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THE EFFECT OF MERGER ON DEPOSIT MONEY BANKS PERFORMANCE IN THE NIGERIAN BANKING INDUSTRY

IKPEFAN, OCHEI AILEMEN
Department of Banking & Finance, Covenant University, Ota, Ogun State

KAZEEM, BAYO LIAFEEZ OYERO
Department of Business & Finance, Crescent University,
Abeokuta, Ogun State

ABSTRACT: *The study objective gives an insight into the effectiveness of economic policy reforms in the Nigerian banking industry. This study examines the impacts of merger on deposit money banks performance in Nigeria between 2000 and 2009. The period was characterized by financial deregulation, the Global economic crisis, and bank restructuring programs. The panel data ordinary least squares approach is the methodology employed to investigate if there is any significant effect on the performance of banks from the pre to the post merger periods, in order to detect whether bank mergers produce any performance gains in the Nigerian banking industry. The evidence shows that merger created synergy as indicated by the statistically significant increasing post-merger financial performances although banks should not jump at any merging opportunity that offers itself because the exercise is not an opportunistic one. We therefore recommend that merger being a relatively new phenomenon in the Nigerian banking environment should be given more encouragement by the regulatory authorities.*

JEL CODE: G34
KEYWORDS: Merger, Performance, deposit money banks

BACKGROUND TO THE STUDY

Banking reforms have been an ongoing phenomenon around the world since the 1980s but it has been very frequent and intense in recent times in developed and developing countries due to the effect of globalization which is triggered by continuous integration of the world market and economies. Between 1980 and 2010, three-fourths of the International Monetary Fund's member countries have experienced significant banking sector problems though the elements involved are unique to each country based on historical, economic and institutional background. Between 1999 and 2003, a space of nine years, no fewer than 36 banks in the country closed down due to insolvency; four, twenty-six and three in 1995, 1998 and 2000 respectively. In 2002 and 2003, at least a bank collapsed (Umar, 2009).

It was glaringly evident that the Nigerian banking industry was in desperate need for reform. After the 1986 structural adjustment program induced boom that brought about

banking license liberalization and deregulation of interest rates, the distress syndrome slowly and surely crept into the industry accentuated by the Prudential Guidelines of 1990 when banks were directed by the regulatory authority that is Central bank of Nigeria (CBN) to classify loans into performing and Non-performing accounts. As a result, many banks were liquidated, either singly or in groups. This did not provide a final solution as the CBN had identified about twenty five banks with liquidity problems. Assessment showed that the overall health of the Nigerian banking system was generally satisfactory but the state of some banks were less cheering. As at the end of March 2004, the CBN ratings of all the banks classified 62 as sound, 4 as marginal, 11 as unsound and 2 did not render any returns (Bello, 2005). Neither the CBN governor nor the deputy governor cited poor supervision by the regulatory bodies of CBN and Nigeria deposit Insurance Corporation (NDIC) in their presentations as one of the reasons that created the distress syndrome in the banking industry which eventually saw the demise of many banks. The Nigerian banking industry then witnessed a lot of stress, uncertainty and anxiety. This eroded the confidence of the general public which used to be a great asset of the banking sector in the past. These challenges greatly impaired the quality of the bank's assets as non-performing assets became unbearable and huge burdens on the banks as macroeconomic activities seriously slowed down.

There were 89 banks with 3,382 branches predominantly in the urban centers as at June 2004 characterized by structural and operational weaknesses such as low capital base, insolvency and liquidity, over reliance on public sector deposits and foreign exchange trading, poor asset quality, weak corporate governance, ineffectiveness in the support of real sector which is about 24% of the gross domestic product, compared to Africa's average of 78% and 272% for developing and developed countries respectively (Eseoghene, 2009). It was against this background that the former Governor of the Central Bank of Nigeria, Professor Chukwuma Soludo announced a 13-point reforming program in the entire banking industry. The recapitalization of the capital base of banks constituted the first phase of the reform policy in the entire banking sector of the Nigerian economy. The key elements in the agenda included minimum capital base of ₦25 billion with a deadline of 31st December, 2005, consolidation of banking institutions through mergers and acquisitions and eight other items. Of all the reform agenda, the issue of increasing shareholder's fund to ₦25 billion generated so much controversy especially among the stakeholders and the need to conform before 31st December, 2005.

This paper shall attempt to empirically examine the effect of merger on bank performance by considering the state of the merged banks before and after consolidation. The data to be used are secondary time series data on selected variables covering a period 10 years i.e. 2000-2009. The broad objective of this paper is to investigate into the effect of mergers on the performance of banks in Nigeria. This is to see whether or not there has been any significant effect on the Nigerian banking sector.The following research questions should be answered: What was the state of the banks before consolidation? What are the challenges posed by the bank consolidation policy? How would mergers promote bank's performance? How would bank mergers affect competition in the Nigerian banking industry? The hypothesis in this paper is thus:

H_0: Merger has no significant effect on bank's performance.

This paper will serve as a yardstick for the justification of the recent mergers in the Nigerian banking industry. Section two will focus on review of relevant literature with respect to the subject topic. Section three focuses on the nature of research method, model specification, and description of variables used in the estimation technique. Section four and five dwells on data presentation and analysis and discussion of results/findings. Section six ends the paper conclusion and policy recommendations.

LITERATURE REVIEW

According to Bello (2005), banking system is the backbone of financial intermediation through the mobilization and channeling of financial resources. Banks in performing their pivotal role in the economy, facilitate financial settlement through the payment system, influence money market rates and provide a means for international payment. The sector mobilizes funds from the surplus-spending units into the economy and by on-lending such funds to the deficit spending units for investment, banks in the process increase the quantum of national savings and investment (Mordi, 2004). Banks are the most regulated institution in Nigeria because of their role as financial intermediaries. During the mid 1990's, there was growth in the number of banks and in addition to that, the financial sector witnessed the boom and bust cycle, which was characterized by financial liberalization with deregulation of interest rate and the loosening of credit allocation quotas. Consequently, there came the emergence of massive entry of new banks that specialized in foreign exchange operations and taking advantage of the price disparity (CBN, 2005). While the number of banks multiplied during that period and financial sector boomed, even though, financial intermediation, as measured by credit to the private sector and deposits declined.

