MACROECONOMIC FLUCTUATIONS AND BANK PERFORMANCE: TESTING THE RESILIENCE OF NIGERIAN BANKING SYSTEM PROFITABILITY

LAWRENCE OLUSEGUN FAGBOLA (Ph.D.)
(Corresponding Author)
Department of Economics,
Osun State University,
Osogbo, Nigeria.

RASHEED OYAROMADE, Ph.D.
Department of Economics,
Osun State University,
Osogbo, Nigeria.

AND

KEHINDE OLABIYI, Ph.D.
Department of Economics,
Osun State University,
Osogbo, Nigeria.

ABSTRACT
This study examines the effect of macroeconomic fluctuations on banks performance by testing the resilience of Nigerian banks profitability to shocks from the macroeconomic environment with quarterly data from 1986Q1 to 2018Q4 that coincide with the period of structural adjustment program in Nigeria to the current democratic dispensation using the impulse response functions and variance decompositions of Vector Autoregression method. The study reveals that Nigerian bank performance is not resilient to exchange rate, inflation, interest rate and net export shocks but resilient to unemployment and economic growth shocks using return on assets and return on equity as measure of bank performance. The non-resilience of bank performance to exchange rate, inflation, interest rate and net export shocks reflects a countercyclical relationship between bank performance and macroeconomic fluctuations while the resilience of bank performance to unemployment and economic growth shocks is indicative of a procyclical relationship of bank performance to macroeconomic fluctuations. The study also reveals that about

20% of Bank profitability decline results from the macroeconomic fluctuations within 10quarters which represents about to 2% profitability decline per quarter from macroeconomic fluctuations with exchange rate and inflation showing greater declining effects on Nigerian bank profitability. Nigerian banks regulatory and supervisory authorities must therefore not ignore sound macroeconomic policies if bank failures are to be minimized, most especially the maintenance and sustenance favourable exchange rate regime.
Keywords: Macroeconomic Fluctuations, Shocks, Resilience, Countercyclical

Introduction

Stable macroeconomic environment is germane to a resilient banking system. Evidences exist that macroeconomic instability is one of the consequences of banks' fragility and so does the banking system stability promotes stable macroeconomy (Borio, 2002; Borio and Lowe, 2004; Bernanke and Gertler, 1990; Pesaran and Smith, 2006). Banks' ability to withstand macroeconomic shocks is therefore essential in a highly volatile local and global macroeconomic environment. The examination of the cyclical relationship between the macroeconomy and the Nigerian banks' performance is essential for the understanding of macroeconomic sources of banking system performance. This will assist policy makers to take proactive actions that will mitigate the adverse consequences of the macroeconomy on the banking system. The various micro-prudential policies adopted by Central Banks in most nations of the world have not resolved bank crisis and its attendant adverse effects on the economy (Lindgren *et.al*, 1996). It thus implies that micro-prudential actions of individual bank though necessary, may not be sufficient to check systemic banking crises (Borio and Claudio, 2003).

The recurring banks' failures from the time of 'Great Depression' in 1929 to the most recent 'Global Financial Crisis' of 2008, have further re-emphasized the need for a new approach to financial crises management. In building strong resilience against severe financial crises and ensuring stable macroeconomic stability there is the need for sound macro-prudential framework tools. This has led to the emergence of macro-prudential analyses as tools to monitor financial risks and vulnerabilities. These tools of analysis have helped to strengthen the soundness of the banking system and improve effectiveness of the surveillance activities by the banks' regulatory and supervisory authorities (IMF, 2011).

The need for financial surveillance most especially during recessionary phases of the economy is crucial to the prevention of bank failures and macroeconomic instability (Arpa *et.al*, 2001). The cost implication of bank crises and the persistent nature of such crises often inflict much stress on the economy, which manifests in terms of output reduction, wrong pricing of assets, sub-optimal investment and resource allocation decisions. The resulting output losses further generate instability of economic agents' behaviour. The consequences of the unpredictable economic agents' behaviour such as wrong assets pricing and general misallocation of resources across various sectors of the economy have profound effects on consumption and investment decisions (Mishkin, 1997). These also severely affect the channeling of funds from surplus to deficit units of the economy and ultimately destroy the capacity of the financial sector to generate more credits.

