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COMPARATIVE ANALYSIS OF COMMERCIAL BANKS SOUNDNESS: A CAMELS STUDY OF NIGERIAN PRE AND POST CONSOLIDATION ERA

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ABSTRACT
This study examined CAMELS analysis of Nigerian quoted commercial banks from 1997– 2016 pre and post consolidation. The objective was to x-ray and compare the Nigerian banking system soundness in the pre and post consolidation using the CAMELS criteria. Time series data of the variables were sourced from financial statements of the quoted deposit money banks within the period. The study used Capital to Risk Assets Ratio (CRA) and Adjusted Capital to Risk Assets (ACRA) as Capital Adequacy (C), Non Performing Loans and Advances to Total Assets (TLA/TA) as Assets Quality (A), Operating Expenses to Total Assets (OPE/TA), Total loans and Advances to Total Deposit (TLA/TD) as Management Quality (M), Net Interest Income to Total Assets (NII/TA) as Earnings (E), Total Liquid Assets to Total Assets (L) as liquidity (TLA/TA) and Net Interest Income to Gross Domestic Product (S) (TLA/GDP) as sensitivity. Simple average and ranking was used as data analysis method. Findings revealed that the performance of the commercial banks in the post consolidation is better than the pre-consolidation. The study concludes that there is a significant difference between the pre and post consolidation of the quoted commercial banks using the CAMELS criteria. It recommends that the banking sector reforms should be strengthened deepened and the capital and management of the commercial banks should be used for effective to achieve the objective of the banking sector reforms.
KEYWORDS: *Capital Adequacy, Assets Quality, Management Quality, Earnings, Liquidity, Sensitivity, Consolidation*

I. INTRODUCTION

Over the years, there is no doubt saying, Nigeria banking industry has undergone various phases of reforms both in structure, policies, rules and regulations with the objective of achieving sound banking system and financial system stability. The regulatory and the supervisory policy framework are aimed at achieving prudential and financial system stability. The banking sector consolidation and recapitalization reforms programme of 2005 has been noted in the history of the Nigerian Banking sector as the most proactive measure to ensure sound banking system and leverage the industry of the inability to withstand monetary and macroeconomic shocks within the operating environment. The reforms was designed to enable the banking system develop the require resilience as the fulcrum of financial intermediation (Lemo, 2005).

CAMELS area acronyms for Capital Adequacy, Assets Quality, Management Quality, Earnings Capacity, Liquidity and Sensitivity to risks operations in the operating environment is a product of the Uniform Financial Institutions Rating System (UFIRS) adopted by the Financial Institutions Examination Council (FIEC) and was first used in United State in 1979 (Nimalathasan, 2008). It is a ratio-based model to evaluate the performance of banks and rank the banks according to the rating criteria. The regulatory authorities' argued that bank supervisor uses the CAMELS to access and evaluate the performance and financial soundness of the banking activities and provide a measurement of a bank current, overall financial, managerial, operational and compliance performance (Sanni, 2009).

In light of the Nigerian Banking sector crisis in the last forty years, CAMELS is a useful tool to examine the safety and soundness of banks and help mitigate the potential risks which may lead to bank failures (Ajaro and Emmanuel, 2013). The consolidation reforms Nigeria in 2005 mandated Commercial banks to adhered strictly to the norms of capital adequacy, assets quality, provision for non- performing loans, prudential management and corporate governance, disclosure requirements, acceleration of pace and reach of latest technology, effective risk management mechanism, streamlining the procedures and complying with accounting standards by making financial transparent (Kolade, 2012).
The uncertainties that characterize the bank operating environment, the frequent banking sector crisis and its effect on the financial market as well as the ideas of low CAMELS rating model relates to other similar model like stress test is relevant in the modern banking environment (Gunsel,2007),CAMELS rating ranges from 1 – 5.CAMELS' model reflect excellently the conditions and performance of banks over years as well as enriches

the on-site and off-site examination to bring better assessments toward banks conditions. Mohammed (2009) claims that the strength of these factors would determine the overall strength of the bank. The quality of each component further underlines the inner strength and how far it can take care of itself against the market risk. Providing a general framework in evaluating overall performance of banks is of great importance due to the increasing integration of banking and the financial market notwithstanding, however, the Nigerian Banking Industry has undergone various stages of reforms which include the pre and the post consolidation era.

The consolidation of Nigerian banking sector was a welcome development; however, there has been two schools of thought on the consolidation, the prominent believe that the consolidation will increase banks operational efficiency, deepened the bank capital standard, leverage the challenges of the operating environment such as risk and position Nigerian banks to international standard (Subroto, 2011), (Aburime,2008) (Inanga,2009). Prior to the consolidation no Nigerian bank was among the first 500 in Africa and the first 1000 in the world using the CAMELS rating. The total assets and liabilities of Nigerian banks were less than one bank in Malaysia and South Africa (Toby, 2006). Thus, opponent view the consolidation as a measure to create monopoly in the banking industry that will deepen the banking sector crises. In less than five years after the consolidation, some Nigerian banks were found "ill" functioning by the Central Bank of Nigeria Examination team in 2009 which led to Nationalization of eight banks and the establishment of Assets Management Corporation of Nigeria (AMCON). The banks are Mainstreet bank, Keystone bank. The divergences between the two schools of thought create a knowledge gap in using the CAMELS in examining the soundness of the banking industry.

Again, Despite the long application of CAMELS in examining and rating of Banks in the developed financial markets, the application in the developing financial market like Nigeria is still at rudimentary stage as studies to examine the soundness of Nigerian banks focused on profitability indicators such as Return on Assets, Return on Investment, Return on Equity, Net Profit Margin and Earnings per share (Aburime, 2008), (Nnana, 2008), (Prasad, 2011). Similar study by Sanni (2013) using CAMELS does not include sensitivity to risk which is relevant in ascertain banks ability to withstand both internal and external shocks. From the above, this study intends to examine Nigerian Banking System soundness of the pre and post consolidation using the CAMELS Analysis of quoted commercial banks in Nigeria.

2. LITERATURE REVIEW

Overview of Camels Analysis

The Uniform Financial Institution Rating system, commonly referred to as CAMELS rating, was adopted by the Federal Financial Institution Examination Council on November 13 1979, and then adopted by the National Credit Union Administration in October 1987. It has proven to be an effective internal supervisory tool for evaluating the soundness of a financial firm, on the basis of identifying those institutions requiring special attention or concern Barr et al. (2002) states that "CAMELS rating has become a concise and indispensable tool for examiners and regulators". This rating ensures a bank's healthy conditions by reviewing different aspects of a bank based on variety of information sources such as financial statement, funding sources, macroeconomic data, budget and cash flow.

Hirtle and Lopez (1999), stressed that the bank's CAMELS rating is highly confidential, and only exposed to the bank's senior management for the purpose of projecting the business strategies, and to appropriate supervisory staff. Its rating is never made publicly, even on a lagged basis. CAMELS is an acronym for six components of bank safety and soundness

Capital Adequacy (C) Capital adequacy is a measure of the financial strength of a bank usually express as a ratio of its shareholders‟ fund to total assets. The ratio reflects the ability of a bank to withstand the unanticipated losses. This ratio has a positive relationship with the financial soundness of the bank. This means that if the bank's capital adequacy ratio is high, the bank will be financially sound and strong.

Asset Quality (A) Asset quality is an important measure of the strength of banks. The ratio of non-performing loans and advances as a share of total loans and advances is considered for the purpose of analysis. In addition, the ratio of total loans and advances to total assets is utilized to measure the extent of deployment of assets in earning assets.

Management Quality (M) The capacity and or the efficiency of the management of a bank can be measured with the help of certain ratios. To capture the possible dynamics of management efficiency, the following ratios

are considered: total loans and advances to total deposits, interest expenses to total deposits, and operating expenses to total assets.

Earnings Ability (E) Two ratios are used to assess the earnings ability of the banks under study. The first ratio is the net income to total assets or "Return on Asset (ROA). The second ratio used is interest income to total assets. The two ratios have positive relationship with the financial performance of the bank and negative relationship with the risk of bank failure.

Liquidity (L) Two ratios are employed in this study to assess the liquidity level of the banks. The first one is total liquid assets to total assets. The second ratio is liquid assets to customers‟ deposits. The two ratios have positive or negative impact on the financial performance of the firm.

Sensitivity to the Market Risk (S): This measures the extent to which bank operation are sensitivity to its operating environment such as monetary and macroeconomic environment. The ratios are:

1. Earnings per share to interest rate
2. Return on investment to Real Gross Domestic Product.
3. Return on Asset to Exchange Rate
4. Return on Equity to Equity Price.

Banking in Nigeria and the Banking Sector Consolidation

Between 1892 when banking started in Nigeria and 1952 when the legal framework for it was laid out, banking was largely an unregulated activity in Nigeria. Since 1952, there has been significant growth in size and structure of banks. Financial liberalization led to a loosening of the conditions for granting banking license and consequently a sharp rise occurred in the number of banks in Nigeria between 1986 and 1993. By 1992, there were over 120 banks with 3,300 branches up from 15 banks with 273 branches in 1970. The Central Bank of Nigeria (CBN)stipulation that banks should have branches in major cities with Central Bank of Nigeria (CBN) branches as a condition for direct cheque clearance led to a growth in branch expansion rate of 33.5 percent between 2001 and 2003. Banking distress reduced the number to 89 by 2004 (with 26 banks collapsing in 1998 alone). The majority of banks were fragmented, small and marginal players with only about 10 of the banks controlling over 50 percent of total industry assets and deposits (Sanusi, 2003).

As at mid-2004 when the new Central Bank of Nigeria (CBN)Governor was appointed, the industry faced myriad challenges including operating within a slow and structurally impeded system, frequent changes of policies about operations and government deposit management, periodic distress, weak credit regulation, poor management, poor corporate governance, macroeconomic shocks and political instability, unethietical practices, maturity mismatches, insider abuses, frauds and conflict of interest, general insecurity and corruption. Prior to this time, cultural and business model rigidities resulted to voluntary mergers and Acquisition in 1991 and 2001. Following the announcement for all banks to raise their capital base, the apex bank set up a monitoring committee to oversee the program. However, it did not seem to have a monopoly and/or competition monitoring process or commission. It brought in, and paid for technical assistance to the banks; with most of such assistance contained of payments for merger and acquisition experts. It also worked with the Securities and Exchange Commission to drastically reduce and in many cases, remove fees payable to the commission for such mergers and acquisitions. While banks handled software, operations and branch mergers, the apex bank allowed for a transition time for operations merger and regularization of employees for merged banks beyond the consolidation deadline. There was also special assistance that took the form of a special forbearance framework, which took effect on 6 April 2005. The special assistance had two components, one of which is a write-off of 80 percent of debt owed Central Bank of Nigeria (CBN)by the banks, subject to:

Recovery of non-performing owner/insider related loans and advances within two months. Injection of any shortfall in the banks' capitalization to bring it up to a solvency status, also within two months;The Central Bank of Nigeria (CBN)converted the balance of 20 percent of debt to a long term loan of maximum of 7 years at 3 percent per annum with two years moratorium. The Central Bank of Nigeria (CBN) also announced that further

forbearance on the balance of 20 percent of the debt could be extended to the new owners after its acquisition and meeting the N25 billion capital base. The idea was to increase attractiveness of the banks concerned and accelerate their mergers and acquisitions through debt write-off. Fortunately, the incentives were contingent upon recovery of nonperforming loans associated with owners and other insiders of the banks (Olajide, 2005). This way, the Central Bank of Nigeria (CBN) wanted to ensure that past mismanagement of banks were not rewarded. In its 2005 accounts, the Central Bank of Nigeria (CBN) provided for these incentives by treating the loans to the affected banks as sunk and irrecoverable costs. The provision for the incentives to be contingent upon insider loan recovery led to only 11 banks actually benefiting from the incentive provision. Besides, it started midway in to the consolidation program and this may have impacted on the number of banks that benefited ultimately.

