

Influence of Bank Consolidations and Bank Deposit Demands on Lending to Small Businesses: New Ex Post Factor Evidence Emerging from Nigerian Banking Sector

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Abstract

This study investigated how the interactions between bank consolidations and positively changing bank deposits have affected banks' lending to small businesses in Nigeria. In the famous Monti-Klein model of banking firm, variables such as consolidations are considered random and uncorrelated with other fundamental domains and as such are not considered among the factors that can determine banks' lending behavior. However, studies have emerged that found consolidations imperative in determining banking behavior. With subsequent bank consolidations that have occurred in Nigerian banking sector, where deposit demands have changed due to the consolidations, concerns have been raised concerning how interactions or associations between consolidations and deposits could influence bank lending to small credit users. That is, whether this influence differs when the changes in deposits were not direct merger interference. From all ramifications, this kind of clue could enhance good policies on Nigerian economy. Disappointingly, information regarding these concerns has remained asymmetrical. Knowing the adverse implication of this, the researcher selected for study, all the 24 banks that have involved in consolidations and/or recapitalization especially after N25billion bank recapitalization mandate in Nigeria using an Ex-Post Facto research design. Data were obtained from the Central Bank of Nigerian Statistical Bulletins and were analyzed using multiple regression analysis techniques. The results showed that after consolidations, changes in bank deposits caused by consolidation negatively affected small business lending and it is significant. However, when deposits change due to other factors other than consolidations, the influence on lending to small businesses tested negative although insignificant. Government should encourage deposit growth through economic development rather than through consolidations.

Keywords: Mergers, Acquisitions, Consolidation, Small Business and Bank Size

1. Introduction

Nigerian banking sector for almost a decade now has been an arena for bank mergers and acquisitions. The influence of these activities on lending to small businesses has generated many controversies that have raised significant concerns among Nigeria policymakers. Really, anecdotal evidence suggests that small business lending is an inherently a local product likely to be influenced by merger-driven evolution in bank product market. Despite that, the product would likely take local status quo in the midst of the evolution. The main issue arising in this scenario is whether consolidation -induced deposit demand could translate into small risk asset creation differently than when deposit change is due to other drivers such as economic growth for policy utilities. This investigation is relevant given that the major bank mergers and acquisitions that took place within Nigerian banking sector is regulatory driven, which is quite extraordinary rather than strategic. The phenomenon restored the confidence of bank depositors anyway and hence enhanced the liquidity standing of the consolidated banks, which we fear could lead them into investment adventures likely to be at the detriment of small risk asset consumers. Between 2005/2006, out of 89 banks in operation as at 2004, 72 merged into 21, reducing the total number of banks to 24. Three did not merge with any banks, although recapitalized while 14 were liquidated. From that experience, average-banking size in terms of equities, deposits and gross assets increased significantly. Moreover, in 2009, Asset Management Corporation of Nigeria (AMCON) acquired 3 out of the 21 merged mega banks while in 2012, 6 banks merged to form 3. At present, Skye Bank is negotiating acquisitions of Mainstreet bank of Nigeria. Therefore, Nigerian-banking industry is really a composite of consolidated banks and no doubt, bank financial characteristics particularly deposit market demands could give bank managers lending reorientations.

Evidently, these kinds of activities bring about changes in bank market structures, which in turn could influence banks' behavior such as lending decisions (Prompitak 2009). Therefore, based on the subsequent consolidations that have taken place in Nigerian banking sector, the need to examine how the phenomena impact on bank lending to small business cannot be ignored. Moreover, considering that evidence has emerged among researchers indicating that consolidations have brought back confidence among depositors, diminishing the

quantity of cash outside the banking sector, the need to examine how the changes in deposit demand due to consolidations on bank lending to small businesses becomes much more interesting. In the famous Monti-Klein theoretical banking model, changes in deposits are considered fundamental to banking firms' behavior, although the theory is based on general bank lending. In the present study, we would be empirically narrowing down the model and testing it in relation to small business lending behavior of consolidating banking firms. We cannot just assume according to Klein (1971) that banks view borrowers as homogenous consumers of bank lending products.

Before we proceed, we would like in brevity to intimate ourselves of the concept of bank mergers and acquisitions, although we would still broadly deal with conceptual framework in the review of the related literatures in the following section. We believe that understanding the basic concept on the outset, would enhance our comprehension of the entire research work. The concept-bank mergers and acquisitions-have prominently come in the limelight within the past decades given that the global banking industry has witnessed the activities of which the heavy impacts have continued to trail stakeholders in manners that have provoked controversy and questions among policy makers. If we are then to raise a question like the novice, the first would be what bank mergers and acquisitions are that they could exert such enormous influence on banking firms' stakeholders that warrant a controversy. Bank mergers, as a tip of iceberg, could mean a combination of two or more banking firms, which helps them to pursue common and beneficial goals synergistically. On the other hand, bank acquisitions are term used to describe a case where one bank takes over another by paying off some or all of their shareholders in cash or kind, which makes such a taken over bank become a subsidiary under the control of the acquiring predatory banks called the parents. Nwude (2005) sees acquisition as the purchase of controlling interest in one company by another company such that the acquired company becomes a subsidiary or a division of the acquirer. This control usually enables the acquiring banks to direct the operational and financial policies of the subsidiary banks. Note however, that most of the times whether by mergers or acquisitions, control is always achieved by one of the consolidating banks. This control resulting from the change of ownership structures could influence significantly banking behavior, which could in turn affect their stakeholders such as borrowers. Mergers and acquisitions are consummated through consolidations and for the purpose of this study; we use consolidations, mergers and acquisitions interchangeably.

As previously noted, literatures have shown that banking consolidations bring about evolution in banking product market. However, small business lending is likely to be one of the banking products that would still remain local amidst the evolution (Samolynk and Avery 2000). Traditionally, according to the scholars, small business lending as a banking product has inherently been local in nature, which means the product would likely be supplied to firms and borrowers having peculiar credit needs and risks embedded to the prospects of the local economy. This implies according to the scholars that small business lending would generally require local expertise for monitoring borrower-specific risks. In contrast, according to literatures, large commercial loans, consumer credits, treasury bills, government bonds, open market operation (OMO) bills, multinational lending and home mortgage lending have become increasingly standardized and evolving products transacted in what have become national or international markets. Although these types of loan products require expertise, we should realize that they might no longer require the same sort of local presence that small business loans require according to scholars.

