Mergers & Acquisitions and Efficiency of Financial Intermediation in Nigeria Banks: An Empirical Analysis

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Abstract

The value gains that alleged to accrue to the large and growing wave of merger and acquisition activity have not been verified. Thus leading the research community in quandary on whether the industry has followed a path of massive restructuring on a misguided belief of value gains or whether the financial regulators and operators are lying to the public and shareholders about the effects of their activity on shareholders value and banking performance. It is important to address this issue by reconciling data with empirical reality of continued merger and acquisition activity. This paper fills the gap by investigating the effects of mergers and acquisitions on the efficiency of financial intermediation in the Nigerian banking industry. This is carried out by estimating a model that incorporates some key financial variables in a model that regress interest rates on these financial variables. Two models are estimated: one for the lending activity and the other is for the deposit activities. The model for lending activity has interest rate on loan as the dependent variable and deposit rate represents the dependent variable in the deposit model. The study found evidence to support the thesis that the consolidation programme-induced mergers and acquisitions in the banking industry had improved competitiveness and efficiency of the borrowing and lending operations of the Nigerian banking industry.

Keywords: Nigerian banking industry, Mergers & Acquisitions, Intermediation

1. Introduction

Banks are the linchpin of the economy of any country. They occupy central position in the country's financial system and are essential agents in the development process. By intermediating between the surplus and deficit savings' units within an economy, banks mobilize and facilitate efficient allocation of national savings, thereby increasing the quantum of investments and hence national output (Afolabi, 2004).Through financial intermediation, banks facilitate capital formation (investment) and promote economic growth.

The decade 1995 and 2005 were particularly traumatic for the Nigerian banking industry; with the magnitude of distress reaching an unprecedented level, thereby making it an issue of concern not only to the regulatory institutions but also to the policy analysts and the general public. Thus the need for a drastic overhaul of the industry was quite apparent.

In furtherance of this general overhauling of the financial system, the Central Bank of Nigeria introduced major reform programmes that changed the banking landscape of the country in 2004. The main thrust of the 13-point reform agenda was the prescription of a minimum shareholders' funds of 25 billion for Nigerian Deposit money bank not later than December 31, 2005. In view of the low financial base of these banks, they were encouraged to merge. Out of the 89 banks that were in operation before the reform, more than 80 percent (75) of them merged into 25 banks while 14 that could not finalized their consolidation before the expiration of deadline were liquidated.

Because of the apparent advantage of efficiency related benefits the, banking industry has experienced an unprecedented level of consolidation as mergers and acquisitions among financial institutions have become a general phenomenon globally (Note 1). For instance between 1993 and 1996, about 1500 mergers were recorded in the USA (Pilloff 1996), similar experience was observed in the Europe and Asian continents (Schenk 2000). To a large extent, this consolidation is based on a belief that gains accrue through expenses reduction, increased market power, reduced earnings volatility, and scale and scope economies. However, the characteristics of the kind of reforms induced mergers and acquisition of the banking industry creates doubts about its potentials of realizing efficiency gains. A deeper look at the 25 banks that emerged after the consolidation shows that most banks that were regarded as distressed and unsound regrouped under new names or fused into existing perceived strong banks not necessarily to correct the inefficiency in their operating system but just to meet the mandatory

requirement to remain afloat and to continue business as usual. While this consolidation no doubt has benefits, what is less clear is the effect of this consolidation on the operating efficiency of the banks. In view of this observation certain issues arise on the desirability or otherwise of this imposed 'one fit all consolidation' exercises: will the increase in market power creates monopoly which theoretically increase price (bank interest rates) and reduce output (financial intermediations)?

Mergers and acquisition or any other form of consolidation may influence bank interest rates, competition and transmission mechanism of monetary policy in so far as the increase in size and the opportunity for reorganization involved may either provide gains in efficiency that bear on marginal costs or give rise to increase in market power, or both together. Gains in efficiency would be obtained in moving on to greater scale of activity (if there are economies of scale).

Moreover, the primary role of banking institution is intermediating fund from the surplus unit to the deficit unit. In the presence of increase competition and reduced number of banks, there is every tendency for these banks to engage in activities that yield higher return irrespective of whether these activities promote the primary intermediation role. The consequences of this, is that consolidation may or may not yield greater financial intermediation or reduce the banks to a mere financial investment. Since the essence of any reforms is to bring greater efficiency not only in the operation but also their contributory role to the overall economy, then it is important to also raise the issues whether the recent mergers and acquisitions have really impacted positively on both credit allocation and saving mobilization through reduced cost of borrowing and increased returns on savings.