According to Ahamd (2007) the average bank had a capital base of N4.22 billion Naira with standard deviation of 7.46 billion Naira, ranging from 0.1 billion Naira to 38.6 billion Naira. The average shareholders' fund was estimated to be N1, 350.77 million, with a standard deviation of 519.57 Million Naira. In terms of loans, loans to SMEs was 7.65 percent total loans with a standard deviation of 2.55 while loans for agricultural purposes was estimated at an average of N223,553.20 million with a standard deviation of 17,147.86 million Naira. Finally, an average bank had 27.84 percent of their total loans as nonperforming prior to consolidation, with a standard deviation of 10.22 percent. The proportion of nonperforming loans ranged between 6.5 percent for one bank and almost half of total loans (46.55%) for another of prior consolidation era.

There were three outcomes observed among the 89 banks post-consolidation. These banks were generally classified into three groups, reflecting the post-consolidation outcome. A majority of the banks either formed voluntary mergers or were forced into mergers to survive the conciliation rules. In all, 70 banks fall into this category, representing 78.65% of the total (89) banks. In addition, there were 6 banks which stood alone post consolidation, representing 6.74% of the total (89) banks. The remaining 13 banks (representing 14.61 percent of the 89 banks) failed after the consolidation exercise according to Central Bank of Nigeria, (2006).

Camels Rating System

A bank's composite rating under Uniform Financial Institutions Rating System (UFIRS) or CAMELS integrate \ratings from six component areas: Capital adequacy, Asset quality, Management, Earnings, Liquidity, and Sensitivity to market risk. Evaluations of the component areas take into consideration the institution's size and sophistication, the nature and complexity of its activities, and its risk profile. Composite and component ratings range from **1** to **5**. A **1** is the highest rating and represents the least supervisory concern, indicating the strongest performance and risk management practices relative to the institution's size, complexity, and risk profile. A**5** is the lowest rating and represents the greatest supervisory concern, indicating the most critically deficient level of performance and inadequate risk management practices relative to the institution's size, complexity, and risk profile.

Capital Ratings

1 A rating of 1 indicates a strong capital level relative to the institution's risk profile.

2 A rating of 2 indicates a satisfactory capital level relative to the financial institution's risk profile.

3 A rating of 3 indicates a less than satisfactory level of capital that does not fully support the institution's risk profile. The rating indicates a need for improvement, even if the institution's capital level exceeds minimum regulatory and statutory requirements.

4 A rating of 4 indicates a deficient level of capital. In light of the institution's risk profile, viability of the institution may be threatened. Assistance from shareholders or other external sources of financial support may be required.

5 A rating of 5 indicates a critically deficient level of capital such that the institution's viability is threatened. Immediate assistance from shareholders or other external sources of financial support is required.

Asset Quality

The asset quality rating reflects the quantity of existing and potential credit risk associated with the loan and investment portfolios, other real estate owned, and other assets, as well as off-balance sheet transactions. The ability of management to identify, measure, monitor, and control credit risk is reflected and evaluation of asset quality should consider the adequacy of the allowance for loan lease losses and weight the exposure to

counterparty, issuer, or borrower default under actual or implied contractual agreements. All other risks that may affect the value or marketability of an institution's assets, including, but not limited to, operating, market, reputation, strategic, or compliance risks, should also be considered.

The asset quality of a financial institution is rated based upon, but not limited to, an assessment of the following evaluation factors:

- The adequacy of underwriting standards, soundness of credit administration practices, and appropriateness of risk identification practices.
- The level, distribution, severity, and trend of problem, classified, nonaccrual, restructured, delinquent, and nonperforming assets for both on- and off-balance sheet transactions.
- The adequacy of the allowance for loan and lease losses and other asset valuation reserves.
- The credit risk arising from or reduced by off-balance sheet transactions, such as unfunded commitments, credit derivatives, commercial and standby letters of credit, and lines of credit.
- The diversification and quality of the loan and investment portfolios.
- The extent of securities underwriting activities and exposure to counterparties in trading activities.
- The existence of asset concentrations.
- The adequacy of loan and investment policies, procedures, and practices.
- The ability of management to properly administer its assets, including the timely identification and collection of problem assets.
- The adequacy of internal controls and management information systems.
- The volume and nature of credit documentation exceptions.

Asset Quality Ratings

1 A rating of 1 indicates strong asset quality and credit administration practices. Identified weaknesses are minor in nature and risk exposure is modest in relation to capital protection and management's abilities. Asset quality in such institutions is of minimal supervisory concern.

2 A rating of 2 indicates satisfactory asset quality and credit administration practices. The level and severity of classifications and other weaknesses warrant a limited level of supervisory attention. Risk exposure is commensurate with capital protection and management's abilities.

3 A rating of 3 is assigned when asset quality or credit administration practices are less than satisfactory. Trends may be stable or indicate deterioration in asset quality or an increase in risk exposure. The level and severity of classified assets, other weaknesses, and risks require an elevated level of supervisory concern. There is generally a need to improve credit administration and risk management practices. Comptroller's Handbook 49 Bank Supervision Process

4 A rating of 4 is assigned to financial institutions with deficient asset quality or credit administration practices. The levels of risk and problem assets are significant, and inadequately controlled, and they subject the financial institution to potential losses that, if left unchecked, may threaten its viability.

5 A rating of 5 represents critically deficient asset quality or credit administration practices that present an imminent threat to the institution's viability.

Management

The capability of the board of directors and management, in their respective roles, to identify, measure, monitor, and control the risks of an institution's activities and to ensure that a financial institution's safe, sound, and efficient operation in compliance with applicable laws and regulations is reflected in this rating. Generally, directors need not be actively involved in day-to-day operations; however, they must provide clear guidance regarding acceptable risk exposure levels and ensure that appropriate policies, procedures, and practices have been established. Senior management is responsible for developing and implementing policies, procedures, and practices that translate the board's goals, objectives, and risk limits into prudent operating standards.

Depending on the nature and scope of an institution's activities, management practices may need to address some or all of the following risks: credit, market, operating or transaction, reputation, strategic, compliance,

legal, liquidity, and other risks. Sound management practices are demonstrated by: active oversight by the board of directors and management; competent personnel; adequate policies, processes, and controls taking into consideration the size and sophistication of the institution; maintenance of an appropriate audits program and internal control environment; and effective risk monitoring and management information systems. This rating should reflect the board's and management's ability as it applies to all aspects of banking operations as well as other financial service activities in which the institution is involved. The capability and performance of management and the board of directors is rated based upon, but not limited to, an assessment of the following evaluation factors:

- The level and quality of oversight and support of all institution activities by the board of directors and management.
- The ability of the board of directors and management, in their respective roles, to plan for, and respond to, risks that may arise from changing business conditions or the initiation of new activities or products.
- The adequacy of, and conformance with, appropriate internal policies and controls addressing the operations and risks of significant activities.
- The accuracy, timeliness, and effectiveness of management information and risk monitoring systems appropriate for the institution's size, complexity, and risk profile. Comptroller's Handbook 50 Bank Supervision Process. The adequacy of audits and internal controls to: promote effective operations and reliable financial and regulatory reporting; safeguard assets; and ensure compliance with laws, regulations, and internal policies.
- Compliance with laws and regulations.
- Responsiveness to recommendations from auditors and supervisory authorities.
- Management depth and succession.
- The extent that the board of directors and management is affected by, or susceptible to, dominant influence or concentration of authority.
- Reasonableness of compensation policies and avoidance of self-dealing.
- Demonstrated willingness to serve the legitimate banking needs of the community.
- The overall performance of the institution and its risk profile.

Management Ratings

1 A rating of 1 indicates strong performance by management and the board of directors and strong risk management practices relative to the institution's size, complexity, and risk profile. All significant risks are consistently and effectively identified, measured, monitored, and controlled. Management and the board have demonstrated the ability to promptly and successfully address existing and potential problems and risks.

2 A rating of 2 indicates satisfactory management and board performance and risk management practices relative to the institution's size, complexity, and risk profile. Minor weaknesses may exist, but are not material to the safety and soundness of the institution and are being addressed. In general, significant risks and problems are effectively identified, measured, monitored, and controlled.

3 A rating of 3 indicates management and board performance that need improvement or risk management practices that are less than satisfactory given the nature of the institution's activities. The capabilities of management or the board of directors may be insufficient for the type, size, or condition of the institution. Problems and significant risks may be inadequately identified, measured, monitored, or controlled.

A rating of 4 indicates deficient management and board performance or risk management practices that are inadequate considering the nature of an institution's activities. The level of problems and risk exposure is excessive. Problems and significant risks are inadequately identified, measured, monitored, or controlled and require immediate action by the board and management to preserve the soundness of the institution. Replacing or strengthening management or the board may be necessary.

A rating of 5 indicates critically deficient management and board performance or risk management practices. Management and the board of directors have not demonstrated the ability to correct problems and implement

appropriate risk management practices.
Problems and significant risks are inadequately identified, measured, monitored, or controlled and now threaten the continued viability of the institution. Replacing or strengthening management or the board of directors is necessary.

Earnings
This rating reflects not only the quantity and trend of earnings, but also factors that may affect the sustainability or quality of earnings. The quantity as well as the quality of earnings can be affected by excessive or inadequately managed credit risk that may result in loan losses and require additions to the allowance for loan and lease losses, or by high levels of market risk that may unduly expose an institution's earnings to volatility in interest rates. The quality of earnings may also be diminished by undue reliance on extraordinary gains, nonrecurring events, or favorable tax effects. Future earnings may be adversely affected by an inability to forecast or control funding and operating expenses, improperly executed or ill advised business strategies, or poorly managed or uncontrolled exposure to other risks. The rating of an institution's earnings is based upon, but not limited to, an assessment of the following evaluation factors:

- The level of earnings, including trends and stability.
- The ability to provide for adequate capital through retained earnings.
- The quality and sources of earnings.
- The level of expenses in relation to operations.
- The adequacy of the budgeting systems, forecasting processes, and management information systems in general.
- The adequacy of provisions to maintain the allowance for loan and lease losses and other valuation allowance accounts.
- The earnings exposure to market risk, such as interest rate, foreign exchange, and price risks.

Earnings Ratings
A rating of 1 indicates earnings that are strong. Earnings are more than sufficient to support operations and maintain adequate capital and allowance levels after consideration is given to asset quality, growth, and other factors affecting the quality, quantity, and trend of earnings.
A rating of 2 indicates earnings that are satisfactory. Earnings are sufficient to support operations and maintain adequate capital and allowance levels after consideration is given to asset quality, growth, and other factors affecting the quality, quantity, and trend of earnings. Earnings that are relatively static, or even experiencing a slight decline, may receive a 2 rating provided the institution's level of earnings is adequate in view of the assessment factors listed above.
A rating of 3 indicates earnings that need to be improved. Earnings may not fully support operations and provide for the accretion of capital and allowance levels in relation to the institution's overall condition, growth, and other factors affecting the quality, quantity, and trend of earnings.
Rating of 4 indicates earnings that are deficient. Earnings are insufficient to support operations and maintain appropriate capital and allowance levels. Institutions so rated may be characterized by erratic fluctuations in net income or net interest margin, the development of significant negative trends, nominal or unsustainable earnings, intermittent losses, or a substantive drop in earnings from the previous years.
A rating of 5 indicates earnings that are critically deficient. A financial institution with earnings rated 5 is experiencing losses that represent a distinct threat to its viability through the erosion of capital.

Liquidity
In evaluating the adequacy of a financial institution's liquidity position, consideration should be given to the current level and prospective sources of liquidity compared to funding needs, as well as to the adequacy of funds management practices relative to the institution's size, complexity, and risk profile. In general, funds management practices should ensure that an institution is able to maintain a level of liquidity sufficient to meet its financial obligations in a timely manner and to fulfill the legitimate banking needs of its community. Practices should reflect the ability of the institution to manage unplanned changes in funding sources, as well as react to changes in market conditions that affect the ability to quickly liquidate assets with minimal loss. In addition, funds management practices should ensure that liquidity is not maintained at a high cost, or through undue

reliance on funding sources that may not be available in times of financial stress or adverse changes in market conditions. Liquidity is rated based upon, but not limited to, an assessment of the following evaluation factors:
The adequacy of liquidity sources to meet present and future needs and the ability of the institution to meet liquidity needs without adversely affecting its operations or condition.