Once bank failure occurs, the impact on economic activity is usually severe and long lasting with great impairment on the effectiveness of monetary and fiscal policies. There is therefore the need for collaborative efforts by both the bank supervisory authorities and the managers of the economy for appropriate proactive policy measures to ameliorate the adverse consequences of macroeconomic fluctuations on bank performance and the devastating effects of poor bank performance on the health of the economy. The effectiveness of achieving this will assist the timely forecast of macroeconomic fluctuations that might interfere with the smooth working of the banking system.

The beginning of an expansionary phase of the business cycles in an economy leads to increased profits among economic agents. This brings increases in asset prices due to high expectation of the economic agents which make them increase their demands for goods and services. Expansion in aggregate demand leads to a remarkable proportional growth in bank lending and the economy's indebtedness. During the boom, banks tend to increase their lending activities thus increasing their risk exposures. Banks, during boom, relax their credit standards and reduce their loan loss provisions, thus sowing seeds that would amplify and propagate recession in the subsequent period (Quagliariello, 2004).

The experience in most economies is that in the succeeding period following the peak of the expansion cycle, the profit and credit worthiness of banks' customers decline (Borio *et.al*, 2001). This reduces their loan servicing ability which results in deterioration of banks' asset quality. Consequently, there will be losses in the worth of banks' balance sheets and subsequent falls in asset prices.

The global banking crisis of the 2008 threw many economies into severe recession and left the financial sector in an extremely weak position that changed the competitive environment under which banks operated (Altman and Roggi, 2013). In Nigeria, the economic downturn resulted in bank failures arising from reduced earnings, erosion of banks' capital base positions, deregulated interest rates and greater competition against banks from non-bank financial institutions. This competition is further heightened by the emergence of strong capital markets which draws away many of the banks' high net-worth customers (Adewumi, 2002).

Stress tests help to measure the vulnerability of banking institutions to shocks from the macroeconomy. This assists Central banks and other banking regulatory institutions to identify the potential macroeconomic risks to the banking system as a whole. The purpose of this paper is to use Vector Autoregressive (VAR) method to investigate the performance of Nigerian banking system to changing key macroeconomic variables so as to determine the macroeconomic factors that influence the performance of Nigerian banks, as macroeconomic early warning indicators of declining bank performance. The VAR methods help to capture the bi-directional relationships between the banking sector and the real sector of the economy; assists to capture performance changes resulting from macroeconomic shocks and the relative contribution of each macroeconomic factor to banks profitability.

Literature Review

Bank performance is most often viewed on the basis of competition, concentration, efficiency, productivity and profitability. The classification of bank performance varies according to researchers' interests and operating characteristics of banking systems. Such classifications include among others problem/non-problem (Sinkey, 1975), failed/surviving (Siems, 1992),

financially successful/non-financially successful (Arshadi and Lawrence, 1987); distressed/healthy (Korobow and Stuhr, 1975) and vulnerable/resistant (Hunter and Srinivasan, 1990; Adekanye and Adewumi, 1993). The nature of macroprudential analysis favours the vulnerable and resistant classifications and hence adopted by this study.

There are various financial ratios used to classify bank performance, these include among others the level of profitability covers measured by the rate of return on equity (ROE), the rate of return on assets (ROA). The ROE reflects the efforts of managers in maximizing shareholders' wealth, the ROA is indicative of managerial efficiency in putting into effective use the assets of the bank.

Other measures of bank performances include capital adequacy, asset quality and liquidity. The focus of these other performance measurement is indirect hence this study focusses on earlier bank performance metrics which are direct in nature. Apart from these financial ratios, derived from financial information, other factors such as economic conditions, market structure, demographic conditions and capital market information have also been used to analyze bank performance (Baboucek and Jancar, 2005). There is therefore lack of consensus on bank performance metrics. This had led to intervention of the International Monetary Fund (IMF) in conjunction with the international community to develop a set of financial soundness indicators (FSIs), to support macro-prudential analysis to assist the assessment of the strengths and vulnerabilities of the financial systems.

Banks as financial intermediaries are inherently exposed to changes in the macroeconomic environment which makes them vulnerable to macroeconomic condition that influences or even determines the severity of macroeconomic risks on the performance of banking system. There are Macroeconomic conditions therefore contribute to the performance of banks from bank default risk arising from the monetary policy transmission channels.

