

# Bank Reforms and Deposit Money Banks Performance: Evidence from Nigeria

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## ABSTRACT

This study investigates the impact of banking reforms on the performance of Deposit Money Banks in Nigeria spanning from 1995 to 2012. The main purpose of this study was to ascertain the effect of banking reforms on bank performances in Nigeria. The required data for this study was obtained from secondary sources which include publications of Central Bank of Nigeria and Federal office of statistics. This study covers all Deposit Money Banks in Nigeria. Test for Equality of means method was adopted, while E-views 7.1 is the computable software that was used to analyze the data. Thus, the study reveals that Return on Equity and banks profitability have a significant difference in the pre and post bank reform era while Return on Assets shows that there is no significant difference in the pre and post banking reform era in Nigeria. Thus, the study reached a consensus that the improved level of Deposit Money Bank profitability is associated to the various bank reforms in Nigeria. Therefore, we recommend that Banks should improve their total asset turnover and diversify in such way that they can generate more income on their assets.

**Keywords:** Bank Reforms, Return on Assets, Return on Equity, Banks Performance

## 1. INTRODUCTION

The banking industry plays an essential role in the economy in terms of resource mobilization and allocation and, is by far, the most important part of the financial system in developing economies, accounting for the bulk of the financial transactions and assets. In addition, banks have recently expanded in other activities such as securities markets, fund management, insurance, among others, blurring the distinction between banks and other financial markets (Moyo et al, 2014).

In a developing country like Nigeria, bank plays an important and sensitive role hence their performance directly affects the growth, efficiency and stability of the economy (Oladejo and Oladipupo, 2011). But for more than two decades after independence, the Nigerian financial system was repressed, as evidenced by ceilings on interest rates and credit expansion, selective credit policies, high reserve requirements, and restriction on entry into the banking industry. This situation inhibited the functioning of the financial system and especially constrained its ability to mobilize savings and facilitate productive investment (Sylvanus and Abayomi, 2001).

A critical look at the nation banking sector invariably portend the need for urgent attention, as situation that have made for series of reform of the sector over the year. The recent of all the reform came up in 2004 with a policy aimed at improving the regulatory and supervisory environment as well as restructuring and developing the banking sector entities. Soludo (2004) expressed that the reforms agenda is a pre-emptive and proactive measure to prevent an imminent system crisis and collapse of the banking industry and permanently stop the boom and burst cycle which have characterized the history of our banking industry. More fundamentally the reforms are aimed at ensuring a sound, responsive, competitive and transparent banking system appropriately suited to the demand of the Nigeria economy and the challenges of globalization. The main trust of the reform package which is anchored on a thirteen point agenda, is to consolidate and recapitalize banks by increasing their shareholders fund to a minimum of N25 billion with effect from December 31st 2005.

The reforms according to Oluyemi (2006) had in turn prompted a regulatory induced restructuring in the form of consolidation that would engender the alignment and realignment of banks and banking group in determined moves expected to translate into the merge of some banks and the acquisition of others. The emergence of mega banks no doubt would expose banks to new challenges, which if not properly addressed could adversely affect the operation of the payment system and its credibility. The banking sector reforms have been acclaimed to be necessary but the question is whether they yield anticipated result.

The resolve of the central bank of Nigeria to place the banking system in a regional and international context and promote soundness, stability and enhanced efficiency of the system was the major reason behind the increased minimum base for all universal banks to N25billion effective from December 31 2005. This invariably prompted a regulatory induced restructuring in the form of consolidation through merger and acquisitions. The policy initiative will definitely pose some problems and challenges to both the banking system and economy (Oladejo, 2010).

This study is therefore set to investigate the relative potency of financial reform on Deposit Money Banks in Nigeria to know the reason(s) for its current trend of performance and probe into the alternative policy options for the effective development of the Deposit Money Banks in Nigeria. In pursuit of this, the study raised some questions;

- What is the effect of Bank reforms on return on assets of Deposit Money Banks in the Pre and Post Bank Reform period in Nigeria?
- What is the effect of Bank reforms on return on equity of Deposit Money Banks in the Pre and Post Bank Reform period in Nigeria?
- What is the effect of Bank reforms on the profitability of Deposit Money Banks in the Pre and Post Bank Reform period in Nigeria?
- What are the challenges faced by Deposit Money Banks during the Pre and Post bank reforms period in Nigeria?
- What are the improvements made by Deposit Money Banks during the bank reform period?

