

## EFFECTS OF MERGERS AND ACQUISITIONS ON SHAREHOLDERS' WEALTH IN NIGERIAN BANKING INDUSTRY

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**ABSTRACT:** *Mergers and acquisitions that took place in Nigerian Banking Industry in 2005 were to create wealth for shareholders, provide solid and reliable banking institutions that can compete favourably with foreign financial institutions. Going by market value of the merged banks, shareholders wealth had been eroded, in some cases completely destroyed. The visible problems that confront the shareholders of merged banks include melt down of market prices of their shares on the stock market, depletion of shareholders fund due to huge losses incurred by the merged banks and lack of dividend pay out to the shareholders. Exploratory and correlation research designs were used. The population of this study is twenty five (25) consolidated banks as at 1<sup>st</sup> January, 2006. Stratified Sampling technique was adopted to arrive at fifteen (15) merged banks. Questionnaires were distributed to the staff of the merged banks. The instrument was validated and Cronbach's Alpha coefficient result of 0.708 was obtained indicating the internal consistency of the instrument. Five hundred and fifty-seven (557) questionnaires were administered and a response rate of 58.3% was obtained. The findings of study showed that there was a significant relationship between shareholders wealth and capital base ( $p$ - value of 0.000), market share ( $p$ - value of 0.000), bank revenue ( $p$ - value of 0.000), cost savings ( $p$ - value of 0.000). The study concluded that mergers and acquisitions have positive effect on the shareholders wealth. The implication of findings is that, new capital brought in by shareholders of merged banks increase the size of banks total assets and revolutionized the way banks do their business. The study recommends that banks' management should give proper attention to scope and scale of economies; eliminate redundancy, corrupt and inefficient staff; it is imperative for shareholders to always bring in fresh capital and Government should give bail-out loans to banks in distress.*

**KEYWORDS:** Mergers and Acquisition, Shareholders Wealth, Capital Base, Market Share, Bank Revenue, Cost Savings.

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### INTRODUCTION

Mergers and acquisitions that took place in Nigerian Banking Industry in 2005 were to create wealth for shareholders, provide solid and reliable banking institutions that can compete favourably with other financial institutions elsewhere. Going by market value of the merged and acquired banks, the wealth of shareholders had been eroded, in some other cases completely destroyed.

The visible problems that confront the shareholders of merged banks today are: firstly, melt down of market prices of their shares on the stock exchange market, secondly, depletion of shareholders fund as result of huge losses incurred by the merged banks, thirdly is lack of dividend pay out to the shareholders and lastly, the fact that banks can be nationalised or

forcefully taken over by new management with little or nothing for the old shareholders (for example, in the case of defunct Intercontinental Bank plc taken over by Access Bank plc and defunct Oceanic Bank Plc taken over by Ecobank plc), this has become nightmare for the shareholders.

Inadequate capital base has been the bane of Nigerian Banking Industry before 2005 consolidation (Soludu, 2006). This had hindered the progress and performance of banks; hence there was no capital appreciation to the shareholders. The average capital base of Nigerian banks was US\$10 million (before consolidation, 2005), which was very low compared to that of banks in other developing countries like Malaysia where the capital base of the smallest bank is US\$526 million. Similarly, the aggregate capitalization of the Nigerian banking system at N311 billion (US\$2.4 billion) was grossly low in relation to the size of the Nigerian economy and in relation to the capital base of US\$688 billion for a single banking group in France and US\$541 billion for a bank in Germany (Imala, 2005).

One of the benefits of mergers and acquisitions is to eliminate competition and increase market share of the merged companies (Pandey, 2005). Thus, by limiting competition the merged company can earn super normal profits and strategically employ the surplus fund to further consolidate its position and maximise the shareholders' wealth. For Nigerian Banking Industry, reverse is the case. One potential area of challenge to banks authorities and stakeholders of Nigerian banking industry is fierce competition that accompanies bank consolidation and its capacity to trigger unethical practices and poor corporate governance (Adedipe, 2005). Many of the merged banks employed unethical strategies to beat competition, in the bid to meet profit target. Some of the banks are in the habit of de-marketing the others by adopting dirty strategy of blackmail. The merged banks listed on the Stock Exchange are cumbered with performance pressures which lead to income inflation, notwithstanding the tax implication thereby eroding and destroying shareholders wealth.

Banks revenue has been on decline from 2009, this has negative effect on the wealth of the banks' shareholders. The causes of decline in revenue are largely accounted for by the followings:

The global economic recession that started in 2008 had led to poor turnover and eroded profits of business organizations. Many companies have closed shops while those who are still operating are barely surviving. As a result of the economic down turn, the financial position of many corporate borrowers is worsening (Olisaemeka, 2010). Many of the merged banks corporate borrowers could not meet their obligations to the banks, let alone take new credit. Inability of customers to meet their obligations directly increased Non Performing Loan Portfolio; this in turn eroded the profit reported by the merged bank which automatically reduced shareholders dividend. The implication of this is that the shareholders wealth is destroyed through depletion of capital base and revenue of the merged banks.

Another post consolidation problem that had serious impact on merged bank's profitability is increasing incidence of fraud practices among all cadres of merged banks staff. Fraud contributed significantly to the failure of banks in the 1990s in Nigeria (Ogunleye, 1999). Fraud is one of the serious economic crimes being perpetrated in our banking industry today. This had brought huge financial losses to banks and their customers, which resulted in depletion of shareholders funds (capital base) and loss of confidence in the sector. Fraud is therefore of special concern to the regulatory authorities who are saddled with the responsibility of ensuring

the safety and soundness of the entire banking system. Many of the merged banks are still operating under weak corporate governance structure and poor internal control systems. The boards of these banks are run by few cliques with selfish motives. There is frequent internal board wrangling amongst directors, high turnover of board members, management staff, inaccurate reporting and noncompliance with regulatory requirements. Gross insider abuses, resulting in huge Non Performing insider related credits (Imala, 2005). This has impacted negatively on the profit been posted by the merged banks and further translated to low or nil returns to shareholders (Imala, 2005).

