THE IMPACT OF FINANCIAL SECTOR REFORMS ON BANKS PERFORMANCE IN NIGERIA

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ABSTRACT

This study examined the impact of financial reforms on banks' organizational performance in Nigeria between 1995 and 2004. It specifically determined the effects of policies of interest rates deregulation, exchange rate reforms and bank recapitalization on banks performance, and analyzed how banks internal characteristics and industry structure affect the performance of Nigerian banks. The study utilized panel data econometrics in a pooled regression, where time-series and cross-sectional observations were combined and estimated. The result of econometric panel regression analysis confirmed that the effects of government policy reforms, bank specific characteristics and industry structure has mixed effects on banks profitability level and net interest margin of Nigerian banks. Bank specific characteristics appear to have significant positive influence on bank's profitability and efficiency level, while industry stricture variables appeared not to have contributed meaningfully to the profitability and efficiency performance of banks in Nigeria
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JEL: Nigeria, Financial Reforms, Banks Performance

KEYWORDS: F2; G21; E1

INTRODUCTION

Roles of bank in the economic process are strategic. It represents the heart of the national economic life and the nucleus of the economic survival around which other sectors are tangential. The centrality of the banking sector also makes the sector to attract much attention in any reform process. Therefore, the adoption of the Structural Adjustment Programme (SAP) in Nigeria in 1986 made the banks the centre of the gamut of the reform in the financial sector.

Among the objectives of financial reforms is to build more efficient, robust and deeper financial systems, which can support the growth of private sector enterprises (Ajilore 2003). The proponents of financial reforms argued that such reform would bring about significant economic benefits through improved bank operational efficiency and effectiveness in order to guarantee a more effective mobilization and efficient allocation of resources among various economic units. Whether or not bank actually achieves these expected performance gains, remain critically an empirical question. If reforms do in fact, lead to efficiency gains, then shareholder wealth could be increased. On the other hand, if reforms do not lead to the promised positive effects, then reforms may lead to a less profitable and valuable banking industry.

A reading of the literature suggests that the efficiency gains that alleged to accrue to the large and growing wave of banking reforms have not been verified. More importantly, signals from the apex bank (CBN) indicated that three out of the remaining 25 banks after the recent reform are technically distressed. Thus, leading the research community in quandary on whether the industry has followed a path of massive restructuring on a misguided belief of efficiency gains or whether the financial regulators and operators are lying to the public and shareholders about the effects of their activity on banking performance. It is important to address this issue by reconciling data with empirical reality of continued reform activity in the Nigerian banking sector.

Moreover, while there are myriads of studies on the effects of reform policy on other sectors of the Nigerian economies, there is paucity of studies on the effects of bank reforms on banking performance itself in Nigeria. The neglect of this issue is particularly surprising for this sector of Nigerian economy,

where the short run real effects of financial reforms have long remained controversial. In addition, the adoption of financial reforms has often been postponed, reversed shortly after being implemented or partially implemented for fear of recessionary consequences. Indeed, ascertaining the empirical relevance of the implications of bank reform on banking operating efficiency for developing economies is an important step in assessing the short run costs of overall economic reforms in these economies. More so, reforms in the banking sector affect not only the bankers and their customers, it has pervasive impact on overall economic activity given the centrality of financial system in the growth process. It is of great importance to know if bank reforms actually delivered its benefits to the economy.

More importantly, there is evidence in the literature that financial reforms in Nigeria have affected negatively on the overall performance of Nigerian banking system (Ajilore, 2003, CBN 2004, 2006). The implication of this evidence on banking system for a fragile and weak financial system in Nigeria is far reaching. First, unguided financial liberalization exposes the banks and indeed the economy to excessive financial shocks. The recent financial crises in the Asian countries are a case in point. Second, continuous reforming the financial system makes the system unstable, planning difficult and indeed creates unfriendly operational environment that may affect the efficient operational performance of the banks. For instance, the ripples of universal banking introduced in 2001 have not settled before the recapitalization exercise was introduced in 2004. Similar reversal and rewriting of rules were noticed in the past reforms. Given the under developed nature of financial base of the economy and the dominant role the bank is expected to play in the transition stage of development, the issue deserves attention; specific bank empirical evidence is crucial if any policy inference is to be made based on policy reform bank performance hypothesis.