Whether or not bank mergers actually achieve these expected performance gains is still remain critically an empirical question. If consolidation does, in fact, lead to gains, then shareholder wealth can be increased. On the other hand, if consolidating entities do not lead to the promised positive effects, then mergers may lead to a less profitable and valuable banking industry.

A reading of the literature suggests that the value gains that alleged to accrue to the large and growing wave of merger and acquisition activity have not been verified (Pautler 2001). Thus leading the research community in quandary on whether the industry has followed a path of massive restructuring on a misguided belief of value gains or whether the financial regulators and operators are lying to the public and shareholders about the effects of their activity on shareholders value and banking performance. It is important to address this issue by reconciling data with empirical reality of continued merger and acquisition activity.

Moreover, while there are myriads of studies on the effects of consolidation on other sectors of the developing economies, there is paucity of studies on the effects of bank consolidation in developing countries like Nigeria. The neglect of this issue is particularly surprising for these developing economies, where the short run real effects   of financial reforms have long remained controversial (Teriba 2005). And more so, the adoption of financial reforms has often been postponed, reversed shortly after being implemented or partially implemented for fear of recessionary consequences. Indeed, ascertaining the empirical relevance of the implications of financial reform especially merger and acquisition on banking operating efficiency for developing economies is an important step in assessing the short run costs of overall economic reforms in these economies. More so, mergers in the banking and elsewhere take up considerable amounts of managerial time and talent (perhaps as much as fifty percent at the level of top-executives, Schenk, 2000). Since they usually requires enormous funds to get done, or vast offerings on paper, it is therefore of great importance to know what they deliver to the economy.

Faced with this set of possible repercussions, it worth evaluating whether merged banks have actually obtained gains in efficiency of their financial intermediating roles. This study aims to fill a gap, as the handful of empirical studies in this area is US- or European based. Specific empirical evidence from the developing countries like Nigeria is crucial since the developed economies experiences cannot be automatically applied to the undeveloped   environment in general and Nigeria economy in particular there is substantially different institutional reality.

2. Theoretical and Empirical Considerations

Several types of efficiency gains may flow from merger and acquisition activity. Of these, increased cost efficiency is most commonly mentioned. Many mergers have been motivated by a belief that a significant quantity of redundant operating costs could be eliminated through the consolidation of activities. For example, Wells Fargo estimated an annual cost savings of $1billion from its 1996 acquisition of First Interstate (Crocket 1995)

Consolidation enables costs to be lowered if scale or scope economies can be achieved. Larger institutions may be more efficient if redundant facilities and personnel are eliminated within the post-merger organization. Moreover, costs may be lowered if one bank can offer several products at a lower cost than separate banks each providing individual products. Cost efficiency may also be improved through merger activity if the management of the acquiring institution is more skilled at holding down expenses for any level of activity than of the target. Bank merger and acquisition activity may also encourage improved revenue efficiency in a manner analogous to cost efficiency, (Cline 1996). According to this view, scale economies may enable larger banks to offer more products and services, and scope economies may allow providers of multiple products and services to increase the market share of targeted customer activity.

Additionally, acquiring management may raise revenues by implementing superior pricing strategies, offering more lucrative product mixes, or incorporating sophisticated sales and marketing programmes. Banks may also generate greater revenue by cross-selling various products of each merger partner to customers of the other partner. The result is supposed to be higher revenue without the commensurate costs, i.e., improved profit efficiency. The latter term in general refers to the ability of profits to improve from any of the sources noted above, cost economies, scope economies or marketing efficiency. In a sense, it represents the total efficiency gains from the merger without specific reference to the separately titled efficiency improvement areas.

Merger-related gains may also stem from increased market power. Deals among banks with substantial geographic overlap reduce the number of firms in markets in which both organizations compete. A related effect of in-market mergers is that the market share of the surviving organization in these markets is raised. These changes in market structure make the affected markets more vulnerable to reduced competition. The increased market power of the surviving organization may enable it to earn higher profits by raising loan rates and lowering deposit rates. However, to the extent that a local market can be exploited by a merger which results in substantial market power, the potential gain could be substantial.

