Research article

AN EMPIRICAL ANALYSIS OF NIGERIA'S EXPERIENCE WITH BANKING SECTOR REFORMS

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Abstract

The objective of the study has been to develop a model to investigate the impact of the banking sector reforms on the level of economic growth in Nigeria. The study covered the period 1980 and 2012. The cointegration technique was applied. The result shows that the credit to the private sector which is a key banking sector reform indicator has not significantly influenced the level of economic growth in Nigeria. The result shows that minimum capital base and the level of financial deepening has a positive and significant impact on the level of economic growth in Nigeria. The result recommends that future reforms in the banking sector should be geared towards credit provision to the private sector. **Copyright © IJEBF, all rights reserved.**

Keywords: Banking sector reforms, credit to the private sector, minimum capital base, cointegration

1.   INTRODUCTION

In the circular flow of income in an open economy, the roles of the financial market; part of which the banking sector occupies a prominent place are well spelt out. These include provision of services in the areas of payment enhancement, money supply transmission, credit allocation and general intermediation in the economy. When the banking sector falls short in efficient delivery of the services required of it, the economy is short circuited of funds to drive economic growth. The banking sector helps in mobilizing financial resources in the savings – investment nexus, particularly to the growth – enhancing sectors of the economy, namely; agriculture, manufacturing, mining and minerals, oil and gas and telecommunications. Reforming a system has to do with identification of problems, challenges and issues militating against the system from achieving pre-determined goals and proffering solutions to overcoming the challenges.

To this end, banking sector reform is about issues relating to identification of challenges and provision of capacities to improving the banking system generally. Adeoye and Adewuyi (2005) in their study of benefits and costs of financial sector reforms asserted that the Nigerian financial system of the pre-reform period essentially catered for the needs of planned development in a mixed-economy framework where the Government sector had a predominant role in economic activity. The financial sector scenario was characterized by underdeveloped financial markets coupled with limited financial instruments and products. Soludo (2004) opined that the banking system in the pre-reform was fragile and marginal and that the system faced enormous challenges which if not urgently addressed could snowball into crisis in the near future. Further evidence on the state of Nigerian banking system before the 2004 reform are also found in Ologun (1994), Hassan and Olufemi (1994), Eke (1999) and Ebhodaghe (1995).

Consequent upon the pre-reform state of the Nigerian banking system, Soludo (2004) posited that the 2004 banking sector reform and others were embarked upon to bring about a diversified, strong and reliable banking sector which would ensure the safety of depositor's money and make banks play active roles in the Nigerian economy and become more competent and competitive players in the African regional and global financial system. The objective of this paper is to develop a model to analyze, assess and appraise the impact of banking sector reforms on economic performance in Nigeria. To achieve this objective, the remaining part of the paper is structured as follows. Section two presents the theoretical framework and literature review. The focus of exposition in section three is econometric procedure which encompasses the methodology and results and conclusion constitutes the last section.

2.   LITERATURE REVIEW

The theoretical foundation of economic reform is vast and spread across the entire spectrum of the neo-classical school of thought. Since the 1980s, African countries have embarked on aggressive economic reforms in an attempt to stimulate and sustain economic growth. According to Magbagbeola (2004), this strategy is in consonance with the

neo-classical theory, which asserts that a liberalized (free market) economy is more efficient than a controlled economy. The free market economy option is premised on the principles of macro-economic stability, trade openness, a reduced role of government and implementation of poverty reducing strategies (Olivia and Suarez, 2002). In order for free market to have its impact on economic development objectives, economic reform should spread across the spectrum of all the sectors of the economy including the banking sector. Given the above, therefore, the theoretical framework for this study is couched under the neo-classical school.

The Central Bank of Nigeria having identified the problems and challenges facing the banking industry came up with a 13 – point agenda that was believed will reposition the banks for greater efficiency and better performance for enhanced economic growth. Recapitalization and consolidation were the anchor points of the 13 – point agenda.

Schumpeter (1934) pioneered some works on the relationship between financial development and economic growth. In the same vein Cameron et al (1967) show historical relationships between banking development and early stages of industrialization in England, France, Germany, Russia and Japan. They found that a well functioning banking system stimulates economic growth. Recent studies by Levin (2004) as cited in Obilikwu (2009) emphasized bank liquidity and efficient financial intermediation in economic growth. According to BIS (2001), consolidation in the banking industry is viewed as the reduction in the number of banks with a simultaneous increase in size and concentration of the consolidated entities in the sector.

