

# POST-CONSOLIDATION EFFECT OF MERGERS AND ACQUISITIONS ON NIGERIA DEPOSIT MONEY BANK

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## ABSTRACT

Prior to the consolidation exercise in 2005, the banking industry was filled with a large number of weak, small banks that had low capital bases and were not performing their duties as the main financial intermediaries in the economy. The consolidation exercise which was spearheaded by the CBN governor, Charles Soludo raised the recapitalization of deposit money banks to a minimum of N25 billion naira by December 31, 2005 with mergers and acquisitions (M&As) as one of the strategies the banks could adopt to meet this requirement. By the end of the consolidation exercise, the number of banks had reduced from 89 to 25 while the capital base and reliability of the banks that survived increased. This study was carried out to find out the challenges faced by the banks during and after the exercise, the performance of these banks post-consolidation and if mergers and acquisitions has in anyway affected the banks and if so, in what ways. The panel data regression technique was used in the analysis and we found that M&As affect banks' performance but does not affect banks' cost of equity capital. We recommend that the management of Nigerian banks has to be efficient and effective in allocating available resources so as to stay relevant in the now competitive banking industry so as to enjoy the full benefits that come with mergers and acquisitions.

**Key words:** Post-Consolidation, Merger and Acquisition, Deposit Money banks

## 1.1 BACKGROUND OF STUDY

For the past two decades, because of globalization, liberalization, industrial developments and extremely competitive business environment, mergers and acquisitions have become popular all over the world. Mergers, acquisitions and other types of strategic alliances are on the agenda of many industrial groups intending to have an edge over competitors. Mergers and acquisitions especially in the banking industry is now a global phenomenon. In the United States of America, there had been over 7,000 cases of bank mergers since 1980, while the same trend occurred in the United Kingdom and other European countries. Specifically, in the period 1997-1998, 203 bank mergers and acquisitions took place in the Euro area. In 1998 a merger in France resulted in a new bank with a capital base of US\$688 billion, while the merger of two banks in Germany in the same year created the second largest bank in Germany with a capital base of US\$541 billion. According to Soludo (2006), in Nigeria, the banking sector has undergone the consolidation exercise, which was only aimed at recapitalizing the banks and increasing banks capital base but has had little or no significant impact because there are still weak banks as a result of huge non-performing loans.

The financial deregulation in Nigeria that started in 1987 subsequent to the adoption of the now abandoned Structural Adjustment Program (SAP) in 1986 generated a high and healthy degree of competition in the banking sector. This was because the financial deregulation provided incentives for the expansion of banks in terms of individual size and number of banks in operation. However, the increased competition in the financial sector in general and the banking sub-sector in particular, amidst political instabilities and financial inconsistencies on the part of the financial regulators, led to rapid decline in profitability of the traditional banking activities.

Aregbeyen and Olufemi (2011) opined that to survive and maintain adequate profit level in the political and policy instability in the Nigerian economy, banks allowed excessive risks and this resulted in frequent bank failures and related financial shocks in the economy. In its effort to prevent bank failures, on July 6, 2004, the Central Bank of Nigeria (CBN) announced a major reform program that would transform the banking landscape of Nigeria. The main thrust of the reform program was the prescription of a minimum shareholders' funds of N25 billion for all Nigerian banks in 2005. The banks were expected to increase their capital through the injection of fresh funds where applicable. The banks were also encouraged to enter into merger/acquisition arrangements with other relatively smaller banks thus taking the advantage of economies of scale to reduce cost of doing business and enhance their competitiveness locally and internationally.

The program resulted in reduction in the number of banks from 89 to 25 through mergers/acquisitions involving 76 banks. A merger is the combination of two or more separate firms into a single firm. The firm that results from the process could take any of the following identities: acquirer target or new identity. Acquisition on the other hand, takes place where a

company takes over the controlling shareholding interest of another company. Usually at the end of the process, there exist two separate entities or companies. The target company becomes either a division or subsidiary of the acquiring company. The importance of adequate capital in banking cannot be overemphasized. Thus, increasing the capital base of banks is aimed at increasing customers' confidence in the banking sector. It is also expected to lead to increase in profitability and higher returns for the shareholders. The years 2001-2004 are referred to as pre-consolidation period and 2005-2010 as post-consolidation period for the purpose of this research.

The banking sector reform in Nigeria was designed to promote the viability; soundness and stability of the system to enable it adequately meet the aspirations of the economy in terms of enhanced economic growth and development. The reform agenda was motivated by the need to proactively put the Nigerian banking industry on the path of global competitiveness to enable it effectively respond to the challenges of globalization. The overall objective is to guarantee that the economy and Nigerians do not remain fringe players in the context of a globalizing world. Ebong (2005) posited that the banking reform is meant to address weak capital base. Most banks in Nigeria had less than US\$10 million while the largest bank in the country had a capital base of about US\$240 million. According to Ebong (2005), this is in contrast with the situation in Malaysia where the smallest bank had a capital base of US\$526 million. The small size of most local banks, coupled with their high overheads and operating expenses, has negative implications on the cost of intermediation. It also meant that they could not effectively participate in big-ticket deals, especially within framework of the single obligor limit.