Imala (2005) postulated that the objectives of banking system are to ensure price stability and facilitate rapid economic development. Regrettably these objectives remained largely unattained in Nigeria as a result of some deficiencies in our banking system, these include; low capital base, as average capital base of Nigeria banks was ₦10 million which was very low, a large number of small banks with relatively few branches, the dominance of a few banks, poor rating of a number of banks, weak corporate governance evidence by inaccurate reporting and non compliance with regulatory requirements, insolvency as evidence by negative capital adequacy ratios of some banks, eroded shareholders fund caused by operating losses, over dependence on public sector deposit, and foreign exchange trading and the neglect of small and medium scale private savers. The Nigeria banking sector plays a marginal role in the development of the real sector.

Soludo (2005) and Somoye (2008) observed that many banks appear to have abandoned their essential intermediation role of mobilizing savings and inculcating banking habit at the household and micro enterprise levels. A combination of many weak elements of financial institutions could jeopardize the health of the system. This results primarily from extraction of rents which are made possible through weak regulatory and supervisory framework, weak safety nets arrangements, poor crisis resolution techniques, poor corporate governance and the structure of the banking system (Ajayi, 2005). While reforms in the banking industry are aimed at addressing issues such as governance, risk management and operational inefficiencies, the wave of reform is around firming up capitalization. Capitalization is an important component of

reforms in the banking industry, owing to the fact that a bank with a strong capital base has the ability to absolve losses arising from non-performing liabilities (NPL). Attaining capitalization requirements is achieved through consolidation, convergence as well as the capital market. Thus, banking reforms are primarily driven by the need to achieve the objectives of consolidation, competition and convergence (Herald, 2004) in the financial architecture.

Brockington (1987), Kurfi (2003) and Umoren (2007), defines a merger as an arrangement by which all the assets and resources of two or more companies are brought together under the control of one company which is owned jointly by the stockholders of the original companies and shareholders of the two companies now become shareholders of the surviving company. 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".Sudarsanam (2003) stated that terms such as 'merger', 'acquisition', 'buyout' and 'takeover' are used interchangeably and are all part of the merger parlance, but was quick to point out the differences when he described merger as the process whereby corporations come together to combine and share their resources to achieve common objectives with the shareholders of the merged firms still retaining part of their ownership and this may sometimes lead into a new entity being formed while acquisition resembles more of an arm's-length deal, with one firm purchasing the assets or shares of the other and the shareholders of the acquired firm ceasing to be owners of the new firm. The view of Sudarsanam (2003) conforms to those of Okonkwo (2004).

Out of the 25 banks that achieved the N25 billion requirements, **Table 2-1** below shows that 14 of them were the product of M&A involving 69 banks, while only 6 grew organically (CBN, 2005). The wave of M&A that began in 2004 has not abated as the merger between IBTC Chartered Bank Plc and Stanbic Bank of Nigeria Limited after the December 31, 2005 deadline has further reduced the number of banks from 25 to 24 (Adesida, 2008; Ekundayo, 2008), while those banks that were unable to recapitalize which were earmarked for liquidation by the banking regulatory authorities have virtually been acquired by successfully recapitalized banks (Okwe, 2006).

One major challenge of consolidation is capacity building for risk management for both the regulators and operators. Both constituencies of the bank system need to enhance their risk management skills and indeed acquire new ones, covering the three plant of risk recognition, evaluation and monitoring (Adedipe, 2005).Madubueze (2007) stated among others rapid expansion of branch networks of banks. The down side of that is the likely inadequacy of qualified and experienced hands on ground with the result that qualified hands are increasingly on demand and with attendant high staff mobility and corresponding operations instability. Additionally, many Nigerian banks are now opening off-shore branches to make impact beyond the borders of the country. There is the need for banks to acquaint themselves with the prevailing laws and regulations guiding banking in those countries and endeavour to always operate with decorum within the bounds of those laws and regulations so as to ensure that their operations do not bring a bad name to the country.

The Nigeria bank operating abroad has by implication become a formal ambassador of our country. There is the challenge of human capital development which has become very pronounced with the emergence of mega-banks. Banks have the challenge of subjecting their staff to necessary training and skills development for them to cope with the demands of current level of activities in today's banks in Nigeria. Besides the challenge of inadequate skilled manpower, the availability of increased funding to mega-bank has given them the freedom to source more sophisticated operational facilities and that on its own has created new skills gaps in how to operate them.

Table 2-1 NIGERIAN BANKS AFTER CONSOLIDATION

NEW BANKS	MERGING PARTNERS	SHARE CAPITAL(bn)
Access Bank	Access, Marina Intl and Capital Banks	28.6
Afribank	Afribank and Afribank Merchant Bankers International	29
Bank PHB	Platinum Bank and Habib Bank	25
Citibank-NIB	Citibank Nigerian Limited and Nigerian Intl Bank	25
Diamond Bank	Diamond Bank and Lion Bank	33.26
ECO Bank	Stand Alone	57
ETB	ETB and Devcom Bank	26.36
FCMB	FCMB, Co-operative Dev. And Nig American Banks	30.6
Fidelity Bank	Fidelity, FSB and Manny Bank	29
First Bank	First Bank, FBN Merchant Bank, MBC Intl Bank	44.6
First Inland Bank	First Atlantic Bank and Inland Bank PLC	30.6
GTB	Stand Alone	34
Intercontinental	Intercontinental, Equity, Global and Gateway Banks	51
Oceanic Bank	Oceanic Bank and International Trust Bank	31
Skye Bank	Prudent, EIB, Bond, Reliance, Cooperative Banks	37.7
Spring Bank	Citizen, Guardian express, Omega, TIB and Fountain Banks	27.6
Stanbic IBTC		25
Standard Chartered	Stanbic Bank and IBTC Chartered Bank	26.6
	StandAlone	25
Sterling Bank	Trust Bank of Africa, Magnum and NBM Banks	29
UBA	UBA and Standard Trust Bank	58.6
Union Bank	UBN, Broad, UTB, UBN Merchant Bank	30.6
Unity Bank	Intercity, Interstate, Tropical, Pacific, Centre point Banks	35
Wema Bank		38
Zenith Bank	Wema Bank and National Bank	
	Stand Alone	