Establishing or refuting the validity of positive effects of reforms on banks performance without taking cognizance of the 'aggregate versus specific bank level' controversy impedes seriously the policy relevance of the inferences from such studies. However, some studies had attempted to examine the effects of financial reforms on banks in other developed country like Japan. Not much work has been done in this area to investigate individual bank effect of financial sector reforms in a developing economy like Nigeria. Investigating micro effects of bank reforms in Nigeria is a worthwhile challenge, which will distinguish this study from any other studies carried out on policy reform- bank performance nexus in any developing countries like Nigeria.

Filling these empirical gaps is an invaluable addition to existing empirical evidence on the financial management and economics using Nigerian-banking industry as the case study. This is therefore an exigent scholarship effort at contributing to, and complementing other scholarly efforts at providing empirical foundation for designing appropriate policy strategy to promote and sustain financial development growth in a developing economy like Nigeria. To this extent, this study investigated the empirical linkage between financial reforms and banks' operational performance in Nigeria. Specifically, it investigated whether financial reforms have any effect on the operational performance of banks in Nigeria.

The rest of the paper proceeds as follows: following this introductory section, section 2 presents the review of extant literature in the study area. Section 3 presents data Sources, sampling procedure and modeling techniques for the subsequent empirical analysis contained in this study; section 4 presents the empirical estimation and analysis of results, while section 5 concludes with summary, conclusion and policy recommendations.

REVIEW OF EMPIRICAL LITERATURE

There exist many studies carried out to examine the relationship between financial sector reforms and bank performance. Demirguc–Kunt and Detragiache (1998) conducted a study in 53 countries for the period of (1980-1995), on financial liberalization and financial fragility. Their findings showed that a weak institutional environment makes liberalization more likely to lead to banking crises, specifically in

countries where the rule of law is weak, corruption is widespread, the bureaucracy is inefficient and contract enforcement mechanisms are ineffective.

McKinnon (1973) in his study discovered that liberalized financial systems experience high volatility of nominal interest rates in comparison to controlled ones and especially more so if financial liberalization preceded economic stabilization. Consequently, banks are exposed to a greater risk and are therefore more vulnerable in the process of performing their financial intermediation functions. He argued further that banks develop more interest in adopting high-risk loan portfolio because of the liberalization exercise. This is because the entry of more banks into the industry erodes the monopolistic profit as competition intensifies thereby reducing the cost of losing a banking license when a bank becomes insolvent. In Kharkate (1992) and Sundararajan and Balino (1991), it was established that increased freedom of entry into the financial sector resulted in indiscriminate bidding for funds which can raise interest rates to exceedingly high levels.

The study by Chete (2002), on financial liberalization, development and fragility drew from the model used by Dermiguc – Kunt and Detragiche (1998). It also confirmed the result obtained by Dermiguc-Kunt and Detragiache that there is positive correlation between the financial liberalization dummy and the probability of a banking crisis, which gives credence to the hypothesis that financial liberalization is a cause of banking sector fragility.

Burkett and Vogel (1992) extended Mckinnon's complementarily hypothesis" to the case where a credit constrained firm uses non-capital asset balances (cash, bank, deposits and inflection hedges) as working capital, and where the firm's credit constraint is loosened by increased deposit holdings. The model concludes that in such an environment, interest rate liberalization would lead to more productive utilization of the capital stock and additional credit –supply effects emphasized by McKinnon (1973) and Shaw (1973).

Fischer and Smaoui (1997) conducted a study using a sample of 82 banks from Greece, Indonesia, Korea, Malaysia, Mexico, Thailand and Taiwan to identify the characteristics of banks that are most likely to cause banking crisis following financial liberalization. To accomplish this objective the authors identify a sample of "failed" and "healthy" banks following financial liberalization and then compared their financial data at the onset of the process. The study also tried to identify to what extent the quality of the loan portfolio and the management and risk-taking practices of banks affect the outcome. The results suggest that banks that are more conservative or are more capable of absorbing important macro shocks given their capitalization, are the ones that are more likely to remain solvent. The study of Chang and Velasco (1998) also confirmed that banks become vulnerable to exogenous shocks and shifts in expectations after financial liberalization.

In the study carried out by Ikhide and Alawode (2001), evidence from Nigeria showed that the success or failure of a financial sector reform programme depends on, among other factors, the implementation of an appropriate sequence of the various policies in the programme package. The study showed that high bank insolvency, high inflation and excessively high interest rates have become common phenomena in the economy because of financial sector reforms embarked upon. The study uses discriminate analysis to demonstrate that the health of banks deteriorates following reforms in Nigeria.