There are two strands of literature on the relationship between consolidation and banks performance. The first school of thought argued that consolidation reduces the cost of operation and thus improves performance and enhances economic growth. The other school of thought posits that consolidation impacts negatively on financial sector stability and growth. The proponents of consolidation argued that consolidation promotes capital market development and may be a channel through which inefficient management is removed. Scholars on the other side of the divide asserted that consolidation could affect the provision of facilities to small business, and encourage bigger banks to throw caution to the winds by getting involved in reckless risks that may hurt their solvency and profitability.

The seminal works of Cameron (1967), Mckimnon (1973), and Shaw (1973) laid a firm foundation for research on the linkage between banks, financial markets and the macro economy. The major anchor of these studies is that there is a symbolic relationship between financial markets and economic growth. Other studies that have explored the correlation between the banking sector and economic growth include Townsend (1979), Stigliz and Weiss (1981), who developed some of the first banking – related models, based on utility and profit maximization. The studies focused on the role played by asymmetric information in resource allocation. Also, in the same vein, King and Levine (1993) have established that the banking sector's development correlated with economic growth and also a source of long term growth. Also, subsequent works resting on King and Levine have been able to demonstrate that financial markets are a source of economic growth (see for example, Nnana (2004), Lavine and Zervos (1996), De Gregorio and Guidolti (1995). Several empirical studies have been conducted on consolidation, recapitalization and banking sector reforms in Nigeria (see for example, Campbell(2006), Onwiodukit (2005), Balogun (2007). These

studies lend credence to the impact of reforms in banking sector on economic growth. It must be remarked, however, that there were problems eating away the soul of the banking sector for example Soludo (2004) argued the banking system was fragile, marginal and the system faced enormous challenges which if not urgently addressed could snowball into crisis in the near future. In the same vein, Ebhodaghle (1995), Eke (1999) and Ezeuduyi (1997) also identified the issues facing the sector and prescribed policy measures.

As recent as 2009, five years after the reform began, there were pockets of distress in the banking sector. This is a pointer to the fact that it is not yet time for policy makers and regulators to ease a sigh of relieve in the sector. The Asset Management Company of Nigeria is in place dealing with toxic wastes of sticky risk assets created by the banks. But it is yet to be proved that almost a decade of banking sector reforms, that the sector is stable, healthy and indeed playing its vital role of driving the economy efficiently. To this end, this research effort draws heavily from theoretical literature to assess and appraise the impact of banking sector reforms in Nigeria economy. In an attempt to have a deeper understanding, throwing light on the issues highlighted above and, as well as adding value to policy options lies the justification for our study.

3. ECONOMETRIC PROCEDURE

The Vector Error Correction Model (VECM) was used for the analysis because it restricts the long run behaviour of the endogeneous variables to converge to their cointegrating relationships while allowing for a short run adjustment (Gujaratti, 2003). The VECM is of the form:

$$\Delta y_t = \alpha \beta' y_{t-1} + \sum_{i=1}^{j=1} \Gamma_j \Delta y_{t-1} + \pi + \varsigma_t, t = 1, \ldots, T$$

Where y_t is a vector of endogenous variables which include credit to the private sector, Gross Domestic Product, financial deepening, total assets and total savings . αs parameters measures the speed of adjustment through which the variables adjust to their long run values and the β' vectors are estimates of the long run cointegrating relationships among variables in the model. π is the drift parameter and is the matrix of the parameters associated with the exogenous variables the stochastic error term is also included in the specification.

The model to be estimated that would enable us analyze the effect of the banking sector reforms on the level of economic growth in Nigeria is thus stated below:

LGDP = b_0 + b_1LCPS + b_2 LGS+ b_3LTA+b_4LFDEEP+ b_5LMCB + et

Where:

GDP   =   Gross Domestic Product

CPS   =   Credit to the private sector

GS = Gross Savings

MCB = Minimum capital base

TA = Total assets

et = Error term

L = Natural logarithm s

The data where collected from various issues of the Central Bank of Nigeria Statistical Bulletin and the World Bank indicators for Nigeria. The data covered the period between 1980 and 2012.

The Augmented dickey Fuller (ADF) unit root test result is shown in table 1 below:

Table1: summary of ADF unit root test result

Variables	Level data	1st diff	Order of Integration
MCB	0.31	-3.84*	I(1)
TA	1.57	-2.88***	I(1)
GS	1.88	2.92***	I(1)
GDP	1.17	-5.37*	I(1)
FDEEP	-4.35*	-6.55	I(0)
CPS	3.33**	-2.45	I(0)

NB: *, ** & * ** Indicate statistical significance at the 1 percent,

5 percent and 10 percent level respectively.

