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The Impact of Recapitalization and Consolidation on Banks Costs of Equity in Nigeria

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Abstract: This study investigates the impact of the impact of the bank recapitalization and consolidation program on the cost of equity capital of banks in Nigeria. On the strength of the analysis done and the result obtained, the study concludes that the consolidation and recapitalization programme has brought about considerable reduction in the cost of equity capital of the sampled banks.

Key words: Recapitalization, consolidation, cost of equity, bank, cupital, Nigeria

INTRODUCTION

The financial deregulation in Nigeria that started in 1987 subsequent to the adoption of the now abandoned Structural Adjustment Program (SAP) in 1986, generated a high and healthy degree of competition in the banking sector. This was because the financial deregulation provided incentives for the expansion of banks in terms of individual size and number of banks in operation. However, the increased competition in the financial sector in general and the banking sub-sector in particular, amidst political instability and financial policies inconsistencies on the part of the financial regulators, led to rapid decline in profitability of the traditional banking activities. Thus in a bid to survive and maintain adequate profit level in the ensuing political and policy instability in the Nigerian economy, banks started taking excessive risks which led to frequent bank failures and related financial shocks in the economy.

In its effort to prevent frequent bank failures, on July 6, 2004, the Central Bank of Nigeria (CBN) announced a major reform program that would transform the banking landscape of Nigeria. The main thrust of these new reform program was the prescription of a minimum shareholders funds of N25 billion for all Nigerian banks. The banks were expected to increase their capital through the injection of fresh funds where applicable. The banks were also encouraged to enter into merger/acquisition arrangements with other relatively smaller banks thus taking the advantage of economies of scale to reduce cost of doing business and enhance their competitiveness locally and internationally.

The program resulted in reduction in the number of banks from 89-25 through merger/acquisition involving 76 banks. Indeed, the importance of adequate capital in banking cannot be overemphasized. Thus, increasing the capital base of banks as intended by the consolidation exercise was aimed at increasing customers confidence in the banking sector primarily. It is also expected to lead to increase in profitability and higher returns for the shareholders. About 3 years after the completion of the 1st phase of the Consolidation program, this study sought to ascertain if some of this fundamental goals of the Consolidation program have been achieved and to what extent. This study therefore investigated the impact of Bank consolidation and recapitalization program on the cost of equity capital of banks in Nigeria. In other words, the study considered whether bank consolidation reduces the cost of capital of banks or not. In doing this, the study tested the hypothesis that: there is no significant difference in banks mean cost of equity capital before consolidation and the mean cost of equity capital after consolidation.

The literature

Theoretical insights on bank recapitalization and consolidation: Generally, capital is needed to support business so therefore, the importance of adequate capital in banking cannot be overemphasized. Capital is an important element which enhances confidence and permits a bank to get involve or engage in banking. A very important function of capital in a bank is to serve as a means of absorbing losses. Capital serves as a buffer between operating losses and being unable to pay debt (insolvency). As Phillips (1967) has correctly observed, the more capital a bank has, the more losses it can sustain without running into bankruptcy. Capital thus, provides the measure for the time a bank has to correct for lapses, internal weakness or negative developments. The larger size and capital a bank has, the longer the time the bank

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has before losses completely erode its capital. Apart from capital standing as a protection against losses, adequate capital gives other benefits among which are:

- Protection of depositors and creditors in time of failure
- Strengthening of bank ability to attract funds at lower cost
- Enhances a bank's liquidity position

The larger the liquidity of a bank, the less the bank is exposed to risk. The difficulty, however is that little skill is rewarded with return in line with observation in finance theory of positive linear relationship between risk and return. Thus while inadequate liquidity will destroy a bank's reputation, excess liquidity will retard earnings. In view of its significance, the regulatory authorities consider capital adequacy a primary index to monitor bank. The traditional measures of capital adequacy ratio are ratio of equity funds to risky assets and ratio of capital funds to risk assets.