Source: Nigerian Fact Book 2009

Ademola (2008) posited that one of the objectives of a responsible government is to evolve a strong and virile economic and financial system in which all its citizens would participate

without discrimination. Government therefore, strives to eliminate imperfections and abuses that may be detrimental to the orderly development of the political, economical and financial system. Performance is not a matter of only profit. Its criteria also include Capital adequacy, Assets quality, Management competence, Earnings and Liquidity. Akinwumi (2010), states that capital adequacy is one of the important indicators of the strength and performance of a bank. Asset quality refers to the incidence of large amounts of non-performing loans that can put bank management under severe stress. Management competence can make an important difference between sound and unsound banks. Poor management usually manifests itself in form of excessive operating expenses, inadequate administration of loan portfolio, overly aggressive policies to attract deposits. Earnings would seriously affect banks in generating income on their loan portfolio. Liquidity in terms of adequacy to meet maturing obligations and demand for new credits; inadequate liquidity damages banks' reputation while excess liquidity will retard their earnings. Jimmy (2008) assumes that more competitive environment will encourage bank to be more efficient by lowering costs and increase revenue trough efficiently allocation of resources. As the most affected sector, it is important to distinguish the effect of the merger on bank performance. In general, there are three main reasons for performance measurements: a concern for value of money in all evaluation process; a concentration upon economy, efficiency and effectiveness; and a focus on management rather than administration staff (Sharma, 2001).The most widely applied measure to banks' performance is financial measures, which is not the same as production efficiency, which motivates this study. Shepherd (2010) classified efficiency in three main categories; internal efficiency which can be attained in well-managed firms which minimize costs for any given level of output, allocative efficiencies in which all firms and consumers reach equimarginal conditions of price equal to marginal cost including marginal rates of substitution and transformation. Thirdly, dynamic efficiency deals with how to present resources for future interventions.

METHODOLOGY

The research design used in this paper is the descriptive research design which includes the time-series and cross-sectional data analysis. The critical indicators for examining the effect of mergers on bank performance are: return on assets, asset base, deposit growth rate, the loans to deposit ratio and total value of shareholders funds. The research sample includes ten banks that were involved in the merging process, the banks are: Access bank Plc, Diamond bank Plc, First City Monument bank, Fidelity bank Plc, First bank Plc, Intercontinental bank Plc, Oceanic bank Plc, United bank for Africa, Union bank, Wema bank Plc. The scope of the study is a period of ten years. This is a composition of four years of pre-merger period, a year of merger and four years of post-merger period.

Model Specification

To conduct the investigation that examines the effect of mergers on the performance of banks. The two constructs include bank performance and mergers. The model for this study takes the following form:

$Y = \beta_0 + \beta X_1 + \mu$

Where,

y= bank performance (Dependent variables)

x= mergers (Independent variables)

β= Coefficient of mergers
μ= Error Term
Explicitly, equation 1 can be defined as:
Bank performance= f (mergers) + e
Representing equation two with the variables of the construct, hence the equation below is formulated with inclusion of a control variable dummy. The dummy was critically included because it would aid in the understanding of the effect of mergers 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 (mergers and bank performance). Therefore,
BPERF = f (SIZE, DGR, LTDR, DMERGER) ..... Equation 1
Relationship between return on assets, size of the bank, deposit growth rate and the loans to deposit ratio which can be written in Linear form:

$$BPERF = \beta_0 + \beta_1 SIZE_{it} + \beta_2 DGR_{it} + \beta_3 LTDR_{it} + \beta_4 DMERGER_t + \mu_{it} \ldots\ldots$$ Equation 2

Where:

BPERF	=	return on assets**;** net profit after taxes / total assets
BDEP	=	value of deposits received by the bank
SIZE	=	size of the bank
DGR	=	deposit growth rate of the bank
LTDR	=	loans to deposit ratio
DUMMYMERGER	=	variable to capture the periods of bank merger.

□□□□□□□□□□□□and□□□□ are the unknown parameters. On apriority,
For both models *1* and *2*, $\beta_1>0$, $\beta_2>0$, $\beta_3>0$, $\beta_4>0$
Our prior expectation about the relationship between merger and bank performance is that merger has a significant effect on the performance of banks. This paper employs 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 Ordinary Least Squares (OLS) methodology. Panel regression techniques are used because it has the following advantages. First, it has the advantage of giving more informative data as it consists of both the cross sectional information, which captures individual variability, and the time series information, which captures dynamic adjustment. Unlike time series studies which is plagued with multi-collinearity issues, panel data gives less collinearity among the variables, more degrees of freedom and more efficiency. Hence this will be useful in effectively studying the effects of the independent variables on bank performance. Most studies used the E-views 5.0 package but this study will use the Stata 10.1 package in order to be able to test between both pre and post merger periods.

$Yt = C + \beta 1t\ X1t + \beta 2t\ X2t + \ldots\ldots\ldots + \beta it\ Xit + Uit$
where: Yt = dependent variable (ROA);
C = intercept;
βt = slope of the independent variables
Xt = independent variables; and
Ut = error term (Mills, 1999).
.