The result of the ADF unit root test result shows that most of the variables except the financial deepening and credit to the private sector were originally non-stationary. They however became stationary after the first difference was taken. Financial deepening was stationary at the levels probably because it is a ratio variable. Following Harris (1995) and Gujarrati (2003), both I(1) and I(0) variables can be tested for cointegration which forms the basis of the next section.

The Johansen cointegration test which has the advantages amongst others of allowing for more than one cointegrating equation was used to test for the existence or not of a long run relationship among the variables. The result of the Johansen cointegration test is shown in table 2 below:

Table2: Summary of Johansen cointegration test result

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	5 Percent Critical Value	1 Percent Critical Value
None **	0.942264	180.3150	94.15	103.18
At most 1 **	0.769393	97.61092	68.52	76.07
At most 2 **	0.679760	55.06675	47.21	54.46
At most 3	0.360394	22.04488	29.68	35.65
At most 4	0.232793	9.084677	15.41	20.04
At most 5	0.047120	1.399723	3.76	6.65

*(**) denotes rejection of the hypothesis at the 5%(1%) level

Trace test indicates 3 cointegrating equation(s) at both 5% and 1% levels

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	5 Percent Critical Value	1 Percent Critical Value
None **	0.942264	82.70411	39.37	45.10
At most 1 **	0.769393	42.54417	33.46	38.77
At most 2 **	0.679760	33.02187	27.07	32.24
At most 3	0.360394	12.96020	20.97	25.52
At most 4	0.232793	7.684953	14.07	18.63
At most 5	0.047120	1.399723	3.76	6.65

*(**) denotes rejection of the hypothesis at the 5%(1%) level

Max-eigenvalue test indicates 3 cointegrating equation(s) at both 5% and 1% levels

Both the trace statistic and the max-eigen test indicates the existence of three cointegrating equations. This is an indication of the existence of a long run relationship among the variables.

The true cointegrating equations are inidicated are shown in the result of the Vector Error Correction (VEC) in table 3 below:

Table 3: VEC Result

Cointegrating Eq:	CointEq1
LGDP(-1)	1.000000
LGS(-1)	-2.442541
	(0.18064)
	[-13.5219]
LMCB(-1)	0.108529
	(0.08258)
	[1.31428]
LTA(-1)	0.609697
	(0.21929)
	[2.78035]
LCPS(-1)	0.553963
	(0.12882)
	[4.30019]
FDEEP(-1)	3.794225
	(0.25908)
	[14.6448]
C	-0.183116

Error Correction:	D(LGDP)	D(LGS)	D(LMCB)	D(LTA)	D(LCPS)	D(FDEEP)
CointEq1	0.395355	-0.384148	-0.393949	0.025050	0.052676	-0.351551
	(0.32669)	(0.06127)	(0.19577)	(0.14402)	(0.24396)	(0.17511)
	[1.21019]	[-6.26948]	[-2.01232]	[0.17393]	[0.21592]	[-2.00764]

The result of the VEC indicates that gross savings equation, the minimum capital base equation and the financial deepening equation constitutes the true cointegrating equations. The others are statistically flawed. The existence of

at least one cointegrating equation thus permits us to estimate the parsimonious and overparameterize ECM results which form the basis of the session.

The overparameterize ECM result includes the two lags of each of the independent variables. The result of the overparameterize ECM result is shown in table4 below:

Table 4: Summary of Overparameterize ECM result: Modeling: DLGDP

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLCPS	0.075419	0.258932	0.291269	0.7758
DLCPS(-1)	0.363598	0.341168	1.065743	0.3075
DLCPS(-2)	-0.001996	0.222259	-0.008979	0.9930
DLGS	0.525107	0.155080	3.386038	0.0025
DLGS(-1)	-0.220013	1.372245	-0.160331	0.8753
DLGS(-2)	0.157004	1.639127	0.095785	0.9253
DLMCB	0.597343	0.265596	2.249065	0.0332
DLMCB(-1)	-0.102161	0.289094	-0.353384	0.7299
DLMCB(-2)	-0.120862	0.233771	-0.517013	0.6145
DLTA	-0.070683	0.461415	-0.153187	0.8808
DLTA(-1)	0.199835	0.071938	2.777857	0.0098
DLTA(-2)	-0.441510	0.559416	-0.789233	0.4453
FDEEP	1.422507	0.362447	3.924730	0.0020
FDEEP(-1)	1.532457	0.392128	3.908058	0.0021
FDEEP(-2)	1.256696	0.767977	1.636372	0.1277
ECM(-1)	-0.453696	0.077109	-5.883822	0.0000
C	0.094141	0.506299	0.185941	0.8556