In a bid to survive the stiff competition in the market, a number of operators had resorted to unethical and unprofessional practices. Strictly speaking, some even went into some businesses that could not be classified as banking. As a result of the enormity of the problems caused by the failure to adhere to professional and ethical standards, the Bankers' Committee set up a sub-committee on "ethics and professionalism" to handle complaints and disputes arising from unwholesome and sharp practices. Poor corporate governance practices were also becoming rampant. There were several instances where Board members and management staff failed to uphold and promote the basic pillars of sound corporate governance because they were preoccupied with the attainment of narrowly defined interests. The symptoms of this included high turnover in the Board and management staff, inaccurate reporting and non-compliance with regulatory requirements. Gross insider abuses occurred among the top management staff. This is noticeable in the credit function. There are cases of huge non-performing insider-related credits in banks which Asset Management Corporation of Nigeria (AMCON) has bought over. Insolvency is due to the magnitude of non-performing risk assets which had eroded the shareholders' funds of a number of banks. For instance, according to the 2004 NDIC Annual Report, the ratio of non-performing credit to shareholders' funds deteriorated from 90% in 2003 to 105% in 2004. This meant that the shareholders' funds had been completely wiped out industry-wide by the non-performing credit portfolio. There was over-reliance on public sector deposits by commercial banks (now known as Deposit Money Banks) which accounted for over 20% of total deposits in the system. In some institutions, such public sector funds represented more than 50% of total deposits. This is not a healthy situation from the viewpoint of effective planning and cash management given the volatile nature of these deposits.

On account of the huge reliance on public sector funds, a number of players did not pay adequate attention to small savers who normally constitute a major source of stable funds which should be channeled to finance the real sectors. Instead, they concentrated on a few high net worth individuals, government parastatals and blue chip companies. However, it was in response to this situation coupled with the need to accord the small and medium enterprises sub-sector the priority it deserves that the Bankers' Committee came up with the Small and Medium Enterprises Equity Investment Scheme (SMEEIS) with a view to redirecting credit flows to the sub-sector. Despite this measure put in place, the consolidation programme has not improved the overall performance of banks significantly and also has contributed marginally to the growth of the real sector for sustainable development.

The objective of this research is to examine the difference in banks' mean cost of equity capital before and after consolidation and to investigate if merger and acquisition has significantly impacted on bank performance. The following research questions will be answered during the course of this study:

1. What was the state of deposit money banks in Nigeria before consolidation?
2. How would merger/acquisition promote banks' performance?
3. What are the challenges posed by the bank consolidation policy?

This study covers about ten deposit money banks will focus specifically on consolidation and post-consolidation periods i.e. 2001-2010. This study would inspire employees on how corporate growth can be stimulated through mergers/acquisitions of banks in the nation's banking industry and in the long run enhance the growth of the Nigerian economy. It would also provide insight and pathway to government formulate policies that would boost the performance of banks after merging.

The findings of the research will provide insights to the regulatory authorities in Nigeria such as the Central Bank of Nigeria as to the considerations and implementation of Mergers and Acquisitions.

## 2.1 LITERATURE REVIEW

According to Somoye (2008), the 1990s proliferation of banks, which also resulted in the failure of many of them, led to another recapitalization exercise that saw bank's capital being increased to N500million (USD\$5.88) and subsequently N2billion (USD\$0.0166billion) in 2004 with the introduction of a 13-point reform agenda aimed at addressing the fragile nature of the banking system. According to Somoye (2008), in terms of number of banks and minimum paid-up-capital from 1952-1978; the banking sector recorded forty-five (45) banks with varying minimum paid-up capital for merchant and commercial banks. The number of banks increased to fifty-four (54) from 1979-1987. The number of banks rose to one hundred and twelve (112) from 1988 to 1996 with substantial varying increase in the minimum capital. The number of banks dropped to one hundred and ten (110) with another increase in minimum paid-up capital and finally dropped to twenty-five in 2006 with a big increase in minimum paid-up capital from N2 billion (USD\$0.0166billion) in January 2004, to N25billion (USD\$0.2billion) in July 2004. The marginal and unsound banks increased in number from seventeen (17) in 2001 to twenty three (23) in 2002 and 2003, and then twenty-seven (27) in 2004 representing thirty (30%) percent of the operating banks in the system. This figure rose to seventeen (17) per cent only three years earlier (CBN, 2006). Goldfeld and Chandler (1981); and Somoye (2006) opined that any policy shift must be consistent with market framework if the objective of the policy is to be achieved. They decomposed the total lag between the need for policy and the final effect of policy into four parts. Goldfeld and Chandler (1981) stated that monetary policy, though affects the economy less directly, will have a longer outside lag and that monetary policy tends to influence investment, and the lags in the physical process of building plants and machinery are undoubtedly longer than the lags in producing consumer goods. Therefore, the longer outside lag of monetary policy must be balanced against the shorter policy lag in deciding the optimal policy mix.