Finally, mergers may enhance value by raising the level of bank diversification. Consolidation may increase diversification by either broadening the geographic reach of an institution or increasing the breadth of the products and services offered. Moreover, the simple addition of newly acquired assets and deposits facilitates diversification by increasing the number of bank customers. Greater diversification provides value by stabilizing returns. Lower volatility may raise shareholder wealth in several ways. First, the expected value of bankruptcy costs may be reduced. Second, if firms face a convex tax schedule, then expected taxes paid may fall, raising expected net income. (Note 2) Third, earnings from lines of business where customer's value bank stability may be increased. Finally, levels of certain risky, yet profitable, activities such as lending may be increased without additional capital being necessary. (Note 3)

Any one of these reasons for gains from mergers is sufficient, and different ones presumably are relevant in different circumstances. Not all mergers are expected to result in cost efficiencies, nor does each one result in higher revenue and /or diversification gains. However, for any specific merger to create value, at least one of these gains appears to be necessary to achieve it. A casual review of the press suggests most mergers assert cost advantages, while revenue and diversification gains are less often mentioned. When firms of dissimilar franchise merge, on the other hand, revenue efficiency or diversifications are often the indicated reasons. Participants in in-market mergers trumpet cost efficiencies, while others allege market power outcomes. Whether any of these gains are obtained is another matter. Bankers and their investment bankers can allege all sorts of benefits. The key issue for this study is whether or not these gains are observable.

A large portion of the empirical work examining the benefits of mergers focuses on changes in cost efficiency using available accounting data. Berger and Udell (1998), for example, examine mergers occurring in the 1980s that involved banking organizations with at least $1 billion in assets. The results of their paper are based on data aggregated to the holding company level, using frontier methodology and the relative industry rankings of banks participating in mergers. Frontier methodology involves econometrically estimating an efficient cost frontier for a cross-section of banks. For a given institution, the deviation between its actual costs and the minimum cost point on the frontier corresponding to an institution similar to the bank in question measures X-efficiency. The authors find that, on average, mergers led to no significant gains in X-efficiency. (Note 4) Berger and Humphrey also conclude that the amount of market overlap and the difference between acquirer and target X-efficiency did not affect post-merger efficiency gains. In addition to testing X-efficiency, they also analyze return on assets and total costs to assets and reach a similar conclusion; no average gains and no relation between gains and the relative performance of acquirers and targets. Non-interest costs yield significant results, but the findings are opposite of expectations that the operations of an inefficient target purchased by an efficient acquirer should be improved. Akhavein, Berger, and Humphrey (1997) analyze changes in profitability experienced in the same set

of large mergers as examined by Berger and Humphrey. They find that banking organization significantly improved their profit efficiency ranking after mergers. However, makings based on more traditional ROA and ROE measures that exclude loan loss provisions and taxes from net income did not change significantly following consolidation.

DeYoung (1993) also utilizes frontier methodology to examine cost efficiency and reaches similar conclusions as Berger and Humphrey. Cost benefits from mergers did not exist for 348 bank-level mergers taking place in 1986 and 1987. In addition to the lack of average efficiency gains, improvements were unrelated to the difference between acquirer and target efficiency. However, DeYoung does find that when both the acquirer and target were poor performers, mergers resulted in improved cost efficiency. In addition to frontier methodology, the literature contains several papers that solely employ standard corporate finance measures to analyze the effect of mergers on performance. For example, Srinivasan and Wall (1992) examine all commercial bank and bank holding company mergers occurring between 1982 and 1986. They find that mergers did not reduce non-interest expenses. Srinivasan (1992) reaches a similar conclusion.