- The availability of assets readily convertible to cash without undue loss.
- Access to money markets and other sources of funding.
- The level of diversification of funding sources, both on- and off-balance sheet.
- The degree of reliance on short-term, volatile sources of funds, including borrowings and brokered deposits, to fund longer term assets.
- The trend and stability of deposits.
- The ability to securitize and sell certain pools of assets.
- The capability of management to properly identify, measure, monitor, and control the institution's liquidity position, including the effectiveness of funds management strategies, liquidity policies, management information systems, and contingency funding plans.

Liquidity Ratings

A rating of 1 indicates strong liquidity levels and well-developed funds management practices. The institution has reliable access to sufficient sources of funds on favorable terms to meet present and anticipated liquidity needs.
A rating of 2 indicates satisfactory liquidity levels and funds management practices. The institution has access to sufficient sources of funds on acceptable terms to meet present and anticipated liquidity needs. Modest weaknesses may be evident in funds management practices.
A rating of 3 indicates liquidity levels or funds management practices in need of improvement. Institutions rated 3 may lack ready access to funds on reasonable terms or may evidence significant weaknesses in funds management practices.
A rating of 4 indicates deficient liquidity levels or inadequate funds management practices. Institutions rated 4 may not have or be able to obtain a sufficient volume of funds on reasonable terms to meet liquidity needs.
A rating of 5 indicates liquidity levels or funds management practices so critically deficient that the continued viability of the institution is threatened. Institutions rated 5 require immediate external financial assistance to meet maturing obligations or other liquidity needs.

Sensitivity to Market Risk

The sensitivity to market risk component reflects the degree to which changes in interest rates, foreign exchange rates, commodity prices, or equity prices can adversely affect a financial institution's earnings or economic capital. When evaluating this component, consideration should be given to: management's ability to identify, measure, monitor, and control market risk; the institution's size; the nature and complexity of its activities; and the adequacy of its capital and earnings in relation to its level of market risk exposure.
Market risk is rated based upon, but not limited to, an assessment of the following evaluation factors:

- The sensitivity of the financial institution's earnings or the economic value of its capital to adverse changes in interest rates, foreign exchanges rates, commodity prices, or equity prices.
- The ability of management to identify, measure, monitor, and control exposure to market risk given the institution's size, complexity, and risk profile.
- The nature and complexity of interest rate risk exposure arising from non-trading positions.

- **C**apital adequacy
- **A**sset quality
- **M**anagement quality
- **E**arning ability

- **L**iquidity
- Sensitivity

Capital Adequacy

Fundamentals of Capital Adequacy

Capital adequacy is the capital expected to maintain balance with the risks exposure of the financial institution such as credit risk, market risk and operational risk, in order to absorb the potential losses and protect the financial institution‘s debt holder. “Meeting statutory minimum capital requirement is the key factor in deciding the capital adequacy, and maintaining an adequate level of capital is a critical element” (The United States. Uniform Financial Institutions Rating System 1997).

Karlyn (1984) defines the capital adequacy in term of capital-deposit ratio because the primary risk is depository risk derived from the sudden and considerably large scale of deposit withdrawals. In 1930, FDIC created a new capital model as capital-asset ratios since the default on loans came to expose the greatest risk instead of deposit withdrawals. To gauge the capital adequacy, bank supervisors currently use the capital-risk asset ratio. The adequacy of capital is examined based upon the two most important measures such as Capital Adequacy Ratio (CAR) or Capital to Risk-weighted Assets ratio, and the ratio of capital to assets.

Interpret what are the capital requirements and which banks meet them; what banks are privatizing or merging; are requirements different for private and state banks.

(1) Actual capital adequacy ratio is above regulatory minimum

(2) Good ability to raise capital through government injection or private/public issues

Capital Adequacy Ratios

Each of components in the CAMELS model is scored from 1 to 5. In the context of capital adequacy, a rating of 1 indicates a strong capital level relative to the financial institution’s risk. Meanwhile, the rating of 5 indicates a critical deficient level of capital, in which immediate assistance from shareholders or external resources is required.

Asset quality

Fundamentals of asset quality

According to Grier (2007), “poor asset quality is the major cause of most bank failures”. A most important asset category is the loan portfolio; the greatest risk facing the bank is the risk of loan losses derived from the delinquent loans. The credit analyst should carry out the asset quality assessment by performing the credit risk management and evaluating the quality of loan portfolio using trend analysis and peer comparison. Measuring the asset quality is difficult because it is mostly derived from the analyst’s subjectivity.

Frost (2004) stresses that the asset quality indicators highlight the use of non-performing loans ratios (NPLs) which are the proxy of asset quality, and the allowance or provision to loan losses reserve. As defined in usual classification system, loans include five categories: standard, special mention, substandard, doubtful and loss. NPLs are regarded as the three lowest categories which are past due or for which interest has not been paid for international norm of 90 days. In some countries regulators allow a longer period, typically 180 days. The bank is regulated to back up the bad debts by providing adequate provisions to the loan loss reserve2 account. The allowance for loan loss to total loans and the provision for loan loss to total loans should also be taken into account to estimate thoroughly the quality of loan portfolio.

The asset quality requirements are taken into AIA’s CAMEL approach to

Trends should be noted such as loan concentrations, intra-group lending, and real-estate exposure. For a bank which heavily exposes to lend some specific business sectors and/or business entities, lack of diversification will make its loan portfolio vulnerable. Therefore, AIA designs the portfolio mix shared equally by a third of each of consumer, commercial and industrial loans.

Loan growth: has there been a large increase in loan growth and in what type of lending; are prudent standards being followed or are they becoming lax due to competition.

Non-performing loans: amount, composition, causes for large increase or decreases, how NPLs are defined.

Reserves: levels of reserves in relation to total loans and non-performing loans.

Real-estate exposure: what percentage of loans are real estate based and what type of real estate lending-commercial or residential.

Intra-group exposure: what level of lending is to affiliated companies; what is the group‘s primary businesses; what is the level of ownership.
The asset quality is estimated based upon the following key financial ratios and to be considered as good banks, they must meet certain criteria detailed below:

Rating of Asset Quality. Each of the components in the CAMEL rating system is scored from 1 to 5. In the context of asset quality, a rating of 1 indicates a strong asset quality and minimal portfolio risks. On the other hand, a rating of 5 reflects a critically deficient asset quality that presents an imminent threat to the institution’s viability.

Management quality
Fundamentals of management quality
Management quality is basically the capability of the board of directors and management, to identify, measure, and control the risks of an institution‘s activities and to ensure the safe, sound, and efficient operation in compliance with applicable laws and regulations (Uniform Financial Institutions Rating System 1997).
Grier (2007) suggests that management is considered to be the single most important element in the CAMELS rating system because it plays a substantial role in a bank’s success; however, it is subject to measure as the asset quality examination.
AIA approach to bank analysis states that the management has clear strategies and goals in directing the bank’s domestic and international business, and monitors the collection of financial ratios consistent with management strategies. The top management with good quality and experience has preferably excellent reputation in the local communication. The management requirements are taken into AIA’s CAMELS approach to Bank Analysis (1996) as below:
Ownership: the bank is majority-owned by the government because government support is the most important mitigating factor to potential financial problems, or by large Private Corporation that have economic significance.

Size: top local ranking in term of assets.

Year of operations: long operation history since establishment.

Rating of Management
Each of components in the CAMELS rating system is scored from 1 to 5. In the context of management, a rating of 1 is assigned to note the management and board of directors are fully effective. On the other hand, the rating of 5 is applicable to critically deficient management. Replacing or strengthening may be needed to achieve sound and safe operations.

Earning ability
Fundamentals of earning ability
This rating reflects not only the quantity and trend in earning, but also the factors that may affect the sustainability of earnings. Inadequate management may result in loan losses and in return require higher loan allowance or pose high level of market risks. The future performance in earning should be given equal or greater value than past and present performance.
In accordance with Grier (2007)’s opinion, a consistent profit not only builds the public confidence in the bank but absorbs loan losses and provides sufficient provisions. It is also necessary for a balanced financial structure and helps provide shareholder reward. Thus consistently healthy earnings are essential to the sustainability of banking institutions. Profitability ratios measure the ability of a company to generate profits from revenue and assets.

The profitability is estimated based upon the following key financial ratios, and to be considered as good banks, they must meet certain criteria detailed below: Rating of Earning Ability
Each of the components in the CAMELS rating system is scored from 1 to 5. In the context of earning, a rating of 1 reflects strong earnings that are sufficient to maintain adequate capital and loan allowance, and support operations. On the other hand, a rating of 5 experiences consistent losses and represents a distinct threat to the institution’s solvency through the erosion of capital.

Liquidity
Fundamentals of liquidity 24

There should be adequacy of liquidity sources compared to present and future needs, and availability of assets readily convertible to cask without undue loss. The fund management practices should ensure an institution is able to maintain a level of liquidity sufficient to meet its financial obligations in a timely manner; and capable of quickly liquidating assets with minimal loss.

Rudolf (2009) emphasizes that "the liquidity expresses the degree to which a bank is capable of fulfilling its respective obligations". Banks makes money by mobilizing short-term deposits at lower interest rate, and lending or investing these funds in long-term at higher rates, so it is hazardous for banks mismatching their lending interest rate.

The liquidity requirements are taken into AIA's CAMELS approach to Bank Analysis (1996) as below:

(1) Majority of the funding is coming from customer's deposits, and no concentration of funding sources.

(2) Maturity or interest rate mismatch

(3) Central bank imposes reserve requirements

The profitability is estimated based upon the following key financial ratios, and to be considered as good banks, they must meet certain criteria detailed below: Rating of Liquidity

Each of the components in the CAMELS rating system is scored from 1 to 5. In the context of liquidity, a rating of 1 represents strong liquidity levels and well-developed funds as the institution has access to sufficient sources of funds to meet present and anticipated liquidity needs. On the other hand, the rating of 5 signifies critical liquidity-deficiency, and the institution demands immediate external assistance to meet liquidity needs.

SENSITIVITY

Banks operate in a diverse environment which has direct effect on the operation of the bank. It affects the earnings ability and the operational efficiency of the industry. Monetary and macro economic shocks for instance have direct bearing on the performance of the banks. Quantitatively, sensitivity can be measure as follows:

- Money supply to bank total asset
- Money supply to lending rate
- GNP to Total deposit
- GDP to Total bank investment
- Interest rate risk