The minimum capital adequacy ratio as prescribed by Basle committee of central banks' supervision is 8%. This ratio relates capital to what is considered the banks biggest risk namely, credit. The 8% ratio implies that for every N100 credit, a bank needs N8 capital. A lesser ratio shows different degree of capitalization. The Basle committee is a group of international bankers that met to fashion out more stringent way of determining a bank's capital adequacy ratio. In its explanation of relevance of bank's capital base, the committee stated that a capital serves as a foundation for a bank future growth and as a cushion against unexpected losses. Adequate capitalized banks that are well managed are better able to withstand losses and provide credit to consumers and businesses alike throughout the business cycle including during downturns. Adequate capital therefore, helps to promote confidence in the banking system. Bank recapitalization and consolidation offers opportunities for facilitating adequate capitalization of banks.

Consolidation is most commonly described as the reduction in the number of banks and other deposit taking institutions with a simultaneous increase in the size and concentration of the consolidation entities in the sector. It is mostly motivated by technology innovation, deregulation of financial services, enhancing intermediation and increased emphasis on shareholder value, privatization and international competition (Berger *et al*., 1999; De Nicola *et al*., 2003).

The process of consolidation has been argued to enhance bank efficiency through cost reduction revenue in the long run. It also reduces industry's risk by elimination of weaker banks and acquiring the smaller ones by bigger and stronger banks as well as creates opportunities for greater diversification and financial intermediation.

Consolidation in a banking system can either be market-driven and government induced. The market-driven consolidation which is more pronounced in the developed countries sees consolidation as a way of broadening competitiveness with added comparative advantage in the global context and eliminating excess capacity more efficiently than bankruptcy or other means of exit. On the other hand, government induced consolidation stems from the need to resolve problem of financial distress in order to avoid systematic crises as well as to restrict inefficient banks (Ajayi, 2005).

One of the general effects of consolidation is the reduction in the number of players and thereby moving the industry more toward an oligopolistic market. Consolidation is achieved through merger and acquisition. A merger is the combination of two or more separate firms into a single firm. The firm that results from the process could take any of the following identities: acquirer target or new identity. Acquisition on the other hand, takes place where a company takes over the controlling shareholding interest of another company. Usually at the end of the process, there exist two separate entities or companies. The target company becomes either a division or a subsidiary of the acquiring company (Pandey, 2005).

Mergers and acquisitions could raise profits in any of three major ways. First they could improve cost efficiency (by increasing scale of efficiency, scope, i.e., product mix efficiency or X-efficiency, i.e., managerial efficiency), reducing costs per unit of output for a given set of output quantities and input prices. Indeed, consultants and managers have often justified large mergers on the basis of expected cost efficiency gains.

Second, mergers may increase profits superior combinations of inputs and outputs through improvements in profit efficiency that involve profit efficiency is a more inclusive concept than cost efficiency because it takes into account the cost and which is taken as given in the measurement of cost revenue effects of the choice of the output vector, efficiency. Thus, a merger could improve profit efficiency without improving cost efficiency if the reconfiguration of outputs associated with the merger increases revenues more than it increases costs or if it reduces costs more than it reduces revenues. Third, mergers may improve profits through the exercise of additional market power in setting prices. An increase

in market concentration or market share may allow the consolidated firm to charge higher rates for the goods or services it produces, raising profits by extracting more surplus from consumers without any improvement in efficiency. In summary, banking recapitalization and consolidation is more than mere striking of the number of banks in any banking industry. It is expected to enhance synergy improve efficiency, induce investor, focus and trigger productivity and welfare gains.

Empirical evidences on bank recapitalization and consolidation: The empirical literature is divided on the effect of recapitalization and consolidation in improving the performance and efficiency of banks. The studies by Berger *et al.* (1999) suggest that bank consolidations do not significantly improve the performance and efficiency of the participant banks. In contrast, Berger and Mester (1997), Berger and Humphrey (1992), Allen and Rai (1996) and Molyneux *et al.* (1996) indicate that there is a substantial potential for efficiency improvements from mergers of banks. However, the prospects for scale efficiency gains appear to be greater in the 1990s than in the 1980s. This finding is ascribed to technological progress, regulatory changes and the beneficial effect of lower interest rates (Berger *et al.*, 1999).