Specifically, the study aims;

- i. To ascertain the effect of Bank reforms on return on Assets of Deposit Money Banks in the Pre and Post Bank Reform period in Nigeria.
- ii. To determine the effect of Bank reforms on return on Equity of Deposit Money Banks in the Pre and Post Bank Reform period in Nigeria.
- iii. To examine the effect of Bank reforms on the profitability of Deposit Money Banks in the Pre and Post Bank Reform period in Nigeria.
- iv. To examine the challenges faced by Deposit Money Banks during the Pre and Post Reforms period in Nigeria.
- v. To ascertain the improvement made by Deposit Money Banks during the banking reforms period.

In order to archive the objective of the study the paper is divided into four sections apart from introductory sections, section 2 discusses the literate review and theoretical underpinning, section 3 describes the methodology adopted for the study while section four discussed the results and finding while section five concluded the paper with recommendation.

## **2. LITERATURE REVIEW**

Banking reforms were introduced upon the need to enhance the quality of banks and ensure an effective and efficient banking sector. Banking reforms interchangeably called financial reforms aims at providing lasting solutions to problems experienced in the financial system (Azeez and Ojo, 2012).

According to Omoruyi (1991), the objectives of banking reforms in Nigeria include the followings;

- To improve the regulatory framework and procedures in order to prevent bank distress.
- To promote healthy competition in the provision of banking services.
- To expand the savings mobilization base in support of investment and growth through market-based interest rates.
- Less government interference in the market to ensure optimum allocation of resources.
- To provide a conducive enabling environment by laying the basis for minimal inflationary growth.

### **Measurement of Bank Sector Reforms and Deposit Money Banks Performance.**

Measuring the results of reform is extremely important if policy is to be well designed and implemented. Though it's been argued by many that there is a positive relationship between financial sector reforms and the performance of the Deposit Money Banks, we measured this using specific key indicators for the purpose of this study in line with the Nigerian Deposit Money Banks. The financial sector indicators are many, but we limited our consideration to three major indicators. The indicators considered were: Returns on Assets, Returns on Equity and profitability of the Deposit Money Banks.

The various reforms have been acquired to be necessary but it is debatable if they yielded the anticipated result (Balogun 2008). The new policy initiative will no doubt pose some challenges to both the economy as well as the banking system as observed by Ogunleye (2005) that given the fury of activities that have attended effort of banks to comply with the new consolidation policy and the antecedent of some operators in the system, there are concerns on the need to strengthen corporate governance in banks in order to boost public confidence and ensure efficient and effective functioning of the banking system on the effect of small business. Emeni and Okafor (2008) identified merger and acquisition as one of the instrument of recent banking reforms in Nigeria, using cross sectional survey research and ordinary least square regression analysis the result observed two effect of merger and acquisition as static effect and dynamic effect. The static effect resulted in positive relationship between small businesses lending and bank size because for each N1 deposit received, about N0.33k was given out to small business. However, dynamic effect of merger and acquisition in the Nigerian banking sectors which was reported as restructuring, direct and external effect gave on opposite result. The restructuring and direct effect shows that bank size is negatively related to small business lending and also there is a negatively relationship between external loan by institution like microfinance institution and small business lending.

### **RECAPITALIZATION IN BANKS**

The issue of recapitalization is a major reform objective; recapitalization literarily means increasing the amount of long term finances used in financing an organization. Recapitalization entails increasing the debt stock of the company or issuing additional shares through existing shareholders or new shareholders or a combination of the two. It could even take the form of merger and acquisition or foreign direct investment. Whichever form it takes the end result is that the long term capital stock of the organization is increased substantially to sustain the current economy trend in the global world.

Asedionlen (2004) opined that "Recapitalization may raise liquidity in short term but will not guaranty a conducive macroeconomic environment required to ensure high asset quality and good profitability" In his comment, Soludo (2004) said that low capitalization of the banks has made them less able to finance the economy, and more prone to unethical and unprofessional practices. These include poor loan quality of up to 21 per cent of shareholders' funds compared with 1–2 percent in Europe and America; overtrading, abandoning the true function of banking to focus on quick profit ventures such as trading in forex and tilting their funding support in favour of import-export trade instead of manufacturing; reliance on unstable public sector funds for their deposit base; forcing their female marketing staff in unwholesome conduct to meet unjustifiable targets in deposit mobilization; and high cost of funds.

Jika (2004) as cited in Aminu and Aderinokun (2004) maintained that increasing the capital base of banks in Nigeria would strengthen them and, in the process, deepen activities within the industry. "Growing the Nigerian economy is about the number of banks that have the capacity to operate in all the states of the federation, fund agriculture and manufacturing concerns, and in the process generate employment for Nigerians." Quoting Alarape (2005), as cited in Ologbondiya and Aminu (2005), "We see a very rosy future beyond the next two years or 2007 when profitability will grow and all the adjustments that the industry needs to go through in the macro – economy, including legislation that would be put in place to support the new type of business especially retail banking would have been put in place."