Operating costs in the Nigerian banking industry have been increasing considerably since consolidation. The increase in services offered and the current branch expansion have resulted in a rising demand for skilled staff, which in turn has led to an increase in salaries. Unstable power supply in the country has also kept operating costs high because the banks require diesel generators to power the branches and ATM machines. The rising price of diesel has also contributed to the increase in operating costs. Despite the harsh business environment, Nigerian banks have been able to grow their earnings at an exponential rate and maintain a high margin because of their ability to easily transfer their costs to customers (Stanbic IBTC Bank, 2008). High cost of banking operations has massive effect on the wealth of the shareholders.

### **Objectives**

The specific objectives are:

- i. To establish the relationship that exists between increase in capital base and shareholders' wealth.
- ii. To determine the relationship that exists between merged and acquired banks' market share and shareholders' wealth.
- iii. To investigate relationship that exists between increase in merged banks' revenue and shareholders' wealth.
- iv. To investigate the relationship that exists between merged banks' cost savings and shareholders' wealth.

### **Research Hypotheses**

The hypothetical statements for this research study are:

#### **Hypothesis 1**

H<sub>0</sub>: There is no significant relationship between increase in merged banks' capital base and increase in shareholders' wealth.

#### **Hypothesis 2**

H<sub>0</sub>: There is no significant relationship between increase in merged banks' market share and increase in shareholders' wealth.

#### **Hypothesis 3**

H<sub>0</sub>: There is no significant relationship between increase in merged banks' revenue and increase in shareholders' wealth.

#### **Hypothesis 4**

H<sub>0</sub>: There is no significant relationship between merged banks' cost savings and increase in shareholders' wealth.

### **Operationalisation of Research Variables**

#### **Model Specifications**

For this study, the functional relationship is given as:

$$\text{SHWEAL} = f(\text{Capbase, Market share, Revenue, Cost})$$

Where:

SHWEAL = Shareholders Wealth (dependent variable)

The cause and effect model of the relationship is specified as follow:

$$\text{SHWEAL} = \beta_0 + \beta_1 \text{Capbase} + \beta_2 \text{Market share} + \beta_3 \text{Revenue} + \beta_4 \text{Cost} + \varepsilon$$

Where

$\beta_0$  = Population's regression constant

SHWEAL = Shareholders Wealth (dependent variable)

Capbase = Capital base of banks

Market share = Market share of the bank

Revenue = Revenue efficiency

Cost = Cost efficiency

$\varepsilon$  = Model error,

### Shareholders wealth as Dependent Variable

The dependent variable for this study is shareholders wealth. This is the Economic Value created for the shareholders of merged banks as result of mergers and acquisitions that took place in December 2005. Though varying measures of shareholders values are in use, such as abnormal returns and market value of share prices. The accounting measure of value adopted for this work is Earning Per Share (EPS). This is defined as net profit after tax divide by number of shareholders outstanding.

$$\text{EPS} = \frac{\text{Net Profit after Tax}}{\text{Number of Shareholders}}$$

EPS simply shows the profitability of the firm on a per share basis. However, it does not reflect how much it retained in the business and how much is paid as dividend. But as profitability index, it is valuable and widely used ratio (Pandey, 2005).

### Independent Variables

These are variables that cause a change in the dependent variable. They are also called explanatory variables. For the purpose of this study, the followings are the independent variables: Capital base, Market share, Revenue efficiency, and Cost efficiency,

### Capital Base

The ratio of equity to total assets (CA) is considered one of the basic ratios for capital strength. It is expected that the higher this ratio, the lower the need for external funding and the higher the profitability of the bank. It shows the ability of bank to absorb losses and handle risk exposure. Equity to total assets ratio is expected to have positive relation with performance that well-capitalized banks face lower costs of going bankrupt which reduces their costs of funding and risks (Berger, 1995; Bourke, 1989; Hassan and Bashir, 2003).

**Market share**

Market share is considered as one of the determinants of profitability since the bigger the market, the larger the firm's potential for profits. Bigger market share also means more power to the bank in controlling the prices and services it offers to customers (Heggested, 1977).

Heggested (1977) believed that the net effect of growth in the market on profitability could be negative or positive. Increase in demand would push prices higher and at the same time would affect bank costs. Heggested (1977) found a weak adverse relationship between market growth and profitability. Smirlock,(1985) strongly believed that instead of concentration, market share was more dominant in influencing bank's profitability. He investigated 2700 unit banks and found that market share had a positive significant relationship with profitability and not concentration. Smirlock (1985) not only believed that market share influenced profitability but growth in the market created more opportunities for the bank, thus generating more profits. He also found that growth in the market had a positive significant relationship with profits.

For this study, total assets of the banks are used as a proxy for Market share. This is represented by natural logarithm of total assets ( $\log A$ ) (Smirlock, 1985).

**Revenue efficiency**

In literature, banks revenue efficiency is measured by return on asset (ROA) and return on equity (ROE). ROA is defined as net profit divided by total assets and is expressed in percent (Pilloff, 1996). In this study, we use two measures of bank's profitability: return on assets (ROA) and return on equity (ROE). ROA is a general measure for bank profitability reflects bank ability to achieve return on its sources of fund to generate profits. The second measure ROE is defined as net profit divided by shareholders' equity and is expressed in percent.