Banks that are unable to show financial stability through their balance sheets are likely to perish in an increasingly competitive industry as amplified by Shiratori (2002); Okazaki and Sawada (2003) as cited in Somoye 2008. Shih (2003) points out the possibility that credit risk could increase in the event of a sound bank merging with an unsound one. Also, most of empirical literature suggests that bank consolidations do not significantly improve the performance and efficiency of the participant banks (Berger et al 1999). They concluded that if a voluntary consolidation does not enhance the performance of the participating banks, any performance enhancing effect of the consolidation promoted by the government policy is more questionable (Somoye, 2008).

Five periods of high merger activity, also known as merger waves, occurred in the United States in 1897-1904, 1916-29, 1965-69, 1984-89 and 1993-2000 (ILO, 2001; Jimmy, 2008; Mangold and Lippok, 2008) while M&As was fully expressed in Nigeria banking industry in 2004/2005 with effect from January 1, 2006 under governorship of Charles Chukwuma Soludo at the Central Bank of Nigeria (CBN). Nigerian banks adopted different strategies to achieve the stipulated minimum capital base of N25 billion during the banking sector consolidation of 2004 and 2005, including Mergers and Acquisitions and internal growth (Jimmy, 2008). The choice of a consolidation strategy is mainly determined by the organizational form of the involved institutions as well as the driving motive behind its corporate strategy. Many literatures indicate that banking sector reforms are propelled by the need to deepen the financial sector and reposition for growth, to become integrated into the global financial architecture; and involve a banking sector that is consulting with regional integration requirements and international best practices (Akintoye and Somoye 2008). Owokalade 2006 observes that the Companies and Allied Matters Decree 1990 defines merger as "Any amalgamation of the undertaking or any part of the undertakings or interest of two or more companies or the undertaking or part of the undertakings of one or more companies and one or more bodies corporate". The author further stressed that, a merger is a form of business combination whereby two or more companies join together to one; being voluntarily liquidated by having its interest taken over by the other and its shareholders becoming shareholders in the other enlarged surviving company. For example, in the 1999 merger of Glaxo Wellcome and SmithKline Beecham, both firms ceased to exist when they merged, and a new company, GlaxoSmithKline, was created.

An acquisition, on the other hand, is the purchase of one organization by another. A merger is just one type of acquisition. (Alao, 2010; Dubey, 2007). Such actions can be hostile or friendly and the acquirer maintains control over the acquired firm. Mergers and acquisitions differ from a consolidation, which is a business combination where two or more companies join to form an entirely new company. All of the combining companies are dissolved and only the new entity continues to operate (Okonkwo, 2004). The two companies combine their operations and gains strength in terms of improved performance, increased capital, and enhanced profits. This kind substantially reduces the number of competitors in the segment and gives a higher edge over competition (Gehi 2011; Okonkwo 2004). IBTC-Chartered Bank merger with Stanbic Bank Nigeria Limited, Access Bank's merger with Capital Bank and Marina International Bank, and Platinum Bank Limited merger with Habib Nigeria Bank Limited in Nigeria are examples of horizontal mergers. (Adesida, 2008;

Ekundayo, 2008). Vertical merger is a kind in which two or more companies in the same industry but in different fields combine together in business (Gehi, 2011). The 1993 \$6.6 billion merger between Merck, a pharmaceutical manufacturer, and Medco, a pharmaceutical distributor, is an example of a vertical deal (Gaughan, 2007). The motives for merger are tax advantages, increases liquidity for owners, gaining access to funds, growth, diversification while synergistic benefits are protection against a hostile takeover, acquisition of required managerial skills and assets or technology. Enyi (2006) identifies three important stages that must be carefully followed and intelligently to include **planning** for the overall corporate strategy to show how merger or acquisition fits into the overall framework. It **Search and Screen** ensures that target companies must fulfill a set of criteria so that the target company is a good strategic fit with the acquiring company and **financial evaluation** is evidence by differences in the competences, systems and methods of recording accounting transactions between the merging firms. The most difficult and usually the most contentious issue in business combination is how to finance the new firm, that is, how to define the new ownership structure. The two methods of financing business combination according to Enyi (2006) are cash offer method and Share Exchange Method.

According to Imala (2005), prior to the banking sector consolidation program induced by the CBN 13-point reform agenda, the Nigerian banking system was characterized by generally small-sized banks with very high overhead costs, low capital base averaging less than N1.4 billion, heavy reliance on public sector funds (20% of industry deposits from government sources), foreign exchange trading and neglect of small and medium scale private savers. Lemo (2005) also notes that the top 10 banks were found to control more than 50% of the aggregate assets; more than 51% of the aggregate deposit liabilities; and more than 45% of the aggregate credits. Also, 24 out of the 89 deposit money banks (DMBs) that existed had exhibited one form of weakness or the other: undercapitalization or insolvency, illiquidity, poor asset quality, weak corporate governance, dwindling earnings and in some cases, loss making. A review of the banking sector as at June 2004 revealed that marginal and unsound banks accounted for 19.2% of the total assets, 17.2% of total deposit liabilities while industry non-performing assets was 19.5% of total loans and advances (Soludo, 2004; CBN, 2005). The implication of this unsatisfactory statistics as noted by Lemo (2005) is that there existed threat of a systemic distress judging by the trigger points in the CBN Contingency Planning Framework of December 2002, which stipulated a threshold of 20% of the industry assets, 15% of deposits being held by distressed banks and 35% of industry credits being classified as non-performing.