The cyclical reaction of banks to changes in the macroeconomy can be procyclical (positive), countercyclical (negative) or acyclical (neither positive nor negative) on the basis of prevailing banks conditions depending on some basic theories of banks' cyclical behaviour. Most cyclical theory of bank behavior established that the bank performance depends substantially on the phase of business cycle the economy operates in. In recessionary phases, bank performance tends to be negatively affected through the performance of bank loan portfolios, leading to credit losses and lowering of banks' profits and conversely so during expansion phases (Gerlach,

Peng and Shu, 2003). The understanding of the relationship between bank performance and different macroeconomic fluctuations phases is crucial for regulators' early detection of macroeconomic warning signals of any upcoming financial crisis (Demirguc-Kunt and Detragiache, 1999; Kaminsky, 1999; Logan, 2001; Borio, 2003; Albertazzi and Gambacorta, 2006) so that the regulators can take proactive actions to prevent adverse effect on the financial sector from macroeconomic instability.

The low growth of the real sector Nigerian economy, has not raised significant interest in macroeconomic factors of bank performance. Most researches on bank performance have been addressed from the point of view of micro-prudential factors within the banking industry. The researches on macro-prudential factors have emanated from advanced industrialized countries and few research efforts exist on cyclical behaviour of banks in developing economy .

Employing multiple linear regression method on the Kenya banking sector, Olwency, and Mamba (2009) concluded that internal factors have significant impact on bank's profit while no market factor affects the performance of banks. Ayadi and Boujelbene (2012) found bank size to be a significant factor in Tunisian banking sector profitability while credit risk and liquidity were found to be insignificant. Macroeconomic factors such as GDP and inflation were found to have negative relationship with profit.

Examining the factors affecting the performance of banks in Nigeria, Babalola and Abiodun (2012) applied decomposed and aggregated models and found that capital adequacy ratio in short run and bank size in long run have significant impact on banks performance. Qin and Pastory (2012) research on Tanzania banking sector using regression model on data from 2000-2009 revealed a positive relationship of profitability with liquidity and assets quality while non-performing loans and capital adequacy have negative relationship.

Following these streams of researches, this study analyzes the behaviour of Nigerian banks with a view to understanding the performance of Nigerian banks through different macroeconomic phases. With respect to previous studies, this study provides a maccroprudential framework to analyze the Nigerian banks performance over various macroeconomic phases. This study uses VARs to cross-check essential part of stress testing the Nigerian banking system against fluctuations in the macroeconomy. The study therefore incorporates macroeconomic conditions, into the bank sector conditions for effective prediction of the systemic risk and asset quality dynamics.

Methodology

The Vector Antirecession (VAR) method is selected in view of the bi-directional relationship between the banking system and the macroeconomy and the need to avoid the establishment of the existence or otherwise of the co- integrations of the variables of interest in the study. VAR is used to verify the Nigerian banks' performance response to changes in macroeconomic conditions and the timing of banks' reactions to such changes. The results of the models were then employed to test the impact of macroeconomic fluctuations on the Nigerian banking system using the VAR impulse response functions (IRF) and variance decompositions (VD). The macroeconomic fluctuations regimes are defined through the growth of real output (GDP) (Nickell et al., 2000) and other selected core set of macroeconomic variables to indicate the expansions and contraction phases. The growth rate of both real and nominal macroeconomic and bank performance indicators for Nigeria are used to represent the state of the economy and the banking sector respectively. The effects of macroeconomic fluctuations are estimated using VAR analysis to test the strength of the Nigerian banking system performance degree of vulnerability or resilience to changing macroeconomic conditions.

Model Specifications

(i) Vector Autoregressive (VAR) Model

To achieve the objectives of this study, a VAR model is used with bank performance variables (BPV) of ROA and ROE and macroeconomic variables (MV) of real exchange rate (REX), inflation (INF), depth of unemployment (DUE), interest rate (INT), net export (NEX) and economic growth (GDP) OF with the assumptions that of all variables are endogenous. The

macroeconomic variables were chosen to reflect major component goals of macroeconomy to include economic growth, price stability, employment and balance of payment with exchange rate serving as intervening variable in an import dependent nation. In the VAR model each dependent variable is regressed on its own lag and the lag of other variables so as to allow each variable to be affected by its own history and the history of every other variable.