**Cost efficiency**

Operating costs comprise of all expenses related to the use of physical and labour factors. Since these expenditures are management controllable, expenses management is also considered as an internal determinant of commercial bank profitability. Pilloff (1996), used Total Operating Efficiency ratio which he defined as Operating Expense divide by Operating Revenue as one of the operating indicators to measure cost efficiency of banks. The following ratios are adopted for this study.

**Table 1: Operational Definition of Variables**

Type	Variable	Notation	Measure	Authors
<b>Dependent Variable</b>	Shareholders	EPS	$\frac{\text{Net Profit after tax}}{\text{Number of Shareholders}}$	Pandey, (2005).
	Wealth			
	Capital base (Capital adequacy)	CA	$\frac{\text{Equity}}{\text{Total Assets}}$	Berger, (1995)
<b>Independent Variables</b>	Revenue	ROE	$\frac{\text{Net Profit after tax}}{\text{Total Equity}}$	Pilloff (1996),
	Efficiency	ROA	$\frac{\text{Net Profit after tax}}{\text{Total Assets}}$	
	Market share	Log A	Natural Logarithm of Total Asset	Smirlock, (1985)
	Cost Efficiency	CE	$\frac{\text{Operating expences}}{\text{Operating revenue}}$  $\frac{\text{Total Expenses}}{\text{Total Assets}}$	Pilloff (1996),

Source: Researcher Derivative, 2012

## CONCEPTUAL FRAMEWORK

### Mergers and Acquisitions

A corporation can grow internally by expanding its operation both globally and domestically, or it can grow externally through mergers and acquisitions, strategic alliances and joint venture (Thomas, and Hunger 2010). Merger is the joining of two separate companies to form a single company while Acquisition is the purchase of a controlling interest in another company. In both situations the result is sudden increase in growth which can clearly cause corporate indigestion typified by problems of communication, blurring of policy decisions and decline in the staff's identity with company's product. Mergers and acquisitions differ from 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. Ganghan (2007) also defines merger as a combination of two or more corporations in which only one corporate survives.



### **Types of Mergers and Acquisitions**

There are three major types of mergers (Pandey, 2005). Horizontal merger: This is a combination of two or more of two firms in similar type of production, distribution or any other area of business. Combination of two book publishers to gain dominant market shares is good example of horizontal merger. (ii) Vertical merger: is This a combination of two or more firms involved in different stages of production or distribution for example, joining of a TV manufacturing company and a TV marketing company. Vertical merger may take the form of forward or backward merger. When a company combines with the supplier of material, it is called backward merger and when it combines with customer, it is known as forward merger. (iii) Conglomerate merger: This is a combination of firms engaged in unrelated lines of business activity. A typical example is merging of different businesses like manufacturing of cement products, fertilizers products, electronic products, insurance, investments and advertising agencies (Pandey, 2005).

### **Shareholders Wealth Maximisation**

Pandey, (2005) defined Shareholders wealth maximization as maximizing the net present value of a course of action to shareholders. Net Present Value (NPV) or wealth of a course of action is the difference between the present value of its benefit and the present value of its costs. A financial action that has a positive NPV creates wealth for the shareholders and therefore, is desirable. A financial action resulting in negative NPV should be rejected since it would destroy shareholders wealth. Pandey, (2005) further stated that maximizing the shareholders' economic welfare is equivalent to maximizing the utility of their consumption over time. With their wealth maximized, shareholders can adjust their cash flows in such a way as to optimize their consumption. From the shareholders' point of view, the wealth created by a company through its actions is reflected in the market value of the company's shares. Therefore, the wealth maximization principle implies that the fundamental objective of a firm is to maximize the market values of its shares. The value of the company's shares is represented by their market price that, in turn, is a reflection of shareholder's perception about quality of the firm's financial decision. The market price serves as the firm's performance indicator.

#### **Agency Problems: Managers versus Shareholders Wealth**

Oladipupo and Okafor, (2011) opined that the fundamental and traditional objective of business organizations is maximization of shareholders' wealth. All activities of the organizations are geared towards achieving this objective. One major attribute of public limited liability companies is the separation of ownership from control. Ownership of these companies is usually in the hands of shareholders while the control of the day to day activities is in the hand of management appointed by the Board of Directors. This separation of ownership from control is strength in the sense that it allows division of responsibilities based on specialization. This structure creates principal-agent relationships between the shareholders and managers where the shareholders are the principals and managers are the agents. Basically, managers as agents of the shareholders are expected to act in the best interest of shareholders, which is to maximize their wealth (that is, the net worth of the organisations). However, in practice, there is possibility of managers pursuing their own personal objectives Pandey, 2005; Koutsoyannis and Okafor, 1988). Thus, agency relationship arising from separation of shareholding from control may become weakness where management is tempted to over invest or over-emphasized growth or market shares and would want to maximize its own wealth (which are in form of high salaries and perks) at the expense of maximising wealth of shareholders. Management may avoid taking investment and financial risks that may otherwise be needed to maximize wealth of shareholders. This, however, poses conflict of interest between the

shareholders and management. This is what is usually termed as the agency problem. The gains accrued to shareholders in form of dividends and capital appreciation is the values of the stocks held by them. The stock price appreciation and dividends received constitute the total returns to shareholders. Dividends are payable out of distributable profits and management is not under any obligation to pay dividend (Sections 379-382 of CAMA, 2004). Management is charged with the responsibility of deciding whether to distribute all its earnings (profits attributable to ordinary shareholders) to shareholders in form of dividends or retain part of the earnings to finance future growth.