Several scholars have also investigated the nature of the effects of bank mergers and acquisitions and have identified two major types of mergers and acquisitions effects, which are static and dynamic effects as shown in the work of Berger, Saunders and Udell (1998), Okafor and Emeni (2008), and Asuquo (2012). Although the last two works relate to Nigeria, they attempted to explore only the static effect doing substantially nothing in relation to dynamic effects probably due to data limitation. Static effect just identifies the changes in lending propensities that result from simply combining the balance sheets of the participating institutions into larger pro forma institutions with combined characteristics within one or two years of consummating the merger (Berger et al 1998). On the other hand, the dynamic effect according to the scholars, identifies the change in lending that follows from decisions to restructure the institution in terms of its sizes, financial characteristics or equity conditions (ratio of equity to gross assets) and local competitive positions (market share or asset concentration, and market deposit demand) after the consummation of mergers and acquisitions. This kind of effect fully surfaces at least after three years. In those two works, mergers and acquisitions were represented in substance as just a mere static event having mere static influences on banks' ability to lend. However, bank mergers and acquisitions are not just a mere combination of pro forma assets and liabilities of the consolidating institutions for which we may just algebraically add for instance; N20billion and N5billion worth of assets of banks X and Y respectively, and then expect to always get N25billion assets for a new consolidated bank Z or XY. If that is so, then we shall dwell with the notion that banking consolidation is a mere static event and proceeding with this

present work may no longer be necessary. Bank mergers and acquisitions from all ramifications are much more than simplistic static phenomenon. The urgent question now is whether the policy makers are aware of this in reality. I doubt and wonder less why there are counter-productive policies in Nigerian banking industry. Where such information asymmetry could drive our economy we may not precisely predict. However, we are afraid if that would not bring about total economic break down. Take note; according to Ove and Arksel (2011), the Great Depression of 1930s in US had a depth of its root in the destruction of local banking products because of information asymmetries. Understanding the ways bank-consolidation affects the ability of banks to lend to small business borrowers cannot indeed be ignored in Nigeria for effectiveness of economic policy. Therefore, we reiterate that to the best of our knowledge, no study in Nigeria has investigated how bank consolidations with the associated deposit demand interact to determine small risk asset creation by fully restructured banks based on the fundamentals of Monti-Klein traditional model. We are the first to employ actually the data that could capture real dynamic effect of bank consolidation from consolidation deposit interactive perspective. Following from the above gaps, our paper contributes variously in literatures.

2.1 Statement of Problem

Poor knowledge of the extent and the directions of the impacts of interactions between bank consolidation and bank deposits on small business lending have led to significant counter-productive policies capable of pulling down the entire economy in near future in Nigeria. Literatures as indicated above have revealed that the Great Depression of 1930s in US had a depth of its root in the destruction of local banking products because of information asymmetries. This is the problem; running an economy through assumption is costly and quite risky. Although, researchers have previously studied how bank consolidations and changes in bank deposits have affected small business lending in Nigeria, data limitation might have forced them to focus in substance only on the static effect, doing nothing or less on the dynamic implications. Moreover, they were not able to differentiate between how consolidation induced bank deposit growth could influence small risk asset creation from that induced by other deposit drivers such as economic growth. This has resulted in a literature gap. To address this gap, this present study shall be focusing on adopting a concise tool in the form of Monti-Klein econometric event model that would serve as a guide in analyzing the dynamic effects of bank consolidation and deposit change interaction on small business lending in Nigeria. Events model involves Ex-post factor analysis. Therefore, our study dishes out new EX-Post factor evidence of consolidation on small business borrowers in Nigeria.

2.2. Objectives of the Study

The main objective of this paper is to examine the influence of bank consolidation on risk asset allocation to small business borrowers. Specifically, we would be trying to:

Ascertain the extent interaction between banking firms' consolidations and changes in banks' deposit demands impact on fully restructured banks' propensity to allocate small risk assets to small business borrowers in Nigeria.

2.3 Research Questions

Based on the above objective, the following question was raised.

To what extent does interaction between banking firms' consolidations and changes in banks' deposit demands impact on fully restructured banks' decision to allocate small risk assets to small business borrowers in Nigeria?

2.4 Statement of Hypothesis

Having raised the above pertinent question, the researchers hypothesize that:

Interaction between banking firms' consolidations and changes in banks' deposit demands does not significantly impact on fully restructured banks' decision to allocate small risk assets to small business borrowers in Nigeria.

3.1 Review of Related Literature

In this section, we shall first consider the conceptual and theoretical framework and then the review of the empirical studies related to the impacts of bank mergers and acquisitions on lending behaviour particularly as it affects small credit supply.

3.2 Conceptual Framework

Mergers and acquisitions in most literatures represent aspect of organizational re-composition geared toward effecting strategic management, corporate finance and value maximization for investing stakeholders or shareholders. According to extant literatures, both, that is, mergers and acquisitions deal with the buying, selling, dividing and combining of different companies and similar entities. Fundamentally, the combination helps the players to grow rapidly in their sector or location of origin, or a new field or new location. The unique thing about consolidations is that the activities impacts on the market structures of banks, which in turn affects banks'

behaviour. Based on the Structure-Conduct Performance Paradigm, and Efficient-Structure Performance Hypothesis of banking consolidation, bank mergers and acquisitions affect the way banks behave, and on the other hand, bank concentration causes banks to be more efficient through market collusion that would help the players extract rents from their borrowing customers.

From this scenario, mergers and acquisitions activities can be regarded as type of restructuring events. This is because the activities occur in some corporate organization and result in reorganization that provides growth or positive value to investing shareholders. Mergers and acquisitions are closely related. In fact, the distinction between the two has become increasingly unclear and variously misconceived in various respects particularly in terms of the main economic outcome according to scholars. Although both differ, scholars use the terms loosely to mean the same thing. From a legal point of view, according to Wikipedia (2014), a merger is a legal consolidation of two companies into one entity, whereas an acquisitions occurs when one company takes over another and completely establishes itself as the new owner in which case the target company still exist as an independent legal entity controlled by the acquirer. As a concept that is quite complex, a merger according to Oye (2011) is the situation where two or more companies combine to form a larger business organization. On the other hand, according to the scholar, an acquisition involves the purchase of controlling shares in another company. In her book, 'Advanced Financial Accounting' Ofoegbu, (2003), sees merger as an event that takes place where shareholders or business enterprises combine their operations in order to achieve mutual sharing of risks and rewards attached to the combined enterprises. Hence, considering merger from her own point of view, the ultimate aim of merging in the corporate world is to diversify merging entities' products and operations for risk removal, reduction or even transfer, which eventually would result in value maximization. Control is an essential element in acquisitions. That explains why Nwude (2005) defines acquisition as the purchase of controlling interest in one company by another company such that the acquired company becomes a subsidiary or a division of the acquirer. Where acquisitions occur between entities according to David, Britton and Ann (2009), the acquiring entity obtains control over the action of the entity taken over. This control, according to them, gives the acquirer the power to govern the financial and operating policies of the acquired, which enables them to obtain benefits from its activities.