According to Shih (2003), the idea underlying the consolidation promotion policy is that bank consolidations should reduce the insolvency risk through asset diversification (Shih, 2003). There are a number of empirical studies which confirm a risk diversifying effect of bank consolidation whether directly or indirectly (Hughes *et al.*, 1996, 1999; Benston *et al.*, 1995; Craig and Santos, 1997; Demsetz and Strahan, 1997; Saunders and Wilson, 1999). On the other hand, Shih (2003) points out the possibility that credit risk could increase in the event a sound bank merges with an unsound one.

Case studies evidences suggest that the cost efficiency effects of mergers and acquisition may depend on the motivation behind the mergers and the consolidation process (Rhoades, 1998). Haynes and Thompson (1999) explore the productivity effects of acquisitions for a panel of 93 UK building societies over the period 1981-1993. In contrast to much of the existing bank merger literature, the results indicate significant and substantial productivity gains following acquisition. These gains were observed not to be the result of economies of scale but are found to be consistent with a merger process in which assets are transferred to the control of more productive managements. Similarly, Resti (1998) reports increased levels of efficiency for Italian bank mergers and acquisition, especially when the deals involved relatively small banks with considerable market overlap. Sawada and Okazaki (2004) investigate the effects of policy-promoted consolidation on the stability of the financial system using the data on prewar Japan. It was confirmed that policy-promoted consolidations mitigated the financial crisis by enhancing the ability of the bank to collect deposits, under the condition that the financial system was exposed to serious negative shocks. However, policy-promoted consolidations also had negative aspects as they were accompanied by large organizational costs and decreased bank profitability.

Akhavein *et al.* (1997) examine the efficiency and price effects of mergers by applying a frontier profit function to data on bank mega mergers in the US banking industry. It was reported that merged banks experience a statistically significant 16% point average increase in profit-efficiency rank relative to other large banks. Most of the improvement is from increasing revenues including a shift in outputs from securities to loans, a higher-valued product. Improvements were greatest for the banks with the lowest efficiencies prior to merging who therefore had the greatest capacity for improvement. By comparison, the effects on profits from merger-related changes in prices were found to be very small.

Huizinga *et al.* (2001) analyze the efficiency effects of 52 horizontal bank mergers in Europe over the period 1994-1998, i.e., the period immediately preceding the start of European Monetary Union. They find evidence of substantial unexploited scale economies and large X-inefficiencies in European banking. The dynamic merger analysis indicates that the cost efficiency of merging banks is positively affected by the merger while the relative degree of profit efficiency improves only marginally. However, there was no evidence that merging banks are able to exercise greater market power in the deposit market. On the basis of these results, it was concluded that the bank merger and acquisitions examined in the study appear to be socially beneficial.

Vallascas and Hagendorff (2011) analyze with a sample of 134 bidding banks, the implications of European bank consolidation on the default risk of acquiring banks. The Merton distance to default model was employed to show that on average, bank mergers are risk neutral. However for the least risky banks, mergers generate a significant increase in default risk. This result is particularly pronounced for cross-border and activity-diversifying deals as well as for deals completed under weak bank regulatory regimes. In addition, large deals which pose organizational and procedural hurdles, experience a merger-related increase in default risk. The

researchers are of the opinion that these results cast doubt on the ability of bank merger activity to exert a risk-reducing and stabilizing effect on the European banking industry.