Recapitalization is expected to improve the bank's performance by ensuring adequate capital and profitability as well as enhancing the banks' intermediation capacity. Related literature especially, Dziobek and Pazabasioglu (1998) suggest on how to restore banks' solvency and balance sheet in the following ways: raise additional capital (from existing or new owners or from government; reduce liabilities (write down certain debts) and boost value of assets (recover problem loans and collaterals).

### **Distress and Recapitalization in Nigeria**

Distress could be described as an unhealthy condition where the affected bank will be unable to meet the cash withdrawal demand of its customers mainly because of illiquidity of the bank. Alashi (1993) associates distress with a cessation of operations of a financial institution. Thus, the expression, financial distress, is commonly employed to describe two distinct, but closely related conditions in an enterprise –illiquidity and insolvency. The immediate consequences of distress in the financial system is a sharp reduction in the value of the systems' assets, resulting in apparent or real insolvency of many financial institutions accompanied by some runs and possible liquidation of some of these institutions (CBN, 2004).

The signs of distress include persistent illiquidity, negative net-worth covered with paper profit, soaring savings deposits rates and accommodation of high-risk/high-return customers, and persistent contravention of rules coupled with the inability to honour obligations (Agene, 1995 and Ogunleye 1993).

Bartholomew, Mate and Whalen (1995), defines systemic distress as a sudden, usually unexpected, collapse of confidence as significant portion of the banking or financial system is experiencing financial crisis. This definition leaves the determination of what actually is a systemic crisis to the monetary authorities. However, Caprio, Gerald and Kilingebiel (1998) see a systemic distress as a situation where the net worth of the financial system's capital base is affected. This definition appears to be empty since its focus is on capital base. For instance, a bank with negative shareholders funds may be doing better than the bank with even high capital, however in the short run until the injection of new capital.

Soludo (2004) and Usman (2005) conclude that the Nigerian banking system was experiencing systemic distress before the commencement of the consolidation exercise. For example, as at June, 2004, out of the 89 banks operating, 62 were found to be sound, 13 were marginal players and the rest (14) were unsound. A banking system in which over 30% of the players are unsound was certainly disturbing.

From available reports, the major problems that led to distress and outright failure of banks are: inadequate capital including operational/working; reckless lending, leading to poor assets quality; absence of effective and sound management; weak earnings associated with operational losses; poor liquidity ratio due to ineffective management and absence/weak credit policy (CBN and NDIC, 1995).

In view of the above, the CBN came up under paragraph 21 of the address with a banking reform in the first phase to include among others, the requirement that the minimum capitalization for banks should be N25 billion with full compliance before the end of December, 2005.

With this new capital directive, the Central Bank of Nigeria (CBN) has recapitalized the Nigerian banks five times between 1999 and 2005 alone. In 1999, the minimum capital requirement was N500 million. Between the years 2000 and 2001 it moved to N1 billion for new entrants and N1.5million for existing ones. In 2002, it was raised up to N2 billion and N1 billion for new entrants and existing banks respectively and in 2003 it became N2 billion for all banks and finally to N25 billion in 2005 (Agusto, 2004 and CBN, 2004). Umoh (2004:5) is of the view that the "capital of a bank is expected to fund fixed assets, absorbed future operational losses and determine the volume of risk assets created by the bank".

He gave the recapitalization required of distressed banks as from 1995 when 60 of the 115 operating banks were adjudged to be distressed. In 1995, recapitalization required for the 60 distressed banks stood at N24.3 billion while that of 1996 stood at N42.3 billion for the 47 distressed institutions (Umoh, 2004). The highest of all was reported in the year, 2003 when the figure moved from N20.6 billion in year 2002 to N79.7 billion. The recent recapitalization is aimed at achieving cost efficiency through economy of scale and to diversify and expand the range of banking activities; therefore this scheme is a veritable way of achieving a more efficient and effective allocation of resources (Soludo, 2004).

Biodun (2005) is of the view that the new minimum capital of N25 billion is a growth inducer. He further states that the average ratio of the banks' equity to total liabilities in Nigeria during 1991 to 2004 was 5.86% which translates into a multiplier of 17.06% and an average business volume of N426.6 billion for any bank in compliance with the new minimum capital. In a global survey of the ratio of banks' equity to total liabilities, banks were found to fall in the range of 4.4% to 5.5% implying multiples of between 18.18 and 22.73%. If these are set against the new minimum capital requirement in Nigeria, the bank should grow to balance sheet size of between N454.5 billion and N568.25 billion (Biodun 2005).