3.3 Drivers and Motives of Mergers and Acquisition

There are specific factors that drive bank mergers and acquisitions. These factors motivate and encourage banks to get involved in the activities. First among these factors is the desire for value maximization by the consolidating institutions. This is the shareholders' theory of banking consolidation. Banks get involved in mergers and acquisitions because they want to maximize the value of their investors. They pursue this goal by investing to increase market power, which can easily be achieved through consolidations. In the process of merging, the shareholders always make sure that the mergers would result in a positive present value. Through bank consolidation, the involved can also achieve wealth maximization by replacing inefficient management after the acquisitions. Mergers and acquisitions promote economies of scale and scope, which also advance the interest of investors. As institutions merge, their scale of operations widens for instance geographically. Increase in Scale of operation such as productions reduces fixed cost, which in turn bring about increasing returns to scale. In order to benefit from the increasing returns associated with larger scale of operations, shareholders always take advantage mergers and acquisitions to meet their target value. Therefore, an economy of scale is an opportunity for the consolidating institutions to spread fixed costs across a larger volume of output. This opportunity can be achieved through the elimination of duplicating and competing resources, bulk purchases of materials at reduced prices due to discounts. It may be obtained through improved negotiating strength in dealing with suppliers, intensive utilization of production facilities, standardization of materials and products to enable value analysis to be applied, and acquisition of improved technology and know- how from the acquired company. Moreover, banking consolidation also decreases risk through geographic and product diversification. This no doubt increases shareholders values thereby motivating them to consolidate. Apart from value maximization theory, mergers can also occur between institutions for non-value maximization purposes. Mergers can take place because of desire for managerial acquisitions and hubris hypothesis. When an organization needs expertise in management, they can come by it by acquisition of other entities, which would encourage inter-managerial breed. If the subsidiary has specialist knowledge in specific areas of the parent company's production area, they can demand the release of the specialist from the subsidiary company for the task in the acquiring company since they are both under one entity. This need for managerial expertise, therefore, can drive institutional integrations such as mergers and acquisitions. Organizations such as banks can go for acquisitions because of desire to claim mere superiority over their competitors such that even when the acquisitions may not result in positive net present value to the parent shareholders' wealth, the acquirers may go on to purchase the firm. This is the pride theory in mergers and acquisitions- in this hubris hypothesis, the predatory company just want to show off by even paying higher it should have cost it to acquire similar company under normal

circumstances. In addition to these firm level motives, banks decision for mergers and acquisition might be influenced by external factor such as industry level differences in the economic environment, laws and regulations (Berger et al 1999). Taking for instance, the laws and regulations, institutions can engage in consolidation because a new law that positively reviewed the minimum capital base was passed. The case of the Nigerian consolidation experience was as a result of N25 billion minimum capital mandate by the Central Bank of Nigeria. This law influenced greatly the banks desire to merge in Nigeria. In 2005, 74 banks out of 89 banks in existence merged into 24. Indeed, the causes of mergers and acquisitions have long been debated in the literature (Folios et al 2011). However, following the neoclassical theory argument, all firm decisions including acquisitions are made with the sole objective of maximizing shareholders wealth. Mergers and acquisitions according to them in this context serve as a means to increase market power, replaces inefficient management, achieve economies of scale and scope among others. Nwude (2003) also states that the reasons behind corporate acquisitions and mergers are operating economies of scale; sources of supplies, finance/leverage, management expertise, increased market share, desire for growth and technological drive are largely the factors that firms seek to achieve while pursuing policies for merger and acquisitions. The reasons for mergers and acquisitions would be appreciated when one considers the fact that the acquiring company may be seeking to safeguard the source of supply for materials so that it will not be thrown out of business suddenly. Leverage as the scholar noted improves earning per share, over all liquidity, access to capital markets, access to cash resources, acquisition of asset backing which may assist in obtaining loans. These benefits can be enjoyed through business combinations. Banks going for combinations may have such benefits at the back of their minds. Liquidity is an essential bank specific characteristic and no bank can be managed efficiently without adequate liquid assets. Companies fishing for management expertise can also achieve such by opting for acquisition. The motive here is to acquire management team that is highly experienced, aggressive, competent and respected, cross pollination of managerial tactics and expertise or displacement of existing management to ensure continued growth (Nwude:2003).

3.4 Theoretical Framework

Theoretically, Eustalius et al (1995), maintain that positive relationship exists between bank deposit and credit availability because time and savings deposits can enhance the stability of funds for loans. Bank according to them may need less liquidity with stability of deposits and can invest more money in loans. However, they also maintain that negative relationship can also exist between loans and deposits since if deposits become more interest sensitive banks may choose to increase investment in interest rate sensitive assets and to decrease investment in loans. They would likely take this direction because investment in such securities would likely match the volatility of the interest rate risks. Moreover, repricing a loan can result in additional transaction cost to the bank and transferring risk to borrower may increase the likelihood of a loan default (Eustalius et al, 1995).

Theory according to Berger et al (1998) suggest that the larger and more complex an organization grows is the less it is inclined to lend to small and less informational opaque borrowers. This means that institutions with higher asset value or deposits would likely create less of their asset as loans to small businesses. When the loans demand requires intimate knowledge of the borrowers, larger organization may be less inclined to maintain the relationship by extending loans to them. Large banks from this disposition would likely trade in market that do not demand the intimate knowledge of the borrowers. Such markets include OMO market, Treasurer Bills Product market, Treasurer Certificate market, and Multinational Lending market. The reason why large banks may not like extent loans that demand intimate knowledge of the small business, its owners, performance and its local market is because of organizational diseconomies that would likely arise with producing such loans along with other financial service products. The emergence of these diseconomies was because granting loans to small borrowers that are not transparent in business affairs and at the same time lending to group that are informational transparent may take different cost or activity dimension that may require the use of different technologies and entirely different credit culture(Berger et al 1998). What this means is that the policies and procedures associated with examining and trailing small non-transparent borrowers and transmitting the relevant information within the banking institution according to scholars may be very different from those associated with providing transaction-driven loans to large informational transparent borrowers. Based on this, it can be inferred that no cost conscious firm would like to incur both costs at the same time. According to Joe and Eric (1997), large institutions invest a relatively smaller share of assets in small business loan the reason being that small institutions are generally limited to small loans and cannot make large business because of legal lending limits and diversification problem.

20th and 21st century saw the growth of banks in respect of sizes and loans. Because of this sector transformation, many theories have emerged in relation to bank lending and size changes. Bank consolidation as scholars found out such as studies by Peek and Eric (1997) showed that large institutions invest a relatively smaller share of

assets in small business loan. The scholars maintained that the issue is not just changes in sizes. According to them, some other issues matter. Large banks according to them look away from small business loan demand while small banks invest more in small credit. The reason for this behavior, according to the scholars was that small institutions are generally limited to small loans. They cannot, according to scholars make large business loans because of legal lending limits and diversification problem while large institutions as they found out may be disinclined to extend relationship driven small business loans because of organization diseconomies associated with producing such loan along with the transactions driven large loans and capital market services in which large banks specialize. Moreover, the policies and procedures associated with dealing with small informational opaque borrowers may be very different according to them from those associated with providing credit to large informational transparent borrowers and it may be costly to employ both types of policies and procedures in the same organization. From their findings, large banks that usually emerge out of mergers and acquisitions are not always disposed to maintain their former loan service relationship with the small business. Level has changed and their blown assets are now sufficient for higher dealings. This of course may not be in the interest of the small business unless some other non-banking loaning units find such a departure as a new market for lending to small businesses.

In study of banking behavior, quality and quantity of capital, which has direct relationship with increase in bank size, are very important factors. Banks without sufficient capital would no doubt not be able to withstand some shocks in the market. Of course, involvement in certain transactions could be widely limited. Unarguably, according to BGL (2009), size has been a very important factor in the banking sector. It is presumed that with comfortable balance sheets, banks would be able to handle large ticket transactions and backed by banks, the private sector is expected to run the economy in the near future, providing basic infrastructure needs. Because of this boost in size, we see banks coming together to finance developmental projects around the nation. Examples abound. The new local airport in Lagos quickly comes to mind when discussing banks developmental projects. Some banks have also been involved in financing independent power projects and the concession of some roads such as the Lekki – Epe express and the proposed Shagamu- Benue express and indeed many others have opened banks to more of such large business transactions.