### **Capital Base**

Generally, capital is required to support business. But the importance of adequate capital in banking cannot be overemphasized. It is an essential element which enhances confidence and permits a bank to engage in banking. A very important function of capital in a bank is to serve as a means of absorbing losses; it serves as a buffer between operating losses and insolvency.

Bank capital is fund attributed to the proprietors as published in the balance sheet (Nwankwo, 1991). Adequate capital is the quantum of funds which a bank should have or plan to maintain in order to conduct its business in a prudent manner. The more capital a bank has, the more losses it can sustain without going bankrupt, capital thus provides the measure for the time a bank has to correct for lapses, internal weakness or negative developments. The bigger the size of the capital, the longer the time a bank has before losses completely erode its capital. Apart from offering protection against losses, adequate capital confers other benefits, among which are: Protection of depositors and creditors in time of failure. Strengthening of banks ability to attract funds at lower cost and enhances a bank's liquidity position. The higher the liquidity of a bank the less risky is the bank.

Developments in the national and international environment affect capital adequacy. The current situation of banks will undoubtedly be influenced by the prevailing and expected economic conditions of the entire economy and the specific area served by the bank. It will also be influenced by the quantity, quality, and liquidity of the bank assets and liabilities and by the quality of bank management. A bank operating in a prosperous economy, with excellent quality assets and adequate liquidity in relation to deposit volatility and economic conditions and having a sound management is likely to require a small amount of capital to adequately maintain solvency. An unfavourable change in any of these factors would increase the possibility of insolvency and would necessitate additional capital. Since capital is a cushion against which to charge off losses, the riskier the asset composition, the more capital is required to maintain a given level of soundness. Similarly, the concentrated and volatile the liabilities, the greater the risk, the greater the amount of capital base required to maintain solvency. The risk in high volatility is derived from the fact that massive withdrawals may force asset liquidation at an inopportune time, and liability maturity mismatch may force refinancing or liquidation at a loss.

### **Market Share**

The percentage of an industry or market's total sales that is earned by a particular company over a specified time period. Market share is calculated by taking the company's sales over the period and dividing it by the total sales of the industry over the same period. This metric is used to give a general idea of the size of a company to its market and its competitors. Investors look at market share increases and decreases carefully because they can be a sign of the relative



competitiveness of the company's products or services. As the total market for a product or service grows, a company that is maintaining its market share is growing revenues at the same rate as the total market. A company that is growing its market share will be growing its revenues faster than its competitors (Heggstad, 1977). Market share increases can allow a company to achieve greater scale in its operations and improve profitability. Companies are always looking to expand their share of the market, in addition to trying to grow the size of the total market by appealing to larger demographics, lowering prices, or through advertising. This calculation is sometimes done over specific countries such as Canada market share or US market share. Investors can obtain market share data from various independent sources (such as trade groups and regulatory bodies), and often from the company itself, although some industries are harder to measure with accuracy than others.

### **Revenue Efficiency**

Revenue efficiency indicates how well a bank is predicted to perform in terms of profit relative to other banks in the same period for producing the same set of outputs (Thanassoulis, 2001). Revenues can more than double if output doubles (scale economies), or revenue may increase by producing two products jointly rather than separately (scope economies) if large firms or joint-production firms can charge higher prices for their services. This may occur if customers prefer services that can only be provided by a larger firm, or if customers enjoy the additional convenience of 'one-stop shopping,' having a greater variety of services delivered by the same firm. These customer preferences may be reflected in higher revenues for the firms that provide the extra services, provided that these firms have the market power to extract some of this consumer surplus (Berger, Humphrey, and Pulley, 1995). Revenue augmentation can come from cross selling banking services, an increased number of clients, and new markets. The notion of such synergies implies that a merger benefits shareholders when the company's post merger share price increases by the value of the potential synergy (Pilloff, 1996).

Most of the studies over the 1990s have concentrated mainly on estimates of cost efficiency (Berger, Hunter and Timme, 1993). Subsequently, bank efficiency studies have been criticized for ignoring the revenue and profit side of banks' operations. Indeed, banks that show the highest inefficiencies and incur the highest costs might be able to generate greater profits than more cost efficient banks (Berger and Humphrey, 1997). The few available studies that estimate revenue and profit frontier functions report efficiency levels that are much lower than cost efficiency levels, implying that the most important inefficiencies are on the revenue side (Maudos, Perez, & Quesada, 2002).

### **Cost Efficiency**

In this regard, cost efficiency gives a measure of how close a bank's cost is to what a best-practice bank's cost would be for producing the same bundle of output under the same conditions (Coelli, Prasada Rao, & Battese 1998). Mergers can potentially improve cost efficiency by increasing scale efficiency, scope (product mix) efficiency, or managerial efficiency. The findings in the banking literature suggest that scale and scope efficiency changes are unlikely to change unit costs by more than a few percent for large banks. Any meaningful cost scale economies that are found typically apply only to relatively small banks. The potential is greater for cost efficiency gains by moving closer to the 'best-practice' cost frontier where cost is minimized for a given output bundle. The cost (managerial) efficiency empirical findings suggest that on average, banks have costs that are about 20% to 25% above those of the observed best-practice banks. This result suggests that cost efficiency could be considerably improved by a merger in which a relatively efficient bank acquires a relatively

inefficient bank and spreads its superior management talent over more resources (Berger, Hunter, and Timme 1993).Pilloff suggests that cost reductions can occur by eliminating redundant labour, closing overlapping bank branches and consolidating back office functions like check clearing. Mergers with operational overlap can result in cost savings of up to 30% of the target's non-interest expenses.