In the words of Ajayi (2005), banks' recapitalization through consolidation is motivated by four key economic factors: economies of scale; economies of scope; potentials for risk diversification and banks' management's personal incentives. Osho(2005) and Uchendu (2005) believe that those benefits from banking reforms cannot

just come without incurring some costs, such as job losses; lowering of the gross domestic product and high recapitalization costs as a reasonable component of the gross domestic product. They drew the examples from Malaysia, Korea, Indonesia, and Thailand. They conclude that in spite of the huge sums spent on the banking sector reforms, the benefits always far outweigh the cost in the medium term to long term.

### **THE CONCEPT OF FINANCIAL PERFORMANCE**

The term performance is not as simple as it sounds; people often mean very different things when they talk about performance.

No performance review is beyond dispute, for instance, reported profit is a matter of opinion. If income is to be measured in terms of the increase or decrease in the wealth of an enterprise, obviously some definitions of that stock of wealth is required. Three basic measures of wealth are evident from the literature (Akinsulire, 2008 and Pandey, 2003) as follows:

- i) Financial capital – the equity stake in an enterprise in money terms;
- ii) Real financial capital – the equity stake in an enterprise in real terms (the proprietary concept);
- iii) Operating capacity capital – the ability of the enterprise to maintain its ability to provide goods and services (the entity concept).

Hunger and Wheelan (1997) define performance as the end result of activity and the appropriate measure selected to assess corporate performance is considered to depend on the type of organization to be evaluated and the objectives to be achieved through that evaluation. Performance measurement is therefore the process whereby an organization establishes the parameters within which programmes, investments, outputs and acquisitions are reaching the desired results (Hunger and Wheelan, 1997).

### **Performance Measurement Models In Banks**

Many researchers and writers have offered a variety of models for measuring performance in banks. However, little or no consensus is reached as to what model or approach could be described as most valid set of performance criteria (Cameron, 1981; Lewin and Minton, 1986). For instance, Cameron (1986) suggests that studies on corporate performance should include multimedia criteria analysis. Weiner and Mahoney (1981) have indicated that there are numerous measures of corporate performance that could serve as dependent variables. However, more important than the specific measure chosen is the use made of multiple measures because different criteria of performance are likely to be differently affected by the various independent variables (Lieberman and O'Connor, 1972). The performance of firms can be measured in terms of their productive (cost and output) efficiency and allocative efficiency (market power). To measure efficiency, input and output have to be compared with each other and researchers of banking markets face the problems of how to define the inputs and output process. This explains why no techniques have been accepted and thus has brought considerable differences in the measurement of efficiency.

### **Profit as a Measure of Banks' Performance**

Information about the return (or profit) a firm earns on its past investments to the point of the calculation enables shareholders to assess the performance of the company's management; Users will want to know how well companies are doing and also to know if it can be improved in the foreseeable future. This is the reason why the use and interpretation of a firm's financial results must be done with utmost care and desirable professional expertise. Besides, it obviously provides a basis for assessing the internal and external performances of the firm (Lucey, 2003)

Enyi (2007) maintains that a firm's internal performance determines its external position in the stock exchange bearing the economic forces of demand and supply of its stocks, which invariably is influenced by the firm's performance. Performance indication can only be meaningful to the user if it bears a true reflection of the relationship that it was intended to test. The return on capital employed (ROCE)/shareholders funds is a measure of efficiency of management in the application or use of the organization's available funds or resources in a given financial period. For this purpose, capital employed is taken as shareholders fund which is made up of equity and all reserves. It is measured by comparing the profits made by the company with the capital used in making the profit and set as a percentage or fraction (Egungwu, 2005).

Agu (1985) states that in measuring profits and profitability of the Nigerian Banks System using return on assets (ROA), return on equity (ROE) and the average consumer price index finds that the financial health of banks and consequently their performance are dependent on profits declared and that the ability of banks to control and reduce operating cost will greatly determine the amounts of profits to be declared. He however could not statistically determine the relationship between profits and operating cost.



### 3. RESEARCH METHODOLOGY

As the empirical data for this research relates to measurements over the several time periods, the time based data adopted is secondary data since they are obtained from already existing publications, journals, financial statements, which constitutes secondary sources of information. The sources of this research data however, were Central Bank of Nigeria (CBN): banks performance Reports, Statistical Bulletin, annual reports, and Federal office of statistics. This data will be estimated using Econometric Views (E-Views) version 7.1 statistical application package. The study covered from pre Bank Reform period of 1995 to 2003 and to the post Bank Reform period of 2004 to 2012.