Table I: Position of Nigeria Banks after the Consolidation

S/N	GROUP	MERGING PARTNERS	SHARE HOLDERS FUND	TOTAL ASSET	TOTAL DEPOSIT
1	First bank	First Bank Plc and MBC International Bank Plc	44.67bn	377.49bn	265.67bn
2	Diamond bank	First Merchant Bank Diamond Bank and lion Bank	28.6bn	N/a	W/A
3	Platinum Habib	Platinum bank and Habib bank	25bn	116bn	60.6bn
4	Zenith bank Plc	Zenith bank Plc (alone)	38bn	370.72bn	233bn
5	Oceanic bank	Oceanic bank & Int'l Trust bank	31.1bn	217.8bn	167.4bn
6	International bank	Intercontinental bank, Equity, Global and Gateway bank.	N51bn	350bn	220bn
7	Fidelity bank	Fidelity bank, FSB Int'l and many bank	29bn	120bn	N/A
8	First city Monument bank (FCMB)	FCMB, cooperative Development bank, and Nig. American Merchant bank	28bn	90bn	50bn
9	United bank for Africa (UBA)	UBA, and Standard trust bank	50bn	419.3bn	318.4bn
10.	Spring bank	Citizens bank Int'l, ACB, Omega, Trans Int'l bank & Guardian Express	27bn	90bn	60bn
11.	Access bank	Access bank, marina Int'l and Capital bank	28bn	140bn	60bn
12.	NIB	Nigeria Int'l bank (alone)	N/A	N/A	N/A
13.	Sterling bank	Trust bank of Africa, Magnum Trust bank, NBM bank, NAL bank, and Indo-Nigeria	25bn	100bn	60bn

		bank			
14	Unity bank	Intercity Bank, First Interstate, Tropical Commercial Bank, Center Point And Pacific Bank, Societe Bancaire, NNB Int'l, New African and bank of the North	30bn	100bn	N/A
15	ETB/DEVCOM	Equitorial Trust Bank and Devcom bank	26.5bn	56bn	34.14bn
16	Eco bank	Eco bank (alone)	N/A	N/A	N/A
17	Union bank	Union bank, union merchant, broad bank, universal trust bank	39.12bn	396.3bn	200bn
18	STANBIC BANK	Stanbic (Nig) Bank (alone)	N/A	N/A	N/A
19	First inland bank	First Atlantic, inland, IMB Int'l and NUB bank	30bn	130bn	80bn
20	Guaranty Trust	Guaranty Trust Bank (alone)	30.88bn	167.9bn	95.65bn
21	Standard Chartered	Standard Chartered bank (alone)	26bn	34.72bn	23.5bn
22	Afribank	Afribank Plc, Afribank (Merchant Bankers) international Assurance and lead bank	Over 25bn	110bn	62bn
23	IBTC bank	Investment Banking and Trust Company Plc (IBTC), Chartered bank Plc and Regent Bank	38bn	Over100bn	N/A
24	Skye bank	Prudent bank, EIB Int'l bank Bond bank, and Cooperative bank	37.7bn	Over 100bn	70bn
25	Wema bank	Wema bank, National Bank	35bn	127.7bn	78bn

Source: ***Financial Standard Newspaper,Jan.4TH,2006.***

Empirical Review

Cabral et al. (2002) Carletti et al. (2002) and Szapary (2001) provided the foundation for a research on the linkage between banks mergers and acquisitions and profitability. Evidence as provided by Calomiris and Karenski (1996) De-Nicolo (2003) and Caprion (1999) suggested that mergers and acquisitions in the financial system could impact positively on the efficiency of most banks. Surprisingly, the available empirical evidence suggests that mergers and acquisitions operations in the United States banking industry have not had a positive influence on performance in term of efficiency.

DeLong and Deyoung (2007) overall of these studies provide mixed evidence and many fail to show a clear relationship between mergers and acquisitions and performance. Some of the previous literature has examined the impact of mergers and acquisitions operation on cost efficiency as measured by simple accounting cost ratios (DeYoung, 2007), the impact on cost x-efficiency. Also, evidence supporting mergers and acquisitions to achieve cost saving and efficiency gain is sparse (Kwan and Elsenbeis, 1999). Akhavein et al. (1997) analysed changes in profitability experienced in the same set of large mergers as examined by Berger and Humphrey (1992). They found that banking organizations significantly improved their profit efficiency ranking after mergers.

De Young (1993) does find that when both the acquirer and target were poor performers, mergers Okpanachi 2003 resulted in improved cost efficiency. Healy et al. (1992) examined all commercial banks and bank holding company mergers and acquisitions occurring between 1982 and 1986. They found that mergers and acquisitions did not reduce non-interest expenses that could have lead to improved efficiency. Pilloff and Santomero (1997), there is little empirical evidence of mergers achieving growth or other important performance gains. Their findings undermine a major rationale for mergers and consequently raised doubt other benefits mergers and acquisitions may provide to businesses.

Cornett and Tehranian (1992) and Kay (1993) find some evidence of superior post merger period because of the merged firms' enhanced ability to attract loans. They also show increased employee productivity and net asset growth. Also, this is evident in the Nigeria's banking industry (Okpanachi, 2006). Walter and Uche (2005) posited that mergers and acquisitions made Nigerian banks more efficient. They used table to present their data which was analyzed using simple percentage. Akpan (2007), using square to test this stated hypothesis found that the policy of consolidation and capitalization has ensured customers' confidence in the Nigerian banking industry in term of high profit. Sobowale (2004) and Osho (2004), it is expected that the value of the companies that participated in mergers and acquisitions activities would be higher than before because future dividends and earning streams are expected to rise and subsequently improves efficiency. Uchendu (2005) and Kama (2007)

opined that, the bank consolidation which took place in Malaysia facilitated banks expansion which led to growth. Kwan (2002) found that the high rate of economic activities experienced in Chile was mainly from productivity's improvement from the large banks formed as a result of mergers and acquisitions. Berger and Mester (1997) and Stiroh (2002) using data on United States banks suggested that, there may be some substantial scale efficiency from larger sizes of banks as a result of mergers and acquisitions. But for Straub (2007), mergers and acquisitions have often failed to add significantly to the performance of banking sector.

The majority of studies comparing pre and post mergers performance found that, this potential efficiency derived from mergers and acquisitions rarely materialize (Piloff, 1996; Berger et al., 1999). Beitel et al. (2003) found no gain effect due to mergers and acquisitions.Yener and David (2004), mergers and acquisitions played an important role in improving after merger financial performance which is a stimulus for efficiency. Most of the studies examined found that mergers and acquisitions add significantly to the profits of the banking sector, except for Straub (2007) and Rhoades (1993) that have contrary views. Onaolapo (2008) employed CAMEL rating system to examine the effectiveness of recapitalization. He found that recapitalization had improved the financial health of banks.

Sani (2004) using a regression model, Sani discovered a positive and significant relationship between recapitalization policy and economic growth in Nigeria. Adegbaju (2008) examined the effectiveness of recapitalization on the performances of 20 Nigerian banks. He discovered that while few banks recorded appreciable improvements in their performances, majority of the banks remained the same or even worse off. Okafor (2009) research on consolidation exercise in Nigeria employed capital adequacy asset quality liquidity and management. 2004 -2005 was regarded as the pre consolidation period while 2006-2009 was regarded as the post consolidation period, she concluded that consolidation improved the overall performance of banks in terms of assets size, deposit base, capital base and capital adequacy , however it did not contribute to the profit efficiency of those commercial banks. Using the dynamic panel GMM method on a cross sectional data from 2000 -2010, Barnos and Caporale(2008) came to a conclusion that consolidation specifically reduced foreign ownership of commercial banks and also through merger and acquisition banks were more cost efficient.

The investigation carried out by Elumilade (2010) on the effects of mergers and acquisitions on the efficiency of financial intermediation in the Nigerian banking industry had evidence that the consolidation programme induced mergers and acquisitions in the banking industry and improved competitiveness and efficiency of the borrowing and lending operations of the Nigerian banking industry. Olaosebikan (2009) investigated the efficiency of the Nigerian banking system between 1999 and 2005. Bank efficiency was evaluated using Data Envelopment Analysis (DEA). The results indicated that efficiency fluctuated during the first part of the period and improved during the recent years, a period associated with the increase in minimum capital requirement, differences in banks' efficiency was explained by problematic loans and their size.

Donwa and Odia **(**2011) investigated the impact of the consolidation on banking industry in the Nigerian Capital Market between 2004 and 2008 using primary (questionnaires) and secondary data from the Nigerian Stock Exchange. When the data was analyzed with the chi-square test and ANOVA, it was found that bank consolidation affected the industry significantly as most of the banks had to go to the capital market to raise the required amount by issuing securities. They submitted that banks' consolidation had increased public awareness and operations of the Nigerian capital market just as the capital market had continued to be an easy and cheap source of funds for banks in the post consolidation era. Based on their findings, it was recommended that the banks and capital market regulatory authorities should continue to monitor and institute reforms program that would better reposition the banking industry as a major player in the Nigerian Capital Market and the economy. Adegboyega (2012) evaluated the impact of mergers and acquisitions on performance of Banks in Nigeria. Pre-merger and post merger financial statements of two consolidated banks were obtained, adjusted, carefully analyzed and compared. The result revealed that all the two groups produced in addition to operational and relational synergy, financial gains far more than the 2+2=5 synergistic effects. Ratio technique and inferential statistical tools were used to highlight synergistic effects on the merging banks. Berger and Udell (1995) used 1980-1988 as its study scope and the Thick Frontier Approach (TFA) method. The study found out that deregulation of deposit rates caused an increase in average cost in US banks especially the smaller ones, hence it led to reduced efficiency while during post deregulation periods, and their average coast fell owing to the structural change.

0Sobodu and Akiode (1995) employed data envelopment analysis (DEA) to study the efficiencies of banking institutions in Nigeria under the privatization policy, the study showed that the efficiency of the Nigerian banking system declined significantly during period of financial deregulation compared to its levels before

consolidation, they also discovered that privately owned banks operated more efficiently than government owned banks. Favero and Papi (1995) used a sample consisting of 174 Italian banks, which represented 80 percent of total deposits, cross-sectional data from 1991 to 1995 and used the Data Envelopment Analysis (DEA) as its methodology. The major findings showed that efficiency of banks was mainly determined by productivity and specialization by bank size and lesser by their locations.

Erel (2006) studied the effect of bank mergers on loans price. He found out that on average mergers reduced loan spreads, and that the results were stronger for acquirers with large declines in operating cost post merger. According to him, merger and acquisitions did not decrease the spread of the loans, because, by the time one or more banks were merged together at least they would be stronger more than before and that would allow them to spread credits to borrowers more than before. Lamberte and Manlagnit (2004) examined the recent consolidation trends among depository institutions (commercial banks and thrifts) in Philippine for the period between 1989 and 1994. The study found out that market concentration increased significantly, midsize commercial banks were gaining market share at the expense of large banks in most markets. Roger and Ferguson (2009) studied the financial consolidation. Their study concluded with an extensive evaluation of the potential effects of financial consolidation on the efficiency of financial institutions, competition among such firms, and credit flows to households and small businesses.

According to Willson, Wilson and Goddard (2008) consolidation in the US had empirical evidence that there was often little improvement in efficiency or performance of merged entity. The study also suggested that the hubris and agency motives for merger may be relevant, or that synergy derived more from enhanced market power than from cost savings De young (1993) studied 348 merged banks, of which 43 percent were intercompany ones. The study estimated pre- and post-merger cost efficiency by applying a thick frontier approach. Prior to merger, the acquiring banks were more cost efficient than the target; however, in the three years period after the merger, cost efficiency improved in about 64 percent of the cases.

3. Research Methodology

The purpose of this study was to compare Nigerian Commercial Banks soundness in the pre and post consolidation.The nature of this research is such that secondary data will be used. The secondary data was sourced from the financial statement commercial banks in Nigeria and Central Bank of Nigeria financial review for the period. The pre consolidation period covers 1997-2003 while the post consolidation covers 2009-2016, 2004 and 2005 were skipped to examine the effect on the consolidation.

4. Results and Discussion

This section of the study contains the time series data of the invariable that makes up CAMELS. This study adopts the CAMELS approach to evaluate the performance of the 15 quoted commercial banks in the pre and post consolidation period the pre-consolidations is 8 years from 1997-2004 while the post consolidation is 8 years from 2009- 2016.

Capital Adequacy (C)

Capital adequacy is a financial strength of a bank according to Adesina (2012), it is usually expressed as its shareholders fund to total asset. In this study, capital asset to risk asset and adjusted capital to risk asset is used.

Table II - V analyze the capital adequacy of the fifteen (15) quoted banks in the pre and post consolidation.