## METHODOLOGY

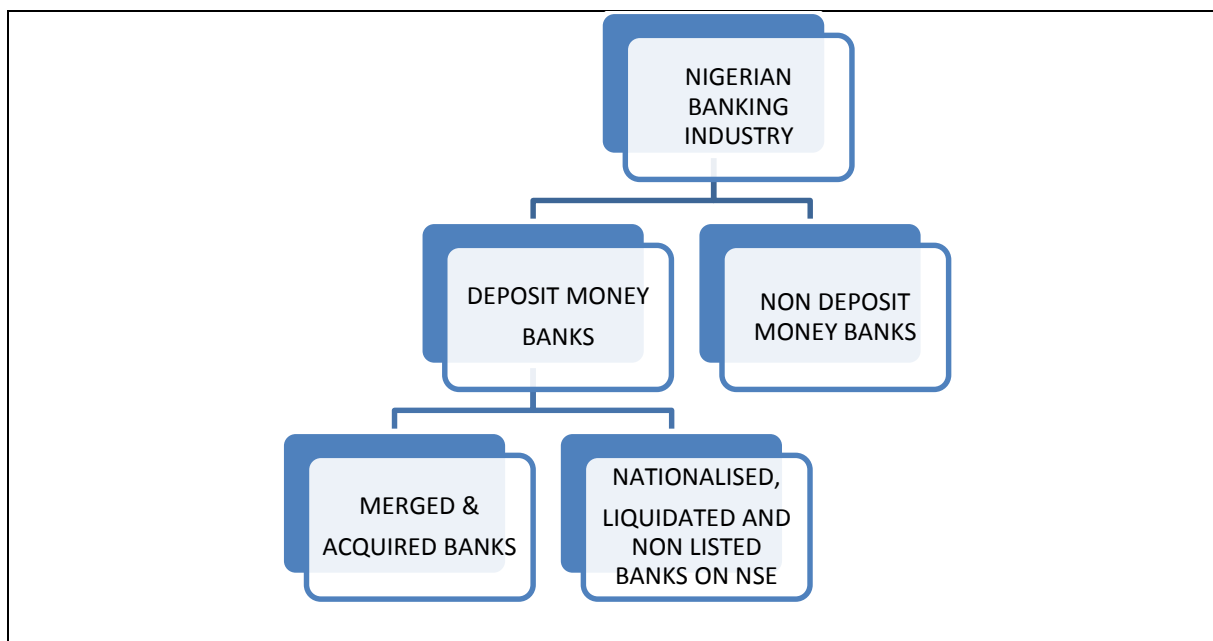
Quantitative and Qualitative research methods were adopted for this study. Marshall and Rossman (1999) point out that in qualitative inquiry, initial curiosity of research often comes from real world observation, emerging from interplay of researcher's direct experience. Mouton (2003) indicates that the research methodology focuses on the research process and the kind of tools and procedures to be used. Quantitative methods were utilized in the form of tables, graphs, statistical measures, accounting ratios and structured questionnaires.

### Population of the Study

For the purpose of this research, the population of the study is twenty five (25) consolidated banks as at 1<sup>st</sup> January, 2006 in the Nigerian Banking Industry (CBN Annual Report, 2006).

### Sampling Method

Stratified Sampling technique was adopted for this study in other to derive sample size from the population. Nigerian Banking Industry was grouped into 'deposit money banks' and 'non deposit money banks'. The deposit money banks were further grouped into two strata. One group was "merged and acquired banks" and second group was "nationalized and liquidated banks".



**Figure 1: Strata of Nigerian Banking Industry**

**Source: Adapted from CBN Annual Reports, 2006**

### Sources of Data Collection

The Primary data was adopted for this study. The Primary data were obtained through the administration of Questionnaires on five hundred and fifty-seven (557) respondents. The prime importance of using primary data for this is study; it helped us to draw information directly from the field.

### Administration of Questionnaires

Five hundred and fifty-seven (557) questionnaires were administered to the respondents between 3<sup>rd</sup> May and 7<sup>th</sup> June, 2012. Three hundred and twenty-five (325) were fully returned. This represents 58.3% of total questionnaires administered for this study. Fifteen (15) banks chosen for this study were visited.

**Table 2: Analysis of Respondents Composition by Questionnaires Administered.(A)**

	FREQUENCY	PERCENTAGE (%)
Retrieved	325	58.3
Not Retrieved	232	41.7
Total	557	100

Source: Field Survey 2012

**Table 5: Analysis of Respondents Composition by Questionnaires Administered (B)**

Banks	Allotted Questionnaire	Retrieved	Not Retrieved / improper filled questionnaires
1 Access Bank Nig Plc	14	10	4
2 Diamond Bank Plc	25	11	14
3 Ecobank Plc	26	17	9
4 Fidelity Bank Plc	34	5	29
5 First Bank of Nig. Plc	73	43	30
6 First City Monument Bank Plc	21	14	7
7 Guaranty Trust Bank Plc	31	28	3
8 Stanbic -IBTC Chartered Bank Plc	17	16	1
9 Skye Bank Plc	23	6	17
10 Sterling Bank Plc	13	12	1
11 Union Bank Plc	60	32	28
12 UBA Plc	115	66	49
13 Unity Bank Plc	23	22	1
14 Wema Bank Plc	17	4	13
15 Zenith Bank Plc	65	38	27
Total	552	325	232