DATA SOURCES, SAMPLING PROCEDURE AND MODELING TECHNIQUES

This study utilized data on identified banks for the periods 1986 to 2004. These data are coalesced together to generate a pooled data series. Hence the study is both time series and cross sectional. Secondary time series data were collected on the selected banks for the period 1995 and 2004. The sample were drawn from all the 51 banks in existence, and listed on the Nigerian Stock Exchange between these two (1995 to 2004) years. Data were sourced from the annual returns of these banks to Central bank of Nigeria (CBN), and FACTBOOK of Statistics published by the Nigerian Stock Exchange (NSE).

The empirical test is concerned with determining the impact of banking sector reforms on organizational performance in Nigerian commercial banks. For the purpose two categories of performance measures are explored, these are the net interest margin (NIM) and the return on assets (ROA). In addition, three classes of explanatory factors are considered; these are banking reform indicators, financial structure indicators and banks' internal characteristics indicators. A linear equation relating the performance measures to a variety of indicators is displayed in equation 1:

$$I_{it} = c + \sum_{j=1}^{J} \beta_j X_{it}^j + \sum_{l=1}^{L} \beta_l X_t^l + \sum_{m=1}^{M} \beta_m X_t^m + \varepsilon_{it} \qquad (1)$$

$$\varepsilon_{it} = v_i + u_{it}$$

where I_{it} represents two alternative performance measures of bank *i* at time *t*, with *i = 1,...,N; t = 1,..., T*; *c* is a constant term, the *X*s are explanatory variables (grouped into financial reforms variables, bank internal variables and measures of financial structure indicators. *j*, *l* and *m* respectively) and ε_{it} is the disturbance, with v_i capturing the unobserved bank-specific effect and *uit* the idiosyncratic error. Although the primary focus of this study is the relationship between financial reforms and banks performance, the inclusion of banks internal variables and financial structure indicators is intended to control for cyclical factors that might affect bank performance in Nigeria.

Two measures of performance are used in the study: the net interest margin (NIM) and the return on assets (ROA). The NIM variable is defined as the net interest income divided by total assets. ROA is a ratio computed by dividing the net income over total assets. NIM and ROA have been used in most banks' performance studies. ROA measures the profit earned per naira of assets and reflects how well bank management uses the bank's real investments resources to generate profits while NIM is focused on the profit earned on interest generating activities.

Three indicators of banking sector reforms are considered in our analysis. These are number of banks (NBANK), real interest rate (RIR) and nominal effective exchange rate indices (EXR). The three variables respectively captured the impact of financial/banking sector reforms on performance of Nigerian banks. This choice is informed by the fact that banking reforms during our period of analysis can be categorized under three headings namely;

i)   Reform of the financial structure: Generally, policy instruments here are designed to increase competition, strengthen the supervisory roles of the regulatory authorities and strengthen public sector relationship with the financial sector. Measures undertaken here include granting of licenses to more banks, strengthening supervision of banks and a clear definition of the roles of the financial sector.

ii)   Monetary policy reforms: These are policies designed to stabilize the economy in the short run and to induce the emergence of a market-oriented financial sector. Such included rationalization of credit controls, deregulation of interest rates and a shift from direct to indirect system of monetary control.

iii) Foreign exchange reforms: previously, the sale and purchase of foreign exchange was rigidly controlled using import licenses and the exchange rate was fixed by fiat. This resulted in an overvaluation of the naira with its attendant consequences. In order to restore appropriate exchange rates, the authorities began the auction sales of foreign exchange to licensed dealers.

Three bank's characteristics indicators are used as internal determinants of performance. They comprise the ratio of equity capital to total assets (CAP), the ratio of bank's loans to total assets (BLOAN), and the log of bank assets (LNSIZE). Bank loans are expected to be the main source of income and are expected to have a positive impact on bank performance. Other things constant, the more deposits are transformed into loans, the higher the interest margin and profits. However, if a bank needs to increase risk to have a

higher loan-to-asset ratio, then profits may decrease. We also expect that the higher the equity-to-asset ratio, the lower the need for external funding and therefore higher performance. It is also a sign that well capitalized bank face lower costs of going bankrupt and then cost of funding is reduced. The size of the bank is also included as an independent variable to account for size related economies and diseconomies of scale. In most of the finance literatures, the total assets of the banks are used as a proxy for bank size. However, since the other dependent variables in the models such as ROA were deflated by total assets it would be appropriate to log total assets before including it in the models.