Table II: Capital – Risk Assets Ratio (Pre consolidation)

Bank	1997	1998	1999	2000	2001	2002	2003	2004	Total	Average	Rank
Access bank	25.2	20.2	24.1	24.7	26.4	39.8	11.45	11.39	183.24	22.91	7
Eco bank	14.3	23.7	14.1	12.8	17.1	16.5	20.6	18.6	137.70	17.21	13
Diamond bank	26.2	17.8	11.0	17.5	13.4	29.6	18.0	19.5	153.00	19.13	12
FCMB bank	21.3	19.7	14.6	18.1	12.0	18.2	16.7	13.5	134.10	16.76	15
Fidelity bank	81.9	78.1	88.4	10.26	10.64	54.7	57.3	57.1	438.40	54.80	1
First bank	18.6	18.1	14.4	14.8	14.3	13.1	15.5	13.9	122.70	15.34	14
GT bank	35.1	25.6	18.1	14.2	24.8	27.5	20.8	18.2	184.30	23.04	5
Skye bank	26.5	36.7	31.1	31.0	23.2	19.6	27.5	39.4	235.00	29.38	4
Sterling bank	14.1	16.3	14.1	26.4	14.9	24.9	20.4	26.8	157.90	19.74	11
Stanbic bank	19.4	19.8	24.5	26.6	24.7	24.2	26.6	15.4	181.20	22.65	8
UBA bank	35.0	29.3	52.7	28.5	21.1	20.7	30.1	24.4	241.80	30.23	3
Union bank	24.1	21.3	24.7	29.3	34.4	12.7	10.7	11.3	168.50	21.06	10
Unity bank	27.4	26.7	34.4	23.6	62.1	68.7	38.0	34.9	315.80	39.48	2
Wema bank	29.6	10.1	26.6	28.5	17.7	12.6	27.8	27.4	180.30	22.54	9
Zenith bank	21.1	23.3	25.2	25.8	24.1	22.5	24.4	17.4	183.8	22.97	6

Source: Computed by Researcher from the financial statement of the quoted commercial banks.

Noted: The pre-consolidation data was computed from the balance sheet of all commercial banks merged to consolidate.

Table III: Capital – Risk Assets Ratio (post consolidation)

Bank	2009	2010	2011	2012	2013	2014	2015	2016	Total	Average	Rank
Access bank	96.1	47.7	68.5	21.2	23.5	26.2	23.3	30.0	336.50	42.06	2
Ecobank	21.5	18.6	16.0	13.2	11.7	16.2	18.3	17.5	133.00	16.63	8
Diamond bank	18.7	10.3	21.1	11.5	18.1	11.8	19.4	13.2	124.10	15.51	10
Fcmb bank	16.2	18.4	10.7	13.5	15.6	18.7	14.8	12.3	120.20	15.03	11
Fidelity bank	27.1	60.9	96.1	31.9	33.5	75.0	93.3	13.37	431.17	53.90	1
Firstbank	10.9	12.5	13.0	30.9	31.2	34.3	34.7	45.8	213.30	26.66	7
GTbank	13.0	09.1	12.8	13.7	11.6	14.8	16.1	19.4	110.50	13.81	12
Skye bank	24.0	23.8	28.1	24.6	28.4	34.8	31.8	33.0	228.50	28.56	5
Sterling bank	19.4	11.3	05.3	03.9	12.1	07.6	13.8	07.4	80.80	10.10	14
Stanbic bank	01.2	07.1	04.6	03.6	17.1	04.7	08.1	08.2	54.60	6.83	15
UBA bank	12.2	10.4	14.9	76.1	13.37	35.5	66.3	86.7	315.47	39.43	3
Union bank	12.7	11.7	30.5	35.3	35.7	26.0	37.9	35.5	225.30	28.16	6
Unity bank	47.7	18.8	08.1	07.6	15.8	90.5	25.5	16.1	230.10	28.76	4
Wema bank	12.3	08.2	06.4	04.5	13.4	14.4	13.9	14.7	87.80	10.98	13
Zenith bank	10.5	14.5	26.6	27.3	26.3	01.8	13.9	08.4	129.30	16.16	9

Source: Computed by Researcher from the financial statement of the quoted commercial banks.

Table IV: Adjusted Capital to Risk Assets (pre consolidation)

Bank	1997	1998	1999	2000	2001	2002	2003	2004	Total	Average	Rank
Access bank	27.4	26.8	27.1	32.7	30.3	30.6	35.1	25.1	235	29.39	8
Ecobank	16.1	16.6	29.2	30.4	24.9	29.1	17.8	17.4	182	22.69	12
Diamond bank	20.0	14.9	20.4	16.3	17.1	20.3	18.1	17.5	145	18.08	14
Fcmb bank	13.9	18.9	16.0	22.5	13.1	17.6	18.8	14.8	136	16.95	15
Fidelity bank	44.1	49.9	51.4	28.9	13.9	12.5	20.8	28.0	250	31.19	6
Firstbank	50.6	16.2	23.2	25.7	21.9	56.8	60.0	51.0	305	38.18	2
GTbank	22.3	24.0	25.4	24.7	21.8	28.5	29.8	27.9	204	25.55	11
Skye bank	36.1	35.6	36.2	41.3	25.7	41.3	30.0	20.5	267	33.34	4
Sterling bank	28.3	35.0	27.4	23.5	47.3	26.5	28.9	29.7	247	30.83	7
Stanbic bank	13.0	13.5	22.7	21.9	22.7	29.5	38.2	50.7	212	26.53	10
UBA bank	17.5	59.7	65.1	74.9	16.4	22.9	25.9	25.6	308	38.50	1
Union bank	36.3	42.6	38.0	41.1	33.0	14.2	39.9	31.8	277	34.61	3
Unity bank	42.6	48.3	34.5	38.0	20.4	22.0	28.7	16.4	251	31.36	5
Wema bank	14.9	27.7	25.3	24.8	10.7	16.3	14.1	31.7	166	20.69	13
Zenith bank	35.6	14.3	19.3	24.3	28.5	39.3	31.8	39.2	232	29.04	9

Source: Computed by Researcher from the financial statement of the quoted commercial banks.
Noted: The pre-consolidation data was computed from the balance sheet of all commercial banks merged to consolidate.

Table V: Adjusted Capital to Risk Assets (post consolidation)

Bank	2009	2010	2011	2012	2013	2014	2015	2016	Total	Average	Rank
Access bank	24.0	23.5	28.3	11.5	42.5	28.9	19.7	14.4	193	24.10	9
Ecobank	20.9	27.5	25.2	15.5	12.5	13.7	15.7	27.5	159	19.81	12
Diamond bank	17.3	25.4	23.8	15.1	18.4	17.0	10.1	10.9	138	17.25	15
Fcmb bank	18.2	16.5	18.7	14.3	16.8	16.3	24.8	24.3	150	18.74	14
Fidelity bank	24.9	22.8	42.6	24.5	35.5	41.9	45.0	44.6	282	35.23	2
Firstbank	38.3	10.1	16.7	19.9	16.0	10.2	12.2	38.8	162	20.28	11
GTbank	11.6	15.5	20.1	30.0	21.1	28.4	46.8	47.0	221	27.56	8
Skye bank	28.9	40.2	29.9	21.5	30.3	26.6	28.0	32.1	238	29.69	7
Sterling bank	10.6	36.2	49.6	36.6	23.0	38.0	38.2	45.5	278	34.71	3
Stanbic bank	21.9	31.7	43.2	66.0	44.8	37.9	36.5	35.8	318	39.73	1
UBA bank	19.0	22.0	50.8	30.6	26.9	47.4	30.1	45.6	272	34.05	5
Union bank	40.1	15.5	38.5	39.1	15.7	44.9	42.2	43.2	279	34.90	4
Unity bank	28.5	37.9	34.7	45.0	34.7	21.5	33.2	26.8	262	32.79	6
Wema bank	11.5	13.6	14.4	15.2	28.9	23.3	27.7	20.5	155	19.39	13
Zenith bank	10.3	28.6	11.3	14.4	20.9	26.8	35.5	24.2	172	21.50	10

Source: Computed by Researcher from the financial statement of the quoted commercial banks.

Capital-Risk Assets

Comparative analysis of the components of capital adequacy during the pre-consolidation era shows that Fidelity Bank has a higher capital-risk assets ratio and first Bank having the lowest capita-risk assets ratio while the post-consolidation also had Fidelity Bank with the highest capital risk asset ratio and Sterling Bank has the lowest capital-risk ratio.

The pre-consolidation adjusted capital to Risk Asset depicted a high figure for United Bank for Africa while Wema Bank shows an average of 20.69% with Rank 13 while post consolidation adjusted capital to risk assets shows a high amount of 39.73 for Sterling Bank and a low amount of 17.25 for Diamond Bank and the Rank score is 1st and 15th respectively.

Asset Quality (A)

Asset quality is a measure of strength of the bank. In this study, the ratio of nonperforming loans to total loans and advance and advances to total assets is used. Table 5 – Table 8 below gives analysis of asset quality of the commercial banks in pre and post consolidations.

Table VI: Non- Performing loans to total loans and advances (pre consolidation)

Bank	1997	1998	1999	2000	2001	2002	2003	2004	Total	Average	Rank
Access bank	24.7	26.8	28.5	23.1	24.4	20.3	21.6	19.4	189	23.60	6
Ecobank	25.0	22.6	36.1	26.6	37.2	57.1	48.3	29.8	283	35.34	3
Diamond bank	10.5	18.1	13.7	15.3	19.3	20.7	14.7	17.0	129	16.16	14
Fcmb bank	18.7	17.6	12.6	19.5	21.1	14.7	18.2	19.0	141	17.68	13
Fidelity bank	40.7	63.0	88.3	63.0	25.2	71.4	89.1	47.2	488	60.99	1
Firstbank	18.4	20.4	19.8	18.3	19.6	17.6	27.7	20.8	163	20.33	9
GTbank	30.2	24.1	27.6	26.6	31.7	30.0	18.7	29.3	218	27.28	4
Skye bank	25.2	20.2	17.3	29.9	19.4	21.7	20.7	18.4	173	21.60	8
Sterling bank	11.8	12.9	19.8	11.8	16.7	18.9	14.0	11.3	117	14.65	15
Stanbic bank	24.9	21.7	21.4	14.9	17.4	14.3	15.3	17.5	147	18.43	10
UBA bank	14.0	19.5	11.1	35.5	45.1	82.8	32.4	45.9	286	35.79	2
Union bank	15.0	10.8	19.0	12.7	11.3	34.0	18.0	28.0	149	18.60	11
Unity bank	18.8	12.8	16.9	28.3	29.1	24.9	20.6	24.1	176	21.94	7
Wema bank	22.8	17.8	29.0	12.6	16.7	10.6	15.6	19.7	145	18.10	12
Zenith bank	27.5	26.1	32.5	31.6	36.2	38.0	13.0	10.8	216	26.96	5

Source: Computed by Researcher from the financial statement of the quoted commercial banks.

Noted: The pre-consolidation data was computed from the balance sheet of all commercial banks merged to consolidate.

Table VII: Non- Performing loans to total loans and advances (post consolidation)

Bank	2009	2010	2011	2012	2013	2014	2015	2016	Total	Average	Rank
Access bank	18.6	16.2	14.0	45.1	18.1	24.8	21.2	33.7	192	23.96	13
Ecobank	29.6	29.9	58.4	14.1	10.8	13.5	11.4	11.1	179	22.35	14
Diamond bank	20.4	16.4	85.2	54.2	19.6	25.1	31.9	19.4	272	34.03	3
Fcmb bank	21.0	72.1	16.3	49.0	18.1	20.1	26.4	16.5	240	29.94	8
Fidelity bank	93.6	21.5	23.8	68.1	86.8	58.0	45.9	10.9	409	51.08	1
Firstbank	21.5	33.0	68.1	59.1	15.0	13.9	14.7	15.6	241	30.11	7
GTbank	30.7	22.0	46.3	25.9	28.4	14.3	28.4	25.9	222	27.74	11
Skye bank	16.3	72.0	20.2	31.4	22.0	24.1	28.1	40.2	254	31.79	6
Sterling bank	22.1	82.0	28.0	51.4	21.8	15.9	24.4	17.5	263	32.89	5
Stanbic bank	31.1	35.1	78.0	19.6	16.1	13.7	19.9	18.2	232	28.96	9
UBA bank	18.1	74.0	39.3	40.0	43.7	45.8	61.8	75.6	398	49.79	2
Union bank	24.0	25.1	18.0	20.1	11.0	26.0	15.0	8.0	147	18.40	15
Unity bank	14.2	78.1	46.1	19.0	27.6	32.2	35.9	14.5	268	33.45	4
Wema bank	42.1	21.8	86.1	17.9	10.9	13.4	17.7	9.4	219	27.41	12
Zenith bank	69.1	43.1	19.0	22.0	12.0	11.0	33.0	15.2	224	28.05	10

Source: Computed by Researcher from the financial statement of the quoted commercial banks.

