks' leadership were also replaced in order to stabilize and return the confidence to the investors and the market at large in the year 2010 (CBN financial stability report January – June 2010). Lastly, 2011 is chosen as the base year because that was the year that uniformity in the accounting year end of financial statement started by all banks in Nigeria.

Moreover, 2020 is chosen as the ultimate year in order to have access to all the selected variables, because all banks would have uploaded their financial statement as at the accounting year end. In conclusion, the choice of the years ensures that the period covered a full economic cycle which is in most cases, at least 10 years. Hence the period of 2011 – 2020 is chosen so as to examine if the purpose and the aim of CBN on banks' stability has been achieved among DMBs in Nigeria. Financial stability represents the insolvency risk measure. This study follows measurement variables used in Laeven and Levine (2009), Amidu and Wolfe (2013) to measure banks financial stability i.e. Altman Z-score, which measures insolvency by determining the number of standard deviation that profit of a bank must fall. It is considered to be an indicator that is unbiased in determining banks' riskiness. This index was used to measure the accounting distance to default for given banks and it is calculated thus:

$$\text{Altman's } Z - score = \frac{ROA + \frac{E}{TA}}{\sigma ROA} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\text{i}$$

ROA denotes the bank's rate of return on asset, $\frac{E}{TA}$ represents the bank equity as a percentage of total asset and σROA stands for the return on asset's standard deviation.

The bank financial stability indicator decreases when there is unstable earnings which will be reflected by an high return on asset standard deviation while the indicator increases with high capitalization level and profitability. The probability of a bank becoming insolvent is initially measured by Altman z-score, when the assets' value drop below the value of debt. When Altman Z-score is high, it denotes low probability of insolvency, while a low z-score denotes high probability of banks becoming insolvent i.e. a bank with high Altman z-score is stable, while the one with low Altman z-score is unstable.

For this study, Altman z-score was logged so as to improve the regression's goodness of fit and bring down the possibility of simultaneous bias. In addition to this, the study used data gathered to measure the two risk adjusted performance measure of the return on Assets ($RAROA$) and return on equity ($RAROE$) by return on asset (ROA) and return on equity(ROE) by their respective standard deviation(σ) as

$$RAR_{ROA} = \frac{ROA}{\sigma ROA} \text{ and } RAR_{ROE} = \frac{ROE}{\sigma ROE} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\text{ii}$$

Where:

ROA denoted the ratio of income before tax to total asset

ROE was calculated using net income all over total equity

4. Data Analysis and Discussion of Findings

4.1 The pattern of financial stability in Nigeria over the period of 2011-2020

This analysis was carried out so as to estimate the pattern and the direction of stability of DMBs in Nigeria over the period 2011-2020 using graph and tables for presentation. The rate of banks' financial stability for the period showed an upward movement throughout the study period. Considering Table 1, it can be seen that there is a considerable growth in the financial stability of the DMBs from 2010 to 2011 as the growth moved from 19.41% to 22.58% which implied 16.34% growth rate. This can be as a results of policies and measures adopted to mitigate the effect of the global economic crunch of 2007 and 2008, which spilled to 2009. The stability was likely recorded as a result of the effort of Asset management Cooperation of Nigeria (AMCON) that was founded in 2011 to absorb the toxic assets of ailing banks via the issuance of bonds so as to enhance the resilience of banking system. Prior to the emergence of AMCON in 2011, that is, immediately after the credit crunch, the stock market lost about 70% of its value in 2008 to 2009, CBN had to rescue in order to stabilize the finance of DMBs and regain investors' confidence on the economy. The apex bank was compelled to inject ₦620 billion of liquidity into the banking industry and in addition to that, the leadership of eight banks were also replaced(CBN 2010).

All these activities helped the financial stability of DMBs from 2012 through 2013 when Nigerian banking industry recorded growth rate of 14.29% which implied upward movement from 22.58% in 2012 to 25.81% in year 2013. On the contrary, downward movement was witnessed within the period of 2013 through the end of year 2015. The financial stability moved downward from 25.81% in the year 2013 to 25.75% in year 2014 which denoted -0.24% and a further reduction was also recorded for the year 2015 when the financial stability reduced from 25.75% to 18.92% in the year 2015, this can be as a result of the ugly experience recorded by small, medium and large banks groups, when they showed vulnerability to the severe shock of about 200% increase in NPLs in the circulation.

During this period , banks across the country were unable to sustain the effect of the NPLs, as a result of this, their capital adequacy ratio after the shock dropped below 10% minimum prudential requirement (CBN 2015).