#### DATA ANALYSIS TECHNIQUE

In providing the answer to determine how these variables are measured, our model is estimated using the test for Equality between means technique as a statistical tool which will test the Reform periods and its impact on Deposit Money Banks performance in Nigeria within the period of study.

#### TEST OF DIFFERENCE BETWEEN MEANS

This is an experiment designed to compare the mean of a control group with the mean of an experimental group. The inferential statistics used in analyzing this type of experiment depend on the distribution of the difference between mean. The sample distribution of the difference between means can be thought of as the distribution that would result if we repeat the following step over and over again; therefore, the distribution of the differences between means is the sampling distribution of the difference between means.

#### Model Specification

$$t_c = \frac{\bar{x} - \bar{y}}{\sqrt{\partial \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}} \text{-----(1)}$$

$$\text{And } \partial = \sqrt{\frac{n_1 s_1 + s_2 s_2}{n_1 + n_2 - 2}} \text{ with Degree of freedom (df) = } (n_1 - 1) + (n_2 - 1) \text{----- (2)}$$

The functional forms of the models are

H<sub>01</sub> Model

$$ROA_1 = ROA_2 \text{ or } ROA_1 - ROA_2 = 0 \text{----- (3)}$$

H<sub>02</sub> Model

$$ROE_2 = ROE_1 \text{ or } ROE_1 - ROE_2 = 0 \text{----- (4)}$$

H<sub>03</sub> Model

$$PBY_1 = PBY_2 \text{ or } PBY_1 - PBY_2 = 0 \text{----- (5)}$$

Where

$\bar{x}_1$  and  $\bar{x}_2$  = Mean value of Post and Pre Bank Reform period respectively.

$S_1$  and  $S_2$  = Standard Deviation of Post and Pre Bank Reform period respectively.

$n_1$  and  $n_2$  = Sample size of Post and Pre Bank Reform period respectively.

$ROA_1$  and  $ROA_2$  = Return on Asset in the Post and Pre Bank Reform period respectively.

$ROE_1$  and  $ROE_2$  = Return on Equity in the Post and Pre Bank Reform period respectively.

$PBY_1$  and  $PBY_2$  = Profitability of Deposit Money Banks in the Post and Pre Bank Reform period respectively.

### DECISION RULE

Using a one-tail test at 0.5 level of significance, the decision rule states that when the calculated value is greater than the t-tabulated value, we reject the null hypothesis and hence accept the alternate hypothesis.

### Research Hypotheses

The following hypotheses are formulated to guide this study;

$H_{01}$ : There is no significant difference between Deposit Money Banks return on assets in the pre and post Bank reform period in Nigeria.

$H_{02}$ : There is no significant difference between Deposit Money Banks return on equity in the pre and post Bank reform period in Nigeria.

$H_{03}$ : There is no significant difference between profitability of Deposit Money Banks in the pre and post Bank reform period in Nigeria.

### RESULTS AND DISCUSSION

The Empirical results can be found in the appendix below, Based on the stated statistical tools of analyses, we analyze our estimated test of Equality of mean between series model;

**The F-Test:** The computed F-value form the result of the Pre and Post Bank Reform period from table 4.1 and 4.1(Appendix) are 9.025818 and 49.87218 respectively while the tabulated F-value is 3.40. Therefore, we reject the null hypothesis and conclude that the overall parameter on both periods is statistically significant

### Test of Hypotheses

The hypotheses stated above will be tested to determine the level of difference on the employed variables.

### Calculated results for Return on Assets (ROA), Return on Equity (ROE) and Profitability (PBY) contribution on the performance of Deposit Money Banks (DMBs)

Source: Researcher's computation

The above result shows the sample mean and standard deviation value of the pre bank reform (1995-2003) and the post bank reform era (2004-2012) in Nigeria which was carried out using the difference of equality for means

Return on Assets (ROA)		Return on Equity (ROE)		Profitability (PBY)	
$\bar{x}_1 = 4.398889$	$\bar{x}_2 = 3.055556$	$\bar{x}_1 = 29.64889$	$\bar{x}_2 = 64.48333$	$\bar{x}_1 = 1424437.$	$\bar{x}_2 = 6484309.$
$s_1 = 2.57811$	$s_2 = 1.519993$	$s_1 = 16.42688$	$s_2 = 34.95610$	$s_1 = 1422365.$	$s_2 = 2754575.$
$n_1 = 9$	$n_2 = 9$	$n_1 = 9$	$n_2 = 9$	$n_1 = 9$	$n_2 = 9$
T-Calculated value=1.27 T-tabulated = $t_{0.05,16}=1.75$		T-Calculated value=-2.55 T-tabulated = $t_{0.05,16}=1.75$		T-Calculated value=-14599108.76 T-tabulated = $t_{0.05,16}=1.75$	

between series on date presented on table 4.3 and 4.4. These values were than used to compare a one-tailed t-test in which the t-calculated values were to compare with that of t-tabulated value. Thus, the decision rule states that when the t-calculated value is greater than the t-tabulated value, we reject the null hypothesis and accept the alternate hypothesis.

