

Synergistic Effect of Recent Mergers and Acquisitions in Nigerian Banking Industry

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Abstract

Precisely in 2010 in Nigeria, Intercontinental Bank; Oceanic Bank; Finbank and Equitorial Trust Bank were acquired by Access Bank; Ecobank; First City Monument Bank and Sterling Bank respectively as the only option against distress. The unpalatable experience that greeted the industry after the most notable consolidation of 2005 through mergers and acquisitions has become a course for concern for researchers in this area. In the light of the above, this study is aimed at investigating into the synergistic effect of the recent mergers and further confirming the position of economic theory which cites synergy as one the many possible reasons why mergers might occur. Using Enyi model and technique, the study analysed the pre and post-merger financial statements of three (3)of the four (4) merger groups whose data were available between 2006 and 2012. Our results showed that of the three merger groups only one showed evidence of synergy in the growth of shareholders funds while none of the groups achieved synergy in the growth of total assets. Suffice to say that not all mergers and acquisitions in Nigeria result into true financial synergy

Keywords: Synergy; Acquisition; Merger; Performance;

1.0 Introduction

Banking Sector Reform in Nigeria was introduced in 2004. The government aimed to establish a reliable and efficient banking sector so that it could guarantee the safety of the depositors' money. The first phase of the banking reform in Nigeria was designed to ensure a diversified, strong and reliable banking sector, which will ensure the safety of depositors money, play active developmental roles in the Nigerian economy and become competent and competitive players both in the African and global financial systems. The second phase which is still in the pipeline will involve encouraging the emergence of regional and specialized banks.

Before the reform, Nigeria had eighty-nine banks many of which have a capital base of less than US\$ 10 million. It was seen as a paradox that despite the size of the economy, the country's reserves were still deposited in foreign banks due to the low capacity of the local Banks. The sector has been highly concentrated structurally as the ten largest banks account for about fifty percent of the industry's total asset and liability. Most banks in Nigeria had a capital base of less than 10 million dollars; this rendered the system very marginal relative to its potentials and in comparison to other countries. There was therefore the need to be proactive and to strategically place Nigerian banks to be active players and not spectators in the emerging world economy.

In view of this, the Central Bank of Nigeria (CBN) recognized that all over the world and given the internationalization of finance, size has become an important ingredient for success in the globalised world. The last few years have witnessed the creation of the world's banking group through mergers and acquisitions. Flowing from this, the CBN stipulated that the only legal modes of consolidation allowed are mergers and outright acquisition/takeovers. A mere group arrangement was not acceptable for the purpose of meeting the minimum capital base. The implication of this is that all banks that had other banks as subsidiaries or had common ownership were encouraged to merge.

Be as it may, the advantage envisaged from mergers of banks in Nigeria is still a mirage after about seven years of post merger experience. The wide margin between the rate of interest on deposit and the rate of interest on loans and advances remains a problem. The vision of 'bigger and stronger' is far from being realised. As a matter of fact, the federal government through the CBN has to nationalise Spring Bank, Bank PHB and Afribank to become Enterprise Bank, Keystone Bank and Mainstreet Bank respectively in a bid to safe them from distress barely six years after their first post merger experience. Recently and surprisingly, Intercontinental Bank, Oceanic Bank, Finbank and equatorial Trust Bank were again acquired by Access Bank, Ecobank, First City Monument Bank and Sterling Bank respectively as the only option against distress while Union Bank was bought over by African Capital Alliance. These unpalatable experiences that greeted the industry after the consolidation of 2005 through merger and acquisition have become a course for concern.