The framework for the VAR model is:

$$BPV_t = \alpha_0 + \sum_{t=1}^{K} \alpha_{1i} BPV_{t-j} + \sum_{t=1}^{K} \alpha_{2i} MV_{t-j} + \varepsilon_{1i}$$

$$MV_t = \alpha_0 + \sum_{t=1}^{K} \alpha_{1i} MV_{t-j} + \sum_{t=1}^{K} \alpha_{2i} BPV_{t-j} + \varepsilon_{2i}$$

Where: BPV and MV are as defined earlier and t= 1986… 2018; j= 0, 1, 2

Macroeconomic Variable (MV} is a vector of REX, INF, DUE, INT NEX, GDP, Bank Performance Variable (BPV) is represented by profitability measures of ROA and ROE.

The equations for the model are given below:

$BPV_t = \gamma_1 + \delta_1 BPV_{t-j} + \delta_2 REX_{t-j} + \delta_3 INF_{t-j} + \delta_4 DUE_{t-j} + \delta_5 INT_{t-j} + \delta_6 NEX_{t-j} + \delta_7 GDP_{t-j} + \varepsilon_1$

$REX_t = \gamma_2 + \delta_8 BPV_{t-j} + \delta_9 REX_{t-j} + \delta_{10} INF_{t-j} + \delta_{11} DUE_{t-j} + \delta_{12} INT_{t-j} + \delta_{13} NEX_{t-j} + \delta_{14} GDP_{t-j} + \varepsilon_2$

$INF_t = \gamma_3 + \delta_{15} BPV_{t-j} + \delta_{16} REX_{t-j} + \delta_{17} INF_{t-j} + \delta_{18} DUE_{t-j} + \delta_{19} INT_{t-j} + \delta_{20} NEX_{t-j} + \delta_{21} GDP_{t-j} + \varepsilon_3$

$DUE_t = \gamma_4 + \delta_{22} BPV_{t-j} + \delta_{23} REX_{t-j} + \delta_{24} INF_{t-j} + \delta_{25} DUE_{t-j} + \delta_{26} INT_{t-j} + \delta_{27} NEX_{t-j} + \delta_{28} GDP_{t-j} + \varepsilon_4$

$INT_t = \gamma_5 + \delta_{29} BPV_{t-j} + \delta_{30} REX_{t-j} + \delta_{31} INF_{t-j} + \delta_{32} DUE_{t-j} + \delta_{33} INT_{t-j} + \delta_{34} NEX_{t-j} + \delta_{35} GDP_{t-j} + \varepsilon_5$

$NEX_t = \gamma_6 + \delta_{36} BPV_{t-j} + \delta_{37} REX_{t-j} + \delta_{38} INF_{t-j} + \delta_{39} DUE_{t-j} + \delta_{40} INT_{t-j} + \delta_{41} NEX_{t-j} + \delta_{42} GDP_{t-j} + \varepsilon_6$

$GDP_t = \gamma_7 + \delta_{43} BPV_{t-j} + \delta_{44} REX_{t-j} + \delta_{45} INF_{t-j} + \delta_{46} DUE_{t-j} + \delta_{47} INT_{t-j} + \delta_{48} NEX_{t-j} + \delta_{49} GDP_{t-j} + \varepsilon_7$

Where BPV = ROA, ROE

The values of, γ_i, δ_i are the coefficients of the variables and ε_i are error terms of each equation obtained from VAR model. The one standard deviation to the values of ε_i show the impulse, shocks or innovations of the dependent variables which are measured in reaction (response) to the independent variables.