$R^2 =$ 0.81, AIC = 2.49, SC = 3.29, Fstatistic=33.78, DW=2.08

The parsimonious(preferred) ECM result was gotten by deleting insignificant variables from the overparameterize ECM result. The lag length was chosen with the aid of the Aikaike information criterion, Schwarz criterion and the loglikelihood ratio. The result of the parsimonious ECM result is shown in table 5 below:

Table 5: Summary of parsimonious ECM result: Modeling: DLGDP

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLGS	0.173256	0.056385	3.072751	0.0044
DLMCB	0.394417	0.146140	2.698894	0.0117
DLTA(-1)	0.376539	0.187319	2.010144	0.0549
FDEEP	0.250501	0.118824	2.108161	0.0485
FDEEP(-1)	0.013075	0.006303	2.074484	0.0459
ECM(-1)	-0.407183	0.059263	-8.70795	0.0000
C	0.244163	0.213040	1.146094	0.2635

R^2 = 0.86, AIC = -2.02, SC = -2.35, Fstatistic=41.86, DW=2.22

The result indicates that credit to the private sector which is a major component of the banking sector reform is not statistically significant. This is an indication that banking sector reform has not improved the credit availability to the private sector. Thus, the credit to the private sector was dropped from the parsimonious ECM result. The result shows that the minimum capital base which is a target variable of the banking sector reform has a positive and significant impact of the level of economic growth in Nigeria. The result shows that an increase in the minimum capital base by 1 percent increased the level of economic growth by 39 percent. The result shows further that the total asset of banks which is another key banking sector reform target has significantly and positively influenced the level of economic growth in Nigeria. The result shows that an increase in the total asset by 1 percent increased the level of economic growth by 38 percent. The level of savings which provides the needed fund for bank transactions has also significantly influenced the level of economic growth in Nigeria. The result indicated that an increase in the savings level by 1 percent increased the level of economic growth by 17 percent. At the levels and immediate past period, the level of financial deepening has a significant impact on the level of economic growth in Nigeria. The result shows that an increase in financial deepening by 1 unit increased the level of economic growth by 0.25 units and 0.01 units in both the current and immediate past periods. The statistical significance of the ECM which is also negatively signed provides an indication of a satisfactory speed of adjustment. It shows that about 41 percent of the errors are corrected each period.

The Brusch-Godfrey serial correlation LM test with a value of 1.63 and probability of 0.19 indicates that the residuals are not serially correlated. The Cumulative Sum of Recursive Residuals (CUSUM) and the Cumulative Sum of Squares of Recursive Residuals (CUSUMQ) stability tests shown in figure 1 and figure 2 indicate residual stability.
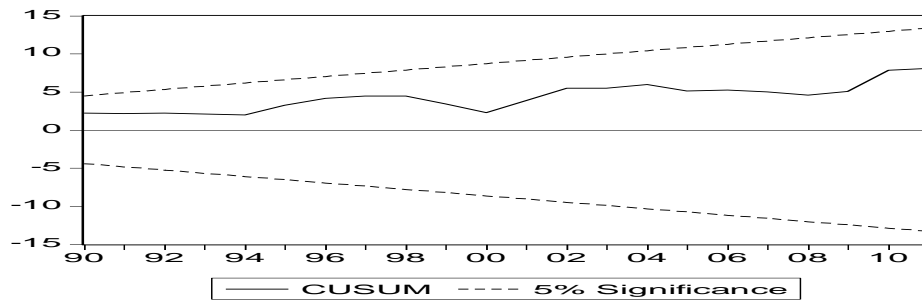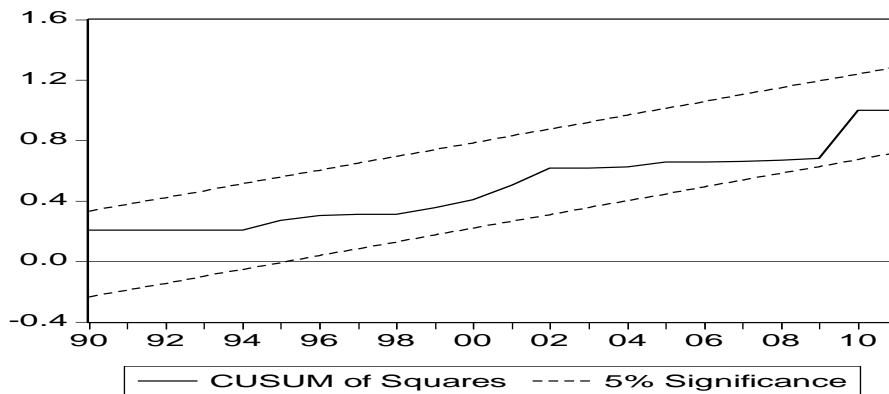
Figure1: CUSUM stability test