Table VIII: Total loans and advances to total asset (pre consolidation)

Bank	1997	1998	1999	2000	2001	2002	2003	2004	Total	Average	Rank
Access bank	13.9	19.1	20.2	24.1	25.8	23.0	28.1	32.2	186	23.30	8
Ecobank	26.6	22.0	13.7	18.5	15.3	46.1	46.1	19.3	208	25.95	4
Diamond bank	18.0	16.2	14.9	10.3	18.0	21.6	26.1	52.5	178	22.20	10
Fcmb bank	19.1	11.3	34.1	16.7	19.3	28.8	28.8	34.1	192	24.03	7
Fidelity bank	27.7	30.4	18.7	27.4	31.3	39.9	39.2	32.0	247	30.83	2
Firstbank	31.2	21.7	27.6	18.1	16.0	29.4	60.5	37.3	242	30.23	3
GTbank	20.3	23.5	22.8	21.3	29.1	26.9	29.2	23.1	196	24.53	5
Skye bank	20.6	20.0	13.6	27.5	21.6	18.3	26.3	19.8	168	20.96	12
Sterling bank	15.4	18.7	13.9	15.0	31.5	16.6	35.1	15.0	161	20.15	13
Stanbic bank	13.7	13.3	14.6	17.4	20.5	24.0	20.5	30.1	154	19.26	14
UBA bank	11.0	12.5	38.7	13.8	18.7	23.1	18.7	35,6	137	17.06	15
Union bank	29.6	30.9	27.5	21.7	43.7	45.9	43.7	31.2	274	34.28	1
Unity bank	25.2	24.0	11.0	13.8	15.0	30.1	50.1	17.1	186	23.29	9
Wema bank	39.2	30.3	9.6	24.4	16.7	31.1	16.7	26.1	194	24.26	6
Zenith bank	18.4	17.6	12.3	12.8	14.1	20.3	20.1	61.8	177	22.18	11

Source: Computed by Researcher from the financial statement of the quoted commercial banks.
Noted: The pre-consolidation data was computed from the balance sheet of all commercial banks merged to consolidate.

Table IX: Total loans and advances to total assets (post consolidation)

Bank	2009	2010	2011	2012	2013	2014	2015	2016	Total	Average	Rank
Access bank	13.4	34.1	28.4	30.2	28.1	29.6	25.4	61.2	250	31.30	10
Ecobank	20.1	60.3	24.2	27.5	15.2	54.2	29.7	16.4	248	30.95	11
Diamond bank	27.1	57.1	30.2	26.3	18.0	55.1	18.0	59.1	291	36.36	7
Fcmb bank	20.0	37.1	18.1	18.7	21.0	23.1	17.1	24.0	179	22.39	15
Fidelity bank	36.2	39.5	48.7	40.1	26.2	33.1	33.2	62.3	319	39.91	5
Firstbank	48.0	23.1	31.1	17.1	18.4	21.3	30.5	57.4	247	30.86	12
GTbank	26.6	69.2	50.2	44.3	21.1	58.2	27.0	69.1	366	45.71	3
Skye bank	60.5	18.1	40.2	32.5	38.4	36.0	23.2	18.9	268	33.48	9
Sterling bank	39.0	30.0	48.2	12.1	24.2	19.9	67.2	27.8	268	33.55	8
Stanbic bank	38.1	39.6	49.3	62.4	48.9	44.2	48.0	47.7	378	47.28	2
UBA bank	56.3	46.1	47.3	19.5	58.4	7.0	50.5	31.1	316	39.53	6
Union bank	33.0	31.6	35.2	30.1	17.6	31.0	17.2	27.7	223	27.93	14
Unity bank	11.1	30.2	76.6	33.6	10.1	19.1	30.3	34.1	245	30.64	13
Wema bank	43.1	49.1	41.1	60.1	30.2	38.1	59.1	25.6	346	43.30	4
Zenith bank	26.3	24.1	43.2	64.2	89.1	46.3	65.1	30.1	388	48.55	1

Source: Computed by Researcher from the financial statement of the quoted commercial banks.

Asset Quality

Comparative analysis of the components of assets quality during the pre-consolidation era shows that Fidelity Bank has a higher non-performing loan to total loans and advances ratio and first Bank having the lowest non-performing loan to total loans and advances ratio while the post-consolidation also had Fidelity Bank with the highest non-performing loan to total loans and advances and Sterling Bank has the lowest non-performing loan to total loans and advances ratio.

The pre-consolidation adjusted Total loans and advances to total assetsdepicted a high figure for Union Bank Plc while United Bank for Africa shows an average of 17.06% with Rank 15 while post consolidation Total loans and advances to total assets (post consolidation)shows a high amount of 48.55 for Zenith Bank and a low amount of 22.39 for FCMB and the Rank score is 1st and 15th respectively.

Management Quality (M)

The capacity and efficiency of the bank can be measured with the help of certain ratios. In this study, operating expenses to total asset and loans and advance to total deposit is used. The tables below; table 9 – table 12 analyze management quality of the banks.

Table X: Operating expenses to total assets (pre consolidation)

Bank	1997	1998	1999	2000	2001	2002	2003	2004	Total	Average	Rank
Access bank	18.0	21.5	26.4	37.1	30.0	30.7	31.1	45.2	240	30.00	13
Ecobank	29.1	35.1	16.7	20.6	15.4	17.9	28.0	57.1	220	27.49	15
Diamond bank	63.1	19.0	16.3	17.9	17.4	16.5	21.8	52.0	224	28.00	14
Fcmb bank	57.6	19.5	60.4	16.0	17.8	30.0	25.0	39.1	265	33.18	9
Fidelity bank	40.8	39.9	43.1	47.2	64.8	32.2	49.5	22.8	340	42.54	1
Firstbank	15.3	42.8	44.0	58.1	16.1	51.1	47.0	49.5	324	40.49	6
GTbank	33.5	39.0	45.9	39.5	28.5	38.8	26.6	52.9	305	38.09	7
Skye bank	47.4	59.4	60.9	11.6	31.7	52.3	46.3	28.2	338	42.23	2
Sterling bank	19.5	28.4	49.5	32.0	10.8	43.0	21.0	38.9	243	30.39	12
Stanbic bank	69.0	41.1	24.1	20.2	42.2	60.1	48.8	22.1	328	40.95	5
UBA bank	68.1	15.8	48.3	35.1	41.8	58.1	25.0	45.3	338	42.19	3
Union bank	14.0	36.0	50.0	78.0	18.0	11.0	36.8	13.0	257	32.10	10
Unity bank	26.4	48.8	18.9	62.0	11.8	51.0	25.0	51.0	295	36.86	8
Wema bank	46.0	40.0	19.6	46.1	33.1	72.1	39.1	32.9	329	41.11	4
Zenith bank	33.0	39.4	66.0	16.1	18.0	27.0	18.0	40.0	258	32.19	11

Source: Computed by Researcher from the financial statement of the quoted commercial banks.

Noted: The pre-consolidation data was computed from the balance sheet of all commercial banks merged to consolidate.

Table XI: Operating expenses to total assets (post consolidation)

Bank	2009	2010	2011	2012	2013	2014	2015	2016	Total	Average	Rank
Access bank	58.2	24.4	27.0	26.0	55.2	36.0	43.1	49.1	319	39.88	4
Ecobank	37.1	39.8	39.1	29.0	31.2	28.2	28.7	29.5	263	32.83	14
Diamond bank	19.3	72.1	44.1	34.1	43.1	31.1	29.1	24.6	298	37.19	9
Fcmb bank	18.7	56.8	64.1	21.1	46.1	41.4	19.7	23.1	291	36.38	10
Fidelity bank	39.1	59.4	29.2	23.2	23.3	39.2	42.4	49.3	305	38.14	7
Firstbank	23.1	38.1	17.6	62.1	16.8	47.1	35.1	32.1	272	34	11
GTbank	58.9	29.2	26.0	45.3	48.3	45.4	40.7	43.0	337	42.1	1
Skye bank	38.8	52.3	38.2	28.1	37.5	35.0	54.3	37.7	322	40.24	3
Sterling bank	48.0	71.0	37.0	38.2	21.8	47.1	16.1	21.1	300	37.54	8
Stanbic bank	32.1	19.0	41.0	31.1	51.0	39.8	34.8	61.5	310	38.79	6
UBA bank	41.2	42.0	28.6	66.7	38.0	27.2	49.8	29.0	323	40.31	2
Union bank	72.0	12.9	18.1	21.1	51.1	49.1	56.2	31.2	312	38.96	5
Unity bank	48.5	68.5	17.8	39.1	10.6	30.1	19.1	31.6	265	33.16	13
Wema bank	61.9	38.2	28.5	28.1	15.1	36.1	44.1	16.7	269	33.59	12
Zenith bank	47.0	61.0	15.7	29.8	28.0	24.8	24.9	22.7	254	31.74	15

Source: Computed by Researcher from the financial statement of the quoted commercial banks.

Table XII: Total loans and advances to total deposits (pre consolidation)

Bank	1997	1998	1999	2000	2001	2002	2003	2004	Total	Average	Rank
Access bank	24.9	42.0	35.1	32.5	31.8	27.6	43.6	49.2	286.7	35.84	5
Ecobank	16.0	39.1	25.3	19.2	34.1	57.0	51.2	29.4	271.3	33.91	7
Diamond bank	19.3	16.3	11.0	16.1	32.2	29.1	28.1	27.3	179.4	22.43	15
Fcmb bank	17.6	19.4	15.5	40.1	38.4	77.1	47.1	49.1	304.3	38.04	4
Fidelity bank	41.5	36.7	41.5	57.8	22.1	42.8	57.8	47.7	347.9	43.49	1
Firstbank	18.5	51.1	18.2	17.1	19.7	36.0	35.1	25.1	220.8	27.60	11
GTbank	13.7	23.4	19.0	53.6	26.6	28.9	31.2	58.2	254.6	31.83	10
Skye bank	37.8	41.4	48.5	33.0	43.2	27.5	54.3	48.3	334	41.75	2
Sterling bank	15.4	17.8	38.1	16.8	19.1	21.4	25.0	63.0	216.6	27.08	13
Stanbic bank	17.4	20.1	42.5	39.1	23.1	11.9	33.4	31.1	218.6	27.33	12
UBA bank	21.0	39.5	53.0	27.0	37.0	48.1	1`6.0	29.7	255.3	31.91	9
Union bank	37.1	28.8	41.1	53.7	17.3	49.0	52.0	33.0	312	39.00	3
Unity bank	47.3	17.1	45.6	14.1	10.0	19.1	17.0	10.2	180.4	22.55	14
Wema bank	15.0	28.0	50.0	21.5	19.7	68.1	20.2	41.1	263.6	32.95	8
Zenith bank	43.4	18.6	49.8	31.7	37.9	37.5	28.0	28.0	274.9	34.36	6

Source: Computed by Researcher from the financial statement of the quoted commercial banks.
Noted: The pre-consolidation data was computed from the balance sheet of all commercial banks merged to consolidate.