According to Laurent et al (2012), undercapitalized banks tend to restrict the provision of loans to the economy as relatively higher cost of bank equity leads banks to deleverage in order to reach target capital ratio. Studies by Francis and Osborne (2009) quoted in Laurent et al (2012), indicates that capital is essential in bank lending behavior. Using partial adjustment models and estimates on banks' target capital ratios; they maintain that banks with surplus (shortfall) of capital relative to their target tend to record higher (lower) credit growth. As quoted in Laurent et al (2012), analysis by Peek and Rosengren (1995b), and Brikmann and Horvitz (1995), suggest that the lending of poorly capitalized banks increases less than that of better-capitalized competitors owing to reductions in bank capital. According Laurent et al (2012), Hancock et al (1995) found similar effect. According to the scholar banks with binding-capital constraints cut back lending more quickly in reaction to unanticipated drops in capital than those without such constraints. Evidence also shows that banks with weaker capital reduce lending more strongly than other banks especially among Spanish banks. Scholars also maintain that some theoretical models have confirmed the existence of a negative link between capital status and lending behavior of banking firms. As an example, Laurent et al revealed that Thakor (1996) showed that capital requirement linked solely to credit risk raises the cost of lending relatively to alternative investment. This according to him increases credit rationing and reduce aggregate demand.

There is a capital constraint model, which describe the behavior of banks in giving out loans to small businesses. Some banks due to their capital limitation are restricted in giving out loans beyond a certain proportion. Take for instance, micro-finance banks in Nigeria are not allowed to lend beyond N500, 000 to their customers who want to make use of their credit services. This is the side of capital lending. According to Obamunyi (2007) quoted in Asuquo (2012), fundamentally banks are limited or subjected to both market and regulatory imposed capital requirement. There is always a reserve requirement every bank is expected to maintain in relation to deposits coming to them. For instance, proportion of reserve requirement for any private sector deposit in Nigeria is 40% (Asuquo, 2012). For the deposits from the public sectors, the minimum reserve ratio to the deposit is 90%. Therefore, despite the propensity to lend, banks are not expected to lend beyond the limiting rates otherwise penalty cost would involuntarily be incurred. Moreover, apart from legal deposit reserve requirement, banks could also engage in internal capital buffer, which is keeping a percentage of their lendable deposits after they must have provided for the normal legal reserve requirement. Where this is strictly adhered to, it could also affect bank's propensity to lend, unfortunately negatively.

3.5 Empirical Review

According to Laurent et al (2012), in their study; ‘Bank merger and Their Impact: A survey of Academic Literature’, one of the most contentious policy and regulatory issue surrounding bank mergers and acquisitions—especially large-scale in-market mergers—is the impact on small business lending. According to them, there exist two competing theories on the empirical effects of banking consolidation on bank services offered to small business customers. The first theory as they maintained anchors on the fact that mergers would always lead to reduction in services supplied for small businesses. This according to them is because the economies of scale and scope expected to be reaped lead to the pursuit of larger mainly corporate customers for maximum profiteering. This disposition according to them indicate that time consuming ‘relationship’ private information regarding credit quality will be abandoned in favor of more financially transparent public corporations that do not require such time and effort. On the other hand, the second theory postulates that mergers of banks present a benefit to small-small business customers because larger banks with greater capital and more diversified loans portfolio have a greater capacity to lend to small businesses because the management risk of this loan is far less to these larger banks than to small banks. This conclusion about the empirical impact of consolidation on credit availability means the effects are broad based. This implies the effects definitely are going to depend on many factors and could be positive, negative or even neutral on banking behavior.

Studying over 6000 Mergers and acquisitions involving over 10000 banks across US, Berger et al (1998) through their pioneer study on the impact of mergers and acquisition on small business lending decomposed the likely effects into static and dynamic effects, which include the reaction of other banks in the local market to mergers and acquisitions. Their result showed that the static effects of banking consolidation reduced small business lending. These reductions are however according to their finding mostly offset by the reaction of other banks in the market, and in some cases also by refocusing efforts of the consolidating institutions themselves. The findings showed that small and medium size banks are associated with an increase in small business lending. Despite that relationship, larger bank mergers according to them are in general associated with decrease in small business lending. Moreover, large holding companies according the scholars appear to increase small business lending, whereas smaller acquisitions may tend to decrease this type of lending. In summary, consolidation between banks of lower size could increase banks’ propensity to lend. Although, size is relative, banking firms’ consolidation based on their finding could generally bring about reduction in the players’ credit allocation to borrowers especially small borrowers. But then, they discover that other non-players could react to this decrease by filling the gaps in the form of credit supply to the consumers in this small credit users.

Domestic study on the effects of bank mergers and acquisition on small business lending by Okafor and Emeni (2008) similarly revealed significant influence of consolidation on lending to small businesses. Using merged UBA and non-involved GTB, they found that the effect of consolidation on bank lending is positive. Their result showed a significant positive relationship between bank deposits and lending to small business borrowers. However, going by restructuring effects, according to their discovery, bank size, bank financial characteristics and deposits of non-merged bank GTB are positively related to small business lending. In relation to the reaction of other non-commercial banks, they found their reaction to small business lending negative implying increase in bank loans to small businesses would reduce their propensity to lend. As they put it, the relationship is such that for every N1 increase in external loan, there is a fall in small business lending to the tune of N7.95. Similar studies in Nigeria by Asuquo (2012) using the same methodology of a 2-bank case of new Merged UBA and non-involved GTB, revealed also significant impact of mergers on bank lending behavior. He found that the dynamic effects of mergers and acquisitions, which he reported as restructuring direct and external effects negatively impacted on lending to small businesses while the static effect had a positive influence. From his work, the restructuring and direct effects showed that the bank size is negatively related to small business lending and that there was a negative relationship between bank consolidation and external lending to small businesses by other non-commercial bank lenders. He reported that the larger the size of a bank by way of consolidation (static effects) the more it lends to small businesses. Lamenting on the external lending result, he maintained that the result indicates that banking consolidation is not on a whole helping the economy.

For Nicolas (1996), strong evidence suggests from his work that there are several reasons that can lead to discounting the popular notion that consolidation in the banking sector leads to a constricted flow of credit to small businesses. His findings indicate that first; although large banks do tend to devote a smaller share of their assets to small business loans than smaller banks, the main purchasers of small banks have themselves been quite small. Moreover, his work indicates that the purchasers tend to be much more active small business lenders than either the banks that they purchased or comparably sized banks that were not involved in a merger. This means that banks that acquired another banks largely tended to revert very quickly towards their original lending philosophy as indicated by their pre-merger allocation of assets. The finding showed that the behavior of banks

in this regards is contrary to the widespread notion that consolidation inevitably leads to less credits to small businesses. He however warned that this result should be taken with a pinch of salt because when loans and assets are aggregated across all members of bank holding companies, the model he formulated for the purpose of the study may not going to be a very good fitting type. Therefore, according to him, the result should not be carried too far. Contrary, the result of the study in respect of banking consolidation and credit availability implications from Tunisia seem to deviate from the popular result. By using 83 Tunisian companies to study bank consolidation between 2001 and 2008, Hakimi and Khazri (2012), found that bank acquisition affected credit availability to Tunis firms positively and significantly. Their size hypothesis that changes in bank size due largely to banking consolidations affected credit availability to small businesses was rejected, although the effect of consolidation without size interaction was positive and significant.