However, there were steady increment in the financial stability of the banks from 2014 through the end of 2020. There was an increase of 5.85% in the year 2016, which implies a movement form 18.92% in year 2015 to 20.03% in 2016. In furtherance there was also improvement in the stability in the year 2017, the growth was from 20.03% to 20.0706% i.e 0.18% growth rate. This could be as a result of banks intensifying their effort towards strengthening the existing synergy between the fiscal and monetary authorities policies.

Table 1: Trend of Financial Stability

Year	FB	FB(%)	FB_Growth
2011 Average	0.19	19.41	
2012 Average	0.22	22.58	16.33
2013 Average	0.25	25.81	14.29
2014 Average	0.25	25.75	-0.24
2015 Average	0.18	18.92	-26.51
2016 Average	0.20	20.03	5.85
2017 Average	0.20	20.07	0.18
2018 Average	0.23	23.28	16.01
2019 Average	0.26	26.67	14.53
2020 Average	0.27	27.42	2.81
Total Average	0.22	22.69	4.80

Source: Author's Computation (2023).

Furthermore, the period of 2017-2018 also witnessed increase in stability from 20.07% to 23.28% in which the percentage increase recorded was 16.01%. More so 2018-2019 also witnessed increase in financial stability when there was increase from 23.28% to 26.67% which means that there was 14.53% change in growth rate. The improvement in the stability was as a result of gradual recovery as the GDP of the economy increased by 210% in the second half of 2018, the increase in stability can also be attributed to the revitalization of Agricultural activities and services (CBN 2018). In the CBN report, it was also reported that the improvement in financial stability is an indication of management of composite risk taking and risk rating of banks. During this period, the CAR of banks moved upward from 12.11% to 15.21% at that time, which thus reflect improvement in the capital cover of exposures of banks to insolvency. In the same vein, the ROA, ROE and interest margin of banks improved, this thus signified profitability of banking industry which translate to soundness and financial stability.

The pattern of financial stability in Nigeria over the period of 2011-2020

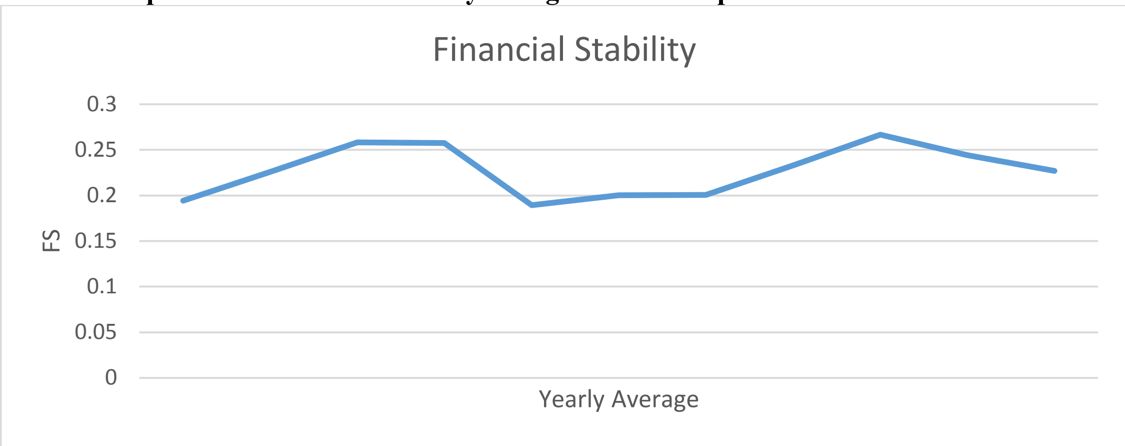

Figure 1: Trend of Financial Stability

Furthermore, an increase in financial stability was also witnessed in year 2019 when there was 8.4 % growth increase. The financial stability moved from 26.67% in 2019 to 27.43% in 2020. The increase in the stability was likely as a result of measures put in place by the regulatory authorities that oversees the activities of DMBs in Nigeria i.e. CBN, between the period of 2018-2020, the apex bank in their quest to ensure long term financial stability took unconventional regulatory measure to improve lending to the real sector of the economy, they devised a novel Loan to deposit ratio (LDR) policy that will avail nothing less than 65% of their deposits to the domestic private sector. Central bank of Nigeria also embarked on strategies that continually de-risk lending to productive sector of the economy without hampering the soundness and health of the banks (CBN 2020). It was also stated in the CBN 2020 Annual Report that, despite the increase in credit to the private sector of the economy, the NPLs in circulation reduced by close to 600 basis points over the period to 6.06% at the end of December 2020.