### Test One

$H_{01}$ :  $\beta_1=0$ ; There is no significant difference between Deposit Money Banks return on assets in the pre and post Bank reform period in Nigeria.

From the table presented above, the calculated value of Return on asset is 1.27 which is less than the t-tabulated value (1.75). Therefore, we accept the null hypothesis that there is no significant difference between Deposit Money Banks return on assets in the pre and post Bank reform period in Nigeria.

### Test Two

$H_{02}: \beta_2=0$ ; There is no significant difference between Deposit Money Banks return on equity in the pre and post Bank reform period in Nigeria.

From the table presented above, the calculated value of return on equity is -2.55 which is greater than the t-tabulated value (1.75). Therefore, we reject the null hypothesis and accept the alternate that there is a significant difference between Deposit Money Banks return on equity in the pre and post Bank reform period in Nigeria.

### Test Three

$H_{03}: \beta_3=0$ ; There is no significant difference between profitability of Deposit Money Banks in the pre and post Bank reform period in Nigeria.

From the table presented above, the calculated value of profitability of Deposit Money Banks is -4599108.76 which is greater than the t-tabulated value (1.75). Therefore, we reject the null hypothesis and accept the alternate that there is a significant difference between the profitability of Deposit Money Banks in the pre and post Bank reform period in Nigeria.

Based on the above result and findings, we therefore accept the null hypotheses that there is no significant difference between return on asset in the pre and post Bank reform period in Nigeria and reject the null hypotheses that there is a significant difference between Deposit Money Banks return on equity and profitability of Deposit Money Banks in the pre and post Bank reform period in Nigeria during the period of this study.

## 5.1 DISCUSSION OF FINDINGS

This research investigates the impact of banking reforms on profitability of Deposit Money Banks in Nigeria. This is based on the on-going reforms introduced by the apex bank of Nigeria (CBN) in order to transform the financial sector into growth catalyst. Therefore, the effect of the following bank performance variables such as Return on Assets, Return on Equity and Deposit Money Banks profitability were used to evaluate the Pre and Post Banking era in Nigeria.

Surprisingly, the study found that return on assets during the period of significant reform as against period without significant reforms has not contributed positively to Deposit Money Banks performance during the period of the study. Our finding is reverse of Kosmidou, et. al., (2004) reported positive relationship on return on asset (ROA) which is consistent with Bourke (1989). This implies that there is significant difference on how efficient Deposit Money Banks utilizes its assets to generate profit between pre and post banking reform period.

Interestingly, the study found that Return on Equity has contributed positively to the profitability of Deposit Money Bank during the period of significant reform as against period without significant reforms in Nigeria economy although not to a significant extent yet. Also, it is observed from the data collected that Deposit Money Bank profitability has increased to a large extent following the introduction of the ongoing bank reforms which emphasize on recapitalization as a means to diversify its portfolio and promote customers confidence

## 5.2. CONCLUSIONS

This section wraps up the implication of the research findings. Ultimately, the Central Bank of Nigeria (CBN) in its effort to boost the performances of banks in Nigeria has established various reform policies and programmes; however, the study has reached a consensus that the improved level of Deposit Money Bank profitability is associated to the various bank reforms in Nigeria.

Therefore, the study intensely concludes that the various bank reforms have influence on the profitability of Deposit Money Bank in Nigeria. This is noticeable especially since the introduction of the 2004 bank reform in Nigeria.

## 5.3 RECOMMENDATIONS

Based on our findings, it is therefore important to make recommendations that would ensure sustained growth in the banking industry.



- Banks should improve their total asset turnover and diversify in such way that they can generate more income on their assets.
- Banks should diversify their investment and it should be more on long-term bases.
- The ongoing banking reform should be sustained in Nigeria.
- Bank management should embark on effective intermediation drive which will provide a cheap source of fund for the banks which they can use to generate more interest income that would eventually increase their profit.
- Government should evolve a good regulatory environment that will enable the banks to expand their scope of business but strictly within the financial service industry.
- Monetary authorities should ensure effective and efficient banking supervision.