Promptak (2009), in his work on the effects of bank mergers and acquisitions on lending behavior among the merged European banks found banking firm consolidation influence on portfolio pricing to be negative and significant. His finding can then be interpreted to mean that banking consolidation reduces the loan interest rates, which has direct relationship with credit availability. By reducing loan prices, the propensity to supply loans to the borrowers would fall and would definitely, going to be much heavier in relation to lending to small business borrowers based on the previous review. According to their report, the reason for this negative relationship might be that banks engaging in consolidations can thereby increase their efficiency for example product and services, diversification, and these efficiency improvements from mergers are passed on to customers as reduced loan prices. According to Lance and Franco (2005), the general conclusion of several empirical studies is that mergers between large banks reduce the combined banks' level of small business lending while mergers between small banks tend to increase the combined level of small-business lending. In average, according to the effect of bank mergers on the availability of small business lending is minimal. Competition according to the scholars from extant banks seems to maintain the capacity of small business lending within a merging bank's market.

Despite that, they reveal that the terms of lending are adversely affected for small business borrowers. Therefore, the overall result according to them regarding the influence of bank mergers on small business lending and the local economy is that concern over adverse effects is warranted, but perhaps a bit exaggerated. We can infer from the review that the effect of banking consolidation is non-conclusive and hence, dependent on the timing of the acquisitions, the nature of capital regulation on the acquirers' or players' banking sector and the place of the mergers. These factors therefore, make it imperative that the inquiry into the influence of banking consolidation can be non-conclusive. Moreover, the review of the related literature showed that the effects of banking consolidation on bank lending are not only static but also dynamically complex. Unfortunately, none of these effects has been substantially investigated in Nigeria. These gaps point to one thing: the need for a substantial research in Nigerian as it affects bank consolidations, interactions with deposits, and credit availabilities to small business borrowers by fully restructured consolidated banks. Literatures in this regards have been scanty and sketchy, despite subsequent banking consolidations. Investigating this, remains a *sine qua non*.

4. Methodology

4.1 Research Design

This research is an event study where the effects of independent variables on the dependent variable using historical accounting data from CBN Statistical Bulletins are ascertained. Therefore, the design adopted should be such that the independent variables are not to be manipulated. Our interest is to analyze the observed reality as they occurred. Based on this, Ex-Post Factor research design was engaged enabling the researchers to carry out a ten-year (2001 to 2010) cross-sectional trend study of 24 Nigerian banks that either recapitalized and/or consolidated between 2005/2006. The period under study was divided into two, which are the period from 2001 to 2004 and the period from 2005 to 2010. The period 2001 to 2004 covers four-year pre-merger time while the period 2005-2010 covers a six –year post- merger era in Nigerian banking history. To separate the impact of pre merger from post-merger, and in order to capture the merger effects, a merger dummy variable *mer* was created, which takes the value 0 for pre-merger period and 1 for post merger period. This study was focused on commercial banks in Nigerian banking sector. Apart from the data sought from CBN databases, we also sourced data from internet downloads, journals, published thesis, unpublished theses and databases of banks sampled for study. The data were analyzed by multiple regression analysis with the aid of E-view software. E-view is powerful statistical software for panel data analysis, which has several extensive tests and correction such as test for normality, linearity and serial correlation of the empirical data. Regression coefficients (Beta or β s) and associated signs were used in determining the degree and direction of the effects. Beta of positive value signifies positive direction while Beta of negative value indicates negative effects. Zero Betas indicate no effects. Regression analysis demands that data should be analyzed in relation to how good the data fit the formulated

model. The statistic that indicates this is the Co-efficient of Determination (R^2), which we substantially employed in analyzing the goodness of fit of our model.

Null hypothesis were postulated in which the significance of the effect is to be determined. To do this; we employed Wald Coefficient Restrictive Tests and F-tests. The Wald test works by testing the null hypothesis that a parameter is equal to some value. In this paper, the null hypothesis is that the coefficient associated with an explanatory variable is significantly not different from zero. The hypothesis depending on the value of the probability associated with Wald statistics, which follows Chi (X^2) distribution in comparison with the normal 5% level of significance would be accepted or rejected. Moreover, for regression analysis to be unbiased and genuine, certain assumptions must be satisfied especially as it concerns multiple regressions. Among the assumptions are that the data obtained for the purpose of regression analysis must follow a normal distribution, and the independent variable is expected to have a linear relationship with the dependent variable. In this work, test for normality and linearity were done using Jarque- Bera Statistic. Jarque- Bera statistic tests the null hypothesis that the data are normally distributed. In statistics, the Jarque-Bera test is a goodness-of-fit test of whether sample data have the skewness and kurtosis matching a normal distribution.

The test statistic is defined as:

$$JB = \frac{n}{6} (s^2 + \frac{1}{4} (K - 3)^2) \dots \dots \dots (1)$$

where n is the number of observations (or degree of freedom in general); S is the sample Skewness, and K is the sample kurtosis.

$$S = \frac{\mu_3}{\delta^2} = \frac{[n-1 \sum_{i=1}^n (X_i - \mu)^3]}{[n-1 \sum_{i=1}^n (X_i - \mu)^2]^2 / 2} \dots \dots \dots (2)$$

$$K = \frac{\mu_4}{\delta^2} = \frac{[n-1 \sum_{i=1}^n (X_i - \mu)^4]}{[n-1 \sum_{i=1}^n (X_i - \mu)^2]^2} \dots \dots \dots (3)$$

where μ_3 and μ_4 are the estimates of third and fourth Central moments respectively, μ is the population mean and δ^2 is the estimate of the Second Central Moment, the variance. If the data come from a normal distribution, the JB Statistic asymptotically has a Chi-Squared distribution with two degrees of freedom. So the statistics can be used to test the hypothesis that the data are from a normal distributed source. P-value of greater than 0.05 indicates the presence of normality and we would be willing to accept the null hypothesis that the data is drawn from a normally distributed data.

Multiple regression analysis also demands that in order to obtain a valid and unbiased regression result some post-regression assumptions must be satisfied. For instance; the residual of the regression must be normally distributed which is indispensable to obtaining a valid result with statistical significance (Jarque and Bera, 1980), and the model must be correctly specified. If the model is not correctly specified, the basic OLS fitted values may not help explain significantly the response variable (Ramsey, 1969). To be able to examine if our regression analysis met the essential assumptions, we conducted a test for each of the assumptions. First, we test for the distribution implicit using Jarque-Bera statistics, which test the null hypothesis that the residual error is normally distributed. The usual formulation of the JB test statistic when we test for normality of the errors in an OLS regression model is:

$$JB = \frac{n-k}{6} (s^2 + \frac{1}{4} (k-3)^2) \dots \dots \dots (4)$$

Where n is the number of observation and k is the number of regressors when examining residual to an equation. S= the sample or the population skewness. Second, post-regression test for error specification of our basic pooled OLS model was carried out using Ramsey RESET test. Regression Specification Error Test (RESET) is indeed an essential test that is needed after the basic OLS regression.