In the light of the most recent acquisition, this study is aimed at examining/investigating the rationality and the synergistic effect of the exercise. It is in order to unravel the gain of merger in terms of synergy that this paper



examines whether such corporate marriages are productive. The study analyses and compares the pre and post-merger financial statements of three (3) of the above mentioned four (4) merger groups whose data are available between 2006 and 2012

2.0 Literature Review

A merger as quoted by Pasha (2010) is a combination of two companies into one larger company. Such actions are commonly voluntary and involve stock swap or cash payment to the target. A merger can resemble a takeover but result in a new company name (often combining the names of the original companies) and in new branding; in some cases, terming the combination a "merger" rather than an acquisition is done for marketing reasons (http://www.yourdictionary.com/merger). Stone (1930) states, in the context of banking, that two banks merged and operated as a single bank or operated by single bank is called merger. Greenwood et al. (1994) define, "A merger involves a blend of two companies, rather than mere legal enjoinment or absorption of one firm into another" Kithinji and Waweru (2007) describe merger as a process in which one of the two companies loses its identity to make a one firm. On the other hand, Oloyede (2000) views acquisition as a situation in which a company acquires another by either buying all or significant proportion of shares in the acquired company in order to have controlling interest. Mergers and acquisitions often referred to as M&A is also a tool for expanding ones business or get around different laws or regulations such as tax laws or monopoly regulations (Ross et al., 2002). Merger and acquisition (M&A) has been the most debatable issue in the field of management and finance. There are arguments for and against corporate restructuring and mergers. Lambrecht (2005) argued that although M&A activities occur in waves but M&A activities are as a result of the economic environment. In agreement with Akintoye and Somoye (2008), empirical research on mergers and acquisitions had revealed a great deal about their trends and characteristics over the last century. For example, a profusion of event studies has demonstrated that mergers seem to create shareholder value, with most of the gains accruing to the target company (Andrade, et al, 2001; Fisher 1987; Scherer 1988; Andrade and Stafford 1999, etc). But on the issue of why mergers occur, research success has been limited. Economic theory has provided many possible reasons for why mergers might occur: efficiency-related reasons. (Eugene Brigham's 2+2 = 5 phenomenon); attempts to create market power, by forming monopolies or oligopolies; market discipline, a self-serving attempts by acquirer management to "over-expand" and other agency costs; and to take advantage of opportunities for diversification, by exploiting internal capital markets and managing risk for undiversified managers Some of these theories have been found to explain some of the mergers that took place in Nigerian banking industry in the last few years. Amir et al. (2008) as quoted in Pasha (2010), opined that mergers are important for market concentration. Merged organizations have high profitability and efficiency than the non merged firms but it is a long term process and at the end the merged firms are in strong position. Whatever the motives for M&A might be, recent researches suggest that among all industries consolidation is inevitable and cannot be escaped. A number of such studies have been carried out to evaluate the effects of merger on organizations, for instance see, Wetherell (1996), Nguyen and Kleiner (2003), Salama et al. (2003), Stahl (2005), Kithinj and Waweru (2007) and Chrusciel (2007), among many others.

Rhoades (1998) in his study proved with nine samples of mergers. His results showed that the mergers clearly improve efficiency and profitability. Berger et al (1999) also believes that merger an acquisition enable banking firms to benefit from new business opportunities that have been created in the post merger period. Brierley (2001) reported in his study that Abbey Bank and Lloyds Bank in Europe gain cost efficiency after merger and acquisition. To him, apart from the cost efficiency, the two banks increase their retail deposit and gain loan portfolio with good performance record. Lastly, prager and Hannan (1998) found that merger and acquisition of banks result into higher bank concentration which in turn lead to lower rates on deposits. Some evidence also suggests that U.S. banks that involved in M&A improved the quality of their outputs in the 1990s.

However, Berger and Humphre (1994) argued that not all mergers bring cost efficiency to the new entities. Some mergers fail to reduce costs. Sufian (2004) reported that during the post merger years, Malaysian banks' overall efficiency level deteriorated significantly compared to the pre merger periods. To him, this is mainly due to scale inefficiency. Merging a weaker bank with a healthier bank may sometimes result into a bank even more likely to fail (Shih 2003) if the new entities fail to achieve scale economies.