Both of these studies focus solely on non-interest expenses resulting in an incomplete picture of the cost savings associated with mergers. In order to gain a complete view of bank costs, the total of interest and non-interest expenses must be examined. Various funding and investment strategies have different impacts on the two cost components. For example, an increase in purchased fund raises interest costs, but lowers non-interest costs. Therefore, to avoid attributing efficiency gains to changes in funding methods or investment choices, total costs must be evaluated. (Note 5) Toward this end, Rhoades (1993) conducts a thorough examination of in-market mergers taking place between 1981 and 1986. He regresses the change in several performance measures on control variables and a dummy variable differentiating bank that engaged in an in-merger from those that did not. Rhoades also conducts several logic analyses where the dependent variables measure whether the efficiency quartile of a bank increased, decreased, or remained unchanged. In both sets and tests, cost reductions and efficiency gains were not significantly related to horizontal mergers. The 1993 study is the most recent of a number of studies on the subject by this author. In an earlier study, Rhoades (1987) examines the impact of mergers on the ratios of net income before extraordinary items to assets and non-interest expenses to assets. He runs profit analyses in which a dummy variable distinguishing non-acquired banks from banks acquired by multibank holding companies is the dependent variable. Performance measures and several control variables serve as the independent variables. Rhoades finds that neither income nor – interest expenses were affected by merger activity. In Rhoades (1990), a similar study to Rhoades (1993) is conducted with 13 acquisitions involving billion dollar banks. Consistent with his other work, Rhoades finds no performance effect due to mergers.

The work of Linder and Crane (1992) is also noteworthy. They analyze the operating performance of 47 bank-level intrastate mergers that took place in New England between 1982 and 1987. Of the 47 mergers in the sample, 25 were consolidations of bank subsidiaries owned by the same holding company. The authors aggregate acquirer and target data one year before the merger and compare it to performance one and two years after consolidation. The performance of merged banks is adjusted by the performance of all non-merging banks in the same state as the merging entities. The results indicate that mergers did not result in improved operating income, as measured by net interest income plus net non-interest income to assets.

Several studies find evidence of merger gains, but the results of these studies must be scrutinized carefully. Spindit and Tarhan (1993) find gain in their sample of 192 commercial bank mergers completed in 1986. Non-parametric tests comparing the performance changes of merged banks with a group of matched pairs indicate that mergers led to operating improvements. The results, however, may be due primarily to economies of scale. The existing evidence in the literature suggests that scale economies do exist for institutions holding less than $100 million in assets. (Note 6) Spindt and Tarhan's result are based on a sample that is dominated by mergers involving banks of this size. Because the results maybe driven by economies of scale at small institutions, it is unclear whether their findings are relevant to large mergers-the transactions most severely transforming the banking industry. Chamberlain (1992) demonstrates the importance that sample selection can have in influencing the results of a merger study. Her sample consists of 180 bank subsidiaries that were acquired by bank holding companies between 1981 and 1987. The unit of analysis is the individual target bank that experienced a change in ownership, but was not consolidated into another bank. For each merger, matched pair analysis is conducted. Pre-merger and post-merger performances of the acquired bank are compared to those of a non-acquired bank form the same area and of similar size and leverage. While Chamberiain finds evidence of overall gains when Texas mergers are omitted from the sample, the full sample yields no evidence of gains.

Turning to studies of stock market reactions to merger announcement, researchers also generally fail to find total gains from consolidation. Most abnormal return studies typically analyze target and acquirer return separately. However, in order to measure the overall anticipated gains resulting from a merger the value-weighted average of bidder and target abnormal returns must be analyzed. Most research on abnormal returns does not do this. Hannan and Wolken (1989) conduct a study of the value-weighted abnormal returns experienced in 43 deals announced between 1982 and 1987. The authors find that, on average, total shareholder value was not significantly affected by the announcement of the deal. The authors do, however, find that one determinant, target capitalization, cross-sectionally influenced expected synergistic gains Target capital was negatively related to the change in total value.

Houston and Ryngaert (1994) examine abnormal returns from four days before the target was initially declared a takeover candidate (by any bank) to the announcement day. In their sample of 153 mergers announced between 1985 and 1991, acquirers suffered a loss in value and targets enjoyed a gain. However, there was no significant aggregate effect on the overall value of the two organizations. The amount of value that was created was highest when acquirers were strong pre-merger performers and when substantial overlap existed. This relationship of value creation with the degree of overlap in consistent with the market expecting mergers best suited for improved efficiency and/ or increased market power to experience the greatest level of post-merger benefits. Madura and Wiant (1994) study abnormal returns of acquirers over a lengthy period following the merger announcement. They find that average cumulative abnormal returns of acquirers in a sample of 152 deals taking place between 1983 and 1987 were negative during the 36-month period following the merger announcement, however, are not likely to be due to the price. They seem more attributable to either the merger achieving fewer benefits than projected, or the market revising downward its expectations for the merger.