The financial structure indicators serve to examine how the performance of the banking sector is related to the relative development of the banks and stock markets. Relative size (RSIZE) is calculated as the ratio of the stock market capitalization to total assets of deposit money banks. In addition, we use stock market capitalization divided by GDP (MCAP) as a proxy of financial market development and as a measure of the size of the equity market. The size of the banking sector (SBS) is measured by the ratio of total assets of the deposit banks to GDP and is intended to measure the importance of bank financing in the economy. MCAP and SBS may also indicate the complementarities or substitutability between bank and equity market financing. Both variables are expected to influence positively bank performance. Following from the foregoing discussion, the estimated form of equation 1 takes the form:

$$I_t = \beta_o + \beta_1 NBANK_t + \beta_2 RIR_t + \beta_3 EXR_t + \beta_4 CAP_t + \beta_5 BLOAN_t + \beta_6 LNSIZE_t + \beta_7 RSIZE_t + \beta_8 MCAP + \beta_9 SBS + \varepsilon_t \qquad (2)$$

where:

I_t = commercial bank performance indicator measured by net interest margin (NIM) and return on assets (ROA)

$NBANK$ = Number of Banks $(\beta_1 > 0)$

RIR = Real Interest Rate $(\beta_2 < 0)$

EXR = Real Exchange Rate $(\beta_3 > 0)$

CAP = the ratio of equity capital to total assets $(\beta_4 > 0)$

$BLOAN$ = the ratio of bank's loans to total assets $(\beta_5 > 0)$

$LNSIZE$ = log of bank assets $((\beta_6 > 0)$

$RSIZE$ = the ratio of the stock market capitalization to total assets of deposit money banks $(\beta_7 > 0)$

$MCAP$ = stock market capitalization divided by GDP $(\beta_8 > 0)$

SBS = the ratio of total assets of the deposit money banks to GDP $(\beta_9 > 0)$
ε_t = error term

EMPIRICAL ESTIMATION AND ANALYSIS OF RESULTS

This section employs panel least square estimation techniques to estimate the impact of financial sector reforms on organizational performance in Nigerian banking system. Section 4.1 begins with the investigation of the time series properties of the data set in our systems of equations, this is done by carrying out a unit root and cointegration tests on variables of the empirical model, while section 4.2 presents results from model estimation.

Panel Unit Root And Cointegration Results

Before estimating the equations, an examination of the properties of the underlying data was effected. Testing for stationarity of the time series was done to ensure that the variables used in the regressions were not subject to spurious correlation. For the variables like INSIZE, MCAP, RIR RSIZE and SBS the results indicated no presence of a unit root. The unit root test results on the variable ROA, NIM, CAP and NBANK, BLOAN, REXCH generally indicated the presence of a unit root. Going by most of the results, the variables were transformed by differencing. The unit root test for the transformed variables confirmed that they were stationary. Table 1 shows the test results.

Table 1: Panel Unit Root Tests- (Individual Effects, Individual Linear Trends)

VARIABLES		LLC	P-VALUE	IPS	P-VALUE	ADF	P-VALUE	PP	P-VALUE
		1		**2**		**3**		**4**	
NIM	0	2.74	0.10	-4.32	0.11	32.89	0.10	82.13	0.00
	1	-11.64	0.00	-0.95	0.17	22.89	0.01	74.52	0.00
	2	-10.86	0.00	-6.31	0.00	37.64	0.00	91.09	0.00
ROA	0	-729.69	0.00	-165.21	0.00	552.62	0.00	476.79	0.00
	1	-4.62	0.00	2.16	0.98	12.72	0.00	11.12	0.00
	2	-12.36	0.00	-0.50	0.30	68.47	0.21	120.74	0.00
BLOAN	0	-12.32	0.00	-1.9	0.00	38.25	0.37	69.57	0.11
	1	-11.64	0.00	0.37	0.64	15.52	0.63	89.82	0.00
	2	-10.7	0.00	-0.95	0.17	21.66	0.04	116.22	0.00
CAP	0	-4.78	0.00	0.41	0.66	27.51	0.38	70.45	0.00
	1	-13.84	0.00	-0.73	0.23	64.57	0.00	117.07	0.00
	2	9.9E-14	0.50	-1.67	0.05	60.35	0.00	115.54	0.00
INSIZE	0	-203.17	0.00	-19.69	0.00	50.35	0.08	114.30	0.00
	1	-80.29	0.00	-6.84	0.00	66.00	0.00	185.01	0.00
	2	-20.31	0.00	-2.15	0.02	62.31	0.00	194.86	0.00
MCAP	0	-1522.7	0.00	-424.70	0.00	552.62	0.00	173.28	0.00
	1	-729.69	0.00	-165.21	0.00	552.62	0.00	476.79	0.00
NBANKS	0	-4.62	0.00	2.16	0.98	12.72	0.00	11.12	0.00
	1	-24.43	0.00	-2.99	0.00	152.29	0.00	277.65	0.00
REXCH	0	-5.30	0.00	0.07	0.53	53.64	0.71	52.27	0.75
	1	-12.36	0.00	-0.50	0.30	68.47	0.21	120.74	0.00
	2	-11.30	0.00	0.33	0.63	52.36	0.75	280.08	0.00
RIR	0	-31.26	0.00	-6.52	0.00	245.3	0.00	159.43	0.00
RSIZE	0	-8.6	0.00	-7.2	0.00	48.86	0.00	64.49	0.00
	1	-2.61	0.00	-9.32	0.21	32.78	0.02	72.26	0.00
SBS	0	1.71	0.97	-19.4	0.53	51.13	0.01	45.21	0.59