DATA PRESENTATION AND ANALYSIS

This section focuses on the presentation and analysis of the descriptive statistics of the variables, and their implications. Also, the correlation matrix of the variables will be presented and analyzed.

Table 4.-1 Descriptive Statistics of Selected variables

Variables	Statistics	All period All period	Pre-merger	Post-merger
ROA	Mean	0.0406	0.0319	0.0492
	Std. Dev	0.1523	0.0165	0.2155
	Min	-0.5313	-0.0016	-0.5313
	Max	1.0000	0.07654	1.0000
SIZE	Mean	6.8982	6.8296	6.9668
	Std. Dev	1.5438	1.0142	1.9434
	Min	0.0000	5.0791	0.0000
	Max	9.0923	7.9389	9.0923
LDGR	Mean	-0.9614	-1.1533	0.7694
	Std. Dev	1.2608	1.4359	1.0367
	Min	-4.6565	-4.6565	-2.9059
	Max	5.8777	5.8777	1.0873
LLTDR	Mean	-0.8191	-0.9464	0.6917
	Std. Dev	0.5436	0.3674	0.6549
	Min	-3.1559	-1.7510	-3.1559
	Max	2.2475	-0.1441	2.2475
Observations		100	50	50

Source: computed by author using STATA SE 10

Note: the size of the companies used for this research was determined by the log of the assets of the company, the return on assets was determined by dividing the profit before tax by the total asset of each company, DGR represents the deposit growth rate and LTDR represents the loans to deposit ratio

The descriptive analysis enables us to have first hand information of the key issues for this research work. From table 4-1 above it can be seen that the average return on asset of the firm-measure of performance in the all period is 4%. In the pre merger period, it is 3% but it increased in the post period to 5%,. This shows that management of the banks has been able convert the bank's assets into net earnings to a small extent after the merger. The mean size of the banks

measured by their asset increased in the post period to 6.96 from 6.82 in the pre merger period. The mean of their deposit growth rate of the banks firms increased from -1.15 in the pre merger period to 0.77 in the post merger period which means that the deposits of the banks lodged in by customers increased after merging. The mean of their loan to deposit ratio increased from -0.94 in the pre-merger period to 0.69 in the post merger period, this means that the loans received from the bank deposits increased overtime. Correlation is a measure of the relation between two or more variables. The measurement scales used should be at least interval scales, but other correlation coefficients are available to handle other types of data. Correlation coefficients can range from -1.00 to +1.00. The value of -1.00 represents a perfect negative correlation while a value of +1.00 represents a perfect positive correlation. A value of 0.00 represents a lack of correlation. Correlation relationship between variables can be interpreted using the following rules; -1.0 to -0.7 strong negative association, -0.7 to -0.3 weak negative association, -0.3 to +0.3 little or no association, +0.3 to +0.7 weak positive association, +0.7 to +1.0 strong positive association. From the above tables, we can see that in the all period the relationship between the firms return on assets and size is strong negative correlation (-0.6072), on deposit growth rate (0.1745) and the loans to deposit ratio (0.1363), there is no correlation.

TABLE 4-2 Correlation Test
ALL PERIOD
PRE-PERIOD

	ROA	SIZE	LDGR	LLTDR
ROA	1.0000			
SIZE	-0.6072	1.0000		
LDGR	0.1745	0.0949	1.0000	
LLDR	0.1363	0.1343	0.0232	1.0000

POST-PERIOD

	ROA	SIZE	LDGR	LLTDR
ROA	1.0000			
SIZE	-0.7022	1.0000		
LDGR	0.2754	-0.0618	1.0000	
LLTDR	0.1568	0.0186	-0.0918	1.0000

Source:

	ROA	SIZE	LDGR	LLTDR
ROA	1.0000			
SIZE	0.2644	1.0000		
LDGR	0.1179	0.3232	1.0000	
LLTDR	-0.2587	0.4997	0.0845	1.0000

The relationship between size and deposit growth rate is no correlation (0.0949) and with the loan to deposit ratio (0.1363), there is also no correlation. The relationship between deposit growth rate and the loans to deposit ratio is also no correlation (0.0232). In the pre-merger period, the relationship between the firm's returns on assets and size is no correlation (0.2644), on deposit growth rate (0.1179) is also no correlation and on loans to deposit ratio (-0.2587), there is also no correlation. The relationship between size and deposit growth rate is weak positive correlation (0.3232) and between size and loan to deposit ratio (0.4997), also weak positive correlation. The relationship between deposit growth rate and loans to deposit ratio is no correlation (0.0845). In the post-merger period, the relationship between the firm's returns on assets and size is weak negative correlation (-0.7022), on deposit growth rate (0.2754) is no correlation and on loans to deposit ratio (0.1568), there is also no correlation. The relationship between size and deposit growth rate is strong negative correlation (-0.0618) and between size and loans to deposit ratio is no correlation (0.0186). The relationship between deposit growth rate and loans to deposit ratio is weak negative correlation (-0.0918).

DISCUSSION OF RESULTS/FINDINGS

This study will make use of a panel regression model as discussed earlier. While it is possible to use ordinary multiple regression techniques on panel data, they may not be optimal. The estimates of coefficients derived from regression may be subject to omitted variable bias - a problem that arises when there is some unknown variable or variables that cannot be controlled for that affect the dependent variable. Despite their substantial advantages, panel data pose several estimation and inference problems. Since such data involve both cross-section and time dimensions, problems that plague cross-sectional data (e.g., heteroscedasticity) and time series data (e.g., autocorrelation) need to be addressed (Gujarati 2004). There are several estimation techniques that have been developed to address these problems, though the most prominent of them are the Fixed Effects Model (FEM) and the Random Effects Model (REM). Fixed effects regression is the model to use when you want to control for omitted variables that differ between cases but are constant over time. This model allows for each cross sectional unit to differ in the model in recognition of the fact that each cross sectional unit may have peculiar characteristics of their own. It lets you use the changes in the variables over time to estimate the effects of the independent variables on your dependent variable, and is the main technique used for analysis of panel data. The random effects model will be suitable if you have reason to believe that some omitted variables may be constant over time but vary between cases, and others may be fixed between cases but vary over time as the random effects model can include both types. Probability Figures are significant at 1%, 5% or 10% levels where 1% lies between 0.000 and 0.01, 5% lies between 0.01 and 0.05, 10% lies between 0.05 and 0.099.