Table XIII: Total loans and advances to total deposits (post consolidation)

Bank		2010	2011	2012	2013	2014	2015	2016	Total	Average	Rank
Access bank	33.1	29.2	37.6	36.0	39.1	28.1	10.3	49.4	262.8	32.85	10
Ecobank	25.7	20.1	46.1	52.6	62.2	44.1	46.1	39.1	336	42	3
Diamond bank	52.1	35.1	18.1	19.6	17.0	38.3	21.4	29.0	230.6	28.82	12
Fcmb bank	18.7	50.3	19.3	54.1	10.4	19.7	22.2	17.5	212.2	26.52	15
Fidelity bank	56.6	57.8	57.9	59.9	39.8	60.4	34.2	27.4	394	49.25	1
Firstbank	47.1	29.1	42.1	43.1	16.8	46.1	44.1	31.1	299.5	37.43	5
GTbank	27.2	28.9	29.1	38.4	46.0	38.8	49.1	39.8	297.3	37.16	6
Skye bank	75.1	70.1	48.3	47.1	28.1	10.2	38.0	24.1	341	42.625	2
Sterling bank	67.0	67.0	21.1	31.1	26.1	19.5	24.0	47.0	302.8	37.85	4
Stanbic bank	47.3	56.8	38.0	21.1	13.1	24.1	10.7	49.0	260.1	32.51	11
UBA bank	29.5	69.2	29.6	32.8	31.0	27.4	20.9	52.7	293.1	36.63	7
Union bank	72.0	38.0	26.0	16.1	17.0	31.6	7.0	14.0	221.7	27.71	14
Unity bank	58.1	42.0	62.8	11.7	45.1	24.7	17.4	21.0	282.8	35.35	8
Wema bank	15.1	49.5	35.1	10.4	38.0	63.8	28.7	31.1	271.7	33.96	9
Zenith bank	28.3	57.1	11.0	46.8	29.7	23.1	15.0	14.8	225.8	28.22	13

Source: Computed by Researcher from the financial statement of the quoted commercial banks.

Management Efficiency

Comparative analysis of the components of operating expenses during the pre-consolidation era shows that Fidelity Bank has a higher operating expenses and Ecobank having the lowest Operating expenses to total assets (pre consolidation) ratio while the post-consolidation also had GTBank with the highest operating expenses to total asset ratio and Zenith has the lowest Operating expenses to total asset ratio.

The pre-consolidation operating expenses to total assets depicted a high figure for Fidelity Bank while Diamond Bank shows an average of 22.43% with Rank 15 while post consolidation Total loans and advances to total deposits (post consolidation) shows a high amount of 49.25 for Fidelity Bank and a low amount of 26.52 for FCMB and the Rank score is 1st and 15th respectively.

Earnings Capacity (E)

This study adopts net interest income to total asset as a measure of earning capacity of the fifteen (15) quoted commercial banks.

Table XIV: Net Interest Income to total assets (pre consolidation)

Bank	1997	1998	1999	2000	2001	2002	2003	2004	Total	Average	Rank
Access bank	17.8	13.8	29.0	24.3	16.9	30.4	16.2	22.6	171	21.38	15
Ecobank	16.8	15.0	37.5	30.5	29.7	20.3	30.2	25.0	205	25.63	14
Diamond bank	46.3	69.8	28.9	11.7	38.1	21.8	23.6	32.0	272.2	34.03	9
Fcmb bank	47.4	27.9	19.7	25.6	38.0	38.5	26.8	38.5	262.4	32.80	12
Fidelity bank	29.3	39.6	25.9	26.0	43.2	32.4	40.3	40.7	277.4	34.68	7
Firstbank	41.5	45.8	48.1	15.0	49.6	18.5	40.5	20.2	279.2	34.90	6
GTbank	22.7	27.8	29.2	34.7	47.1	43.7	38.9	39.5	283.6	35.45	5
Skye bank	33.1	25.9	18.0	43.5	31.5	35.7	46.3	38.1	272.1	34.01	10
Sterling bank	29.6	25.6	28.2	20.1	42.6	46.7	27.6	48.5	268.9	33.61	11
Stanbic bank	45.6	29.5	58.1	38.8	31.8	42.3	34.0	24.1	304.2	38.03	3
UBA bank	24.5	25.4	52.1	42.3	23.1	43.0	19.0	45,0	229.4	28.68	13
Union bank	30.6	36.4	43.0	40.8	29.1	25.5	28.2	42.6	276.2	34.53	8
Unity bank	25.4	42.1	45.6	46.2	48.5	58.1	48.7	29.5	344.1	43.01	1
Wema bank	38.8	43.0	42.2	30.4	54.6	43.1	44.3	38.9	335.3	41.91	2
Zenith bank	19.1	45.0	30.6	36.4	43.1	32.8	63.3	33.0	303.3	37.91	4

Source: Computed by Researcher from the financial statement of the quoted commercial banks.
Noted: The pre-consolidation data was computed from the balance sheet of all commercial banks merged to consolidate.

Table XV: Net Interest Income to total assets (post consolidation)

Bank	2009	2010	2011	2012	2013	2014	2015	2016	Total	Average	Rank
Access bank	54.4	41.5	50.3	37.8	49.0	61.7	26.7	39.6	361	45.13	2
Ecobank	42.7	37.4	15.8	50.5	55.6	25.8	33.4	46.3	307.5	38.44	11
Diamond bank	41.5	30.5	54.1	18.9	29.0	36.7	58.5	25.8	295	36.88	14
Fcmb bank	35.8	42.7	47.6	51.2	31.1	26.0	33.8	40.9	309.1	38.64	10
Fidelity bank	39.4	40.	30.5	28.4	55.0	50.4	45.3	28.1	317.1	39.64	9
Firstbank	23.4	28.3	43.8	22.6	35.5	36.5	26.1	47.0	263.2	32.90	15
GTbank	36.3	32.0	44.8	41.0	45.1	36.1	53.6	43.4	332.3	41.54	5
Skye bank	43.6	33.3	48.1	44.4	54.4	25.0	36.5	44.3	329.6	41.20	6
Sterling bank	29.1	30.4	33.7	40.8	45.8	29.4	54.4	42.1	305.7	38.21	12
Stanbic bank	27.6	37.1	40.6	42.3	45.5	42.9	43.5	49.2	328.7	41.09	7
UBA bank	24.7	43.3	46.4	31.5	46.3	29.8	59.6	42.0	323.6	40.45	8
Union bank	47.5	50.3	61.3	28.7	46.4	40.3	49.1	58.2	381.8	47.73	1
Unity bank	45.2	49.2	50.1	30.7	47.1	40.1	46.3	49.8	358.5	44.81	3
Wema bank	29.9	39.3	35.2	30.0	47.1	32.0	43.3	47.6	304.4	38.05	13
Zenith bank	33.6	40.4	53.6	27.4	53.0	34.7	48.6	42.9	334.2	41.78	4

Source: Computed by Researcher from the financial statement of the quoted commercial banks.

Earning Capacity
Comparative analysis of the components of earning capacity during the pre-consolidation era shows that unity Bank has a higher net interest income to total assets (pre consolidation) and access bank having the net interest income ratio

The pre-consolidation net interest income to total assets (pre consolidation) depicted a high figure for Unity Bank while Access Bank shows an average of 21.38% with Rank 15 while post consolidation net interest income to total assets (pre consolidation) shows a high amount of43.73 for Union Bank and a low amount of 32.90% for First Bank and the Rank score is 1st and 15th respectively.

Liquidity (L)
In this study, the ratio of total liquid asset to total asset is adopted. The tables below give insight of the liquidity in the pre and post consolidation.

Table XVI: Total Liquid Asset to Total Asset (Pre Consolidation)

Bank	1997	1998	1999	2000	2001	2002	2003	2004	Total	Average	Rank
Access bank	29.0	46.8	15.9	24.1	18.6	14.9	21.2	30.8	201.3	25.16	15
Ecobank	36.1	40.7	37.3	48.1	20.6	23.7	17.8	10.5	234.8	29.35	11
Diamond bank	18.0	29.9	16.10	28.8	67.6	47.8	46.2	36.0	290.4	36.30	2
Fcmb bank	21.6	68.9	65.6	20.1	45.8	16.8	41.3	40.4	320.5	40.06	1
Fidelity bank	19.7	14.1	17.8	24.0	51.7	23.7	16.0	38.4	205.4	25.68	13
Firstbank	22.4	22.1	58.6	24.7	34.0	27.5	51.6	17.1	258	32.25	8
GTbank	32.7	35.0	46.6	27.7	30.8	26.0	23.1	63.8	285.7	35.71	4
Skye bank	38.6	13.0	28.9	26.1	18.0	27.4	29.7	26.5	208.2	26.03	12
Sterling bank	25.0	35.0	36.3	30.3	49.7	28.6	30.1	32.2	267.2	33.40	6
Stanbic bank	24.0	10.9	39.8	28,0	37.8	34.0	29.3	25.6	201.4	25.18	14
UBA bank	51.S1	21.2	26.8	28.7	32.5	37.3	36.9	25.4	259.9	32.49	7
Union bank	26.9	18.1	62.0	27.5	30.0	46.6	37.8	24.9	273.8	34.23	5
Unity bank	28.4	35.3	27.4	27.5	30.6	27.0	33.8	25.1	235.1	29.39	10
Wema bank	29.7	13.5	8.0	29.1	55.0	28.8	38.1	40.8	243	30.38	9
Zenith bank	36.6	30.2	50.1	24.1	43.4	31.4	36.0	35.7	287.5	35.94	3

Source: Computed by Researcher from the financial statement of the quoted commercial banks.

Noted: The pre-consolidation data was computed from the balance sheet of all commercial banks merged to consolidate.

Table XVII: Total Liquid Asset to Total Asset (post consolidation)

Bank	2009	2010	2011	2012	2013	2014	2015	2016	Total	Average	Rank
Access bank	31.0	36.0	52.6	31.4	38.8	60.1	33.3	39.1	322.3	40.29	4
Ecobank	66.4	42.8	49.5	60.3	49.8	40.5	62.1	73.2	444.6	55.58	1
Diamond bank	58.0	40.2	62.7	40.8	41.3	28.0	32.2	38.3	341.5	42.69	3
Fcmb bank	43.7	40.0	56.4	39.4	47.3	69.1	36.0	55.7	387.6	48.45	2
Fidelity bank	43.0	47.5	40.1	27.7	39.3	25.0	35.3	37.0	294.9	36.86	7
Firstbank	41.5	39.1	43.8	18.0	48.0	12.1	38.0	35.9	276.4	34.55	9
GTbank	57.0	23.0	27.7	39.2	25.0	35.3	37.9	41.5	286.6	35.83	8
Skye bank	15.0	35.1	25.4	24.1	23.4	25.0	37.4	32.9	218.3	27.29	15
Sterling bank	38.6	43.2	19.4	18.0	38.1	69.4	38.0	37.3	302	37.75	6
Stanbic bank	15.1	23.4	15.1	28.5	57.5	37.9	37.6	30.8	245.9	30.74	13
UBA bank	30.6	43.0	28.3	23.7	37.0	39.8	37.6	30.8	270.8	33.86	10
Union bank	40.6	46.1	10.9	15.8	24.0	27.2	22.7	38.0	225.3	28.16	14
Unity bank	39.4	21.0	49.6	45.8	58.8	21.7	17.0	17.5	270.8	33.85	11
Wema bank	56.0	25.6	16.0	26.6	23.0	27.3	40.3	42.4	257.2	32.15	12
Zenith bank	20.8	57.6	15.8	24.7	28.9	42.1	40.9	28.0	322.3	40.27	5

Source: Computed by Researcher from the financial statement of the quoted commercial banks.

Liquidity Ratio

Comparative analysis of the components of liquidity ratio during the pre-consolidation era shows that FCMB has a higher Total Liquid Asset to Total Asset (Pre Consolidation) and Access Bank having the lowest Total Liquid Asset to Total Asset ratio (Pre Consolidation)

The post consolidation Total Liquid Asset to Total Asset (Post Consolidation) shows a high amount of 55.58% for Eco bank and a low amount of 27.29% for Sterling Bank and the Rank score is 1st and 15th respectively.