Notes: Table 1 presents the results of unit roots tests of variables of the model. Panels 1 to 4 respectively indicates results from the Levin, Lin and Chu (LLC), Im, Pesaran and Shin (IPS), Augmented Dickey Fuller (ADF) and Phillips Peron (PP) test statistics. The null hypothesis (H_o) is that there is no unit root, (H_1) some do have a unit process. 0, 1 and 2 represent level, first difference and second difference respectively.

One of the ways to deal with I (1) variables is to investigate the cointegration relationship among variables. The Pedroni panel cointegration test was conducted. Except for panel variance and panel ADF statistics, all of the panel cointegration test statistics developed by Pedroni rejects the null of no cointegration at 5 percentage significance level (see Table 2). Since there is a cointegration relationship between the variables, the Engle and Granger two-step method can be used. According to Engle and Granger (1987), if the variables are cointegrated, the stable long-run relationship can be estimated by standard least-squares techniques.

Table 2: Pedroni Residual Cointegration Test

Series: Nim Roa Bloan Cap Insize Mcap Nbanks Rexch Rir Rsize Sbs				
Lag selection: Automatic SIC with max lag of 0 to 1				
Newey-West bandwidth selection with Bartlett kernel				
Alternative hypothesis: common AR coefs. (within-dimension)				
			Weighted	
	Statistic	**Prob.**	**Statistic**	**Prob.**
Panel v-Statistic	0.2775	0.3839	0.0504	0.3984
Panel rho-Statistic	1.7949	0.0797*	1.7999	0.0790*
Panel PP-Statistic	-5.0714	0.0000***	-5.3626	0.0000***
Panel ADF-Statistic	-3.3926	0.0013***	-3.6654	0.0005***
Alternative hypothesis: individual AR coefs. (between-dimension)				
	Statistic	Prob.		
Group rho-Statistic	2.5737	0.0145		
Group PP-Statistic	-6.0173	0.0000		
Group ADF-Statistic	-3.8703	0.0002		

This table shows the Pedroni Residual Cointegration test results. ***, ** and * indicate significance at the one, five and ten percent levels respectively

Financial Liberalization And Bank Performance: Results From Panel Data Analysis

In what follows, we present the result from panel data estimation of the effects of financial liberalization policy and other control variables on two alternative measures of bank performance; viz: Returns on Assets (ROA). This is a general measure of profitability of banking operations in the industry, and the Net Interest Margin (NIM), which serves to capture the extent of efficiency of financial intermediation roles of Nigerian banks.

The generally accepted way of choosing between a fixed and a random effect model is running a Hausman test. The Hausman test tests the null hypothesis if the coefficients of the random effects model are the same as the ones of fixed effects model. If they are and therefore have an insignificant p-value, then it is safe and better to use random-effect models. The Hausman test conducted for the model in this study however shows a significant value (at the one percent level) and therefore suggests the use of fixed effects. Thus in this context to estimate the coefficients, a panel data analysis with fixed effect models is conducted. Panel 1 and 2 of Table 3 respectively present the results obtained after regressing equations for Returns on Assets (ROA) and Net Interest Margin (NIM) as specified in section 3.