4.2 Model Formulation

A model where a proportion of bank deposit is allocated to borrowers while holding the remainder as a reserve and the waves of merger interfere with the deposits, holding all other factors constant as m was formulated. The borrowers are always of two kinds: small business borrowers and huge borrowers. Since the focus is on small business borrowers, the huge borrower variable would not be observed and the co-influence would not be determined. The assets to small business borrowers are loans made available out of deposits received from customers. Bank deposits could then be a determining factor in the allocation of these loans. Theoretically, Eustalius et al (1995) maintained that positive relationship could exist between bank deposit and credit availability to borrowers because time and savings deposits can enhance the stability of funds for loans. Bank according to scholars may need less liquidity with stability of deposits and therefore can invest more money in loans. However, negative relationship can also exist between loans and deposits since if deposits become more interest sensitive banks may choose to increase investment in interest rate sensitive assets and to decrease investment in loans (Eustalius et al (1995). They, according to them, would likely take this direction because

investment in such securities would likely match the volatility of the interest rate risks. By increasing investment in the less risky assets, proportion of loans to borrowers, may decrease. Moreover, repricing a loan can bring about increment in transaction cost to the bank and transferring risk to borrower may increase the likelihood of a loan default rate, which could negatively influence banks' propensity to make small risk assets according to scholars. Hence, the variable is to be incorporated into the model as the main explanatory variable. The variable is scaled in terms of total assets and measures changes in proportion of deposits made available to the borrowers. This contraction or expansion of deposit size can change firms' ability to lend. Since, changes in bank deposits could influence bank-lending behavior, in an environment where mergers and acquisitions have taken place subsequently, the interaction between the phenomena could influence bank behavior differently than when the change is not prompted by banking consolidation. We capture this behavior through analysis of the interaction between deposits and mergers and seek to determine the product influence on lending to small businesses.

The study of bank consolidations and behavior considers time dimension and this is very essential, as it is a variable used mainly to capture the merger effects. According to scholars, dynamic effect is observable after 3 years of consolidations, which according to Focarelli and Panetta, (2003) is because there is always a delay in efficiency adjustment. Berger et al (1998) confirm this by agreeing that it may take time to restructure the consolidated institutions' portfolio by divesting assets, or to change its lending focus by promulgating revised lending policies and procedures. To take care of this, we allowed for a 6-year post consolidation lag leading to the model below.

In our basic model set up, we followed Klein(1971), where the asset universe confronting the banker is assumed to consist of cash, a homogeneous government security, and private security (loans). Reserve requirements, liquidity risk, default risk, and other restrictions on asset choice are ignored. We then start with private securities supposing that the bank confronts a demand curve for loans, which is a function of the contract rate of interest r directly proportional to assets to be allocated for profit optimization and a vector of exogenous variables, which influence the state of loans demand confronted by a particular bank. In this model, we assumed that borrowers are viewed as a heterogeneous group made up of different size credit users, although the traditional Klein model view borrowers as homogeneous group. We denote D_L as the proportion of funds allocated to private securities in this case small business borrowers. Then;

$$r=f(D_L), f(D_L)' < 0 \dots\dots\dots(5).$$

Based on the above analogue of a demand curve equation for loan from private deposits, we model that:

$$Small\ business\ loan=f(Bank\ deposits, bank\ deposits*merger, merger, m)\dots\dots\dots(6)$$

This is therefore specified thus:

$$Sbl_{it}=\beta_1dep_{it} + \beta_2dep_{it} * mer_{it} + \delta mer_{it} + m_i \dots\dots\dots(7),$$

Where

β_1 is the vector coefficient on the independent variable -bank deposit (dep) at time t.

β_2 is the vector coefficient on the independent variable-Bank deposit and Merger interaction (dep* mer)

dep* mer is merger and deposit interaction variables.

mer_{it} is a time-invariant merger dummy variable, which vary only between individuals.

δ is the vector coefficient on merger dummy not to be estimated to avoid unnecessary repetition since β_2 would be estimated.

m_i is the observable and unobservable individual level effects held as constant or the stochastic error.

Other constituents of the model summarized in table 1 below

Table1: Summary Description of the variables

Variable	Symbol	Description	Source
Small Business Loans	Sbl	Log of loans to small scale businesses	CBN Statistical Bulletins
Bank deposit	dep	Log of bank deposits	CBN Bulletins & authors own calculations
Merger and deposit interaction	dep*mer	The interaction between changes in bank deposit and banking firms' consolidations	CBN Bulletin and Author
Merger Effect	Mer	Time dummy that takes value 1 and 0 for post and pre merger periods respectively	Author

Source: Author

5.1 Data Presentation, Analysis and Conclusion

Having outlined the methodologies, the next is to present the data. The data obtained were therefore presented in the table 2 below.

Table 2: The Raw Data Obtained

Year	TBA (4)	TBDEP	SBLOANS
2010	17331559	9784542	12550
2009	17522858	9150037	16366
2008	15919559	7960166	13512
2007	10981693	5001470	41100
2006	7172932	3245156	25713
2005	4515117	2036089	50672
2004	3753277	1661482	54981
2003	3047856	1337296	90176
2002	2766880	1157111	82368
2001	2247039	947182	52428

Source: Author; Data from CBN Bulletins

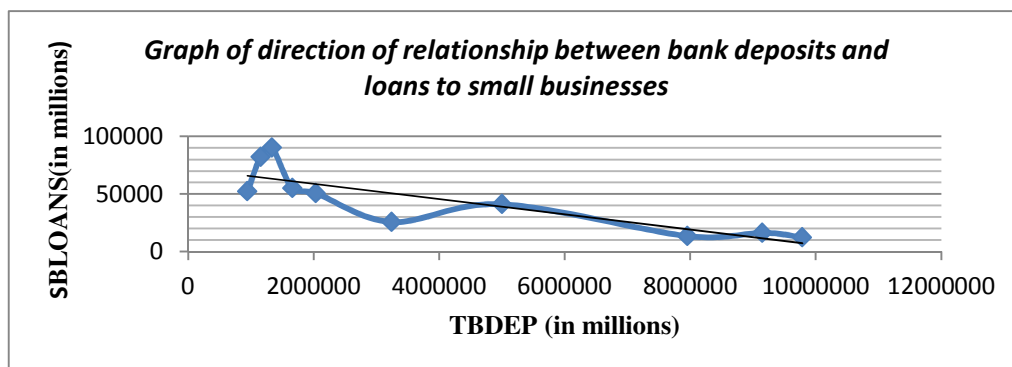
NB: Figures in millions of Naira

TBDEP = Total Bank Deposit; SBLOAN= Small Business Loans; TBA= Total Bank Assets

The table shows that bank loans to small businesses majorly started to decline 2004 and peaked in 2010. The reason could be attributed to merger announcement and activities. However, the relationship between small businesses loans and changes in bank deposit based on this table is not consistent. This means there is need for higher analysis, which we shall carry out regression analysis technique.

The data were also present in graphs as can be seen below in figure 1.

