CAPITAL ADEQUACY, MANAGEMENT AND PERFORMANCE IN THE NIGERIAN COMMERCIAL BANK (1986-2006)

BY

IKPEFAN, OCHEI AILEMEN Ph.D (Finance), ACA, ACIB

Department of Banking & Finance, Covenant University, Ota, Ogun State
E-mail Ochei_Ikpefan@yahoo.Co.Uk; **Tel 08053013418**

CAPITAL ADEQUACY, MANAGEMNT AND PERFORMANCE IN THE NIGERIAN COMMERCIAL BANK (1986-2006)

ABSTRACT

This study investigates the impact of bank capital adequacy ratios, management and performance in the Nigerian commercial bank (1986-2006). The objectives of this paper are: to determine to what extent bank capital adequacy ratios impact on bank performance and also to investigate the extent to which operation expenses has impacted on the return on capital. *The study captured their performance indicators and employed cross sectional and time series of bank data obtained from Central Bank of Nigeria (CBN) and Annual Report and Financial statements of the sampled banks. The formulated models were estimated using ordinary least square regression method. The overall capital adequacy ratios of the study shows that Shareholders Fund/Total Assets (SHF/TA) which measures capital adequacy of banks (risk of default) have negative impact on ROA. The efficiency of management measured by operating expenses indice is negatively related to return on capital. The implication of this study, among others, is that adequate shareholders fund can serve as a veritable stimulant in strengthening the performance of Nigerian commercial banks and also heighten the confidence of customers especially in this era of global economic melt-down that has taken its toll in the Nigerian financial system.*

Key words: Buffer capital theory of capital adequacy, Expense theory, Capital adequacy ratios.

JEL classification: E44, E5, G21.

1.0 INTRODUCTION

Bank capital can be seen in two ways. Narrowly, it can be seen as the amount contributed by the owners of a bank (paid –up share capital) that gives them the right to enjoy all the future earnings of the bank. More comprehensively, it can be seen as the amount of owners' funds available to support a bank's business (Athanasoglou, Brissimis and Delis et al., 2005).The latter definition includes reserves, and is also termed shareholders' funds (Anyanwaokoro, 1996). Adewumi (1997) gives two connotations of capital in banking. He opines that at the outset, capital in the form of issues and paid-up share is money with which the business of banking is started. Overtime, the capital funds of the bank reflect the accumulated (addition or depletion) capital. The question of adequate capital of a bank is more crucial especially in the light of the global financial meltdown where bail out measures is now being employed by the regulatory authorities to keep the financial system afloat. In fact, question as to whether existing levels of capital are considered adequate for the increasing levels of risk has been an issue of debate between bankers and the supervisory authorities. Universally, Basle Committee's specified minimum capital adequacy ratio of eight percent relating to banks' credit is taken as the benchmark of measuring the capital adequacy of a bank. This implies that for every Naira given as credit a bank needs eight (8) Kobo capital. A bank that has lesser ratio is said to be undercapitalized. No empirical method has been used to determine banks' capital adequacy in Nigeria.

This study is an attempt to investigate the relationship between bank capitalization (dependent or explained variable) management and performance in Nigerian banking industry (independent variables) on the other hand. The following variables are used as indicators for gauging bank capitalization: return on assets (ROA) and return on capital (ROC). The following indicators are used as internal determinants of bank management and performance. They are: (BL/BD) ratio of bank loans and advances to total deposit (B DEPOSIT), (LA/BD) ratio of liquid assets to bank deposits (LAD), (OE/TA) ratio of operating expenses to total assets (EOM i..e Efficiency of Management), (SHF/TA) ratio of Shareholders Fund to total assets, (CAP) and (BL/BA) ratio of bank loans to Bank assets (B LOAN). On the other side, capital cannot perform without good management from those at the top echelon of the organization. Capitalization in this study refers to a number of variables of interest which are produced from the existence of funds for use in the process of intermediation. From these funds, obviously concepts such as Return on Capital (ROC) and Return on assets (ROA) are derivatives from the use of funds. Management need to

employ the assets and capital of the bank judiciously for positive results. Absence of corporate governance has been attributed to the distress experienced in the banking industry in the past. The CBN Governor noted that the vision or prospect of the CBN and the Federal Government of Nigeria is a banking system that is part of the global change, and which is strong and reliable. It is a banking system which must be efficient, depositors can trust and investors can rely upon. Capital adequacy is important for banks to absorb risks till banks are able to generate profit. However, banks that are able to exceed the capital requirement stand a better chance of luring customers and instilling confidence in the system. Like other sectors, this sub-sector is also faced with poor infrastructural facilities and poor performance of regulatory authorities. According to Ajekigbe (2009), from the classical and historical perspective, *"several factors led to the failure of banks between 1977 and earlier 2000. Some of the reasons advanced are poor asset quality, under capitalization, inexperienced personnel, illiquidity, inconsistent regulatory policies and supervision"*.