Source: Field Survey 2012

### Multiple Regression Analysis

Multiple regression analysis was adopted for this study. It was used to test hypothesis, estimate population value, predict and describe the outcomes of the model. Software statistical package called SPSS was used to carry out all the analyses. Berger and Humphrey (1992) used multiple regression to analyse 57 mergers occurring between 1981 and 1989. Deyoung (1993) used data on 348 banks mergers between 1987 and 1988. He used univariate, t-test and multiple regression to carry out the analysis. Chung and Weston (1982) employed multiple regression analysis to explore the determinants of the annual number of large conglomerate mergers. They found that

these mergers were positively and significantly related to the difference between yields on lower and higher grade corporate bonds, the ratio of short- to long-term bond yields, 895 and the rate of growth of GNP; the mergers were negatively related to the rate of return on corporate bonds. When they used Tobin's q instead of the last two variables, the authors found a positive and significant effect. Oladipupo and Okafor (2011) used multiple regression to analyse control of Shareholders' Wealth Maximisation in Nigeria. The research focused on who controls Shareholder's wealth maximisation and it affects firm's performance in publicly quoted non-financial companies in Nigeria. The results showed that turnover and retained earnings are of more significance in the control of shareholders wealth than the dividend payment.

### Model Specification:

For this study the functional relationship is given as:

$$\text{SHWEAL} = f(\text{Capbase, Market share, Revenue, Cost,})$$

Where:

SHWEAL = Shareholders Wealth (dependent variable)

The cause and effect model of the relationship are specified as follows:

The multiple regression equation is given as:

$$\text{SHWEAL} = \beta_0 + \beta_1 \text{Capbase} + \beta_2 \text{Market share} + \beta_3 \text{Revenue} + \beta_4 \text{Cost} + \varepsilon$$

$$\text{SHWEAL} = -6.47 + .255 \text{Capbase} + .220 \text{Market share} + .231 \text{Revenue} + .136 \text{Cost} + \varepsilon$$

Where

$\beta_0$  = Population's regression constant

SHWEAL = Shareholders Wealth (dependent variable)

Capbase = Capital base of banks

Revenue = Revenue efficiency

Cost = Cost efficiency

Market share = Market share of the bank

$\varepsilon$  = Model error

### Model Building

Table 3: Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.733 <sup>a</sup>	.537	.531	2.24020	1.881

Source: SPSS Analysis 2012

a. Predictors: (Constant), COST SAVING, CAPITAL BASE, MARKET SHARE, BANK REVENUE

b. Dependent Variable: SHAREHOLDERS WEALTH

Table 4: ANOVA<sup>b</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1855.725	4	463.931	92.444	.000 <sup>a</sup>
	Residual	1600.901	319	5.018		
	Total	3456.627	323			

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**Table 5: Coefficients**

		Unstandardized Coefficients		Beta	T	Sig.
		B	Std. Error			
Equation 1	(Constant)	-.647	.557		-1.162	.246
	CBA	.255	.042	.275	6.068	.000
	MKS	.220	.045	.254	4.919	.000
	BKR	.231	.051	.239	4.551	.000
	COS	.217	.032	.211	4.271	.000

Source: SPSS Analysis 2012

## INTERPRETATION AND DISCUSSION OF FINDINGS

### Pearson correlation coefficient (R)

The Pearson correlation coefficient (R) result of .733 shows a positive correlation. The strength of the relationship between shareholders wealth and capital base, market share, revenue and cost savings is strong.

### Coefficient of determination (R<sup>2</sup>)

A close examination of the results presented in the equation above indicates that the R<sup>2</sup> value of 0.537 indicates that about 53.7% of the total systematic variations in the shareholders wealth (dependent variable) were due to the variations in capital base, market share, banks revenue and cost savings. This means that only about 46.3% of the systematic variations in the shareholders wealth are left unexplained hence captured by the stochastic error term in the estimate model. Also, the adjusted R-square of 0.531 shows that after adjusting for the degree of freedom the entire variables taken together could still explain about 53.7% of the systematic variations in shareholders wealth. This implies that the regression line has a very good fit and thus a high forecasting power of the model.

### F-test Analysis

The F test carried out for the model revealed that  $\rho$  value of 0.000 is less than  $\alpha$  of 0.05 which means the model is statistically significant.

Implications of this result are:

1. Accept  $H_1$  which says there is significant relationship between shareholders wealth and merged banks capital base, market share, bank revenue and cost savings.
2. A large value of F indicates a significant proportion of the variation in shareholders wealth (y) is explained by the regression equation and model is valid
3. The above result shows that the overall model is statistically significant. This means that merged banks capital base, market share, revenue and cost savings (independent variables) taken together have significant impacts on shareholders wealth at 5% level of significance.

**Table: 6 HYPOTHESES TESTING**

	Construct association	of $\alpha$ level	t test	pvalue	Results
<b>Hypothesis 1</b>	Capital base and shareholderwealth	0.05	6.068	0.000	Reject $H_0$
<b>Hypothesis 2</b>	Market share and shareholderwealth	0.05	4.919	0.000	Reject $H_0$
<b>Hypothesis 3</b>	Bank Revenue and shareholderwealth	0.05	4.551	0.000	Reject $H_0$
<b>Hypothesis 4</b>	Cost saving and shareholderwealth	0.05	4.271	0.000	Reject $H_0$

### Capital Base

On the basis of the individual statistic, capital base passed the test of statistics at 5% level of significance under the two-tailed test. The  $p$ -value of 0.000 is less than  $\alpha$  of 0.05.

