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### Full Length Research Paper

### An Evaluation of Financial System Stability In Nigeria

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Financial System Stability has become a major macroeconomic policy objective in Nigeria partly because of the severe consequences of the previous episodes of financial crises in the country. This paper conducts an evaluation of stability in the system between 1997 and 2016 using the macro prudential approach. Using indicators of capital adequacy, asset quality and profitability, the analysis is conducted on a time series basis to highlight the strengths and vulnerabilities in the system during the review period. The indicators show that by the end of 2016, clear signs of impending crises had started to emerge in the system. The suggestions proffered for ameliorating such a crises include the moderation of inflation, close monitoring of the risk management framework of the banks and strict enforcement of corporate governance standards.

Keywords: Capital Adequacy, Profitability, Asset Quality, Stability, Recapitalization

#### INTRODUCTION

Financial System Stability has become a major macroeconomic policy objective in Nigeria partly because of the severe consequences of the previous episodes of financial crises in the country. The 2008/2009 financial crises was so severe that the authorities had to inject huge amount of funds to recapitalise some banks that had become insolvent. That crises resulted in a full blown financial crises that necessitated the setting up of an Asset Management Company of Nigeria (AMCON) to acquire toxic assets and rescue the banking system. Other measures put in place to restore stability to the system included the implementation of risk based supervision of banks, stress testing and macro prudential analysis and supervision of the banking system. These measures along with other initiatives, were able to restore stability. By the end of the first half of 2013, it was reported in the Central Bank of Nigeria Financial Stability Report (June 2013) that the Nigerian economy recorded some impressive macroeconomic achievements in the first half of 2013. In specific terms, the country recorded strong GDP growth, single digit inflation, exchange rate stability, capital market recovery and growth in external reserves. As well it maintained a stable banking system.

However, by early 2016, some signs of stress had started to emerge in the system. Following the drop in crude oil prices in 2014, foreign reserves had dwindled leading to forex scarcity. The drop in government revenue constrained economic activity. While the cost profile in the banking system has almost remained the same, the revenue has dwindled. Consequently, the asset quality in the system has started to deteriorate. The FSR for June 2016 reports non performing loans in the

Table 1; Structure of the Nigerian Financial Sysstem (N'Billion)

	2012	,	2013		2014		2015 % of		2016	
	Assets	% of Total	Assets	% of Total	Assets	% of Total	Assets	% of Total	Assets	% of Total
Deposit Money Banks	21,308.90	80.37	24,468.30	80.32	27,828.59	80.32	28,507.47	80.40	32,268.92	82.18
Commercial	21,288.10	80.30	24,301.20	79.77	27,526.40	79.45	28,173.20	79.46	31,682.80	80.68
Merchant NIB	0.00 15.80	0.06	133.60 33.50	0.44 0.11	163.69 138.50	0.47 0.40	195.77 138.50	0.55 0.39	447.62 138.50	1.14 0.35
Insurance/Pension Funds	3,736.50	14.09	4,527.00	14.86	5,347.80	15.44	5,451.70	15.38	5,467.40	13.92
Insurance companies	586.40	2.21	468.90	1.54	468.90	1.35	468.90	1.32	468.90	1.19
Pension funds	3,150.10	11.88	4,058.10	13.32	4,878.90	14.08	4,982.80	14.05	4,998.50	12.73
Unit Trusts	n.a		n.a		n.a		n.a		n.a	
Other Non-Bank Financial institutions	1,472.00	5.55	1,469.10	4.82	1,469.10	4.24	1,496.70	4.22	1,531.10	3.90
Finance Houses	109.50	0.41	103.10	0.34	103.10	0.30	103.10	0.29	103.10	0.26
Specialized /Development Banks	446.90	1.69	586.70	1.93	586.70	1.69	586.70	1.65	586.70	1.49
Securities Firms	n.a		n.a		n.a		n.a		n.a	
Fund managers	n.a		n.a		n.a		n.a		n.a	
Mortgage institutions	348.10	1.31	374.60	1.23	374.60	1.08	374.60	1.06	374.60	0.95
Microfinance Banks	222.80	0.84	270.90	0.89	270.90	0.78	298.50	0.84	332.90	0.85
Discount Houses Bureau De Change Asset Management Company Others	344.70 n.a n.a n.a	1.30	133.80 n.a n.a n.a	0.44	133.80 n.a n.a n.a	0.39	133.80 n.a n.a n.a	0.38	133.80 n.a n.a n.a	0.34
Total Financial System	26,512.00	100.00	30,464.00		34,645.49		35,455.87		39,267.42	