(ii) Impulse Response Functions (IRFs)

Impulse Response Functions (IRFs) of VAR models, is a popular model in conducting stress tests (Baboucek and Jancar, 2005; Filosa, 2007; Tracey, 2005 and Amediku, 2007), as it outperforms other forms of stress testing and is therefore used in estimating changes in bank's performance metrics due to changes in macroeconomic fluctuations (Amediku, 2007).This stress tool is increasingly being used by the supervisory authorities to assess the resilience of the Nigerian banking system to adverse macroeconomic disturbances to serve as a useful tool of policy actions. The adverse macroeconomic shocks include among others, a decrease in exchange rate, a persistent rise in commodity prices, a rising unemployment, a rise in interest rate, reduced performance of the export sector and a strong and persistent recessions in the economy or combination of these shocks. The IRF helps to produce estimates of the impact of one variable on itself and others as well as the direction of relationship over given time horizon.

(iii) Variance Decomposition (VD)

The variance decompositions (VD) procedures of VAR model evaluate the relative relationship among variables. This further helps to produce estimates of relative contribution of each variable to the forecast error of the model and evaluates the explanatory/predictive
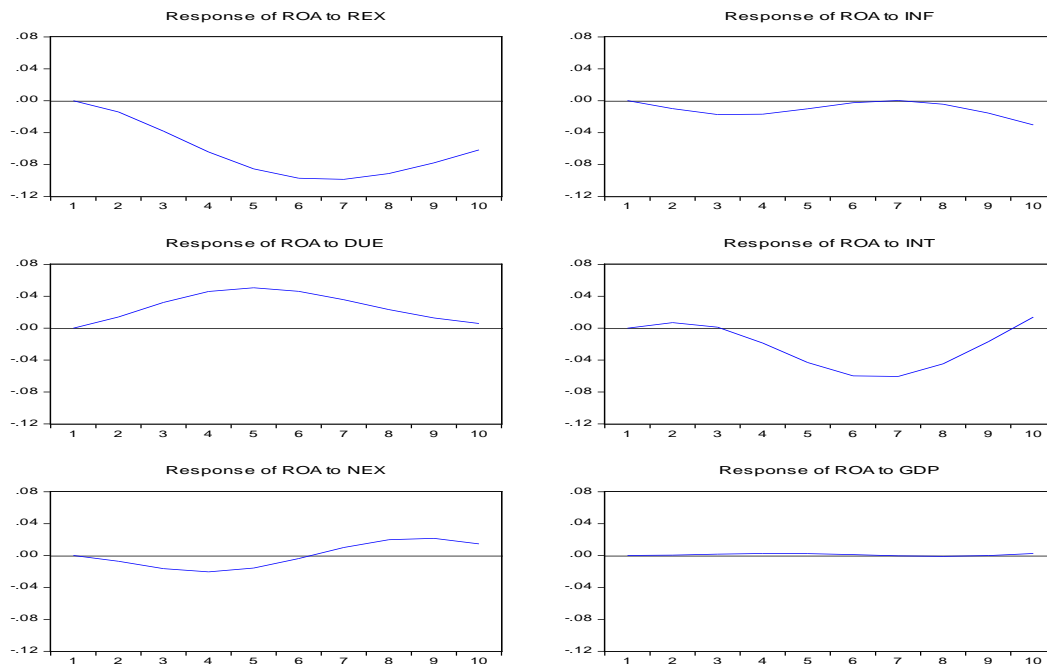
power of each variable in the model by measuring the sensitivity of a bank performance to set of macroeconomic shocks. VD also gives a numerical estimate of the changes arising from changes to given risk factors and decomposes the difference in a distributional statistic and changes over time, into various explanatory factors. We have used VD to provide answers to the relative importance of macroeconomic factors in explaining the extent of differences in bank performance in Nigeria between 1986Q1 and 2018Q4 that were influenced by macroeconomic fluctuations. This study uses variance decomposition to determine the relative contribution of exchange rate, inflation, unemployment, interest rate, net export and gross domestic product to Nigerian banks' return on assets, return on equity in the structural adjustment period (SAP) era to date.