The implications of the above result are:

1. The model is statistically significant.
2.  $H_1$  is accepted. This means there is significant relationship between shareholders wealth and capital base of the merged banks.
3. This implies that merged banks' capital base is a major determinant of shareholders wealth.

This result agrees with many empirical studies, Okpanachi, (2010) found out from his study that highly capitalised banks had positive abnormal returns to their shareholders.

Kwast and Roses's (1982) also found out from their study that banks' capital has a direct relationship with profitability, as more and more money is pump into the business, more profit will be recorded.

Capital adequacy is also an important indicator of the strength of a bank. The best management cannot turn around an ailing financial institution if it does not have an adequate capital. In essence a direct implication of capital adequacy requirement is that it limits the risk profile of investment of a bank and therefore affects its capacity to achieve a target level of profitability. The essence of capital adequacy lies on the needs to manage or re-structure the balance sheet given the linear relationship between the bank profitability; core capital ratio and the risk-based capital ratio. Increase in capital is expected to enhance earnings by reducing the expected cost of financial distress including bankruptcy; Oluyemi (1996); Nanon (1999) and Mathura (2009).

### Market Share

On the basis of the individual statistic, Market Share passed the test of statistics at 5% level of significance under the two-tailed test, since  $p$ -value of 0.000 is less than  $\alpha$  of 0.05.  $H_0$  is rejected and  $H_1$  is accepted



The implications are:

1. The model is statistically significant.
2.  $H_1$  is accepted. This means there is significant relationship between shareholders wealth and Market Share of the merged banks.
3. This implies that merged banks' Market Share is a major determinant of shareholders wealth.

This finding agrees with the work of Smirlock (1985) which strongly believed that instead of concentration, Market share was more dominant in influencing banks' profitability. He investigated 2700 unit banks and found that market share had a positive significant relationship with profitability and not concentration. Smirlock (1985) not only believed that market share influenced profitability but growth in the market created more opportunities for the bank, thus generating more profits. He also found that growth in the market had a positive significant relationship with profits. Once market share has positive impact on bank's revenue invariably it will create wealth to the shareholders.

Under certain conditions, bank mergers also have the potential to raise profits through an increased exercise of market power in setting prices. Mergers between banks that have significant local market overlap ex ante may increase local market concentration and market share and allow the merged banks to raise profits by setting prices less favourably to consumers (higher loan rates, lower deposits rates). Mergers between banks in different regions generally do not affect market structure significantly and are less likely to raise market power. If anything, such mergers may bring new aggressive competition to bear on previously imperfectly competitive markets and reduce the effect of market power (Akhavain, Berger and Humphrey, 1997). Note that increases in local market concentration and market share need not affect prices substantially if the local market is highly contestable, if there are significant nonbank alternative sources of similar services, or if there is a substantial coincident improvement in bank efficiency from the merger that is partially passed on in consumer prices. They did not control for the efficiency effects of mergers, so that their results may incorporate some price effects of any change in efficiency as well. That is, if mergers increase operating efficiency and part of the change in efficiency is passed on in prices, the measured effect of mergers on prices may understate the market power effects. The measured market power effects may be overstated if mergers reduce efficiency. Some further insights into this problem may be gained by examining the larger literature regarding the effects of market concentration and market share on prices and profits. It should be borne in mind that there may be many differences between the dynamic effects of mergers on performance and the static equilibrium relationships between market structure and performance (Akhavain, Berger and Humphrey, 1997).

### **Bank Revenue**

On the basis of the individual statistic, Bank Revenue passed the test of statistics at 5% level of significance under the two-tailed test. The  $p$ -value of 0.000 is less than alpha  $\alpha$  of 0.05.

The implications are:

1. The model is statistically significant.
2.  $H_1$  is accepted. This means there is significant relationship between shareholders wealth and Banks revenue.
3. This implies that merged banks' revenue is one of the major determinants of shareholders wealth.

This result is supported by many empirical studies such as Mullineaux (1978) and Kwast and Rose (1982). Mullineaux (1978) linked bank size with both profitability and efficiency. He found that bank size had a significant relationship with profitability and bigger banks were more profitable than smaller banks. He also found that unit banks were more profitable than branch banking. Kwast and Rose (1982) also used total assets as one of the independent variables in their profitability study. They divided their samples into two categories, high-profit banks and low-profit banks, and found that total assets had no significant impact on profitability for both categories of banks.

Athanasoglou & Brissimis (2004) employed operating performance methodology on revenue, cost, profit and productivity ratios in the pre-merger and acquisition period 1994-1997 and post-merger and acquisition period 2000-2002. They showed that mergers and acquisitions positively affect merged banks' profitability as well as cost efficiency. Also Athanasoglou & Brissimis (2005) using event study methodology for merger and acquisitions in the Greek banking sector for the period 1998-1999, examined seven cases and showed that target banks achieved higher cumulative abnormal returns than bidder banks.

### **Cost Savings**

On the basis of the individual statistic, Cost Savings passed the test of statistics at 5% level of significance under the two-tailed test. The  $p$ -value of 0.000 is less than alpha  $\alpha$  of 0.05.

The implications are:

1. The model is statistically significant.
2. Reject  $H_0$  and  $H_1$  is accepted. This means there is significant relationship between shareholders wealth and Cost Savings of the merged banks.
3. This implies that merged banks' Cost Savings is one of major determinants of shareholders wealth.