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## APPENDIX I

### THE RESEARCH DATA

YEAR	ROA	ROE	PDMBs
<b>PRE BANK REFORM PERIOD</b>			
1995	0.1	5.27	121,952.00
1996	1.99	56.78	179,760.00
1997	3.35	67.15	282,180.00
1998	4.52	86.08	352,592.00
1999	4.13	80.59	833,484.00
2000	3.96	99.45	1,746,689.00
2001	4.82	114.29	2,138,694.00
2002	2.63	41.63	3,258,431.00
2003	2	29.11	3,906,152.00
<b>POST BANK REFORM PERIOD</b>			
2004	2.58	27.23	3,998,437.00
2005	0.75	5.52	4,154,268.00
2006	0.5	4.12	4,617,261.00
2007	5.92	36.83	5,133,206.00
2008	3.94	22.12	4,211,763.00
2009	6.38	42.73	7,550,182.00
2010	6.02	37.83	7,984,290.00
2011	7.53	51.83	8,731,218.00
2012	5.97	38.63	11,978,159.00

Source: Central Bank of Nigeria (CBN) Statistical Bulletin (Various Issues)

Central bank of Nigeria (CBN) Annual Reports and Statement of Accounts (Various Issues)

## APPENDIX II

### PRE BANK REFORM PERIOD

TABLE 4.1

Test for Equality of Means Between Series

Date: 04/28/14 Time: 23:37

Sample: 1995 2003

Included observations: 9

Method	df	Value	Probability
Anova F-statistic	(2, 24)	9.025818	0.0012

Analysis of Variance

Source of Variation	df	Sum of Sq.	Mean Sq.
Between	2	1.22E+13	6.09E+12
Within	24	1.62E+13	6.74E+11
Total	26	2.84E+13	1.09E+12

Category Statistics

Variable	Count	Mean	Std. Dev.	Std. Err. of Mean
ROA	9	3.055556	1.519993	0.506664
ROE	9	64.48333	34.95610	11.65203
PDMBS	9	1424437.	1422365.	474121.5
All	27	474834.9	1044372.	200989.4

## APPENDIX III

### POST BANK REFORM PERIOD

TABLE 4.2

Test for Equality of Means Between Series

Date: 04/28/14 Time: 23:45

Sample: 2004 2012

Included observations: 9

Method	df	Value	Probability
Anova F-statistic	(2, 24)	49.87218	0.0000

Analysis of Variance

Source of Variation	df	Sum of Sq.	Mean Sq.
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Between	2	2.52E+14	1.26E+14
Within	24	6.07E+13	2.53E+12
Total	26	3.13E+14	1.20E+13

Category Statistics

Variable	Count	Mean	Std. Dev.	Std. Err. of Mean
ROA	9	4.398889	2.578117	0.859372
ROE	9	29.64889	16.42688	5.475627
PDMBS	9	6484309.	2754575.	918191.8
All	27	2161448.	3469525.	667710.5

## APPENDIX IV

### COMPUTATION OF T- STATISTICS VALUES OF PRE AND POST BANK REFORMS PERIOD OF DEPOSIT MONEY BANKS (DMBs) IN NIGERIA

#### FOR: RETURN ON ASSET (ROA)

Post Bank Reform period:  
 Period:

Pre Bank Reform

$$\bar{x}_1 = 4.39889$$

$$\bar{x}_2 = 3.055556$$

$$s_1 = 2.578117$$

$$s_2 = 1.519993$$

$$n_1 = 9$$

$$n_2 = 9$$

$$t_c = \frac{\bar{x}_1 - \bar{x}_2}{\partial \sqrt{(1/n_1 + 1/n_2)}}$$

$$\text{And } \partial = \sqrt{\frac{n_1 s_1^2 + n_2 s_2^2}{n_1 + n_2 - 2}} \text{ with Degree of freedom (df) } = (n_1 - 1) + (n_2 - 1)$$

$$\partial = \sqrt{\frac{9(2.578117)^2 + 9(1.519993)^2}{9 + 9 - 2}}$$

$$\partial = \sqrt{\frac{9(6.646687265689) + 9(2.310378720049)}{18 - 2}}$$

$$\partial = \sqrt{\frac{59.820185391201 + 20.793408480441}{16}}$$

$$\partial = \sqrt{\frac{80.613593871642}{16}}$$

$$\partial = \sqrt{5.03834961697763}$$

$$\partial = 2.224462683245515$$

$$t_c = \frac{4.39889 - .055556}{2.224462683245515 \sqrt{\left(\frac{1}{9} + \frac{1}{9}\right)}}$$