It was evident that the banking sector needed reform and it was only a matter of time. The banking sector reform was guided by the provision in the National Economic Empowerment and Development Strategy (NEEDS) document. The policy thrust was to build and foster a competitive and healthy financial system to support development and to avoid systemic distress in the Nigerian banking sector (NPC 2004, Soludo 2006). The reform was to address the shallow depth of the Nigerian capital market, overdependence of banking institutions on public sector and foreign exchange trading as sources of funding and the noticeable lack of harmony between fiscal and monetary policies (NPC 2004). As stated by Soludo (2008), the above policy thrust was to be achieved through the adoption of the followings strategies:

- i. Embarking on a comprehensive reform process aimed at significantly improving the financial infrastructure;
- ii. Restructuring, strengthening and rationalizing the regulatory and supervisory framework of the financial sector;
- iii. Addressing the issue of low capitalization of financial institutions;
- iv. Developing a structured financing for cheap credit to the real sector; and
- v. Fostering financial deepening and accommodation for small and rural financial market.

According to Adam (2005), bank or corporate consolidation could be achieved by way of mergers and/or acquisition, recapitalization and proactive regulation. Bank consolidation is more than mere shrinking of the number of banks in any banking industry. It is expected to enhance synergy, improve efficiency, induce investor focus and trigger productivity and welfare gains (Nnanna, 2004). The reforms are designed to enable the banking system develop the required flexibility to support the economic development of the nation by efficiently performing its functions as the pivot of financial intermediation (Lemo, 2005). Thus, the reforms were to ensure a diversified, strong and reliable banking industry where there is safety of depositors' money and position banks to play active developmental roles in the Nigerian economy.

The key elements of the 13-point reform program include:

1. Minimum capital base of N25 billion with a deadline of 31st December, 2005;
2. Consolidation of banking institutions through mergers and acquisitions;
3. Phased withdrawal of public sector funds from banks, beginning from July, 2004;
4. Adoption of a risk-focused and rule-based regulatory framework;
5. Zero tolerance for weak corporate governance, misconduct and lack of transparency;
6. Accelerated completion of the Electronic Financial Analysis Surveillance System (e-FASS);
7. The establishment of an Asset Management Company;
8. Promotion of the enforcement of dormant laws;

9. Revision and updating of relevant laws;
10. Closer collaboration with the EFCC and the establishment of the Financial Intelligence Unit;
11. Launching of a new Micro finance policy and regulatory framework to serve the un-served 65 percent of the bankable public;
12. Reforming the Exchange rate management system -- adoption of the Wholesale Dutch Auction System (WDAS) and increased liberalization of the foreign exchange market (which since 2006 led to the convergence of the parallel and official exchange rates for the first time in 20 years);
13. Addressing issues of technology and skills in the banking industry especially in risk management and ICT (Enyi, 2006).

Of all the reform agenda the issue of increasing shareholders' fund to N25 billion generated so much controversy especially among the stakeholders. Besides strengthening the Nigerian banks, the new capital, Soludo (2004) explained, is intended to stem the systemic distress that has continued to rock the system. According to him, "If we do not do anything today, several banks would go under and we will end up with more job losses, but with this measure, we will end up with more job savings than if we allowed banks to go under". Speaking further he said, "we have a duty to be proactive and to strategically position Nigerian banks to be active players and not spectators in the emerging world, adding that "the inability of the Nigerian banking system to voluntarily embark on consolidation in line with the global trend has necessitated the need to consider the adoption of appropriate legal and supervisory frameworks as well as comprehensive incentive package to facilitate mergers and acquisition in the country as well as crisis resolution option and to promote the soundness, stability and enhanced efficiency of the system". Adeyemi (2005) grouped these challenges into two headings namely: pre-consolidation and post-consolidation. The pre-consolidation challenges encountered are timeline for consolidation, high cost of mergers and acquisitions, lack of cooperation from some of the consolidating banks, human resource issues, information and communication technology (ICT) and related issues while the post-consolidation challenges are corporate governance, challenge of increased returns on Investment, post-consolidation integration.

### 3.1 METHODOLOGY

The study made use of the descriptive analysis which includes the time-series and cross-sectional data analysis. The critical indicators for examining the effect of mergers and acquisitions on DMBs are: Return on Assets (ROE), Profit before Interest and Tax (PBIT), Asset Base (ASST), Bank Loans (LOA), bank deposits (DEP) and total value of shareholders' funds (SHF). The research sample includes nine banks that were involved in mergers and acquisitions: First Bank of Nigeria Plc., Diamond Bank Plc., United Bank for Africa Plc., Union Bank of Nigeria Plc., Wema Bank Plc., Skye Bank Plc., Access Bank Plc., Fidelity Bank Plc. and First City Monument Bank Plc. The study involves a ten-year period.