The only serious study of the European market on this issue is the recent work by Cybo-Ottone and Murgia (1996). In it they analyze 26 mergers of European financial services firms (not just banks) taking place between 1988 and 1995 in 13 European banking markets. Their results are qualitatively similar to much of the analysis conducted on American banking organizations. Average abnormal returns of targets were significantly negative and those of acquirers were essentially zero. This pattern suggests that there was a transfer of wealth from acquirers to targets. Also comparable to mergers of American banks, the change in overall value of European financial firms at the time of the announcement was small and not significant. This pattern continued for at least a year.   In the year following the merger, (excluding the first 10 days after the announcement), the combined value of the acquirer and target did not change significantly. The findings of Zang (1995) on U.S. data contradict those of most abnormal return studies. Among a sample of 107 mergers taking place between 1980 and 1990, the author finds that mergers led to significant increase in over all value. Although both merger partners experienced an increase in share price around the merger announcement, target shareholders benefited much more on a percentage basis than the acquiring shareholders. Cross-sectional results suggest that increases in value were smallest when improved efficiency and increased market power were expected to have their greatest potential impact. Changes in value decreased as targets got larger relative to acquirers and as the amount of geographic overlap between acquirers and targets increased. The latter finding is consistent with diversification creating value.

Several other papers have incorporated both approaches in the literature. The first of these studies is conducted by Cornett and Tehranian (1992) and examines 30 large holding company mergers occurring between 1982 and 1987. The authors find that profitability, as measured by cash flow returns on the market value of assets, improved significantly after the merger.   This finding, however, must be viewed closely for several reasons. First, the market value of assets may be an inappropriate measure for standardizing income. It is defined primarily from the liability side of the balance sheet as at the market value of common stock plus the book value of long-term debt and preferred stock less cash. Given the nature of banks as financial intermediaries, it is unclear why deposits are not included in this liability-based definition. The appropriateness of subtracting cash holdings is also debatable. Cornett and Tehranian find that net income to assets, a more traditional measure of bank profitability, does not change by a significant amount. In addition, the findings of Cornett and Tehranian may also be partially driven by adjusting performance by an improper benchmark. The authors use, as their peer group, a sample of banks located throughout the country that were traded on either the NYSE or AMEX and that did not merge during the sample period.   This comparison set of banking organizations may not be relevant to the sample institutions which had significantly different regional characteristics. This problem is accentuated by a set of sample observation which has a number of questionable deals. (Note 7) As a result, Cornett and Tehranian's findings of post-merger improvements relative to a benchmark may be due to the unique data used for the study. Cornett and Tehranian also examine value-weighted abnormal returns around the time of the

merger announcement. They find that the market responded to announced deals by raising the combined value of the merger partners. The authors also find that changes in several performance measures, including cash flow returns on the market value of assets, were positively correlated with value-weighted abnormal returns. These relationships suggest that the market may have been able to accurately forecast the eventual benefits of individual mergers. Net income to total assets is not one of the variables that was correlated to value-weighted abnormal returns, however.

Pilloff (1996), like Cornett and Tehranian, combines both approaches found in the literature to analyze a sample of 48 mergers of publicly traded banking organizations that merged between 1982 and 1991. His study improves upon Cornett and Tehranian by addressing many of the problems in that paper. First, results are based on traditional measures of performance that are appropriate for a study of banking organizations. Second, the performance of merging banks is compared to a more accurate benchmark that controls for geographic location. Third, and perhaps most importantly, the merger sample is larger with substantially fewer observations that are poorly suited for analysis. Pilloff obtains results that are consistent with the bulk of the merger literature. In general, mergers were not associated with any significant change in performance, suggesting that managers were unable to generate benefits from deals on average. Moreover, the mean overall change in shareholder value was also quite small. Although there was no average change in either operating performance or shareholder value, there was a great deal of variation among banks. Some mergers proceeded successfully and others resulted in failure. Likewise, the dispersion of changes in market values indicates that investors expected some mergers to increase and others to decrease firm value. A particularly important result of this paper is that merger-related changes in performance were found to be unrelated to changes in market value at the time of merger announcement. Investors recognized that although the mergers would not create benefits on average, some would result in better performance and some would lead to worse performance. However, the market was unable to distinguish between the two types of deals at the time the mergers were initially announced.