Analysis of Results
Impulse Response

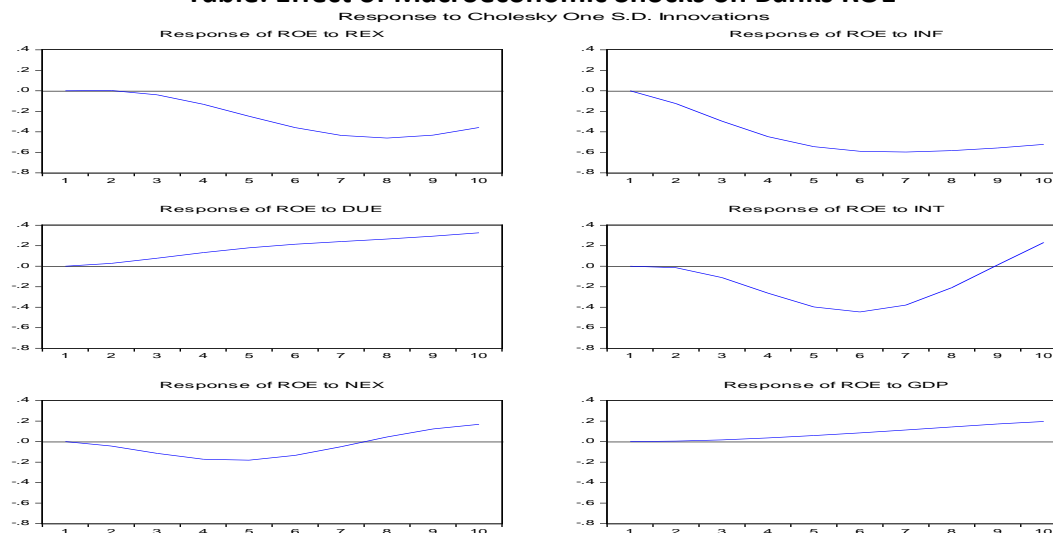### Table: Effect of Macroeconomic Shocks on Banks ROA

Response to Cholesky One S.D. Innovations

A one standard deviation shocks from exchange rate causes banks' return on assets as a proxy for bank profitability to decrease continuously for six quarters before rising continuously but without being positive hence bank profit is non- resilient to exchange rate shocks in the long run. Bank profit falls slightly for three quarters, rises again for subsequent three quarters before falling again without having positive effect in reaction to interest rate shocks. Profit rises continuously in response to unemployment shocks for five quarters and keeps falling continuously thereafter but never results in a negative decline to profit. It therefore exhibits a resilience to unemployment shocks in the long run. Profit response to interest rate shocks is stable for the first three quarters but continuously decline for the next three quarters before rising again continuously for another three quarters but only exhibit a positive effect in the last quarter. Profit response to interest rate shock is negative hence nonresistant to interest rate shocks.

The balance of trade proxied by net export is negative and declining for six quarters and positive in the last four quarters to net export shocks showing a short run vulnerability and a long run resilience to external trade shocks. Banks profitability's response to economic growth shocks is positive and relatively stable both in the short and long run. Bank profitability is therefore a non-resilient in the long run to exchange rate, inflation and interest rate showing a counter cyclical relationship between exchanges rate, inflation and interest rates fluctuations and bank performance while bank performance is resilient to economic growth, unemployment and balance of trade shocks.

Table: Effect of Macroeconomic Shocks on Banks ROE

Response to Cholesky One S.D. Innovations

A one standard deviation shocks from exchange rate causes banks' return on equity as a proxy for bank profitability to decrease continuously for eight quarters before rising continuously for another two quarters but without being positive hence bank profit is non-resilient to exchange rate shocks in the long run. Bank profit falls from the second quarter continuously in response to inflation shocks without having positive effect up to the tenth quarter thus demonstrating a non-resilience of bank performance to inflation fluctuations. Profit rises continuously in response to unemployment shocks from the second quarter and keeps rising to the tenth quarter hence showing continuous resilience of bank profit to unemployment shocks. It therefore exhibits a resilience to unemployment shocks in both the short and the long run.

Profit response to interest rate shocks is stable for the first one quarter but continuously decline for the next eight quarters before rising again for the last quarter. It is therefore resilient only in the last quarter of the ten quarters under review hence bank profit is largely nonresistant to interest rate shocks. The balance of trade proxied by net export is negative and declining for seven quarters and positive in the last three quarters to net export shocks showing a short run vulnerability and a long run resilience to external trade shocks. Banks profitability's response to economic growth shocks is positive and continuously on the increase in the long run. Bank profitability is therefore resilient to economic growth in the long run. In summary banks performance is a non-resilient in the long run to exchange rate, inflation and interest rate showing a counter cyclical relationship between exchanges rate, inflation and interest rates

fluctuations and bank performance while bank performance is resilient to economic growth, unemployment and balance of trade shocks.