3.0 Materials and Method

Hypothesis

The following hypothesis will be tested in order to realize the objective of this study

a. Ho: r = 0, mergers and acquisitions have no significant synergistic effect on emerging banks H_{A} : r = 0, mergers and acquisitions have significant synergistic effect on emerging banks



4.1 Sources and Description of Data

For the purpose of this study, data are obtained from the secondary source. Data for shareholders funds and total assets for the period before and immediately after acquisition are sourced from NSE fact books and financial report of the banks under consideration. Shareholders' funds and total assets are generally considered as the most important banks performance indicator. These data are used for the computation of growth rate total asset and growth rate shareholders' funds

For the analysis of pre-merger data, average growth rate are computed from the extracted last value before merger for individual merging firms and subsequently integrated into a group using weighted average method (see table 1 to 6). We shall compute our research variable ratios by adopting the following formulae formulated by Enyi (2007):

a) AnGR_i =($(Pb_{i(t)} - Pb_{i(t-1)})100/ Pb_{i(t-1)}$ Where:

AnGR = Annual Growth Rate Pb = Previous Year Balance i = Company index t = Elapsed time (year)

b) $AGR_i = \sum_{i=1}^{N} AnGR_i / t$ Where: AGR = Average Growth Ratei = Company indext = Elapsed time (year)

c) $EGR_i = (\sum_{i=1}^n AGR_i) / n$ Where:

n = Number of years in the analysisi = Company indext = Elapsed time (year)

d) $GGR = \sum_{i=1}^{n} ((Lb_i EGR_i) / gv)$ Where:

$$\begin{split} n &= number\ of\ company\ in\ the\ merger\ group \\ Lb &= Last\ Pre-merger\ balance \\ gv &= Total\ group\ value \end{split}$$

gv = 1 otal group value i = Company index

e) $gv = \sum_{i=1}^{n} Lb_i$ Where:

n = number of company in the merger group

Lb = Last Pre-merger balance gv = Total group value

i = Company index

f) Synergy = (psr*4) / apmr Where:

Psr = Post Merger result

Apmr = Adjusted pre-merger result

On a priori, mergers and acquisitions will certainly have significant synergistic effect on emerging banks.



Table 1: Computation of Growth Rate of Shareholders Funds in Eco/Oceanic Group

Name of	Year	Value #	Change	Change	CCR	ACR	EGR	GGR
Bank		Billion		rate	(%)	(%)	(%)	(%)
Ecobank	2006	29.321	-	-	-	-		
	2007	34.822	5.501	18.76	18.76	18.76		
	2008	31.756	-3.066	-8.80	9.96	4.98		
	2009	27.168	-4.588	-14.45	-4.49	-1.50		
	2010	74.320	47.152	173.56	169.07	42.28		
	2011	68.096	-6.224	-8.37	160.70	32.14	32.14	
Oceanic	2006	37.572	-	-	-	-		
	2007	51.193	13.621	36.25	36.25	36.25		
	2008	213.994	162.801	318.01	354.26	177.13		
	2009	-115.524	-329.518	-153.98	200.28	66.76		
	2010	-114.239	1.285	-1.11	199.17	49.79	49.79	65.58

Eco Group Summary – Eco Bank Oceanic Bank (68.096/-76.143)*32.14 = -28.74 (-144.239/-76.143)*49.79 = 94.32(-144.239/-76.143)*49.79 = 65.58

Source: Computed by the authors based on data from Nigeria Stock Exchange Fact Book

Table 2: Computation of Growth Rate of Shareholders Fund in Access/Intercontinental Group

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Name of Bank	Year	Value #	Change	Change	CCR	ACR	EGR	GGR
		Billion		rate	(%)	(%)	(%)	(%)
Access	2006	28.893	-	-	-	-		
	2007	28.385	-0.508	-1.76	-1.76	-1.76		
	2008	171.861	143.476	505.46	503.70	251.85		
	2009	168.346	-3.515	-2.05	501.65	167.22		
	2010	175.370	7.024	4.17	505.82	126.46		
	2011	197.042	21.672	12.36	518.18	103.64	103.64	
Intercontinental	2006	54.467	-	-	-	-		
	2007	156.889	102.442	188.04	188.04	188.04		
	2008	200.413	43.524	27.74	215.78	107.89		
	2009	-363.852	-564.265	-281.55	-65.77	-21.92		
	2010	-307.568	34.361	-9.44	-75.21	-18.80	-18.80	-237.09