#### Model Specification

To conduct the investigation that examines the effect of M&As on DMBs post-consolidation, the constructs include M&A, cost of equity capital and bank performance. The models for this study is stated below

#### Model One

$$Y = \beta_0 + \beta_1 X + \mu \quad \text{Equation ..... (1)}$$

Where,

Y= Bank's cost of equity capital (Dependent Variable)

X= Mergers and acquisitions

$\beta$ = Coefficient of mergers and acquisitions

$\mu$ = Error term

Explicitly, equation 1 can be defined as:

$$\text{Bank cost of equity capital (BCOC)} = f(\text{mergers}) + e \quad \text{Equation ..... (2)}$$

Representing equation 2 with the variables of the construct, the equation below is formulated with inclusion of a control variable dummy. The dummy variable was included because it would aid in the understanding of the effect of M&A in explaining the level of performance obtainable. Furthermore, the inclusion of the control would enhance a better predictability and analysis of the relationship existing between the two constructs (M&As and cost of equity capital). Therefore,  $\text{BCOC} = f(\text{SHF}, \text{DMERGER})$ . The relationship between Return on Equity and Shareholders' Funds can be written in linear form as:

$$\text{ROE} = \beta_0 + \beta_1 \text{SHF}_{it} + \beta_2 \text{DMERGER}_{it} + \mu_{it} \quad \text{Equation ..... 3}$$

Where,

ROE= Return on Equity (Profit after Tax/Total Equity)

SHF= Value of shareholders' funds

DMERGER= Variable to capture the period of bank mergers and acquisitions

$\beta_1$  and  $\beta_2$  are the unknown parameters. Our apriori expectation is stated below:

$$\beta_1 > 0, \beta_2 > 0$$

**Model Two**

Considering the second hypothesis of this study, a second model will be constructed. Thus, BPERF (PBIT) = F (ASST, SHF, LOA, DEP, DMERGER). The relationship between Profit before Interest and Tax (PBIT), Bank Asset, Bank Loan, Bank Deposit and Shareholders' funds can be written in linear form:

$$PBIT = \beta_0 + \beta_1 ASST_{it} + \beta_2 SHF_{it} + \beta_3 LOA_{it} + \beta_4 DEP_{it} + \beta_5 DMERGER + \mu_{it} \quad \text{Equation..... 4}$$

Where,

BPERF= PBIT (Profit before interest and tax)

ASST= Bank assets

SHF= Value of shareholders' funds

LOA= Bank loans and advances

DEP = Value of deposits received by the bank

DMERGER= Variable to capture the period of bank mergers and acquisitions

$\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$  and  $\beta_5$  are the unknown parameters.

On apriori,  $\beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 > 0, \beta_5 > 0$

Our prior expectations about the relationship between M&As and bank performance is that M&As have no significant effect on the performance of banks also that there is no significant difference in banks' mean cost of equity capital before consolidation and the mean cost of capital after consolidation.

**Statement of Hypotheses**

The hypotheses for this study are stated in Null form as follows:

1.  $H_0$ : There is no significant difference in banks' mean cost of equity cost of capital before consolidation and the mean cost of capital after consolidation.
2.  $H_0$ : Merger/acquisition has no significant effect on banks' performance

This study employed the panel data framework for the analysis due basically to its advantage of allowing for more data points. Estimation of the model will be done through regression analysis using the Panel Least Squares methodology.

The general representation of the model is given in the equation below:

$$Y_t = C + \beta_{1t} X_{1t} + \beta_{2t} X_{2t} + \dots + \beta_{it} X_{it} + \mu_{it}$$

Where,

$Y_t$  = Dependent variable;

C = Intercept;

$B_t$  = Slope of the independent variables

$X_t$  = Independent variables; and

$\mu_t$  = Error term

**4.1 DATA PRESENTATION AND ANALYSIS**

This estimation was done using E Views 5.0. In the analysis, the period covered from 2001-2010 representing 2001-2005 as pre-merger era and 2006-2010 as post-merger era. The listed banks used again are Access Bank Plc., Diamond Bank Plc., First City Monument Bank, Fidelity Bank Plc., First Bank Plc., Skye Bank Plc., United Bank for Africa, Union Bank, and Wema Bank Plc.

**Discussion of Results**

The analysis of data for this research was done through panel regression model as stated earlier in this study. Here, the results obtained from the regression is extensively discussed in terms of the coefficient value of each variable, sign expectations, F-statistic to test the overall significance of the model,  $R^2$  and adjusted  $R^2$  to determine what percentage of variation in the dependent variable is jointly explained by all the explanatory variables and the Durbin-Watson to test for the presence of autocorrelation in the model. Two models were developed for the purpose of this research, one model to test for each of the hypothesis developed. The regression was divided into three parts: for all-period, pre-merger and post-merger period so as to be able to make comparison between the banks' cost of equity capital and bank performance before consolidation and after consolidation. This is to help the researcher in determining if merger and acquisition has any significant effect on either of the afore-mentioned measures.