$$t_c = \frac{1.343334}{2.224462683245515 \sqrt{(0.1111 + 0.1111)}}$$

$$t_c = \frac{1.343334}{2.224462683245515 \sqrt{(0.2222)}}$$

$$t_c = \frac{1.343334}{2.224462683245515(0.47138094997571)}$$

$$t_c = \frac{1.343334}{1.05807432862367}$$



$$t_c = 1.26960267691911$$

$$t_c = 1.27$$

$$\text{While } t_{\alpha} = (n_1 - 1) + (n_2 - 1) = t_{0.05,16} = 1.75$$

$$\text{Therefore } t_c = 1.26 < 1.75$$

### FOR: RETURN ON EQUITY (ROE)

Post Bank Reform period:  
Period:

$$\bar{x}_1 = 29.64889$$

$$s_1 = 16.42688$$

$$n_1 = 9$$

Pre Bank Reform

$$\bar{x}_2 = 64.48333$$

$$s_2 = 34.95610$$

$$n_2 = 9$$

$$t_c = \frac{\bar{x}_1 - \bar{x}_2}{\partial \sqrt{(1/n_1 + 1/n_2)}}$$

$$\text{And } \partial = \sqrt{\frac{n_1 s_1^2 + n_2 s_2^2}{n_1 + n_2 - 2}} \text{ with Degree of freedom (df) } = (n_1 - 1) + (n_2 - 1)$$

$$\partial = \sqrt{\frac{9(16.42688)^2 + 9(34.95610)^2}{9 + 9 - 2}}$$

$$\partial = \sqrt{\frac{9(269.8423865344) + 9(1221.92892721)}{18 - 2}}$$

$$\partial = \sqrt{\frac{2428.5814788096 + 10997.36034489}{16}}$$

$$\partial = \sqrt{\frac{13425.9418236996}{16}}$$

$$\partial = \sqrt{839.121363981225}$$

$$\partial = 28.9675916151347$$

$$t_c = \frac{29.64889 - 64.48333}{28.9675916151347 \sqrt{\left(\frac{1}{9} + \frac{1}{9}\right)}}$$

$$t_c = \frac{-34.83444}{28.9675916151347 \sqrt{(0.1111 + 0.1111)}}$$

$$t_c = \frac{-34.83444}{28.9675916151347 \sqrt{(0.2222)}}$$

$$t_c = \frac{-34.83444}{28.9675916151347(0.47138094997571)}$$

$$t_c = \frac{-34.83444}{13.6547708540505}$$

$$t_c = -2.55108198975502$$

$$t_c = -2.55$$

$$\text{While } t_{\alpha} = (n_1 - 1) + (n_2 - 1) = t_{0.05,16} = 1.75$$

$$\text{Therefore } t_c = -2.55 < 1.75$$

### FOR: DEPOSIT MONEY BANKs PROFITABILITY (PBV)

Post Bank Reform period:  
 Period:

Pre Bank Reform

$$\bar{x}_1 = 1424437.$$

$$\bar{x}_2 = 6484309.$$

$$s_1 = 1422365.$$

$$s_2 = 2754575.$$

$$n_1 = 9$$

$$n_2 = 9$$

$$t_c = \frac{\bar{x}_1 - \bar{x}_2}{\partial \sqrt{(1/n_1 + 1/n_2)}}$$

$$\text{And } \partial = \sqrt{\frac{n_1 s_1^2 + n_2 s_2^2}{n_1 + n_2 - 2}} \text{ with Degree of freedom (df) } = (n_1 - 1) + (n_2 - 1)$$

$$\partial = \sqrt{\frac{9(1422365.)^2 + 9(2754575.)^2}{9 + 9 - 2}}$$

$$\partial = \sqrt{\frac{9(2.0231221932) + 9(7.5876834306)}{18 - 2}}$$

$$\partial = \sqrt{\frac{1.8208099739 + 6.8289150876}{16}}$$

$$\partial = \sqrt{\frac{8.6497250615}{16}}$$

$$\partial = \sqrt{0.54060781634375}$$

$$\partial = 0.73526037316297$$

$$t_c = \frac{1424437. - 6484309.}{0.73526037316297 \sqrt{\left(\frac{1}{9} + \frac{1}{9}\right)}}$$

$$t_c = \frac{-5059872}{0.73526037316297 \sqrt{(0.1111 + 0.1111)}}$$

$$t_c = \frac{-5059872}{0.73526037316297 \sqrt{(0.2222)}}$$

$$t_c = \frac{-5059872}{0.73526037316297(0.47138094997571)}$$

$$t_c = \frac{-5059872}{0.3465877324583}$$

$$t_c = -14599108.7569979$$

$$t_c = -14599108.77$$

While  $t_{\alpha} = (n_1 - 1) + (n_2 - 1) = t_{0.05,16} = 1.75$

Therefore  $t_c = -14599108.76 > 1.75$