Access Bank Group Summary – Access (197.042/-110.526)*103.64 = -184.77Intercontinental (-307.568/-110.526)*-18.80 = -52.32GGR -237.09

Source: Computed by the authors based on data from Nigeria Stock Exchange Fact Book



Table 3: Computation of Growth Rate of Shareholders Funds in Fcmb/Finbank Group

Name of	Year	Value #	Change	Change	CCR (%)	ACR	EGR (%)	GGR
Bank		Billion		rate		(%)		(%)
FCMB	2006	26.398	-	-	-	-		
	2007	31.104	4.706	17.83	17.83	-1.76		
	2008	133.633	102.529	329.63	347.46	251.85		
	2009	129.055	-4.578	-3.43	344.03	167.22		
	2010	134.771	5.716	4.43	348.46	126.46		
	2011	117.697	-17.04	-12.67	335.79	67.16	67.16	
Finbank	2006	-3.464	-	-	-	-		
	2007	22.137	25.601	-739.06	-739.06	-739.06		
	2008	10.331	-11.806	-53.33	-792.39	-396.20		
	2009	-75.697	-86.028	-832.72	-1625.11	-541.70	-541.70	1164.51

FCMB Group Summary – FCMB

(117.697/42.000)*67.16 = 188.20(-75.697/42.000)*-541.70 = <u>976.31</u>

GGR 1164.51

Source: Computed by the authors based on data from Nigeria Stock Exchange Fact Book

Table 4: Computation of Growth Rate of Total Asset in Eco/Oceanic Group

Name of	Year	Value #	Change	Change	CCR	ACR	EGR	GGR
Bank		Billion		rate	(%)	(%)	(%)	(%)
Ecobank	2006	132.092	-	-	-	-		
	2007	311.396	179.304	135.74	135.74	135.74		
	2008	432.466	121.070	38.88	174.62	87.31		
	2009	355.662	-76.804	-17.76	156.86	52.29		
	2010	454.239	98.577	27.72	129.14	32.29		
	2011	1102.027	647.788	142.61	271.75	54.35	54.35	
Oceanic	2006	372.035	-	-	-	-		
	2007	1030.441	658.406	176.97	176.97	176.97		
	2008	1246.182	215.741	20.94	197.91	98.95		
	2009	901.090	-345.092	-27.69	170.22	56.74		
	2010	937.701	36.611	4.06	174.28	43.57	43.57	49.39

Eco Bank Group Summary – Ecobank

(1102.027/2039.728)*54.35 = 29.36

Oceanic $(937.701/2039.728)*43.57 = \underline{20.03}$

GGR 49.39

Source: Computed by the authors based on data from Nigeria Stock Exchange Fact Book



Table 5: Co	nputation of	f Growth Rate of	Total Asset in	Access/Intercontinent	al Group
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Name of Bank	Year	Value #	Change	Change	CCR	ACR	EGR	GGR
		Billion		rate	(%)	(%)	(%)	(%)
Access	2006	174.554	-	-	-	-		
	2007	328.615	154.061	88.26	88.26	88.26		
	2008	1033.945	705.330	214.64	302.90	151.45		
	2009	693.384	-340.161	-32.90	270.00	90.00		
	2010	804.824	111.040	16.00	286.00	71.50		
	2011	1634.717	829.923	103.12	389.12	77.82	77.82	
Intercontinental	2006	369.234	-	-	-	-		
	2007	704.784	335.550	90.88	90.88	90.88		
	2008	1392.210	687.426	97.54	188.42	94.21		
	2009	589.571	-802.639	-57.65	130.77	43.59		
	2010	678.664	89.093	15.11	145.88	36.47	36.47	65.69

Access Group Summary – Access
Intercontinental

(1634.717/2313.381)*77.82 = 54.99 $(678.664/2313.381)*36.47 = \underline{10.70}$ GGR 65.69

Source: Computed by the authors based on data from Nigeria Stock Exchange Fact Book