Source; CBN

bankins system as at June 2016 at 11.7 per cent. This was an increase of 6.3 percentage points above the level at and of December 2015. There were also concerns about the levels of capital adequacy in the system In the light of the above stated scenario,

this paper seeks to evaluate the stability of the banking system in Nigeria between 1997 and end 2016 using the macro prudential approach, For this purpose, the paper will be presented in five sections with this introduction as Section 1. Section 2 is an overview of the Nigerian

Financial System while Section 3 will discuss the macroprudential approach to financial stability analysis in Nigeria. Section 4 will evaluate the strength and vulnerabilities of the system while section 5 will provide Table 2. Financial Soundness Indicators: Core and Encouraged Sets

Table 2. 1 mandal Geananess male	ators. Core and Encouraged Sets					
Capital Adequacy	Regulatory Capital to Risk – Weighted Assets Regulatory Tier   capital to Risk – Weighted Assets Nonperforming Loans net of provision to capital					
Asset Quality	Nonperorming Loans to Total Gross Loans Sectorial Distribution of Loans					
Earning and Profitability	Return on Assets (ROA) Return on Equity (ROE) Interest Margin to Gross Income Noninterest Expense to Gross Income					
Liquidity	Liquid Assets to total Assets Liquid Assets to Short Term Liabilities					
Sensitivity to Market Risk	Net Open position in Foreign Exchange to Capital					
Deposit Takers	Capital to assets Large exposure to capital Geographical distribution of loans to total loans Gross asset position in financial derivatives to capital Gross liability position in financial derivatives to capital Gross liability position in financial derivatives to capital Gross liability position in financial derivatives to capital Trading Income to total income Personnel expenses to noninterest expenses Spread between refence lending and deposit rates Spread between highest and lowest interbank rate Customer deposits to total (noninterbank) loans Foreign-currency-denominated loans to toal loans Foreign-currency-denominated liabilities to toal liabilities Net open position in equities to capital					
Other Financial corporations	Assets to total financial system assets Assets to GDP					
Nonfinancial Corporations Sector	Total debt to equity Return on equity Earnings to interest and principal expenses Net foreign exchange exposure to equity Number of applications for protection from creditors					
Households	Household debt to GDP Household debt service and principal payments to incom					
Market Liquidity	Average bid-ask spread in the securities market Average turnover ratio in the securities market					
Real Estate Market	Real Estate Prices Residential Real Estate Loans to Total Loans Commercial Real Estate Loans to Total Loans					

Source: FSLs Compilation Guide, 2006

policy recommendations and conclude the paper.

# An Overview of the Nigerian Financial System Structure of the Nigerian Financial System.

The Nigerian Financial System has expanded over the years in terms of number of operating institutions,

instruments and the asset base. The system is dominated by DMB (23 Commercial Banks, 4 Merchant Bank and 1 Non-Interest Bank) operating at end of 2016. They account for 82.18 percent of Total Financial Sector Assets. The insurance and pension Funds constitute 13.92 percent of the Sector. The third segment of the system is the other Non-Bank Financial Institutions comprising Finance Houses, Specialized/Development Banks, Securities Firms, Fund Managers, Mortgage

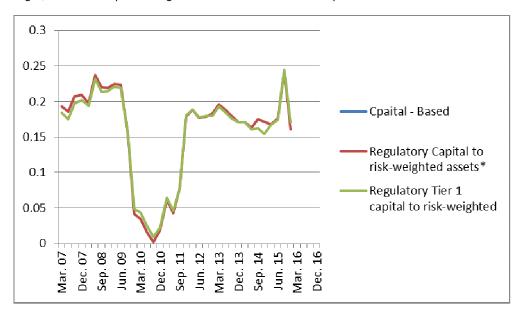


Fig 1; Ratio of Non-performing Loans net of Provisions to Capital

Fig 2; Regulatory capital to Risk Weighted Assets

Institutions, Microfinance Banks, Discount Houses, Bureau De Change, and Asset Management Company etc. As a group, these institutions constitute 3.90 percent of total assets of the Nigeria Financial System (Table 1)

### Regulation and Supervision of the Nigerian Financial System.

The regulatory frame work for the Nigerian Financial System involves oversight by different regulatory agencies over the operating institutions in the different segments of the system. The CBN and the NDIC are the major regulators in the money market segment, the SEC and NAICOM perform oversight of the capital market. The Federal Ministry of Finance and CBN together oversee the activities of the specialized/Development/ Other Financial Institutions.

The functions of these regulatory bodies are crucial for the maintenance of financial system stability. Their surveillance on the operators is necessary to ensure the soundness and effective of the operating institutions. The regulatory oversight is also crucial to the orderly development and growth of the system.