This finding is supported by the work of Berger, Hunter, and Timme (1993). This study suggests that cost efficiency could be considerably improved by a merger in which a relatively efficient bank acquires a relatively inefficient bank and spreads its superior management talent over more resources. Savage (1991) and Shaffer (1993) showed by simulation methods that the potential for scale efficiency gains from mergers between large banks is negligible, but that large managerial efficiency gains are possible. Similarly, using actual merger data, Berger and Humphrey (1992) found that acquiring banks were substantially more cost efficient than the banks they acquired on average. This result confirms the potential for cost efficiency gains if the managers of the acquiring bank are able to run the consolidated bank after the merger as efficiently as they ran the acquiring bank before the merger.

Mergers can potentially improve cost efficiency by increasing scale efficiency, scope (product mix) efficiency, or managerial efficiency. The findings in the banking literature suggest that scale and scope efficiency changes are unlikely to change unit costs by more than a few percent for large banks. Any meaningful cost scale economies that are found typically apply only to relatively small banks. The potential is greater for cost efficiency gains by moving closer to the 'best-practice' cost frontier where cost is minimized for a given output bundle. The cost (managerial) efficiency empirical findings suggest that on average, banks have costs that are about 20% to 25% above those of the observed best-practice banks (Akhavain, Berger and Humphrey, 1997).

The empirical bank merger literature confirms this potential for cost efficiency improvement from mergers. However, this literature also suggests that the potential for cost efficiency improvement generally was realized. Most merger studies compared simple cost ratios, such as the operating cost to total assets ratio, and typically found no substantial change in cost performance associated with bank mergers (e.g., Rhoades 1986, 1990, Srinivasin 1992, Srinivasin and Wall 1992, Linder and Crane 1992, Pilloff 1996). There are methodological problems with using simple cost ratios to measure cost efficiency, including the fact that such ratios do not control for differences in input prices and output mix. Nevertheless, the result of these ratio studies are consistent with the small number of studies that calculated the efficiency effects of mergers by measuring the distance from the best-practice cost frontier and found little or no improvement on average in cost efficiency (Berger and Humphrey 1992, Rhoades 1993, Peristiani 1995, DeYoung 1996). For example, Berger and Humphrey (1992) found about a 5 percentage point average improvement in cost efficiency rank relative to peer group, but the improvement was not statistically significant.

## **CONCLUSION AND IMPLICATION OF FINDINGS**

The findings have provided an insight into some of the implications of banks mergers and acquisition on shareholders wealth in Nigerian banking industry. The major implication of the finding is that new capital brought in by shareholders of merged banks as result of consolidation policy triggered increase in banks operations in post consolidation era. It increased size of merged banks total assets. Revenue was also on increasing trend while cost of operations reduced due to elimination of redundancy and duplication of branches.

Increase in capital base of merged banks does not only enhance revenues generation but act as hedge against future losses and secure equity of the shareholders. Mergers and acquisitions led to changes in banks share ownership. This directly strengthened the corporate governance of these banks. More importantly, increase in capital base of merged banks had revolutionised the way banks do their business. Because of excess capital at their disposal they were able to compete favourably with foreign banks in the area packaging loan deals to aviation, oil and gas, shipping, telecommunication and other high risk (off balance sheet) businesses. Mergers and acquisitions improved cost structure of the banks. Fraudulent and incompetent staff was eliminated while unprofitable branches were closed down.

Mergers and acquisitions also brought about globalisation and rapid advances in information technology that drive the way international banking businesses are done and also impact on survival strategies for domestic competition. Automation, e-banking and online banking are some of the options in vogue now that any bank can only ignore to its disadvantage. This impetus from information technology have impact on financial product design and delivery with implications for staff training, internal controls and operating cost (Dongli, 2008).

## **RECOMMENDATIONS TO BANKS MANAGEMENT, SHAREHOLDERS AND GOVERNMENT**

The outcome of this study suggested a renew focus on elusive factors such as bank revenue efficiency, market share and cost efficiency in an attempt to grow profits, sustain bank's value and create wealth to shareholders. Banks' Management should also give proper attention to scope and scale of economies; eliminate redundancy, duplication, corrupt and inefficient staff. In addition, they should do all in their power to maximise wealth for their shareholders.

It is imperative for shareholders to always bring in fresh capital, if they want their banks to succeed in the fierce competitive banking environment in Nigeria. Shareholders should educate themselves about their companies and take interest in the affairs of their banks. They should seek recent information on banks internal affairs and their performance on the stock exchange floor.

Shareholders Association should form pressure group that will prevent frequent liquidation of banks. One by being watch dog to the banks management. Two, by putting pressure on Government agencies and politicians that take loans from banks with aim of not paying back.

Furthermore, the followings are recommended in other to protect shareholders wealth and their stakes from future destruction.

1. CBN and NDIC should be more vigilant in their supervisory roles to the banks.
2. CBN should introduce new stringent rules and block the loopholes of the old rules, in other to protect and guide shareholders and depositors stakes in the banks.
3. Nigerian Government should play active role in Nigerian Banking Industry has it been done in United States of America. Soft loans (Bailout loan) should be given to banks in time of distress rather asking them to go through the process of liquidation. This will prevent destruction of shareholders wealth has witnessed in the case of Oceanic Banks and Intercontinental Banks.
4. Corporate Governance should be strengthened in our banks. Corporate ethics should be adhered to by banks managements. CBN should ensure that Management staff are not given themselves credit facilities that are detriment or injurious to the performance of the banks.
5. Government should give Nigerian investing public vibrant Stock Exchange. A vibrant Exchange market will give investors free exists and free entry and this will prevent wealth destruction of shareholders.

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