Table 6: Computation of Growth Rate of Total Asset in Fcmb/Finbank Group

Name of	Year	Value #	Change	Change	CCR	ACR	EGR	GGR
Bank		Billion		rate	(%)	(%)	(%)	(%)
FCMB	2006	106.611	-	-	-	-		
	2007	262.841	156.230	146.54	146.54	146.54		
	2008	467.337	204.496	77.80	224.34	112.17		
	2009	515.062	48.265	10.33	234.67	78.22		
	2010	538.591	22.989	4.46	239.13	59.78		
	2011	601.780	63.189	11.73	250.86	50.17	50.17	
Finbank	2006	25.491	-	_	_	_		
	2007	181.308	155.817	611.26	611.26	611.26		
	2008	444.194	262.886	144.99	756.25	378.13		
	2009	157.195	-286.999	-64.61	691.64	230.55	230.55	87.53

FCMB Group Summary - FCMB (601.780/758.975)*50.17 = 39.78 (157.195/758.975)*230.55 = 47.75 GGR 87.53

Source: Computed by the authors based on data from Nigeria Stock Exchange Fact Book

KEY

CCR = Cumulative Change Rate

ACR = Average Change Rate

EGR = Effective Growth Rate

GGR = Group Weighted Average Growth Rate

AR = Annual Report and Account 2012

Finally we conclude the investigation by testing the post-merger data with the adjusted pre-merger data (see table 7 and 8). For effectiveness and avoidance of biased comparison, we shall adjust the pre-merger data using the Derived Growth Rate. The Derived Growth Rate is obtained through the division of Group Growth Rate (see table 1-6) by the number of banks in the group.



In the words of Enyi (2007), The adjustment is based on the assumption that the individual merging firms would have improved on their last performance to the level commensurate with their last performance data compounded with their inherent growth rates which are different for both total asset and shareholders' funds were they to continue as individual firms on their own. That is the individual merging firms expected performance (without consolidation) is the same as:

Ep = Lp * (1 + gr)

Where:

Ep = Expected performance

Lp = Last performance

Gr = Computed growth rate as in tables 1-6

TABLE 7: PRE AND POST MERGER COMPARISON- SHAREHOLDERS FUNDS (#BILLION)

Name of	Pre	Derived	Adjusted	Post	Financial	Financial
Bank	Merger	Growth	Pre Merger	Merger	Surplus	Synergy
	Result	Rate	Result	Result		
A	В	C (%)	D=(B*D/100)	Е	F=(E-D)	G=(E*4)/D
Ecobank	-76.143	32.79	-101.110	153.628	254.738	2+2= -6.08
AccessBank	-110.526	118.55	-123.629	240.990	364.619	2+2= -7.80
FCMB	42.000	582.25	66.455	132.015	65.56	2+2= 7.95
SOURCE	Table 1-3	Table 1-3		A R		

TABLE 8: PRE AND POST MERGER COMPARISON- TOTAL ASSET (#BILLION)

Name of	Pre	Derived	Adjusted	Post	Financial	Financial
Bank	Merger	Growth	Pre Merger	Merger	Surplus	Synergy
	Result	Rate	Result	Result		
A	В	C (%)	D=(B*D/100)	Е	F=(E-D)	G=(E*4)/D
Ecobank	2039.728	24.70	2543.541	1325.315	-1218.662	2+2= 2.08
AccessBank	2313.381	32.85	3073.327	1745.177	-1328.15	2+2= 2.27
FCMB	758.975	43.77	1091.178	908.546	-182.632	2+2= 3.33
SOURCE	Table 4-6	Table 4-6		A R		