**Model One**

**TABLE 4.1: All-Period: Dependent Variable/Regressand: ROE**

REGRESSOR	COEFFICIENT	T-STATISITC	PROB. VALUE
SHF	-1.19E-09	-2.006857	0.0479
C	0.190036	6.506749	0.0000

**Author's compilation from E Views 5.0**

R-squared	0.044245
Adjusted R-squared	0.033259
F-statistic	4.027476
Prob(F-statistic)	0.047870
Durbin-Watson stat	1.992710

**Author's compilation from E Views 5.0**

From the regression result presented in **Table 4-1** above, shareholders' funds was used as an explanatory variable for measuring banks' cost of equity capital but from the result, it has a negative coefficient which implies that it has an inverse relationship with ROE. This means that an increase in shareholders' fund will result in a decrease in ROE and vice versa and that SHF has no effect on banks' ROE. SHF is however statistically significant at 5% level of significance and it also meets the apriori expectation for the model. The  $R^2$  (0.044245) and adjusted  $R^2$  (0.033259) values are very poor and this means that any variation in ROE is not explained by SHF. The F-stat value also shows that the model is not statistically significant. The Durbin-Watson 1.992710~2.00 negates the presence of autocorrelation in the model.

**TABLE 4-2: PRE-MERGER PERIOD**

**Dependent/Regressand: ROE**

REGRESSOR	COEFFICIENT	T-STATISTIC	PROB. VALUE
SHF	-5.22E-09	-1.164733	0.2505
C	0.236711	8.487589	0.0000

**Author's compilation from E Views 5.0**

R-squared	0.030584
Adjusted R-squared	0.008039
F-statistic	1.356602
Prob(F-statistic)	0.250548
Durbin-Watson stat	1.610686

**Author's compilation from E Views 5.0**

**TABLE 4-3: POST-MERGER PERIOD**

**Dependent/Regressand: ROE**

REGRESSAND	COEFFICIENT	T-STATISTIC	PROB. VALUE
SHF	-8.30E-10	-1.013117	0.3167
C	0.144257	2.552097	0.0143

**Author's compilation from E Views 5.0**

R-squared	0.023313
Adjusted R-squared	0.000600
F-statistic	1.026406
Prob(F-statistic)	0.316671
Durbin-Watson stat	2.542477

**Author's compilation from E Views 5.0**

For both the pre-merger and post-merger periods, shareholders' fund still carries a negative coefficient and has an inverse relationship with banks' ROE. The probability value also shows that it is not statistically significant and does not have an effect on banks' ROE. Going from the sign expectation, it does not conform to the apriori expectation. The  $R^2$  and adjusted  $R^2$  values also indicate that it is not relevant in explaining changes in the dependent variable. The F-stat is relatively low and is not statistically significant. The Durbin-Watson for the pre-merger period suggests the presence of some degree of autocorrelation while that of the post-merger period indicates that the model is free of autocorrelation. Conclusively, it can be said that shareholders' fund does not in any way affect banks' return on equity.

**Model two**

**Table 4-4: ALL-PERIOD**

**Dependent/Regressand: PBIT**

REGRESSORS	CO-EFFICIENT	T-STATISTIC	PROB. VALUE
SHF	0.042813	0.689355	0.4925
DEP	0.049478	2.578149	0.0117
LOA	23.91734	3.886712	0.0002
ASST	0.044862	5.488759	0.0000
C	-2216546.	-1.918659	0.0584

**Author's compilation from E Views 5.0**

R-squared	0.792194
Adjusted R-squared	0.782415
F-statistic	81.00898
Prob(F-statistic)	0.000000
Durbin-Watson stat	2.242269

**Author's compilation from E Views 5.0**

From the results obtained for Model 2 in **Table 4-4** above, it is observed that the constant parameter ( $\beta_0$ ) has a negative relationship with PBIT.  $\beta_1$  (ASST),  $\beta_2$  (SHF),  $\beta_3$  (LOA) as well as  $\beta_4$  (DEP) have positive values showing a positive relationship with the dependent variable (PBIT). That means that an increase in any of the variables will lead to an increase in PBIT. Shareholders' fund has a positive relationship with profit before interest and tax but is not statistically significant judging by its probability value (0.4925). Bank deposit also has a positive relationship with PBIT and is statistically significant at 5% level of significance. The coefficient of loans and advances is positive and this means that an increase in bank loan will cause an increase in PBIT. Bank loan is statistically significant at 1% level of significance. Bank asset also has a significant effect on bank's profit before interest and tax and is statistically significant at 1% level of significance. From the foregoing it is observed that every one of the parameters conforms to the apriori expectation stated earlier in terms of the expected signs as they are all have positive. A critical examination of the results as reported above shows that about 79% of the total variation in the regressand or dependent variable (PBIT) can be explained by all the regressors or independent variables. This is indicated by the coefficient of determination ( $R^2$ ) value of 0.792194. This is a very good fit as it shows that only a small percentage (about 21%) of total variation in PBIT cannot be explained by the regressors (ASST, SHF, LOA, DEP). An examination of the F-statistic value of 81.00898 testing for overall significance shows that the overall model is significant at 1% level of significance. Following the results above, the Durbin-Watson statistic of 2.242269, reveals that the model is free of the presence of auto correlation.