The mandates of the CBN were spelt out in the CBN Act 1958 and the Banking Act of 1969. Subsequent amendments to this Act and other related legislations have virtually positioned CBN as the overall regulator of most of the institutions in the system. However the

primary focus of the CBN had remained price/monetary stability. However, in acknowledgement of the recent focus on Financial System stability, the promotion a sound Financial System was stated as a separate mandate in the most recent legislation the CBN Act 2007.

### Macroprudential approach to Financial System Analysis in Nigeria.

The regulatory frame work in Nigeria had relied for a long time on the on-site and off-site supervision of individual Banks and other institutions operating in the county. In other words the authorities concerted their efforts in identifying and intervening in individual institutions that were prone to risk. This approach referred to as Micro prudential Analysis and regulation was anchored on the belief that identifying and mitigating the risks in individual banks would guarantee stable Financial System. This approach aimed at preventing the failure of any individual Bank, which may eventually become systemic. However, the Global Financial Crisis of 2007/2008 that started in the USA has brought to the fore the systemic implications of risk across the entire Financial System as well as on the real economy and even across the domestic economy. This is what has provided the basis for another approach in which regulatory oversight is focused on the system as a whole. This new approach referred to as Macro prudential

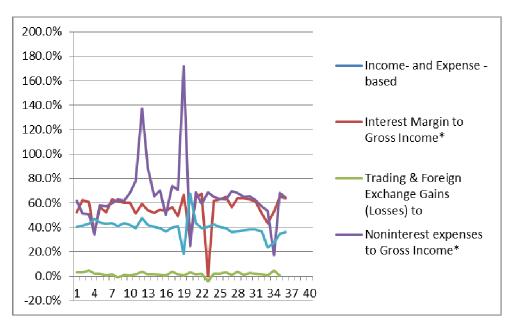


Fig 4; Non Performing Loans to Total loans

Analysis and supervision had been incorporated into the supervisory framework in Nigeria since after the 2009 financial crises in the country.

#### **Key Concepts in Macro prudential Analysis**

Macro prudential Analysis and regulation seeks to identify and mitigate risks to stability of the system. According to Ejembi et al (2014) Macro prudential Analysis relies on indicators that can be used as a basis for monitoring the health, vulnerabilities, and stability of the Financial System. These indicators include aggregated Micro prudential indicators as well as Macroeconomic variables that impact on Financial System Stability. The two main tools used in Nigeria for the purpose of Macro prudential Analysis are Financial Soundness Indicators (FSIs) and Stress Testing. This work will focus on the use of Financial Soundness indicators for analysis of stability of the Nigerian Financial System.

#### Financial Soundness Indicators (FSIs)

The Asian Financial Crisis of the late 1990s revealed an enormous data gap required for timely monitoring and intervention in the Financial System by the relevant authorities. This shortcoming compelled the IMF to commence some statistical initiatives including the compilation of FSIs for the purpose of timely identification

of Financial and external vulnerabilities. According to the IMF FSIs Compilation Guide (2006), FSIs are aggregate measures of the current Financial health and soundness of the Financial Institution in a country as well as their corporate and household counterparts. Guide further explains that in the mid-2000, the IMF conducted a survey on the compilation and dissemination Macroprudential indicators which received remarkable response from over 100 countries. Based on the response from this survey, the IMF was able to identify a core set of Financial Soundness indicators that all member countries are expected to compile and an encouraged set of important indicators that countries are not compelled but encouraged to compile depending on national circumstances. (Table2)

The FSIs for Nigeria are compiled by the CBN on quarterly basis. The compilation is limited to the indicators whose underlying series are available in the statutory returns of deposit money banks in Nigeria. In Essien and Doguwa (2014) it is shown that the CBN has successfully computed quarterly series of FSIs for the period 2007 Q1 to 2014 Q4. (Table 3).

## Application of FSIs to Financial Stability Analysis in Nigeria

The Macro prudential approach to Financial stability analysis in Nigeria is conducted mainly from two

dimensions using FSIs and stress testing. In this section, the focus is on the application of FSIs in the analysis of the stability of the system.

The FSIs currently compiled on Nigeria include 11 out of the 12 core indicators. The indicators are classified into three groups as Capital Based, Asset Based and Income and Expense based FSIs. The indicators are analyzed on a time series basis to highlight the strengths and vulnerabilities in the system. The indicators are also evaluated with respect to the national prudential targets, ceilings or minimum levels.