4.2 Result and Discussion

From table 7, it can be seen that only first city monument bank group achieved true financial synergy in shareholders' funds growth while the remaining banks have negative financial synergy in shareholders' funds. In the same vein, table 8 shows that none of the three merger groups achieved true financial synergy in total assets growth. Thus table 7 and 8 show a situation of unbeneficial business combination. Our results differ markedly from Enyi (2007) where there were true financial synergies in the four merging groups he studied. This could be traced to the fact that the acquired banks in our own study were in distress as they posted negative shareholders' funds and low total assets before the exercise. Acquiring a firm in such grave conditions as shown in virtually all the performance indices is tantamount to acquisition of liability/loss. Suffice to say that, it's not all mergers and acquisitions that result into true financial synergy. Though it may be true that evidence of a beneficial business combination can take a long time, however, merging with or acquiring a failing bank may lead to failure of emerging bank should it fail to achieve scale efficiency. More so, there are other post-merger and acquisition



costs associated with system integration and branch network ammonization and the likes which are foot by the banks. This tends to adversely affect the immediate post-merger performance.

5.0 Conclusion

Based on the empirical findings of this work, the acquisition of Intercontinental Bank, Oceanic Bank, and Finbank by Access Bank, Ecobank and First City Monument Bank respectively failed to produce the desired synergistic effect expected from such business combination. The exercises were purely acquisitions and not mergers. This paper therefore recommends that merging organisations should be conscious of the benefits of merger/acquisition before going into it. In the case of banking institutions, depositors, shareholders and other interested parties should not be misled in the process of merger.

References

Access Bank Plc (2013) Full Year 2012 and First Quarter 2013 Presentation to Investors and Analysts Amir, R., Diamantoudi, E. and Xue, L. (2008). Merger Performance under Uncertain Efficiency Gains.

International Journal of Industrial Organization 27, PP. 264 – 273.

Andrade, G and E. Staffor (1999), "Investigating The Economic Role of Mergers," Harvard Business School

Andrade, G., M. Mitchell and E. Stafford (2001), "New Evidence and Perspectives on

Mergers," Journal of Economic Perspectives, Vol. 15, No. 2, Pp 103-120.

Akintoye I. R. and Somoye R. O. C. (2008), 'Corporate Governance and Merger Activity in the Nigerian Banking Industry: Some Clarifying Comments' International Research Journal of Finance and Economics, Issue 19, Pp126-137.

Chrusciel, D. (2008). What Motivates The Significant/Strategic Change Champion(S)? Journal of Organizational Change Management, Vol. 21, No. 2, PP 148-160.

Ecobank Nigeria ltd (2012) Annual Report and Account 2012 for the Year Ended 31st December 2012

FCMB (2012) Annual Report and Account 2012

Kithinji, A. M. and Waweru, N. M. (2007). Merger Restructuring and Financial Performance of Commercial Banks In Kenya. Journal of Economics, Management and Financial Markets, Vol. 2, No. 4.

Lambrecht, B.M., (2005), Mergers and acquisitions as a response to economic change. Journal of Financial Transformation. Vol.13: 73-76

Nguyen, H. and Kleiner, B. H. (2003). The Effective Management of Mergers. Leadership and Organizational Development Journal, Vol. 24, No. 8, PP. 447-454.

Pasha A. T. (2010), Effects of Merger on Management: Case Study of a Bank, European Journal of Economics, Finance and Administrative Sciences, Issue 19, Pp 98-105

Ross, Westerfield and Jaffe, (2002), Corporate Finance. 6th edition. Boston, McGrawHill/Irwin.

Salama, A., Holland, W. and Vinten, G. (2003). Challenges and Opportunities in Mergers and Acquisitions: Three International Case Studies – Deutsche Bank – Bankers Trust; British Petroleum – Amoco; Ford - Volvo. Journal of European Industrial Training, Vol. 27, No. 6, PP. 313 – 321.

Stahl, G, (2005). Impact of Cultural Differences on Merger And Acquisition Performances-Advances In Merger And Acquisitions, Cary L. Cooper & Sydney Finkelstein (Eds.).

Subhan Ullah, Syed Umar Farooq, Naseer Ullah and Ghayur Ahmad (2010), European Journal of Economics, Finance and Administrative Sciences, Issue 24, Pp 14-19.

Wetherell, A. (1996). Performance Tests. Environmental Health Perspective, Vol 104.

Supplement 2. Neurobehavioral Toxicity, PP. 247-273.

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