Rationale for bank recapitalization and consolidation in Nigeria: Prior to 1992, the minimum paid up capital requirement for banks in Nigeria was N12 million for merchant banks and N20 million for commercial banks. A review that year moved the requirements to N40 and 50 million, respectively. This level lasted till 1997 when a uniform N500 million minimum capital was introduced. The reason for discontinuing the dichotomy was to allow for a level playing field and the realization that there was no real difference between the capital requirements of the two categories. It was also to prepare the system for the introduction of universal banking. In 2000, the minimum capital was moved to N1 billion for new banks while existing banks were expected to meet this level by December 2002.

Total N2 billion minimum paid up capital was introduced for new banks in 2001 while existing banks were given until December 2004 to comply. The reasons for these adjustments include:

- Increasing cost of IT and other infrastructure
- Comparison with other jurisdictions
- Inflation and increasing interest rates
- Depreciation of the national currency, the Naira
- Strengthening the operational capacity of deposit money banks
- Minimizing the risk of distress

There was also the need to curb the spate of requests for licenses which in many cases were not backed with any serious intention. The absorptive capacity of the system was also an issue, i.e. things like the executive capacity to run the banks, supervisory resources, the cut throat competition that was breeding malpractices, etc. Consequently on July 6, 2004, the Central Bank of Nigeria (CBN) made a policy pronouncement.

The highlight was the increment of the earlier N2-N25 billion with full compliance deadline fixed for the end of the year. The rationale as indicated is that most banks in Nigeria have a capital base of <US$10 million or about N1.3 billion and that the largest bank in Nigeria has a capital base of about US$298 million compared to US$526 million for the smallest bank in Malaysia. Further reasoning include that globally, size has become an ingredient for success. An enhanced capital-base, all things being equal is expected to confer competitive edge on a bank. It would enable the bank acquire relevant technology, engage high quality personnel and absorb shock. It would also position the bank to offer better and value-added services while increasing its earning capacity.

Furthermore, consolidation increases the potential of banks to compete effectively at the national, regional and global levels. Another issue related to the small size of Nigerian banks is the high cost of intermediation epitomized by the wide spread between deposit and lending rates. It would be recalled that the desire of the government to have a single digit lending rate has remained a mirage due mainly to the high cost of intermediation.

According to the CBN, the new minimum capital base was aimed at enhancing capabilities to finance large projects as well as ensure a capital base that can support service delivery channels. Ultimately, the recapitalization consolidation policy is expected to result in:

- Cost savings (attributable to economics of scale as well as more efficient allocation of resources)
- Revenue enhancement (resulting from the impact of consolidation on bank size, scope and overall market power)
- Shareholders pressure on management to improve profit margins and returns on investment, made possible by new and powerful shareholder blocks
- Financial stability, characterized by the smooth functioning of various components of the financial system with each component resilient to shock
- Globalizing the banks (to make for a more globally integrated financial services industry and facilitate the provision of wholesale financial services and geographical expansion of banking operations
- Be abreast with new developments which impose high fixed costs and the need to spread these costs across a large customer base
- Facilitate risk reduction due to change in organizational focus and efficient organizational structure
- Be in tandem the advent of deregulation which removed many important legal and regulatory barriers

MATERIALS AND METHODS

The aim of this study is to investigated the effect of the recapitalization and consolidation program on the cost of equity capital of banks in Nigeria. Assessing the reduction or increase in the cost of equity capital of banks is a good measure of both the effectiveness and efficiency

Table 1: Dividend per share and average market value of the sampled banks 2003-2008