Variance Decomposition
ROA Variance Decomposition

Period	S.E.	ROA	REX	INF	DUE	INT	NEX	GDP
1	0.165908	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.295066	99.31691	0.229565	0.114464	0.224967	0.054827	0.058876	0.000389
3	0.381679	97.48139	1.138797	0.277160	0.846370	0.033698	0.220185	0.002404
4	0.427347	93.98503	3.176437	0.377003	1.829701	0.220500	0.405655	0.005674
5	0.449787	88.59802	6.477140	0.390395	2.915385	1.122951	0.488228	0.007879
6	0.466484	82.42281	10.36561	0.366015	3.686483	2.690998	0.460217	0.007869
7	0.483631	77.32532	13.80586	0.340537	3.970943	4.077599	0.472354	0.007387
8	0.498392	74.10457	16.35604	0.328285	3.956749	4.642737	0.604216	0.007401
9	0.507865	72.25755	18.10730	0.409661	3.872751	4.583584	0.762017	0.007134
10	0.513465	70.89933	19.15784	0.749224	3.801767	4.556196	0.826198	0.009437

Cholesky
Ordering: ROA REX
INF DUE INT NEX

Using ROA as measure of profitability, in the short run a shock to exchange rate will result in the variance fluctuation of bank profitability by 3% while in the long run a shock to exchange rate results in fluctuation of bank profitability by 19%. A shock to other macroeconomic economic variables under consideration have little or no variance fluctuations effect on bank profitability both in the short and the long run. Profitability own shock results in profitability fluctuations from 97% in the short run to 71% in the long run.

ROE Variance Decomposition

Period	S.E.	ROE	REX	INF	DUE	INT	NEX	GDP
1	1.378733	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	2.506653	99.70598	0.000176	0.248417	0.012608	0.003463	0.029054	0.000299
3	3.358601	98.76144	0.013937	0.916922	0.060973	0.111725	0.132355	0.002648
4	3.905902	96.89016	0.123454	1.987195	0.160708	0.536270	0.291845	0.010367
5	4.215265	94.03739	0.453430	3.376954	0.319640	1.348578	0.435460	0.028549
6	4.380844	90.58906	1.090138	4.938776	0.535709	2.284541	0.497622	0.064156
7	4.479344	87.20124	1.984480	6.499967	0.801252	2.899575	0.488126	0.125356
8	4.555575	84.30856	2.940345	7.921345	1.112596	3.015586	0.481920	0.219644
9	4.628761	81.86921	3.721628	9.122378	1.476771	2.921771	0.537687	0.350557
10	4.703518	79.60364	4.184292	10.06807	1.910629	3.070891	0.648509	0.513967

Cholesky Ordering:
ROE REX INF DUE INT
     NEX GDP

Using ROA as a measure profitability in the short run, a shock to interest rate will result in the variance fluctuation of bank profitability by 0.9% while in the long run a shock to interest rate will result in the variance fluctuation of bank profitability by 10%. A shock to other

macroeconomic economic variables under consideration have little or no variance fluctuations effect on bank profitability both in the short and the long run. Profitability own shock results in profitability variance fluctuations from 99% in the short run to 80% in the long run.

The study reveals that Nigerian bank performance is not resilient to exchange rate, inflation, interest rate and net export shocks but resilient to unemployment and economic growth shocks using return on assets and return on equity as measure of bank performance. The non-resilience of bank performance to exchange rate, inflation, interest rate and net export shocks reflects a countercyclical relationship between bank performance and macroeconomic fluctuations while the resilience of bank performance to unemployment and economic growth shocks is indicative of a procyclical relationship of bank performance to macroeconomic fluctuations. The study also reveals that about 20% of Bank profitability decline results from the macroeconomic fluctuations within 10quarters which represents about to 2% profitability decline per quarter from macroeconomic fluctuations with exchange rate and inflation showing greater declining effects on Nigerian bank profitability. Nigerian banks regulatory and supervisory authorities must therefore not ignore sound macroeconomic policies if bank failures are to be minimized, most especially the maintenance and sustenance favourable exchange rate regime.