**Table 4-5: Pre-Merger Period: Dependent/Regressand:PBIT**

REGRESSORS	CO-EFFICIENT	T-STATISTIC	PROB. VALUE
SHF	-0.102046	-0.913093	0.3667
DEP	0.082543	2.750973	0.0089
LOA	45.21256	3.877765	0.0004
ASST	0.091044	4.013681	0.0003
C	-1351743.	-2.870886	0.0065

**Author's compilation from E Views 5.0**

R-squared	0.589025
Adjusted R-squared	0.547927
F-statistic	14.33237
Prob(F-statistic)	0.000000
Durbin-Watson stat	2.416437

**Author's compilation from E Views 5.0**

In the regression analysis, it can be observed that shareholders' fund has a negative coefficient which means that it has an inverse relationship with profit before interest and tax and is not statistically significant going by its probability value (0.3667). The inverse relationship implies that as the value of shareholders' fund increases, the profit before interest and tax reduces and vice versa. Bank deposit (DEP), bank loan (LOA) and bank asset (ASST) all have positive relationship with bank performance (PBIT) and are all statistically significant at 1% level of significance. The positive relationship implies that as any of the variables is increasing, PBIT is also increasing. All the variables except shareholders' fund meet the apriori expectation established in chapter three in terms of sign expectation as it carries a negative value. The  $R^2$  value of 0.589025 suggests that the independent variables explain about 59% of the changes or variation in the dependent variable in the model. The  $R^2$  can be used to measure the goodness of the fit in the model which implies how well the estimated



regression fits the actual data. The F-stat value of 14.33237 implies that the overall model is significant at 1% level of significance and that all the explanatory variables jointly explain changes in the dependent variable. The DW stat of 2.416437 shows that there is no autocorrelation and that the model is free of bias.

**Table 4-6: Post-Merger Period - Regressand: PBIT**

REGRESSORS	CO-EFFICIENT	T-STATISTIC	PROB. VALUE
SHF	0.000989	0.011135	0.9912
DEP	0.064507	2.323505	0.0253
LOA	35.21275	3.420363	0.0015
ASST	0.049732	4.301387	0.0001
C	-7391372.	-2.409485	0.0207

**Author's compilation from E Views 5.0**

R-squared	0.786919
Adjusted R-squared	0.765611
F-statistic	36.93051
Prob(F-statistic)	0.000000
Durbin-Watson stat	2.443211

**Author's compilation from E Views 5.0**

From the results obtained for Model 2 in **Table 4-4** above, it is observed that the constant parameter ( $\beta_0$ ) has a negative relationship with PBIT while  $\beta_1$  (ASST),  $\beta_2$  (SHF),  $\beta_3$  (LOA) as well as  $\beta_4$  (DEP) have positive coefficient values showing a positive relationship with the dependent variable (PBIT). This means that an increase in any of the variables will cause an increase in bank performance (PBIT). Shareholders' fund is however not statistically significant. Bank deposit is significant at 5% level of significance while bank loan and bank asset are both significant at 1% level of significance. From the foregoing it is observed that every one of the variables conforms to the a priori expectation stated earlier in terms of the expected signs. A critical examination of the results as reported above shows that about 79% of the total variation in the regressand or dependent variable (PBIT) can be explained by all the regressors or independent variables. This is indicated by the coefficient of determination ( $R^2$ ) value of 0.786919. This represents a good fit as it implies that shareholders' fund, bank loan, bank deposit and bank asset account for 79% of changes in PBIT. An examination of the F-statistic value of 36.93051 testing for overall significance shows that the overall model is significant at 1% level of significance. This is because the observed value of 36.93051 is greater than the critical F-value of  $F_{0.01} = 4.31$ . Following the results above, the Durbin-Watson statistic of 2.443211, reveals that the model is free of the presence of serial correlation.

**Testing of Hypotheses**

**Decision Rule:** If  $F_{Cal} > F_{Tab}$  = reject  $H_0$  and accept  $H_1$ ,  $F_{Cal} < F_{Tab}$  = accept  $H_0$  and reject  $H_1$

**Recall:**

**Hypothesis 1:**

$H_0$ : There is no significant difference in banks' mean cost of equity cost of capital before consolidation and the mean cost of capital after consolidation.

Return on equity was used as the variable for measuring banks cost of equity capital and it had shareholders' fund as its explanatory variable. From the regression results discussed earlier however, there is an inverse relationship between shareholders' fund and return on equity i.e. an increase in shareholders' fund will cause a decrease in the bank's return on equity. Based on the criteria specified for decision making: R-squared, adjusted R-squared, DW-stat, F-stat and sign expectation, shareholders' fund has no effect or relationship on bank' mean cost of equity capital as it has failed to meet any of the criteria. To make our decision, we compare the calculated value of F-statistic with the critical value of  $F_{(0.01)} = 6.96$ . The calculated value of F-stat 4.027476 is less than  $F_{Tab}$  we therefore accept the null hypothesis that there is no significant difference in banks' mean cost of equity capital before consolidation and banks' mean cost of capital after consolidation.