TABLE 5-1 All Period

Dependent/Regressand: ROA

REGRESSORS	OLS	FE	RE
SIZE	-0.0649879 (0.002)	-0.0940678 (0.000)	-0.0702526 (0.000)
LDGR	0.0280091 (0.018)	0.0062719 (0.413)	0.0232231 (0.008)
LLTDR	0.061458 (0.141)	0.0161431 (0.375)	0.05307 (0.009)
CONSTANT	0.5661101 (0.002)	0.7086965 (0.000)	0.590956 (0.000)
R SQUARE	0.4703	0.6596	0.6054
F STAT	3.61 (0.0161)	56.19 (0.0000)	
WALD			96.83 (0.0000)
HAUSMAN TEST			0.000

Note: probability figures in parenthesis, significant at 1%, 5% or 10%. OLS; Ordinary least squares, FE; Fixed Effect and RE; Random Effect

Source: Computer Printout

From the hausman tests results above, it can be observed that the coefficients are significant at the 1% level of significance and thus it can be concluded that the coefficients estimated by the random effects differ from those estimated by the fixed effects, hence we use the random effect results. In the regression analysis, size of the firm is transformed into a non-linear form by taking the natural logarithm. This adjustment brings the coefficient in line with the other variables and also removes the potential disturbance of the OLS assumptions. It can be observed that in the OLS and random effect result respectively, size has an inverse relationship with the ROA and is statistically significant at 1% level of significance respectively. The inverse relationship between size and ROA implies that as the size of the bank increases the return on assets of the firm reduces and vice versa. This means that the size which represents total assets in their annual reports of the bank doesn't necessitate an efficient performance for the bank i.e. their return on assets doesn't justify the size of the bank. The negativity of the coefficient of size is not in conformity to the economic apriori expectation of a positive impact of mergers on bank performance.

It can also be observed that in the OLS and random effect results, deposit growth rate has a positive relationship with bank's performance and is statistically significant at 5% and 1% level respectively. The positive relationship between the deposit growth rate and the return on assets of the firm suggests that as the deposit growth rate of the bank increases so does the performance, this means that the deposit growth rate of the firms affect their performance. In both results, loans to deposit ratio has a positive relationship with firm performance. LTDR is statistically insignificant and statistically significant at 1% level in the OLS and random effect results respectively. The positive relationship suggests that the as loans to deposit ratio increases,

return on assets is also increasing. Hence, LTDR has a significant effect on the performance of banks as it indicates the extent to which deposits are used to meet loan request. The R^2 is 60%, and this implies that the independent variables explain about 60% of the changes or variation in the dependent variable in the model. It shows that the size of the banks, the deposit growth rate of the banks and their loan to deposit ratio account for about 60% of the changes in firm performance. The R^2 can be used to measure the goodness of fit in the model which implies how well the estimated regression model fits the actual data.

The F-stat has a value of about 4 in this period according to the OLS regression and in the random effect 96 and are statistically significantly different from zero at 5% and 1% level of significance and this shows the overall joint significance of the variables in the model as they explain changes in the dependent variable

TABLE: 5-2 Dependent/Regressand: Return on Assets (ROA)

	PRE-MERGER PERIOD			POST-MERGER PERIOD		
REGRESSORS	OLS	FE	RE	OLS	FE	RE
SIZE	0.0085804 (0.001)	-0.0001628 (0.988)	0.0067548 (0.028)	-0.0765485 (0.000)	-0.1086713 (0.000)	-0.0773394 (0.000)
LDGR	-0.0000998 (0.948)	0.0006541 (0.645)	-0.0001497 (0.920)	0.0520576 (0.012)	-0.0054614 (0.799)	0.0466563 (0.055)
LLTDR	-0.0234089 (0.001)	0.0044949 (0.643)	-0.0159927 (0.030)	0.0633711 (0.050)	0.0290979 (0.627)	0.0650399 (0.052)
CONSTANT	-0.0489265 (0.028)	0.0384222 (0.610)	-0.0292524 (0.253)	0.666335 (0.000)	0.8228904 (0.000)	0.6706601 (0.000)
R SQUARE	0.2735	0.1794	0.6336	0.5838	0.7775	0.6962
F STAT	5.77 (0.0019)	0.12 (0.9465)		21.51 (0.0000)	37.26 (0.0000)	
WALD			6.74 (0.0807)			57.20 (0.0000)
HAUSMAN TEST			11.40 (0.0097)			0.000

Note: probability figures in parenthesis, significant at 1%, 5% or 10%. OLS; Ordinary least squares, FE; Fixed Effect and RE; Random Effect.

Source: Computer Print out

Pre-merger Period

From the hausman tests results above, it can be observed that the coefficients are significant at the 1% level of significance and thus it can be concluded that the coefficients estimated by the random effects differ from those estimated by the fixed effects, hence we use the random effect results. In the regression analysis, it can be observed that both in the OLS and random effect result, size of the firm is transformed into a non-linear form by taking the natural logarithm. This adjustment brings the coefficient in line with the other variables and also removes the potential disturbance of the OLS assumptions. Size has a positive relationship with the ROA and is statistically significant at 1% and 5% respectively. The positive relationship between size and ROA suggests that as the size of the bank increases the return on assets of the bank increases and vice versa, this means that as the size of the bank increases the performance of the bank i.e. the larger the size of the bank, the better their performance. Hence, size of the bank has a significant effect on the performance of the banks. It can also be observed that in the OLS and random effect result respectively, deposit growth rate has a negative relationship with the ROA and is statistically insignificantly. The negative relationship between deposit growth rate and ROA suggests that as the deposit growth rate of the bank increases, the return on assets of the bank decreases and vice versa, this means that some times the performance of the bank is not justified by the amount of deposits received by such bank. Hence, deposit growth rate of the bank doesn't have a significant effect on its performance.