The study finds out that macroeconomic fluctuations are correlated with banking earnings in Nigeria with unemployment shocks having the highest impact on bank earnings. As employment declines, consumers' consumption decreases leading to disequilibrium between savings and consumption. The dis-proportional decrease in consumption relative to income reduces borrowers' ability to service their loans and thus affect banks' earnings. The study includes lag of two quarters as dictated by lag selection criteria to account for plausible delays with which macroeconomic shocks affect bank performance.

The trend analysis reveals that changes in most of the macroeconomic variables were accompanied by changes in the performance of the Nigerian banking system with bank earnings as profitability measures. The dynamic analyses using the VAR impulse-response function (IRF) show that macroeconomic shocks (innovations, impulses) have effect on bank performance either in the positive or negative direction or both within the 12 quarters horizons reviewed in the study. The 12 quarters were chosen in relation to Nigerian political cycles of 16 quarters (4 years) with the first 2 quarters being used for formation of government and the last 2 quarters being used for political campaign when little attention is paid to policy implementations.

The VAR estimates of RIDING shocks on earnings show that in the short run, macroeconomic impulses exert impacts on Nigerian bank performance hence a reflection of relative effectiveness of macroeconomic shocks on Nigerian banks both from demand and supply side. Monetary policy shocks as manifested in interest and exchange rate shocks show that monetary policy could be applied to influence bank earnings in Nigeria. The counter cyclical relationship of most bank performance indicators with real GDP indicates that the Nigerian banking system is bank based rather than market based with much emphasis on bank-customer relationship in their product pricing. There is evidence of income smoothing among Nigerian banks making profitability to be counter cyclical. The feedback effect shows a relatively small effect in comparison to the direct effect showing that the Nigerian banking system's contribution to its economic growth is still small.

The reliable policy guide from this study deals with the problems of the macroeconomy on bank performance in Nigeria. Policy to minimize bank vulnerability to fluctuations in the macroeconomy especially employment includes the following:

There is the need to refocus on the core function of the Governor of Central Bank of Nigeria (CBN) to macro prudential policy of managing the macroeconomy and with less emphasis on Bank management as it is presently the practice, Central Banking is more than banking business, and hence Nigerian banks should have a separate apex boss since other financial institutions have their own supervisory head and unit. The Governor of Central bank should oversee the economy and all financial institutions. Macro-prudential policy must therefore reside with the Central bank and not with coordinating Minister for the economy which is a misnomer and should be discarded with.

Unemployment exerts the most important impact on Nigerian bank performance hence employment promotion strategy and unemployment reduction strategy are therefore crucial in promoting stable banking system in Nigeria. Since unemployment lowers the net worth of bank borrowers, reduces repayments ability and lowers demand, economic managers must therefore ensure a stable employment to control employment shocks that can negatively affect bank performance via credit demand. The manager of the economy must in conjunction with apex bank manager be able to respond promptly to development in the macroeconomy that have adverse effect on banks earning capacity to prevent high costs of not doing so promptly. Where conflict exists between the macroeconomic and banking performance objectives, the necessary trade-off must be made to ensure stable macroeconomy where all the components sectors will thrive. Such conflicts must be resolved without much cost to the macroeconomy, preferably by market forces.

In period of economic boom, central banks should ensure the growth of loans is put under control to restrain excessive risk- taking by banks and borrowers to moderate the collective delusion that the prosperity would last forever. The relatively low feedback effects of the Nigerian banking system on the economy is indicative of the fact that Nigerian banks are not yet performing their developmental function well. Policy to ensure this must be put in place for mutual benefit of the economy and the banking system.

Overall, macroeconomic factors such as real effective exchange rate, inflation, unemployment, interest rate, net export and growth of output can be used to explain the performance of the Nigerian banking system. Hence, macroeconomic decisions must not be ignored by bank regulatory and supervisory authorities if bank distresses are to be minimized. This is not to say that macroeconomic factors alone can be used to explain the Nigerian banking performance as other microeconomic bank specific factors relating to sound and prudent bank management also play significant role in stability of the banking system in Nigeria. Much as the microeconomic factors alone are necessary factors in promoting bank performance, they are however not sufficient and must therefore be accompanied by sound macroeconomic policy if banks distress is to be minimized.

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