**Hypothesis 2:**

$H_0$ : Merger/acquisition has no significant effect on banks' performance

Profit before interest and tax was used as to measure bank performance for the purpose of this study and it was dependent on bank asset, shareholders' funds, bank loan and bank deposits as its explanatory variables. It was established from the

regression analysis that all the variables except shareholders' fund have effect on PBIT and are significant in measuring bank performance. The F-statistic test was carried out at 1% level of significance and the  $F_{Cal}$  and  $F_{Tab}$  derived are:

$$F_{Tab} = 4.04, F_{Cal} = 81.00898$$

### Decision

Based on the decision rule stated above,  $F_{Cal} = 81.00898$  is greater than the critical value of  $F_{(0.01)} = 4.04$ . We therefore reject the null hypothesis and accept the alternate hypothesis that merger and acquisition has significant effect on bank performance.

## 5.1 FINDINGS AND RECOMMENDATIONS

### Theoretical Findings

1. Mergers and acquisitions are a global phenomenon that help organizations to be proactive and if properly planned and executed can give an organization a competitive edge over other firms in its line of business.
2. Mergers and acquisition does not necessarily guarantee the success of a firm. The Studies have shown mergers are not successful due to one reason or another. The Nigerian capitalization in 2005 that led to three banks being taken over by CBN in 2011 is a case in point.
3. There are a number of challenges faced by banks in the process of consolidation and for these challenges to be overcome there should be proper planning and sufficient time for the process. The regulatory authorities should also ensure that they play their part towards ensuring successful bank mergers/acquisitions.
4. As a result of the consolidation of the Nigerian banking industry, the banks have now been repositioned for the challenges posed by the economic development reform. For instance, the few banks left after the consolidation have recorded increase in their profitability, asset base, shareholders' funds as well as their deposit liability
5. Nigerian banks now have a strong capital base as against what it was before consolidation when a large number of weak, small banks had to struggle for deposits and this has reduced the likelihood of bank distress and has restored the confidence of the public in the banks.
6. As a result of the recapitalization of the banks, the banks now have greater ability to mobilize fund and grant more loans especially to the real sector of the economy to enhance economic growth and development.

### Empirical Findings

The empirical findings of the analysis include:

1. Shareholders' fund is not significant to return on equity for both pre-merger and post-merger periods. An increase in shareholders' funds does not necessarily mean there will be an increase in banks' return on equity. If anything, going by the negative coefficient, an increase in shareholders' funds will cause return on equity to decrease. The negative coefficient of the variable in all periods is against expectation as a positive relationship was expected.
2. Bank assets has positive coefficient and is significant in explaining changes in a bank's profit before interest and tax.
3. The volume of deposits of a bank will determine the funds available for it to undertake investments and give out loans and advances to its customers in order to generate returns which will increase the bank's profit before interest and tax.
4. Value of loans and advances given out by a bank is very important because loans and advances serve as a major source of income to the bank and from the study undertaken in this research work, has a positive coefficient and is significant in explaining changes in profit before interest or tax of a bank.
5. Shareholders' fund however was found to be statistically insignificant in explaining changes in profit before interest or tax. This means that the total equity available to a bank is not a determining factor of the profit it will make but it is rather determined by other factors such as the deposit available to it and the value of loans and advances given to its customers.
6. Bank performance has improved post-consolidation as the coefficient of the explanatory variables increased in the post-merger period and this has enhanced the competitiveness in the industry.

### Recommendations

Having carried out this research and made some findings as stated above, the researcher would like to make the following recommendations:

1. Mergers should not be done out of desperation or necessity as was the case during the consolidation period but should be properly evaluated and carried out to ensure its success. The pros and cons should be weighed and it should be determined if that is the best option for the organization.
2. Banks should be innovative in the development and marketing of their products in order to increase their market share and performance and also enhance the competitiveness of the banking industry.

3. Mergers and acquisitions have associated risks that if not properly managed can lead to failure. Inability of managers to handle the complex task of integrating two firms with different processes, accounting methods, operating culture, and mis-estimating of the value of the target firm by the buyer, must be avoided. A strategically integrated acquisition programme should be put in place to ensure a successful merger/acquisition.

### Conclusion

This study has reviewed the Post-Consolidation effect of Mergers and Acquisitions on Deposit Money Banks and from the study, it has been established that M&As affect the banks and their overall performance. It has also been noted that M&As require time and is not something that can be done in a hurry. The banks consolidation exercise of 2005 as supervised by the CBN has yielded lots of benefits in terms of improved banking environment. Mergers and acquisitions have played a significant role in strengthening banks' capital base as well as restoring confidence among the public and have consequently enhanced the development of the economy. However, it takes more than banks merging to ensure the soundness and stability of banks as recently confirmed by the three banks (Afribank now Mainstream Bank, Spring Bank now Enterprise Bank and BankPHB now Keystone Bank) which have been nationalized by the regulatory authority (CBN) due to their poor performance. The management of the banks should work towards sustaining and improving performance as well as the profitability of the bank.

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