In the regression analysis, it can also be observed that in OLS and random effect result, loans to deposit ratio has a negative relationship with the ROA and is statistically significant at 1% and 5% respectively. The negative relationship between loans to deposit ratio and ROA suggests that as the ratio increases, the return on assets of the firm decreases and vice versa. This means that loan to deposit ratio doesn't increase the profit ratio or performance ratio of the bank. Hence, loans to deposit ratio of the firms does have a significant effect on the performance of the banks. The R^2 is 63%, and this implies that the independent variables explain about 63% of the changes or variation in the dependent variable in the model. It shows that the size of the banks, the deposit growth rate of the banks and their loan to deposit ratio account for about 63% of the changes in firm performance. The R^2 can be used to measure the goodness of fit in the model which implies how well the estimated regression model fits the actual data. The F-stat has a value of about 5 in this period according to the OLS regression and in the random effect 6 and are statistically significant at 5% and 10% level of significance and this shows the overall joint significance of the variables in the model as they explain changes in the dependent variable.

Post-merger Period

From the hausman tests results above, it can be observed that the coefficients are significant at the 1% level of significance and thus it can be concluded that the coefficients estimated by the random effects differ from those estimated by the fixed effects, hence we use the random effect results. In the regression analysis, size of the firm is transformed into a non-linear form by taking the natural logarithm. This adjustment brings the coefficient in line with the other variables and also removes the potential disturbance of the OLS assumptions. It can be observed that in both the OLS and random effect result respectively, size has an inverse relationship with the ROA and is statistically significant at 1% level of significance. The inverse relationship between size and ROA implies that as the size of the bank increases the return on assets of the bank reduces and vice versa. This means that the size which is represents total assets in their annual reports of the

bank doesn't necessitate an efficient performance for the bank i.e. their return on assets doesn't justify the size of the bank. The negativity of the coefficient of size is not in conformity to the economic apriori expectation of a positive impact of mergers on bank performance. It can also be observed that in the OLS and random effect results, deposit growth rate has a positive relationship with bank's performance and is statistically significant at 5% and 10% level of significance respectively. The positive relationship between the deposit growth rate and the return on assets of the firm suggests that as the deposit growth rate of the bank increases so does the performance, this means that the deposit growth rate of the firms affect their performance.
In both results, loans to deposit ratio has a positive relationship with firm performance. LDR is statistically significant at 5% level of significance in the OLS and random effect results respectively. The positive relationship suggests that the as loans to deposit ratio increases, return on assets is also increasing. Hence, LTDR has a significant effect on the performance of banks as it indicates the extent to which deposits are used to meet loan request. The R^2 is 70%, and this implies that the independent variables explain about 70% of the changes or variation in the dependent variable in the model. It shows that the size of the banks, the deposit growth rate of the banks and their loan to deposit ratio account for about 70% of the changes in firm performance. The R^2 can be used to measure the goodness of fit in the model which implies how well the estimated regression model fits the actual data. The F-stat has a value of about 21 in this period according to the OLS regression and in the random effect 57 and are both statistically significant at 1% level of significance and this shows the overall joint significance of the variables in the model as they explain changes in the dependent variable.

Testing of Hypothesis

Recall: Hypothesis

H_0: Merger has no significant effect on bank's performance

H_1: Merger has a significant effect on bank's performance.

To test, we look at most importantly the post-merger period in comparison to the pre-merger period because we are testing for the effect of the merger which has been represented by the dummy variable, and since there is a transmission mechanism in this research. We look at the descriptive analysis and we see that the return on assets increased from 3% in the pre-merger to 4% in the post-merger period. Also, judging from the pooled Ordinary least squares and Random effect results in the post merger period, a 1% increase in the size which represents the total assets of the banks will lead to a 7% decrease in the performance of the bank amongst all other variables which appeared to be significant in the post-merger period compared to the pre-merger period. This shows that the null hypothesis (H_0) should be rejected while the alternative (H_1) should be accepted because merger has a significant effect on bank performance.

EMPIRICAL FINDINGS

The empirical findings are derived from data generated from the survey. The OLS regression analysis was carried out to determine the impact of three different variables namely; size, deposit growth rate (DGR) and loans to deposit ratio (LTDR) on the return on assets (ROA) in model 1; and three different variables namely – size, loans to deposit ratio (LTDR) and shareholders' funds (SHF) on bank deposits (BDEP) for the period under analysis (2000-2009). The impact of each of the variables is of primary concern here, and at the same time serve as "control variable"

to check the overstating of the estimated coefficient of the other three variables. The empirical findings of the data analysis are presented here under:

1. The coefficient of size and loans to deposit ratio is significant to performance in the pre-merger period whilst all the coefficients of the three variables; size, LDR and LTDR were significant to bank performance in the post-merger period in the model. However, it must be noted that the negative sign of the coefficient of size in the post-merger period is against expectation as positive relationship was expected.
2. Size doesn't always justify the performance as some banks want to be big just for the fun of it or for egotistic reasons, as size in this respect does not guarantee the targeted economies, with the fact that for every branch, separate capital outlays must be made for integrated systems, staffing, and other costs. What makes a sound bank is really how effective and efficient the management of the bank is deploying the available resources.
3. The coefficient of size and loans to deposit ratio is significant to bank deposits in the pre-merger period and both the signs of loans to deposit ratio and shareholders' funds were not in conformity to the expected sign as a positive relationship was expected whilst in the post-merger period, only the coefficient of size was significant to bank deposits used to capture performance in the banking industry although the sign of the shareholders funds was not in conformity to the expected positive in model 2 but the coefficient of size increased in the post-merger period.
4. The few but strong mega banks that survived the consolidation program have found themselves in a keenly competitive banking environment. The banks are now doing so many things to attract more customers; this in effect is very good for the system because the banks are coming up with so many products and quality services which have made banking a lot easier and cheaper for the Nigerian public.
5. Banks are now in a better position to assist members of the public especially owners of small and medium scale enterprises with short and medium term loans. Not only that, banks can also finance long term projects that are of high economic value and benefit to the country either single-handedly or collectively as a consortium of loan syndicates

CONCLUSION AND RECOMMENDATIONS

The study has reviewed the effectiveness of bank mergers in the conduct of sustainable financial system. We notice that there seems to be a presumption that the reform in the banking sector is all that is required to fix the economy. The idea underlying the merging policy is that bank merger would reduce the insolvency risk through asset diversification. It is equally noted that merger require time-frame. Hence, the banks consolidation exercise of 2005 as supervised by the Central Bank of Nigeria has yielded basketful of benefits in terms of improved banking environment.

Recommendations

Based on the findings of this study, the researchers would like to make the following recommendations:

1. Organizations should not jump at any merging opportunity that offers itself because the exercise is not an opportunistic one. It has to be well planned and well executed to realize the very strategic objectives of venturing into the exercise in the first instance because what makes a sound bank is really how effective and efficient the management of the bank is deploying the available resources.

2. Market segmentation and product diversification are very important tools for any business to improve its performance. Through mergers, this can be achieved especially now when the banking industry is very competitive.

3. Mergers have associated risk which if not well managed and implemented can lead to failure, buyers mis-estimating of the value of asset and/or liabilities of the target firm, and managers inability to handle the complex task of integrating two firms with different processes, accounting methods, operating culture, vision and focus, these pitfall must be avoided by all means. Pro-activism and strategically integrated acquisition programme should be put in place because such mistakes can be very costly.

4. Merger being a relatively new phenomenon in the Nigerian banking environment should be given more encouragement. Relevant private sector bodies like the Chartered Institute of Bankers of Nigeria, the Institute of Chartered Accountants of Nigeria, etc should mount intensive enlightenment campaign to educate their members on the advantages, modalities and other attractions of mergers. Seminars and workshops should be constantly organized. The element of education and enlightenment in mergers becomes germane in view of the egoistic attitude of the average Nigerian entrepreneur.

5. Government should set up a body such as "Senate Committee on Merger" or a "National Committee on Mergers" to specially handle mergers and acquisitions. This body can be entrusted with such responsibility to:

a. Oversee the activities of merging organizations in Nigeria.
b. Draw up guidelines for firms intending to band together.
c. Study all proposals regarding mergers and approve or reject them as the case may be.
d. Advise government on the right course of action to take with regards to mergers.

6. The Central Bank of Nigeria (CBN) being banks' supervisory/regulatory agent should intensify its efforts towards effective monitoring and ensure that the gains from the merger are sustained.

REFERENCES

Adesida, S (2008): "Stanbic, IBTC Chartered Set to Unveil New Logo" www. sunnewsonline.com. extracted on 25th February, 2011.

Adedipe, A(2005): "Challenges of Bank Consolidation", www.articlesbase.com/banking-articles. extracted on 13th December, 2010

Ademola, F (2008): "Mergers and Acquisitions: The Performance of Nigerian Banks" . www.google.com. extracted on 28th November, 2010.

Agbaje, O (2008): "The Banking industry in 2008", www.businessdayonline.com. extracted on 25th February, 2011.

Ajayi, M (2005): "Banking Sector Reforms and Bank Consolidation in Nigeria", *Bullion CBN Publication*, Vol 29, No 2, pp. 4-5.

Akhavien, J (2006): 'The Effects of Megamergers on Efficiency and Prices: Evidence from a bank profit function', *Review of Industrial Organization,* Issue 12, pp. 95-139.

Akintoye, R (2008): "Activity in the Nigerian Banking Industry: Some Clarifying Comments', *International Research Journal of Finance & Economics*, Issue 19, p.65.

Balmer, J & Dinnie, K (1999): "The Antidote to Merger Madness", *Corporate Identity &* Corporate Communications, Vol 4, No 4, pp. 182-187.

Bello, Y.A (2005): "Banking Sector Reforms and Bank Consolidation in Nigeria", *Bullion CBN Publication*, Vol 29, No 2, p.48.

Bello, Abdullai, (2005), "Banks Consolidation and N25 billion Recapitalization-Another perspective", www.unionbanking.com. extracted on 23rd August, 2010

Boglarsky, C.A (2005): "Five Steps to Successful Mergers and Acquisition", *Human Synergistics International,* Printed with Permission from Workspan Magazine.

Boyd, J.H. and Runkle, D.E. (1993): "Size and Performance of Banking Firms: Testing the Predictions of Theory", *Journal of Monetary Economics,* Vol 31, p. 47.

Brockington, R.B. (1987): *Financial Management,* 4th Edition, D.P. Publications, Eastleigh Hants, p.251.

Cartwright, S., and Cooper, C., (1992): *Managing Mergers and Strategic Alliances: Integrating People and Cultures,* Oxford, Elsevier, p.6.

CBN (2005): "Annual Report for the year ended 31st December, 2005", www.cenbank.org. extracted on 24th February, 2011.

CBN Annual Report (2006), "Banking supervision in post consolidation", www.cenbank.org. extracted on 28th August, 2010.