Figure2: CUSUMQ stability test

CONCLUSION

The failure of the financial system has constituted a problem for the global economic as could be seen in the last global economic crisis and the European economic crisis. The banking sector reforms in Nigeria was necessitated by the need to revitalize the banking sector and hence increase the level of economic progress. Our result however indicated that the banking sector reforms in Nigeria has mixed performance. For example, the result indicated that the credit to the private sector which is a key banking sector reform target has not significantly influenced the level of economic in Nigeria. However the minimum capital base, the level of financial deepening and the level of savings which are key banking sector reforms target has significantly and positively influenced the level of economic growth in Nigeria. The result also suggested a long run relationship among the variables. The statistical significance of the ECM which is also negatively signed indicates that the speed of adjustment is satisfactory. The result thus recommends that future reforms in the banking sector should focus more on the provision of credit to the private sector

REFERENCES

[1] Balogun, E.D. (2002). "A review of Soludo's perspective of banking sector reforms in Nigeria". A MPRA Paper 3803, University library of Murich, Germany.

[2] Bls(2001). "Risk management principle for electronic banking". A committee   based publications.

[3] Cameron, R. (1967). Banking in the Early Stages of Industrialization. New York: Oxford University Press.

[4] De Gregorio, Y. and P, guidotti (1992). "Financial development and economic growth" IMF Working Paper , 92/101.

[5] Ebhodaghe, J.U (1995). "Causes and environmental effects of banks failure in Nigeria" NDIC Quarterly 5(3) November.

[6] EKE. S.M (1999), "Banking soundness and monetary policy issues in Nigerian   economy".   Nigerian Journal of Banking and Finance, 2, March.

[7] Essien, E.A and E.a Onwiodukit (2005), " Economic development in a deregulated economy: The Nigerian experience". Journal of Economic Management, 4, January: 63-84.

[8] Hassan, M and S.A Oluyemi (1994). "Banks management issues and restoring the health of Nigerian banks through improving the quality of management employee". NDIC Quarterly 4 (4)

[9] Jourserd, R.M (1979). "Optimal contracts and competitive markets with costly state   verification" Journal of Economic Theory, 21 October :265-93.

[10] King, D.T (2003). "USAID/Nigerian economic growth activities assessment: transition period summary report". IBM business consulting services 616 North Forth Meyer Drive Arlington, VA 22209,

[11] Levine, R (2004), "Finance and growth, theory, evidence and mechanisms", in Phillipe Aqhion and Steve Dur lauf (ed), Handbook of Economics Growth, Ansterdam, North-Holland.

[12] Levine, Ross and Sarra Zervos (1996). " Stock market development and long-run growth" World Bank Economic Review 10: 323-39.

[13] Magbagbeola, N.E (2004). "Theoretical and conceptual issues in economic reforms: Application to Nigeria's downstream petroleum sector". Central bank of   Nigeria, Economic and Financial Review 42(4).

[14] Makinnon, R.I. (1973). Money and Capital in Economic Development. Washington:Brookings Institution.

[15] Nnana, D.J. (2004), "Beyond bank consolidation: The impact on society. Central bank of Nigeria, Conference Proceedings; Consolidation of Nigeria; Banking Industry.

[16] Oliva, R. and F. Suagrez (2003). Economy reforms and the competitive environment of firms, January,

[17] Ologun, S.O (1994). "Banks failure in Nigeria; Genesis, effects and remedies" CBN Economic and financial Review 32 (3).

[18] Shaw, E.S (1973). Financial Deepening in Economic Development. New York: Oxford University Press.

[19] Soludo, C. (2004). "Consolidating the Nigerian banking industry to meet the development challenges of the 21st century". An address delivered to the special meeting of the bankers' committee held July 6th 2004 at the Central   Bank of Nigeria's Headquarters, Abuja

[20] Stiglitz, J.E and A. Weiss (1981). "Credit rationing in markets with imperfect information". American Economic Review 71, June: 393-410.

[21] Wuam,J. , S.T Olali and i. Obulikwu (2001). Obasanjo Second era 1999–2007. Markurdi :Abaki Publishers.