The first sets of explanatory variables of the model are those that serve to capture the effects of financial liberalization on performance measures in the banking industry. These consist of Number of banks (NBANK), real interest rate (RIR) and nominal effective exchange rate indices (EXR). The three variables respectively captured the impact of financial/banking sector reforms on performance of Nigerian banks.

The variable NBANK proxy the effects of financial structure reform component of financial liberalisation. The major thrust of policy here involves granting of licences to more banks, which is generally indicated by the rapid burgeoning of banking firms operating in the banking sector. As indicated in equations 1 and 2 respectively, this financial liberalization policy has statistically significant effects on the two measures of banks' performance. The results indicated negative effects of increased number of banks on banks profitability (ROA) and a positive effect on intermediation efficiency (NIM) in Nigeria banks. A hundred percentage point increase in number of banks reduced profitability of banks by 65% at 5% significant level and increased efficiency by 841% at 5% significant level. These results seem to confirm the realities of the outcomes of financial liberalisation in Nigerian banking industry. While reforms of the financial structure lead to increases in the number of banks, the truth remains that most of these new banks are marginal and rent seeking banks, the industry still remained dominated by large, well

established banks, and hence in general increases in the number of banks did not translate to improved profit performance. The positive effect on net interest margin (NIM) is expected apriori. This is implying that increased number of banking firms within the industry engendered more competition that offers consumers wider choices, which naturally enhanced efficiency in the industry.

Table 3: Determinants of Banks Performance in Nigeria

	Panel 1	Panel 2
Dependent Variable:	**Log(ROA)**	**Log(NIM)**
Constant	1.85	-249.85*
	(-0.04)	(-3.66)
Log(NBANK)	-0.65*	8.41*
	(-6.04)	(5.08)
Log(RIR)	-0.31**	7.08*
	(2.06)	(4.22)
Log(EXR)	-0.25	0.85
	(-0.16)	(1.09)
Log(CAP)	-0.03	0.005
	(-0.4)	(0.12)
Log(BLOAN)	0.52**	0.10
	(2.5)	(0.35)
Log(INSIZE)	0.13	-0.08
	(0.51)	(-0.42)
Log(RSIZE)	3.93***	19.86*
	(1.99)	(8.22)
Log(MCAP)	-2.33**	-20.13*
	(-2.73)	(-7.13)
Log(SBS)	-0.52	0.66
	(-0.63)	(1.23)
Summary Statistics		
Adj. R-Square	*0.76*	*0.95*
Durbin-Watson Statistic	*1.91*	*2.27*
F-Statistic	*2.12*	*49.12*
Prob(F-statistic)	*0.02*	*0.00*

Notes: Panel 1 and 2 respectively presents the results of estimation of equation 2 for the determinants of Profitability and intermediation efficiency in Nigerian banks. *t-statistics are in brackets, * Indicates significant at the 1% level, ** significant at 5% level and *** significant at the 10%level.*

The Real Interest Rate (RIR) variable captured the effects of interest rate deregulation component of financial liberalisation on measures of bank performance. Regression results from equation 1 indicated a statistically significant and negative effect of policy of interest rate deregulation on banks profitability performance. As indicated in equation 1, a hundred percentage point increase in real interest rate contracts profit performance in Nigerian banks by 31.07 % at 5% level of significance. While this result contradict theoretical expectations, it could be explained in the context of the extreme volatility and swings in interest rate movements, which created unstable conditions for banks and other allied financial institutions during the period. As expected, interest rate deregulation exerts positive and statistically significant effects on banks net interest margin, confirming that the policy had improved the efficiency of financial intermediation within the industry. A hundred percentage point increase in real interest rate increased financial inter mediation efficiency of banks by 708.3% at 5% level of significance.

The nominal exchange rate variable (EXR) was used to account for the foreign exchange rate reforms component of the financial liberalisation programme. However results from both the profit and net interest margin equations indicated that the variable failed to explain variations in both measures of banks

performance, as the variable turns out insignificant in both equations. Although this is not in line with apriori expectations, it may find explanations in the fact that during the period under analysis, most banks, especially the new generation banks have high preponderance for below the counter dealings in foreign exchange transactions for rent seeking purposes. Most of these dealings failed to be reflected in their official records to circumvent regulatory sanctions. Three bank's characteristics indicators are used as internal determinants of performance. They comprise the ratio of equity capital to total assets (CAP), the ratio of bank's loans to total assets (BLOAN), and the log of bank assets (LNSIZE).