Chong, B.S. (1991):"Effects of Interstate Banking on Commercial Banks' Risk and Profitability", *Review of Economics and Statistics,* Vol 73, p. 78

Demirguc-Kunt, A. and Levine, R. (2000): "Bank Concentration: Cross Country Evidence". www.globalpolicy.org/socecon/tncs/mergers. extracted on 12th December, 2011.

Enyi Patrick, (2006): "Bank consolidation in Nigeria : A Synergistic Harvest", www.firstcitygroup.com. extracted on 3rd October, 2010.

Gadiesh, O & Orniston, C (2002): "Six Rationales to Guide Merger Success", *Strategy &* Leadership, Vol 30, No 4, p.30

Gaughan, P (2007): *Mergers, Acquisitions & Corporate Restructuring,* 7th Edition, New Jersey, p.12.

Gujarati, Damodar. N (2004): *Basic Econometrics, Fourth edition,* The McGraw-Hill Companies, London, p.65.

Ekundayo, K (2008): "Stanbic, IBTC Seal Merger, Raise ₦70 Billion Capital base www. newsdailytrust.com. extracted on 13th November, 2010.

Enyi Patrick, (2006), "Bank consolidation in Nigeria : A Synergistic Harvest", www.firstcitygroup.com. extracted on 3rd October, 2010.

Eseoghene, I (2010): "The Effect of Bank Consolidation on the Performance of Banks in Nigeria",www.articlesbase.com/banking-articles. extracted on 27th August, 2010.

Furlong, Fred (1994) "New View of Bank Consolidation" , www.eurojournals.com extracted on 30th October, 2010.

Herald, D (2004): "New Banking Reforms to focus on Consolidation", www.deccanherald.com. extracted on 23rd January, 2011.

Imala .O. A (2005): "Challenges of Banking Sector Reforms & Bank Consolidation in Nigeria", Bullion, Vol 29, No 2, p.27.

Koutsoyiannis, A. (1977): *Theory of Econometrics,* The Macmillan Press, London.

Kurfi,F (2003): "Impact of Mergers and Acquisition on Staff Effectiveness", *International Research Journal of Finance and Economics,* Issue 3, p.121.

Lemo, A (2005): "The Desired Metamorphosis of Nigerian Banks", www.articlesbase.com/banking-articles. extracted on 28th August, 2010.

Lynch .J.G & Lind, B (2002): "Escaping Merger and Acquisition Madness", *Strategy & Leadership,* Vol 30, No 2, pp. 5-12.

Madubueze, J.A (2007): "Mega-Banking in Nigeria's Business", www.bankingtimes.co.uk.

extracted on 24th February, 2011.
Mordi, C.N.O, (2004): "Institutional framework for the Regulation and Supervision of the financial sector*", Central Bank of Nigeria Bullion,* Vol 28, No 1, pp. 25 – 30.
Jimmy, A (2008): "An Evaluation of Organic Growth and Mergers and Acquisitions as Strategic Growth Options in the Nigerian Banking Sector", www.articlesbase.com/banking-articles extracted on 25th February, 2011
Nigerian Planning Commission (2004): 'Meeting Everyone's Needs: National Economic Empowerment and Development Strategy', http://siteresources.worldbank.org.. extracted on 26th October, 2010.
Ojo, Ade. T (2010): *The Nigerian Maladapted Financial System; Reforming Tasks and Development Dilemma*, CIBN Press Limited, Lagos, p.291.
Okonkwo, C (2004): "Legal Framework for Mergers & Acquisitions", www.cenbank.org. extracted on 28th August, 2010.
Okwe, M (2006). "Ecobank takes over All States Trust liabilities". *The Guardian Online. [internet] 5 May*, www.guardiannewsngr.com extracted On 28th August, 2010.
Owokalade, T (2006), " Corporate Restructuring Post Consolidation Strategies and Challenges, Journal of the Chartered Secretary and Administration, Vol 6, No 3, p.27.
Sathye, M. (2002): "The Impact of Foreign Banks on Market Concentration: The Case of India, Applied Econometrics and International Development (AEEADE), Vol. 2, No 1, p.7
Sharma, G (2001): "The Effect of Mergers on Bank Performance: Evidence from Bank Consolidation Policy in Indonesia", www.eurojournals.com extracted on 25th February, 2011.
Sherpherd, A (2010): "Mergers and Acquisitions in the Nigerian Banking Industry: An Advocate of three Mega Banks", *European Journal of Social Sciences,* Vol 15, No 4. P.555
Soludo, C. (2004): "Consolidating the Nigerian Banking Industry to Meet the Development Challenges of the 21st Century", Being an address delivered to the Special Meeting of the Bankers' Committee, held on July 6, at the CBN Headquarter, Abuja.
Soludo, C., (2008): "The unfinished, revolution in the banking system", Presentation at the University of Agriculture, Abeokuta on March 18, 2008 by the CBN Governor, www.cenbank.org/onlinespeeches extracted on 23rd February, 2011.
Somoye, R.O.C (2008): "The Performance of Commercial Banks in Post Consolidation Period in Nigeria: An empirical review", *European Journal of Economics,* Finance and Administrative Science, issue 14, pp 63-64.
Sudarsanaam, S (2003): Creating Value from Mergers and Acquisitions and the Challenges, Pearson Education Limited, Harlow, p.54.
The Nigerian Fact Book 2009
Umar, G (2009): "The Impact of the Banking Industry Recapitalization on Employment in Nigerian Banks", *European Journal of Social Sciences,* Vol 11, No 3, p.486.
Umoren, A.O (2007): "Merger and Acquisitions in Nigerian: Analysis of performance in Pre and Post Consolidation Era", *Journal of Banking & Finance and Economics,* pp 151- 153.
Umunnaehila, C (2004): "Corporate Restructuring in the Nigerian Banking Sector", United Bank Of Africa Plc. *Annual Report & Statement Of Accounts*