Banks	2003	2004	2005	2006	2007	2008
Eco Bank	0.14 (7.13)	0.26 (7.50)	0.39 (7.50)	0.38 (7.01)	0.47 (7.83)	0.26 (12.13)
FBN	1.50 (23.05)	1.50 (25.75)	1.55 (28.51)	1.60 (41.64)	1.00 (40.65)	1.00 (36.80)
GTB	0.75 (3.09)	0.60 (3.09)	0.62 (10.80)	0.70 (15.39)	1.03 (30.84)	0.75 (26.86)
IBTC	0.15 (3.05)	0.18 (3.85)	0.20 (4.60)	0.20 (5.38)	0.30 (12.36)	0.95 (15.48)
Intercontinental	0.30 (4.71)	0.40 (6.12)	0.42 (7.86)	0.45 (12.56)	0.65 (25.36)	0.75 (32.67)
Oceanic	-	0.67 (6.01)	0.74 (6.10)	0.60 (9.66)	1.02 (24.75)	1.30 (22.88)
UBA	0.45 (7.74)	0.60 (10.85)	0.60 (11.59)	1.00 (17.58)	1.20 (45.56)	1.37 (36.43)
Union Bank	1.35 (25.65)	1.40 (28.79)	1.40 (24.24)	1.00 (26.01)	1.00 (37.06)	1.00 (37.14)
WEMA	0.25 (3.84)	0.10 (4.92)	0.17 (3.90)	0.15 (3.32)	0.25 (8.85)	0.20 (14.85)
Zenith	-	0.70 (15.71)	0.70 (14.85)	1.10 (21.59)	1.00 (46.65)	1.70 (40.43)

Dividend per share; banks various years annual reports and statement of accounts.( ) average market value

of the recapitalization and consolidation program. In accordance with this aim, a sample of ten banks that were in existence prior to the consolidation exercise and still in existence after the consolidation exercise either on its own or having acquired smaller bank(s) was analyzed.

The banks are namely; First Bank of Nigeria (FBN), United Bank For Africa (UBA), Union Bank of Nigeria (UBN), Guarantee Trust Bank (GTB), Zenith Bank, IBTC, Wema Bank, Eco bank, Oceanic Bank and Intercontinental Bank. Financial data on these banks were obtained for a period of 6 years from 2003-2008. The years was divided into two periods 2003-2005 and 2006-2008, representing the period prior to consolidation and the consolidation, respectively. The mean cost of equity capital of all the selected banks prior to consolidation and mean cost of equity capital after the consolidation were then calculated and compared to test the hypothesis of the study that there is no significant difference in banks mean cost of equity capital before consolidation and the mean cost of equity capital after consolidation.

The mean cost of equity capital of the banks was calculated dividing the banks dividend per share by the difference between their average market value and dividend per share and multiplied by 100. The student's t-test was used to test for the difference between the mean cost of equity capital of all the selected banks prior to consolidation and after the consolidation exercise.

RESULTS AND DISCUSSION

Table 1 shows data on the sampled banks dividend per share and average market value from 2003-2008. The calculations of average cost of equity capital for the pre consolidation period (2003-2005) and the post consolidation period (2006-2008) are shown in Table 2 and Fig. 1. From Table 2 and Fig. 1, it is seen that all the sampled banks except Eco Bank experienced a reduction in their average cost of equity capital post consolidation years with considerably high percentage difference.

Table 2: The sampled banks average cost of equity capital pre and post consolidation

	Average cost of capital		
Banks	Pre-consolidation	After-consolidation	Percentage difference
Eco Bank	3.68	4.75	29.1
FBN	6.30	3.10	50.8
GTB	8.06	3.70	54.1
IBTC	5.78	4.30	25.6
Intercontinental	6.48	2.90	55.2
Oceanic	15.67	5.70	63.6
UBA	5.83	4.22	27.6
Union Bank	5.60	3.18	43.2
Wema	4.52	3.00	33.6
Zenith	4.80	3.98	17.1

Cost of equity capital is calculated with information contained in Table 1 as: (Dividend per share/by average market value - dividend per share) ×100

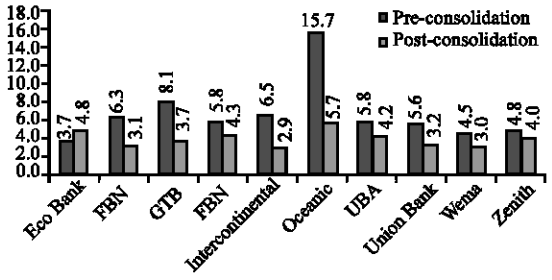

Fig. 1: The sampled banks average cost of equity capital pre and post consolidation

This observed general decline in the cost of equity capital of the sampled banks was tested for statistical significance by computing the t-statistics. The computation is shown in Table 3 and 4. Going by the calculation, the t-statistics obtained, 2.54 is greater than t-critical 1.83 at a degree of freedom of 9 and 5% level of significance.