Figure1: Graph of Bank Deposits and Small Business Credits with merger interaction



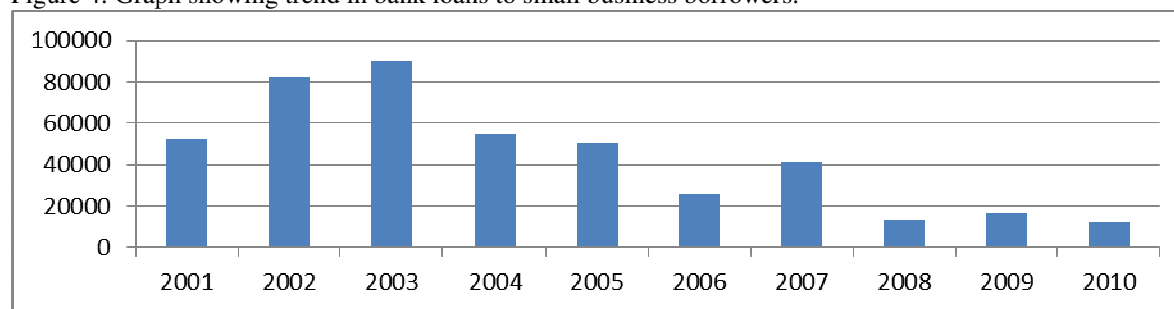
Source: Author; Data used for the plotting are from CBN Statistical Bulletin as shown in table 2

SBLOANS=Small Business Loans; TBDEP= Total Bank Deposit

The above figure shows inconsistent slopes. It has both positive and negative slopes. However, the graph shows a dominating negative slope, showing the impact is negative in average.

Below is a graph of small business loans over a period of 10 years. In 2003, banks lent more to small business borrowers. This was the period preceding the announcement of the recapitalization and consolidation schemes. Over the period, loans to small businesses decreased steeply and between 2008 and 2010.

Figure 4: Graph showing trend in bank loans to small business borrowers.



Note: figures in millions; Source; Author; Data (SBLOANS) used are from CBN Bulletin

The graph was plotted using small business loans (SBLOANS) in table 2 above.

To make sure that our data comply properly with normality test, we transformed them. The transformation of the data was presented in the table 3 below.

Table 3: Operational Measure of the Variables for Regression Analysis

Year	Sbl	dep
2010	4.098654	56.45506
2009	4.213956	52.21772
2008	4.130726	50.00243
2007	4.613846	45.54371
2006	4.410165	45.24169
2005	4.704773	45.09493
2004	4.740214	44.2675
2003	4.955093	43.87661
2002	4.915761	41.82006
2001	4.719567	42.15245

Source: Author; Data used are from banks' financial reports and CBN statistical Bulletins as shown in table 2 above.

$sbl = \log_{10}(\text{SBLOAN})$; This is the operational measure of the Small Business Loans (SBLOANS). It is the natural logarithm values of SBLOANS for various years under considerations. $dep = (\text{TBDEP}/\text{TBA}) * 100$: This is the ratio of Total Bank Deposits to Total Bank Assets multiplied by 100. The descriptive statistics are presented below in table 4. The descriptive statistics are computed from the operational measures of the variables as displayed in table 2 above.

Table 4: Summary of Descriptive Statistics

Statistic/Variable	Sbl	Depa
Mean	4.550400	1.667113
Median	4.659500	1.654833
Maximum	4.955000	1.751703
Minimum	4.099000	1.621385
Std. Dev.	0.316677	0.042244
Skewness	-0.279688	0.881911
Kurtosis	1.632982	2.598949
Jarque-Bera	0.909017	1.363295
Probability	0.634760	0.505783
Sum	45.50400	16.67113
Sum Sq. Dev.	0.902558	0.016061
Observations	10	10

Source: Author Computations; Data used are from CBN Bulletin as shown in table 2 transformed as in table 4 above.

Mean=the average of a given variable data = $\frac{\text{Sum}}{\text{Observation}(10)}$ e.g Mean of sbl= $\frac{45.50400}{10}$ =4.550400 Maximum= the highest value of a given variable data over the 10 year period. Minimum= the

Explanation of table 4 continues;

lowest value of a given variable data over the 10 year observation period. Std. Dev= Standard Deviation of the variable data= the square root of sum of the squared variable deviation from the mean divided by the number of

the observation= $\sqrt{\frac{\text{Sum Sq.Dev}}{\text{Observation}(10)}}$ e.g the Std. Dev of sbl= $\sqrt{\frac{0.902559}{10}}$ = 0.316677

Skewness=the measure of how the variable data tilted either positively or negatively.

Kurtosis= measures the peakness or flatness of the variable data

Jarque- Bera= is a statistic that tests the normality of the variable data for regression analysis= $JB = \frac{n}{6}(s^2 + \frac{1}{4}(K - 3)^2 + \frac{1}{6}(Skewness^2 + \frac{1}{4}(Kurtosis - 3)^2))$ e.g JB of sbl= $\frac{10}{6}(-0.279688^2 + \frac{1}{4}(1.632982 - 3)^2)$ = 0.909017

Sum Sq. Dev.= sum of the squared deviation. Observation=the number of years under survey (2001 to 2010=10 years)

The test for the data normality and linearity is done using Jarque-Bera statistic. If the data were not normally distributed, the probability associated with the statistic would be less than 0.05. The normality of data signifies also linearity. The statistics indicate that the data are normal and linear in nature. The probability associated with each of the Jarque-bera statistic is greater than 0.05. Therefore, the null hypothesis that the data for the regression are normally distributed is accepted. Skewness also confirms the normality test by yielding values that are less than 1 as shown in the above table.

5.2 Regression Analysis

The direction and the extent of the effects are captured in regression analysis. The output of the analysis is displayed in the table below.

Table 5: Regression Output

Dependent Variable: SBL				
Method: Least Squares				
Date: 10/24/14 Time: 16:39				
Sample: 2001 2010				
Included observations: 10				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DEPA	-0.004646	0.024888	-0.186699	0.8572
DEPA*mer	-0.029128	0.007859	-3.706162	0.0076
M	4.920945	0.391408	12.57241	0.0000
R-squared	0.701363	Mean dependent var	4.550275	
Adjusted R-squared	0.616038	S.D. dependent var	0.316724	
S.E. of regression	0.196257	Akaike info criterion	-0.175457	
Sum squared resid	0.269618	Schwarz criterion	-0.084681	
Log likelihood	3.877283	F-statistic	8.219918	
Durbin-Watson stat	2.406578	Prob(F-statistic)	0.014555	

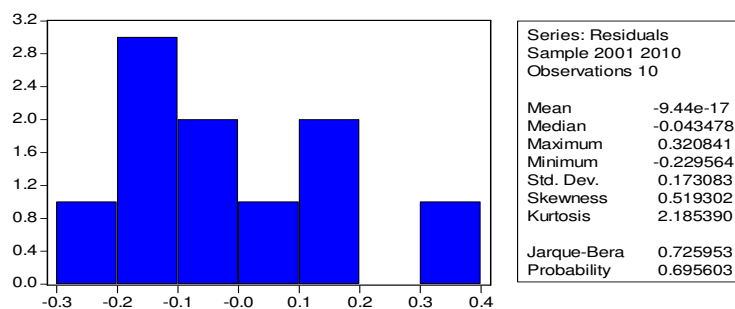
Source: Author; Data used are from CBN Bulletin displayed in table 2 above.

The above table 5 would be interpreted after the residual and Ramsey RESET Tests carried out below.

5.3 Residual Test

The test was done using information from the regression output as shown in table 5 above. The result was displayed in the figure below.

Figure 4; Test for Residual Normality



Source: Author; Determined from E-View

From the above table, it can be seen that the distribution of the residuals is normal (JB=0.73; p-value=0.70>0.05). We therefore accept the null hypothesis that the error is normally distributed.