Most studies thus fail to find a positive relationship between the two types of deals at the time the mergers were initially announced. More importantly, most studies fail to find a positive relationship between merger activity and gains in either performance or stockholder wealth. This conclusion is of no economic benefits holds across a wide variety of methodologies, samples, and levels of analysis, (individual bank or bank holding company). Moreover, there appears to be no relationship between changes in value at announcement and subsequent outcomes. Although Cornett and Tehranian find the existence of a relationship, Pilloff provides stronger evidence for nonexistence.

3. Model and Analytical Techniques

In order to estimate the effect of merger and acquisition on financial intermediation the study adopted the model developed by Klein-Monti (1973) (Note 8). One of the features of this model is that the credit market and the deposit market are independent, that is, loan rates and deposit rates are determined separately. During the period of deregulation the notable volatility of interest rates on the credit market might have entailed an additional marginal cost of interbank financing to that arising from maintaining credit positions in the market. Thus, banks might encounter certain liquidity constraints, depending on whether the gap between credit and deposits was positive or negative. Against this background, the marginal cost of obtaining new credit was not independent of the volume of credit and deposits but related to the magnitude of the gap between them since this determined the likelihood of having to resort to obtaining interbank financing. Therefore, the rule for determining the lending interest rate was not independent of the entity's volume of deposits (Note 9). Bearing in mind these considerations and that the period analysed in this paper relates to a situation of scant interbank market interest rate volatility, it is assumed that the marginal cost of interbank financing does not depend on the stock of loans and deposits. By making appropriate assumptions, the model can be expressed as

$$r^i_L = \beta_0 + \beta_1 r + \beta_2 c^i_L + \beta_3 p^i + \beta_4 \eta^i_L + \beta_5 \eta^M_L + \varepsilon^i_L + FVS \quad \ldots \ldots \ldots \text{(1)}$$

$$\gamma^i_D + \gamma_0 + \gamma_1 \gamma + \gamma_2 c^i_D + \gamma_3 \eta^i_D + \gamma_4 \eta^u_D + \varepsilon^i_D + FVS \quad \ldots \ldots \ldots \ldots \text{(2)}$$

The variables in equations (1) and (2) have been approximated via the following information:

r^i_L: prime interest rate on loans;

r^i_D: interest rate on time deposits ;

r: three-month treasury bill rates;

c^i: operating expenses per asset unit;

$(1 - p^i)$: ratio of non-performing loans to total credit extended;

$\eta^M_{L,} \eta^M_D$:cross-section dispersion of bank interest rates.

A dummy variable (FVS) has been added to capture the possible differential effect of merger processes on the interest rates of the entities resulting from such processes. This dummy takes a value equal to one in years following the merger or takeover date (Note 10) and a value equal to zero in the remaining observation. This dummy has been introduced into the equations in two different ways: either directly, so that it affects the individual effects, or interacting it with the indicator of market competition. In the first case it would reflect the impact on interest rates of organizational changes that could have a bearing on the level of x-inefficiencies, while in the second instance it would reflect an effect of consolidation processes on the competitive response of intermediaries.

The study sourced its data from published books from the regulatory authority. It collects data on identified banks for the periods of time 2002 to 2007. These data are combined together to generate a pooled data series. Hence the study is both time series and cross sectional. Therefore, secondary data time series are collected on the selected banks for the period, 2002 and 2007. The sample includes all the banks in existences two years before and after the 2004 banking reforms. The sample contains the 75(84%) out of the 89 banks in existence in 2004. The remaining 14 (16%) could not consolidate and were liquidated. Out of this 75, only 6(8%) did not combine in any form with any other banks while 69 (92%) fused into one another to form 19(76%) of the final 25 banks that are now in existence after consolidation.

4. Analysis and Discussion of Results

The effects of the M&As on the ability of the banks to carry out its primary functions of financial intermediation is examined. This is carried out by estimating a model that incorporates some key financial variables in a model that regress interest rate on these financial variables. Two models are estimated: one for the lending activity and the other is for the deposit activities. The model for lending activity has interest rate on loan as the dependent variable and deposit rate represents the dependent variable in the deposit model. Table 1 presents the results of the estimations.