Sensitivity (S)

This study adopts the ratio of net interest income to Gross Domestic Product

Table XVIII: Net Interest Income to Gross Domestic Product (post consolidation

Bank	2009	2010	2011	2012	2013	2014	2015	2016	Total	Average	Rank
Access bank	39.3	12.8	50.0	32.4	34.9	23.8	49.7	37.8	280.7	35.09	5
Ecobank	19.6	53.4	67.6	14.6	17.9	35.9	18.7	16.7	244.4	30.55	14
Diamond bank	18.4	33.0	44.7	33.7	27.8	40.5	34.7	15.8	248.6	31.08	13
Fcmb bank		40.0	34.9	50.1	33.4	46.9	37.9	17.6	260.8	32.60	12
Fidelity bank	23.9	23.0	47.6	48.7	11.2	50.8	40.2	34.8	280.2	35.03	6
Firstbank	19.0	18.8	47.0	66.1	44.7	39.7	50.1	46.8	332.2	41.53	1
GTbank	34.5	33.1	49.2	38.9	28.7	25.4	48.9	43.7	302.4	37.80	2
Skye bank	20.9	33.8	46.3	45.7	39.4	49.3	27.9	37.6	300.9	37.61	3
Sterling bank	13.7	22.5	44.7	39.7	50.0	49.0	38.7	37.2	295.5	36.94	4
Stanbic bank	21.7	17.6	16.6	49.7	48.6	38.7	19.7	12.5	225.1	28.14	15
UBA bank	14.8	16.9	45.4	37.9	41.7	27.6	39.9	45.5	269.7	33.71	9
Union bank	20.0	9.8	36.1	49.9	40.8	37.4	18.2	50.9	263.1	32.89	11
Unity bank	8.9	37.0	40.7	37.5	28.8	19.27	49.8	45.7	267.67	33.46	10
Wema bank	38.4	29.7	34.7	48.2	37.9	26.6	21.5	41.6	278.6	34.83	7
Zenith bank	43.0	40.6	24.9	22.9	39.74	30.8	50.7	24.5	277.14	34.64	8

Source: Computed by Researcher from the financial statement of the quoted commercial banks.

Table XIX: Net Interest Income to Gross Domestic Product (pre consolidation)

Bank	1997	1998	1999	2000	2001	2002	2003	2004	Total	Average	Rank
Access bank	30.4	26.6	27.9	16.5	30.4	15.6	23.3	26.4	280.7	35.09	5
Ecobank	12.6	11.1	16.7	24.5	12.6	20.6	24.9	30.5	244.4	30.55	14
Diamond bank	16.3	15.8	18.3	25.4	12.0	30.4	16.8	27.7	248.6	31.08	13
Fcmb bank	23.1	24.3	19.5	21.9	14.6	15.2	14.7	16.5	260.8	32.60	12
Fidelity bank	20.1	22.2	15.6	15.6	24.6	16.4	30.9	19.8	280.2	35.03	6
Firstbank	29.3	26.8	19.2	12.9	12.7	21.6	14.4	27.9	332.2	41.53	1
GTbank	10.8	17.6	16.9	30.5	12.9	12.4	30.2	13.6	302.4	37.80	2
Skye bank	16.7	30.5	24.6	24.5	23.9	13.5	13.3	16.8	300.9	37.61	3
Sterling bank	16.3	16.9	21.4	15.5	24.9	30.2	16.4	24.6	295.5	36.94	4
Stanbic bank	23.5	18.4	30.1	30.6	23.5	20.1	16.8	26.8	225.1	28.14	15
UBA bank	26.8	17.3	15.6	25.6	16.5	23.4	17.9	24.9	269.7	33.71	9
Union bank	10.1	17.8	13.2	15.5	20.6	16.6	22.2	24.7	263.1	32.89	11
Unity bank	10.0	30.0	24.2	14.6	21.3	13.0	26.3	30.6	267.67	33.46	10
Wema bank	30.5	29.8	25.6	14.7	30.6	16.8	17.8	16.6	278.6	34.83	7
Zenith bank	12.5	25.7	30.2	16.4	16.7	16.7	19.8	17.9	277.14	34.64	8

Source: Computed by Researcher from the financial statement of the quoted commercial banks.

Noted: The pre-consolidation data was computed from the balance sheet of all commercial banks merged to consolidate.

Sensitivity to Market Risk

Comparative analysis of the components of Sensitivity to market risk during the pre-consolidation era shows that First Bank has a higher Net Interest Income to Gross Domestic Product (pre consolidation) and Stanbic Bank having the lowest Net Interest Income to Gross Domestic Product (pre consolidation)

The post-consolidation Net Interest Income to Gross Domestic Product (post consolidation) depicted a high figure for First Bank while Stanbic Bank shows an average of 28.14% with Rank 15 while post consolidation Net Interest Income to Gross Domestic Product (post consolidation) shows a high amount of 41.53 for First Bank and the Rank score is 1st and 15th respectively.

5. Discussion of Findings

The objective of this study was to compare the CAMELS analysis of Nigerian pre and post consolidation of Nigerian commercial banks. This comparism is necessary to access the level of Nigerian banking system soundness between the pre and post consolidation reforms. In capital adequacy, Fidelity Bank is ranked the highest in Capital to Risk Asset Ratio in pre and post consolidation while UBA is ranked highest in Adjust

Capital to Risk Asset Ratio in pre consolidation and Stanbic ranked highest in post consolidation, this finding is expected due to the merging in the fidelity bank. In Asset Quality, Fidelity Bank is also ranked highest in pre and post consolidation using non performing loans to Total Asset while Union Bank is ranked highest in pre consolidation using loan to deposit ratio and Zenith bank ranked highest in post consolidation. In management quality fidelity bank is ranked highest in the pre consolidation using operating expenses to total asset while Guarantee Trust bank is ranked highest in post consolidation. In Earnings Capacity, Zenith bank is ranked highest in pre consolidation while union bank is ranked highest in post consolidation. In liquidity, First City Monument bank is ranked highest in pre consolidation while Eco bank is ranked highest in post consolidation. First bank is ranked highest in pre and post consolidation in sensitivity analysis.

Conclusion

From the findings, the research draws the following conclusion:

1. There is significant difference in capital adequacy of the fifteen (15) quoted commercial banks in the pre and post consolidation reforms. This findings confirm the a-piriori expectation of the study and the objective of the consolidation reforms that raised bank capital from ₦2 billion to ₦ 25 billion.
2. That there is significant difference between management quality of Nigerian commercial banks in the pre and post consolidated quality of Nigerian commercial banks in the pre and post consolidation reforms.
3. There is significant difference with the management quality of the pre and post consolidation Nigerian commercial banks.
4. That the Earnings capacity of Nigerian commercial banks in the post consolidation is better and greater than the pre consolidation. This finding confirms the expectation of the result and the objective of the banking sector reform.
5. Nigerian commercial banks are more liquid in the post consolidation than the pre consolidation.
6. Nigerian commercial banks are more sensive to shocks in the post consolidation than the pre consolidation. This findings is contrary to expectation, it might be traced to the multiplier effect of the global financial crises.

Recommendations

The following are recommended from the findings of the study:

1. Policies should further be made to deepen the capital adequacy of the commercial banks to enhance capital adequacy of the quoted commercial banks in Nigeria.
2. The management and the regulatory authorities should ensure that the asset quality of the commercial banks is line with international standard.
3. Management should devise measures of managing the bank operating environment to enhance earnings capacity of the quoted commercial banks.
4. There is need to establish institution for risk management and investment appraisal of the commercial banks to avert the occurrence of poor asset quality.
5. The commercial banks should comply with the regulatory authorities on liquidity reserve to avoid overtrading and sensitivity to liquidity shocks.
6. There is need for efficient and effective management team in the banking industry to manage the environmental shocks that affect the performance of the Nigerian banking industry.

REFERENCES

Alabede, J., (2012). The Intervening Effect of Global Financial Condition on the Determinants of Bank Performance: Evidence from Nigeria. *Accounting Journal of Finance and Management, 7(4), 489-528.*

Al-Tamimi, H.A., (2010).Factors Influencing Performance of UAE Islamic and National Conventional Banks.*Global Journal Business Research, 4 (2), 1-7.*

Angadi, C., &Devraj, V., (1983). Profitability and Productivity of Banks in India.*Economic and Political Weekly, 18, 26-42..*

Barr, Richard et al. (2002). Evaluating the Productive Efficiency and Performance of U.S. Commercial Banks.*Engineering Management, 28 (8) 19-28.*

Bodla, B.S., &Verma, R ., (2006). Evaluating Performance of Banks through CAMEL Development.*Chartered Financial Analyst*.Evidence.*Journal of Banking and Finance*, *28, 423-442*.

Financial Standard Newspaper,4th January, 2006

Gunsel, N. (2007).Financial Ratios and the Probabilistic Prediction of Bank Failure in North Cyprus.*European Journal of Scientific Research, 191-200.*

Nimalathasan B., (2008). A Comparative Study of Financial Performance of Banking Sector in Bangladesh – an Application of CAMELS Rating System.Annals of University of Bucharest. *Economic and Administrative series, 2, 141-152.*

Prasad.K.V.N, & Chari A.A., (2011). Financial Performance of Public and Private Sector Banks: An Application of Post Hoc Tukey HSD Test. *Indian Journal of Management Sciences, 2 (5), 79-92.*

Reddy. D.M. & Prasad K.V.N., (2011). Evaluating Performance of Regional Rural Banks: an Application of CAMEL Model.*Journal of Arts, Science & Commerce, 2 (4), 61-67.*

Sangmi M. &Nazir T. (2010). Analyzing Financial Performance of Commercial Banks in India: Application of CAMEL Model, Pak. *Journal of Commerce Social Science, 4 (1), 40-55.*

Sanni, M., (2009).Short Term Effect of the 2006 Consolidation on Profitability of Nigerian Banks.*A publication by the Institute of Chartered Accountants of Nigeria, 1 (1), 107-119*.

Subroto, C. (2011). An Inquiry into the Financial Soundness of Commercial Banks in India Using Camel Approach.*Journal on Banking Financial Services & Insurance Research, 1 (7), 88-121.*

Uhomoibhi, T.A., (2008). Determinants of Bank Profitability.*Company-Level Evidence from Nigeria.*

Gupta &Kaur (2008).A CAMEL Model Analysis of Private Sector Banks in India. *Journal of Gyan Management, 2, (1) 3-8.*

Kapil, S &Kapil, K.N., (2005). CAMEL's Ratings and its Correlation to Pricing Stocks. An Analysis of Indian Banks.*University Journal of Bank Management, 4 (1), 64-78*.

Levine, Ross & Sara, Zervos (1998).Stock Market, Bank and Growth.*The American Economic Review, 88 (3), 537-58.*

McKinnon, Ronald I., (1973). *Money and Capital in Economic Development*, Brookings Institution, Washington DC, USA. Model: A Case Study of SBI and ICICI.*The ICFAI Journal of Bank Management.*

Nurazi, Ridwan& Evans, Michael (2005).An Indonesian Study of the Use of CAMEL(S) Ratios as Predictors of Bank Failure.*Journal of Economic and Social Policy*, *10 (1), 1-23.*

Olweny, T &Shipho, T.M., (2011).Effects of Banking Sectoral Factors on the Profitability of Commercial Banks in Kenya.*Economics and Finance Review, 1 (5), 1-30.*

Ongore, V. O., &Kusa, G. B., (2013).Determinants of Financial Performance of Commercial Banks in Kenya.*International Journal of Economics and Financial Issues, 3 (1), 237-52.*

Prasuna, D.G., (2004). Performance Snapshot 2003-04. *Chartered Financial Analyst, 10 (11), 6-13*.

Reddy, D. M., & Prasad, K.V.N., (2011).Evaluating Performance of Regional Rural Banks.An Application of CAMEL Model.*Journal of Arts, Science & Commerce, 2 (4), 61-67.*

Said, M. B., & Saucier, P., (2003).Liquidity, Solvency, and Efficiency.An Empirical Analysis of the Japanese Banks' Distress.*Journal of Oxford*, *5 (3), 354-58.*

Sangmi, M.D., &Nazir, T., (2010).Analyzing Financial Performance of Commercial Banks in India: Application of CAMEL Model.*Pakistan Journal of Commerce and Social Science*, *4 (1), 40-55.*

Sarker, A., (2005). CAMEL Rating System in the Context of Islamic Banking: A Proposedn 'S' for Shariah Framework. *Journal of Islamic Economics and Finance, 1 (1), 78-84.*

Shaw, E., (1973). *Financial Deepening in Economic Development*. Oxford University Press, New York.

Siva, S., &Natarajan, P.,(2011). CAMEL Rating Scanning (CRS) of SBI Groups.*Journal of Banking Financial Services and Insurance Research, 5 (3), 49-63.*