5.4 Ramsey RESET Test

Although we have obtained the basic ordinary-least squares result as shown above in table 5 and can begin the interpretation right away having established that the residual is normal, yet we also have to test for any possible error specification for our basic model coefficients. We shall carry out this test using RegRESET. The result of this test, which is based on the regression output displayed in table 5 is shown in table 6 below.

Table 6: Ramsey RESET Test

Ramsey RESET Test:				
F-statistic	1.248352	Probability		0.306600
Log likelihood ratio	1.890147	Probability		0.169185
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DEPA	-0.079606	0.071409	-1.114790	0.3076
DEPA*mer	-0.631227	0.538944	-1.171228	0.2859
C	58.96506	48.37194	1.218993	0.2686
FITTED^2	-2.249958	2.013751	-1.117297	0.3066
R-squared	0.752796	Mean dependent var		4.550275
Adjusted R-squared	0.629194	S.D. dependent var		0.316724
S.E. of regression	0.192866	Akaike info criterion		-0.164471
Sum squared resid	0.223183	Schwarz criterion		-0.043437
Log likelihood	4.822356	F-statistic		6.090485
Durbin-Watson stat	2.162629	Prob(F-statistic)		0.029813

Source; Author; Computed with E-View

The result as shown in the above table indicates that there was no presence of error in the model specification in our basic ordinary least squares result displayed in table 5. The null hypothesis that the basic model was not wrongly specified is therefore accepted (F-statistic and log likelihood ratio =1.248352 and 1.890147; p-value=0.306600 and 0.169185 >0.05 respectively). Therefore, our model would not be based on Ramsey RESET test since our basic regression model is a correctly specified model. We would be interpreting and fitting our model based on the basic regression output as presented in table 5 above which is brought forward below in table 7.

Table 7: Regression Output Brought Forward as in Table 5 for the Test of Hypotheses and Analysis

Dependent Variable: SBL				
Method: Least Squares				
Date: 10/24/14 Time: 16:39				
Sample: 2001 2010				
Included observations: 10				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DEPA	-0.004646	0.024888	-0.186699	0.8572
DEPA*mer	-0.029128	0.007859	-3.706162	0.0076
C	4.920945	0.391408	12.57241	0.0000
R-squared	0.701363	Mean dependent var		4.550275
Adjusted R-squared	0.616038	S.D. dependent var		0.316724
S.E. of regression	0.196257	Akaike info criterion		-0.175457
Sum squared resid	0.269618	Schwarz criterion		-0.084681
Log likelihood	3.877283	F-statistic		8.219918
Durbin-Watson stat	2.406578	Prob(F-statistic)		0.014555

Source: Author; Data used are from CBN Bulletin displayed in table 2.

5.5 Test of Hypothesis and Interpretation of the Regression Results

The output of the regression analysis as outlined in the table 7 above provides us with the information needed for the test of hypotheses, interpretations and applications of the result. First, we shall start the analysis by looking at R^2 , which indicates the proportion of the dependent variable behaviour that is accounted for by the explanatory variables. R^2 equals approximately 0.70, which indicates that 70% of variations in bank loans to small businesses are caused by mergers and acquisitions. On the other hand, only 30% of the variances are attributable to other factors and error. From all indications, the statistic indicates that our model fits well and we can predict with high accuracy the likely behaviour of banks in the events of banking consolidations with consequential interaction with the changing deposit demand market in the long-run.

Hypothesis: *Interaction between banking firms' consolidations and changes in banks' deposit demands does not significantly impact on fully restructured banks' decision to allocate small risk assets to small business borrowers in Nigeria.*

The information used for the test of this hypothesis is taken from table 7- the regression output table where data in table 2 relating to Total Bank Deposit (depa) and Small Business Loans (sbl) were used in regression analysis. The statistics from the regression output are presented again in summary in table 8 below for testing the hypothesis. The hypothesis was tested using Wald at 5% level of significance.

Table 8; Summary Regression Output Statistics for the Test of Hypothesis

Wald Test:			
Equation: dep*mer			
Test Statistic	Value	df	Probability
F-statistic	13.73564	(1, 7)	0.0076
Chi-square	13.73564	1	0.0002
Null Hypothesis Summary:			
Normalized Restriction (= 0)	Value		Std. Err.
C(2)	-0.029128		0.007859
Restrictions are linear in coefficients.			

Source: Author; Test Conducted with E-view; Information used obtained from the regression output in table 7 above.

Based on the result, the null hypothesis is rejected and the alternative that *interaction between banking firms' consolidations and changes in banks' deposit demands significantly impact on fully restructured banks' decision to allocate small risk assets to entrepreneurs or small business borrowers in Nigeria* is accepted. The significant values (0.0076 and 0.0002) yielded by the test are less than the critical value 0.05. We therefore reject the null hypothesis and conclude that interaction between banking firms' consolidations and changes in banks' deposit demands significantly influence the ability of fully restructured banks to allocate small risk assets to small business borrowers in Nigeria. For the bank deposit changes holding consolidation constant, the effect is negative but non-significant. Holding consolidation constant therefore, our result is partially in agreement with previous result by Okafor and Emeni (2008). Partially consistent in that although both results indicate negative effect on small risk asset creation, theirs show significance while ours reveal insignificance. This is new EX-Post evidence. This divergence could be due to their inability to differentiate between merger driven deposit demand and other economic factor driven deposit variations. Overall, the result is not fully consistent with the finding of Okafor and Emeni (2008) and Asuquo(2012) who found the effect of changes in bank deposits on small business lending to be significant and negative. However, overall results show that the impact of changes in bank deposits on the lending behaviour of consolidated banks is negative ($\beta = -0.004$), which is statistically insignificant $p > 0.05$ for our paper. In this case, 1% positive change in deposits would result in 0.004% decrease in loans to small businesses. However, when the consolidations waves interfere with the current of changes in bank deposits the product moment on lending to Nigerian entrepreneurs is negative and highly significant ($\beta = -0.029$; $p = 0.0076 < 0.05$). Therefore, consolidated banks would be cutting small risk assets to small borrowers by 0.029% for every 1% deposit increment. This has strong policy implications. In a market where banks merge subsequently, the effect on small business borrowers as deposits increase due to the activities would be to affect adversely small business borrowers through insufficient credit availability for their transactions.

6. Summary, Conclusion, and Recommendations

The researcher made extensive efforts in analyzing the product impact of bank mergers and acquisitions and deposit interaction with consolidation on lending to small business borrowers in Nigeria, which has raised significant concern among the policy makers in Nigeria. We have through this study, provided answers to the questions raised. To have done this successfully, we gathered data that enabled us to formulate and test the empirical hypothesis postulated. The finding is that changes in bank deposits occasioned by consolidation force negatively influenced lending to Nigerian entrepreneurs or small business borrowers. Based on the finding, we conclude that bank consolidation do not boost loans to small businesses even with consequential deposit growth. We recommend that leveraging bank lending to small businesses should not be sought through consolidation. However, where it remains inevitable that mergers continue to occur, non-player should be sensitized on the likely small credit market available for them due to the merger activities. With this, the equilibrium between demand and supply of small business loans in Nigeria could be maintained or restored if not in the short-run, in the long-run. Based on this conclusion also, other concerns are rising. That is, do other non-players fill the gaps by supplying the loans consolidating banks dropped and where is the channel of the loan escaping small business allocation by banks. Could they be idle in their coffers or are they being traded-off to huge borrowers?

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