Contrary to expectations, the bank capital variable turned out insignificant in both the profitability and net interest margin models. These outcomes however find plausible explanation within the context of the fact that virtually all banks in operation prior to 2005 banking consolidation exercise were grossly undercapitalized, and thus making their capital base an insignificant factor in their performance profile. As will be expected, bank loans, being the main source of income indicated a positive and statistically significant effect on banks profitability performance. A hundred percentage point increase in deposit-loan transformation contributes to a 52-percentage point increase in banks profits at 5% level of significance. This variable however turned out insignificant in the net interest margin model. The last variable considered under the bank internal characteristics variable is Size (LNSIZE). This variable is intended to capture size related economies and diseconomies of scale in banks performance. This variable also turned out insignificant in both the profitability and bank efficiency model, suggesting that size does not matter in banks performance in Nigeria. The last sets of variables considered in the estimated model are financial structure indicators that serve to examine how the performance of the banking sector is related to the relative development of the banks and stock markets.

The first variable under this category is Relative size (RSIZE) is calculated as the ratio of the stock market capitalization to total assets of deposit money banks, thus this variable served to measure the relative size of the bank deposit market to the stock market. In line with apriori expectations, the variable turned out to be a significant variable in explaining both profitability and efficiency performance in Nigerian banks. At 5% level of significance, a one percentage point increase in relative size of the banking sector contributed a 39.3% increases in banks profit performance and at 1% level of significance contributed 198.6% increases in banks net interest margin efficiency.

The next variable under this category is stock market capitalization (MCAP) which proxy for the effect of overall financial sector development on banks performance. The estimation results indicated that the variable significantly explained variations in profitability and net interest margin in Nigerian banks. However, the direction of causation is negative, which is quite contrary to expectation. The results from equation 1 indicated that a one-percentage point increase in the index of financial development contracts profit performance in Nigerian banks by 233% at 1% level of significance, while it contracts net interest margin by 201% at 1% level of significance, as indicated in equation 2.

The last financial structure variable considered in the model - the ratio of total assets of the deposit banks to GDP (SBS) is intended to measure the importance of bank financing in the economy. It may also indicate the complementarities or substitutability between bank and equity market financing. As indicated in equations 1 and 2, the variable turned out not to significantly explains variations in banks profitability and net interest margin performance.

Information provided by the R^2, DW and F - statistics are used to evaluate the statistical reliability of estimated equations 1 and equation 2. Results indicated that our model equations are adequate representation of the data. The value of R^2 adjusted in the profitability model is 0.7686 and 0.9569 for the profit and the net interest margin model respectively. This indicated that the regressors included in the systems of equations jointly explain about 76% and 95% of variations in profit and net interest margin. To test for the overall explanatory power of our model equations, the F - statistic computed for the equations showed that estimated parameters are jointly significantly different from zero. This is because the calculated F-statistics of 2.12 and 49.12 for the profitability and net interest margin respectively are all greater than their corresponding theoretical F-statistic values. This is an indication that our models are

adjudged statistically good for forecasting purposes.The Durbin Watson statistics ranges between 1.91 and 2.27 in all our model equations. These indicate absence of autocorrelation in our analysis.

SUMMARY AND CONCLUSION

This study broadly examined the impact of financial reforms on banks' organizational performance in Nigeria between 1995 and 2004. It specifically determined the effects of policies of interest rates deregulation, exchange rate reforms and bank recapitalization on banks performance, and analyzed how banks internal characteristics and industry structure affect the performance of Nigerian banks. The result of econometric panel regression analysis confirmed that the effects of government policy reforms, bank specific characteristics and industry structure has mixed effects on banks profitability level and net interest margin of Nigerian banks. Bank specific characteristics appear to have significant positive influence on bank's profitability and efficiency level, while industry stricture variables appeared not to have contributed meaningfully to the profitability and efficiency performance of banks in Nigeria.

The major limitation of this study is its limited period of analysis. There is the need to expand the scope by investigating the same issue over a wider time frame in order to examine the possibility of a structural change in the performance of banks from the period when regulated monetary policies were used and when the market determined policies were adopted. Also, the recently introduced recapitalization process was not considered as one of the variables used in the model because of the time period selected for the study. Effort could be made to include this variable in the estimation of bank reforms and performance in Nigerian banking sector.

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