With this result, the null hypothesis that there is no significant difference in banks mean cost of equity capital before and after consolidation is rejected. This therefore implies that there is a significant difference, a reduction in the sampled banks cost of equity capital before and after the consolidation of the banks.

Table 3: Computation of t-statistics parameters

Banks	$Accap_{Pre}$	$Acca_{Post}$	$Accap_{Pre}$ - M_{pre}	$Accap_{Post}$ - M_{post}	$(Accap_{Pre} - M_{pre})^2$	$(Accap_{Post} - M_{post})^2$
Eco Bank	3.68	4.75	-2.99	0.87	8.95	0.75
FBN	6.30	3.10	-0.37	-0.78	0.14	0.61
GTB	8.06	3.70	1.39	-0.18	1.93	0.03
IBTC	5.78	4.30	-0.89	0.42	0.80	0.17
Intercontinental	6.48	2.90	-0.19	-0.98	0.04	0.97
OCEANIC	15.67	5.70	9.00	1.82	80.96	3.30
UBA	5.83	4.22	-0.84	0.34	0.71	0.11
Union Bank	5.60	3.18	-1.07	-0.70	1.15	0.49
Wema	4.52	3.00	-2.15	-0.88	4.63	0.78
Zenith	4.80	3.98	-1.87	0.10	3.50	0.01
Total	66.72	38.83	0.00	0.00	102.81	7.24

Table 4: Computation of parameters

Parameters	Values	Total
M_{pre}		
Sum $Accap_{Pre}$	66.7	6.67
N	10	
M_{post}		
Sum $Accap_{Post}$	38.8	3.88
N	10	
$(S_{pre})^2$		
Sum $(Accap_{Pre}-M_{pre})^2$	102.81	11.42
N - 1	10 - 1	
$(S_{post})^2$		
Sum $(Accap_{Post}-M_{post})^2$	7.24	0.80
N - 1	10 - 1	
t		
$\frac{M_{pre} - M_{post}}{\sqrt{\{[(S_{pre})^2+(S_{post})^2]/N\}}}$	$\frac{6.67 - 3.88}{\sqrt{\{[11.42+0.80]/N\}}}$	2.54

Where:

$Accap_{Pre}$ = Pre-consolidation average cost of capital for each of the selected banks

$Accap_{Post}$ = Post-consolidation average cost of capital for each of the selected banks

M_{pre} = Mean pre-consolidation cost of capital

M_{pre} = Mean post-consolidation cost of capital

N = Sample size (i.e., 10)

$(S_{pre})^2$ = Variance of pre-consolidation average cost of capital

$(S_{post})^2$ = Variance of post-consolidation average cost of capital

CONCLUSION

This study has investigated the impact of the impact of the bank consolidation and recapitalization program on the cost of equity capital of banks in Nigeria. The motivation lies in ascertaining whether or not banks consolidation and recapitalization reduces the cost of equity capital of banks or not.

The hypothesis that there is no significant difference in banks mean cost of equity capital before and after consolidation and recapitalization was formulated and tested. A sample of ten banks that were in existence prior to and after the consolidation and recapitalization exercise was used to test this hypothesis.

The data collected and analyzed indicate that there were considerably high reductions in the cost of equity capital of nine out of the ten sample banks. The observed reductions were subjected to a statistical test of significance using the t-statistics. The calculated t-statistics rejects the hypothesis that there is no significant difference in banks mean cost of equity capital before and the consolidation and recapitalization programme. On the strength of the result, the study shows that the consolidation and recapitalization programme has brought about considerable reduction in the cost of equity capital of the sampled banks.

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