5. Conclusion and Recommendations

The objective of this study was to examine the trend of the financial stability of deposit money banks in Nigeria. However, The result showed that the pattern of financial stability tend positively upward during the period 2011-2020. This was as a result of policies and measures put in place by the regulatory authorities in Nigeria. The study recommends that in order to ensure financial stability of DMBs, the policy makers and regulatory authorities must ensure that they mitigate the effect of NPLs on Banks' Stability by monitoring their credit risk management and also encourage banks to develop strong independent credit culture.

References

Alshubiri, F. N. (2017). Determinants of Financial Stability: An Empirical Study of Commercial Banks Listed in Muscat Security Market. *Journal of Business and Retail Management Research (JBRMR),* 11 (4).

Amidu, M., & Wolfe, S. (2013). Does Bank Competition and Diversification Lead to Greater Stability? Evidence from emerging markets. *Review of Development Finance*, 3, 152–166.

Bain, J. (1951). Relation of profit rate to industry concentration. *Quarterly Journal of Economics,* 65, 293-324.

Bamigboye, O. A., Akinrinlola, M. O., & Erin O. A. (2022). Competition and financial stability of listed deposit money banks in Nigeria**.** *Fuoye Journal of Management, Innovation and Entrepreneurship.*1(2) 22-35

Berger, A., Demirgüç-Kunt, A., Levine, R., & Haubrich, J. (2004). Bank concentration and competition: An evolution in the making. *Journal of Money, Credit and Banking*, 36(3).

Bikker, J. A., & Haaf, K. (2002a). Competition, concentration and their relationship: An empirical analysis of the banking industry. *Journal of Banking and Finance, 26*, 2191-2214.

Bikker, J. A., & Haaf, K. (2002b). *Measures of competition and concentration in the banking industry: A review of the literature*. Research Series Supervision (discontinued)

Central Bank of Nigeria (2010- 2020). Financial Stability Report

Central Bank of Nigeria (2011- 2020) Annual Report

Deutsche, B. (2003). *Report on the stability of the German financial system*, Monthly Report, Frankfurt, December.

Duisenberg, W. F. (2001). *The Contribution of the Euro to Financial Stability, Globalization of Financial Markets and Financial Stability—Challenges for Europe* (Baden-Baden: Nomos Verlagsgesellschaft), 37–51.

Ferreira, H. L., Zanini, A. M., & Alves T. W. (2019). Bank Revenue Diversification: Its Impact On Risk And Return In Brazilian Banks R. Cont. Fin. – USP, São Paulo, 30(79), 91-106, jan./abr. 2019 91 DOI: 10.1590/1808-057x201805810

Foot, M. (2003). *What Is 'Financial Stability' and How Do We Get It?* The Roy Bridge Memorial Lecture (United Kingdom: Financial Services Authority), April 3.

Githinji, E. (2016). *Determinants of Financial Stability Among Commercial Banks In Kenya*. MBA Project Chandaria School of Business United States International University Africa.

Laeven, L., & Levine, R. (2009). Bank governance, regulation and risk taking. *Journal of Financial Economics,* 93, 259-275

Leroy, A., & Lucotte, Y. (2017). Is there a Competition-Stability Trade-Off in European Banking? *Journal of International Financial Markets, Institutions and Money*, 46, 199-215.

Mishkin, F. (1999). Global financial instability: Framework, events, issues, *Journal of Economic Perspectives*, 13, 3–20.

Noman A.H.M., Gee C.S,& Isa C.R (2017) Does competition improve financial stability of the banking sector in ASEAN countries? An empirical analysis. PLoS ONE 12(5), e0176546.
https://doi. org/10.1371/journal.pone.0176546

Ozili, P.K. (2019). Determinants of Banking Stability in Nigeria. CBN Bullion, Vol. 43 No 2, 2nd Quarter.

Ozili, P. K (2020). Tax evasion and financial instability. *Journal of Financial Crime*. 27(2) 531-539 DOI 10.1108/JFC-04-2019-0051

Schinasi, G. J., (2004). *Defining financial stability.* IMF Working Paper 04/187 (Washington: International Monetary Fund).

Shepherd, W.G. (1972). The elements of market structure. *Review of Economics and Statistics,* 54(1), 25-37.

Wellink, N, (2002). Current issues in central banking. (Oranjestad: Central Bank of Aruba), November 14

Xiaohui, H., Shuo, L., Wanli, L., & Qing, W. (2017). *Bank diversification and liquidity creation: Panel Granger-causality evidence from China* Economic Modelling xxx ,1–12