In general, model perform well, the Coefficient of variation (R^2) are relatively high and statistically significant. The variables are able to explain more than 50% of variation in the fluctuations in the interest rate in the two financial activities of the banks. The coefficient of the dummy variable added to capture the differential effect of merger processes on interest rate of the entities during the three years after mergers reflects the impact on interest rate of organizational changes that could have a bearing on the level of efficiency of the banks. The coefficients on the dummy variable in the two models are positive and significant. The Wald test conducted to determine the relative contribution of the dummy variable is significant and hence implies that merger and acquisition has significant effect on both lending and deposit activities of the banks after merger.

The dummy variables are also interacted with the competition indicator. This interactive term reflects the effect of consolidation on the competitive response of intermediaries. The coefficients are also significant and positive. This implies that competitive response of Nigerian banks intermediaries resulting from consolidation processes is not lower, on average, than that shown by other entities. There are even signs that this response may have intensified if regard is paid to the sign and the t-ratio value of the coefficient of the variable resulting from interacting the competition indicator with the merger dummy variable. The potential organizational changes related to efficiencies that are not reflected in accounting costs, following consolidation processes do not appear to have affected negatively the level of either loan interest rates or deposit interest rates. The variable used to approximate to the changes in the degree of average competition in bank markets that is the spread between interest rate among the banks is positive and significant in both the loan and deposit markets. This confirms the high level of price competition among the banks. Ordinarily, the conventional deposit rate in Nigeria is low and almost the same across the banks. This may not be so in the case of time deposit. Most banks use tempting interest rate to draw customers in to time saving and it is always negotiable and never displayed openly and disclose to third party.

5. Summary of Findings

A reading of the literature suggests that the value gains that alleged to accrue to the large and growing wave of merger and acquisition activity have not been verified (Pautler 2001). Thus leading the research community in quandary on whether the industry has followed a path of massive restructuring on a misguided belief of value gains or whether the financial regulators and operators are lying to the public and shareholders about the effects of their activity on shareholders value and banking performance. It is important to address this issue by reconciling data with empirical reality of continued merger and acquisition activity. This paper fills the gap by

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Notes

Note 1. Throughout this study the terms merger and acquisition are used interchangeably while consolidation is used as collective term for the two concepts

Note 2. See Santomero (1995) for a discussion of the benefits of diversification on shareholder value. This area of risk management has grown substantially as this review will illustrate.

Note 3. This is a key rationalization in-favor of a move toward universal banking. See Saunders and Walters (1994).

Note 4. See Berger, Hunter, and Timme (1993) for an excellent discussion on the topic of financial institution efficiency.

Note 5. The problems with ignoring total expenses and only analyzing non interest costs are discussed in Berger and Humphrey (1992).

Note 6. For good surveys of the literature on economies of scale. See Clark (1988) or Humphrey (1990).

Note 7. See Pilloff (1996) for a detailed discussion of this problem.

Note 8. See Klein and Monti (1973)

Note 9. This argument is based on the theoretical model by Tobin (1982) and the comments thereon by King (1986).

Note 10. There are grounds for believing that some of the possible effects of a merger on interest rates may be of a more permanent nature. However, merger effects would be hardly disentangled from those caused by other factors in the simple framework considered in this paper.   Furthermore, a majority of studies consider that most of the effects brought about by mergers cease to be felt after three or four years.   See, for instance, Peristiani (1996) and Vender Vennet (1996).

Table 1. Estimates of the effects of M&As on Financial intermediation

Variables	Model I	Model II
Deposit Activity		-0.023
		(-1.942)
Interest rate	0.115	0.117
	(4.021)	(4.069)
Interbank rates	0.086	0.059
	(2.051)	(2.012)
Operating expenses per asset unit	-0.120	-0.116
	(-3.219)	(-2.013)
Non performing loans to total credit	0.083	
	(3.213)	
Interest rate spread	0.064	0.072
	(2.233)	(-3.129)
FVS	0.037	0.360
	(1.987	(1.867)
Spread* FVS	0.029	0.021
	(2.978)	(2.782)
R^2- adj.	0.541	0.625
Wald Test	114.3(p=0.001)	102.2(p=0.001)
Sargan Autocorrelation Test		
AR (-1) (1st Order	0.24(F=0.08)	
AR(-2) 2nd Order	1.56(F=0.69)	
Period	2002-2007	2002-2007