#### **Capital Based Indicators**

The Capital Based FSIs currently compiled and used include the ratios of regulatory capital to risk weighted assets, capital to assets, non - performing loans net of provisions to capital and return on equity. The ratio of Nonperforming loans net of provisions to capital reached it's peak of 24 percent in the third guarter of 2010 which was the height of the banking sector crises in Nigeria. To further highlight the instability in the system during this period, the ratio of regulatory capital to Risk weighted Assets dropped to below 2 percent far below the prudential minimum of 8 percent. The huge presence of toxic assets and the erosion of the capital base of banking system fuelled the instability at that period. The NPLs ratio has reduced consistently to 3.8 percent in guarter 3 of 2013 and to 3.2 percent in guarter 2 of 2015 reflecting the return of stability to the system. However, signs of instability have emerged in the system with the NPLs ratio shooting up to 28.4 per cent while the regulatory capital ratio dropped to 14.7 per cent respectively in the first half of 2016 (Fig 1).

Fig 1;Ratio of Non-performing Loans net of Provisions to Capital

#### **Asset Based Indicators**

The Asset Based Indicators currently compiled are the ratios of Liquid Assets (core) to total Assets, liquid Assets (Core) to short term liabilities, customer deposits to total loans, Return on Assets and Nonperforming Loans to total Loans. The prevalence of poor asset quality in the system is captured by the ratio of NPL to total Loans at 38 percent in third quarter of 2010 compared with a prudential ceiling of 5 percent. In like manner the illiquidity in the system is indicated by the ratio of Liquid Assets to short term liabilities at 14 percent compare with the prescribed minimum of 30 percent. While poor asset quality reduces the earnings of the

banks, illiquidity constrains the ability of banks to meet maturing obligations. Further analysis shows that stability had been restored as the asset quality ratio had reduced to below the prudential ceiling in quarter 2 of 2015. However by early 2016, this indicator had overshot the ceiling to stand at 11.7 and 14.0 per cent at end June and December 2016 respectively showing signs of impending crises.

Fig 3; Liquid Assets (core) to Total Assets

#### **Income and Expense Based Indicators**

This group of indicators include ratios of interest margin to gross income, Noninterest Expenses to gross Income and Personnel Expenses to Non-Interest Expenses. These indicators are useful in evaluating the sustainability of expenditure pattern as well as profitability in the system. The ratio of Non-interest expenses to gross income shot up to 70.6 percent in second quarter of 2011 whole interest margin to gross income rose to 66.4 percent in the same period. The rising trend in these indicators shows the unsustainability in those expenditures items and explains the declining profitability in the industry.

#### **Summary, Recommendations and Conclusion**

The financial system is dominated by the deposit money banks (22 commercial banks, 5 merchant banks and 1 non-interest bank0 operating in the country at end 2016. Together they account for 82.18 per cent of total assets of the financial system. In response to financial crises that that engulfed the system in 2008, several measures were adopted to resolve the crises. The measures included risk based supervision of banks, financial inclusion initiatives, macroprudential analysis and supervision and the establishment of an asset management company to take up toxic asets from the banks. These measures were able to restore stability to the system so that by middle of 2013, it was reported in the Central Bank of Nigeria Financial stability Report (June 2013) that the Nigerian economy recorded some impressive macroeconomic achievements in the first half of 2013. In specific terms, the country recorded strong GDP growth, single digit inflation, exchange rate stability, capital market recovery and growth in external reserves. As well it maintained a stable banking system.

However, by early 2016, some vulnerabilities were being observed in the system. The macroeconomic environment had adversely affected some bank borrowers constraining their ability to service their loan obligations. The default in loan payments resulted in the

accumulation of non performing loans. The resulting bad debts required additional provisioning by banks resulting in declining capital adequacy levels in the industry. Also, the inflationary pressures in the economy is captured in the rising trend of the expenditure indicators. This trend has adversely affected the profitability levels in the sector. The rapidly increasing accumulation of non performing loans, the falling capital adequacy levels and declining earnings in the system represent clear signals of an impending crisis if these vulnerabilities are not mitigated promptly. The following recommendations are therefore suggested for the purpose of returning the system back to the path of stability and growth;

- (i)Efforts should be redoubled to bring the inflation rate down to single digit in order to bring down the cost of operations for businesses in the country. This will increase their profitability and enhance their ability to service their debt obligations.
- (ii) A closer monitoring of the risk management framework and credit disbursement process of the banks is very necessary in order to reduce the incidence of bad loans
- (iii) The regulatory authorities should ensure compliance with corporate governance standards in the industry

In conclusion therefore, an evaluation of stability in the Nigerian financial system reveals that the stability that had been achieved in the system after the financial crises of 2008 has been considerably eroded. The crash of crude oil prices in 2014 constrained government revenues resulting in a harsh macroeconomic environment for the banks. By the end of 2016 clear signs of impending crises had started to emerge in the system. The suggestions proffered for ameliorating such a crises include the moderation of inflation, close monitoring of the risk management framework of the banks and strict enforcement of corporate governance standards.

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