The issue of bank capitalization in most economies today has been how to resolve the problem of unsound bank, enhance efficient management of the banking system, provide better funding for banks lending activities, reduce non-performing loans and advances, increase profitability, reduce risk, to ensure quality asset management and to put banks in a strong liquid position to meet customers obligation at all times (Soludo, 2004). For instance, the distress that was pervasive in the Nigerian banking system in the mid-1990's and early 2000 was due to amongst others, illiquidity in the banking system which led to the lost of customers confidence in the banking industry. The move by the CBN to raise the minimum paid up capital of banks to ₦25 billion was aimed at strengthening the Nigerian banking industry. It is imperative for banks to meet up the required level of capital for sound and safe banking. The evolving competition in the banking industry as a result of globalization has made it difficult for Nigerian banks to play their major role of financing economic activities arising from inadequate capital. Inadequate bank capital has led to a crisis of confidence in the banks to the extent that the original functions which is to support the volume, type and character of a bank's business, to provide for the possibilities of losses that may arise there from and to enable the bank to meet a reasonable credit need of the community have been eroded. Losses suffered by banks led to bank failure especially in the areas of lending. The soundness, safety and profitability of a bank affect the

quality of its loan portfolio. The last few years have both been traumatic and revolutionary for the Nigerian banking system. According to Eke (1999): "Since the introduction of structural adjustment programme (SAP) in 1986 and the deregulation of the nation's financial system, banking business has raised a variety of performance questions. Although insured banks had recorded an appreciable increase in the volume of assets and deposits, their overall financial condition had deteriorated tremendously".

According to the Governor of Central Bank of Nigeria cited in Egene (2009), of the ten (10) banks audited so far as at August 2009, the banks' balance sheets of five banks (Union bank, Finbank, Oceanic bank, Afrique bank and Intercontinental bank) had shrunken, shareholders' funds impaired and they now have liquidity problems. Their huge exposure to non-performing loans (margin loans) has affected the banks. These banks had spent length of time at the expanded discount window (EDW) introduced in September, 2008 by the apex bank. These five banks accounted for 90% of transactions at the EDW. The remaining banks accounted for 10%.According to the apex banks, these banks took money from the inter-bank to repay their exposure to the discount window. It is an indication that their balance sheets had shrunk. The management teams had acted in a manner that was detrimental to the interest of their depositors and creditors. According to the apex bank, the temporary capital injection of N420 billion into the banks in the form of Convertible Tier 11 Debt, is expected to be repaid to the CBN once the banks are recapitalized. Considering the fact that ownership of banks has moved from family to private, existing shareholders have not been informed how these funds would be converted when the bailout fund is fully repaid. The measure adopted by CBN to bail out the banks is adjudged as misuse of taxpayers' money and may eventually displace existing shareholders.

While there have been several studies on bank capitalization and performance very few of them have focused on bank capitalization and performance of the Nigerian banking industry. Several studies about bank capitalization exist in United Kingdom (UK), United States (US) and Asia, Africa, South Africa and Tunisia. However, the extent to which such research findings can be applied to Nigerian banking industry should be studied. Therefore, this study hopes to establish the relationship that exists between bank capital adequacy ratios, management and performance. The empirical study that will be carried out on this study will fill the gap in the existing literature

especially as it relates to variables that affects bank performance. The following dependent variables are used as indicators for gauging bank capitalization: return on capital (ROC) return on assets (ROA). The questions being asked are: does capitalization reduce the operational expenses of the banks? Increase capitalization reduces the operational risk and bank failure? To what extent does bank capital adequacy ratios affect bank performance? The objectives of this study are:

(i) To determine to what extent bank capital adequacy ratios impact on bank performance.

(ii) The extent to which operation expenses has impacted on the return on capital.

Section 1 above discusses the introduction; Section 2 examines the conceptual framework and literature while Section 3 discusses the method of analysis. Section 4 dwells on the estimation, model specification and discussion of results. Section 5 ends the paper with summary, findings and recommendations. We shall now proceed to examine some conceptual framework and literature review underpinning of this paper.

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

2.1 Buffer Theory of Capital Adequacy

As a consequence, banks may prefer to hold a 'buffer' of excess capital to reduce the probability of falling under the legal capital requirements, especially if their capital adequacy ratio is very volatile. Capital requirements constitute the main banking supervisory instrument in Nigeria. The Central Bank of Nigeria intervenes little in banks' activities but does directly conduct on-site examination and at times delegating this task to external auditors. By contrast, a breach of the capital requirements is considered a major infringement of banking legislation and is not tolerated by the Central Bank of Nigeria. Banks remaining undercapitalized for prolonged periods are closed. The withdrawal of some banking license at the expiration of the recent capitalization of banks in Nigeria in 2005 is a pointer to this fact. Banks will require more capital if deposits are not fully mobilize from the public. Capital is more reliable, dependable and can be used for long term planning. Ability of banks to mobilize enough deposits obviates the capital base from being eroded. The buffer theory of Calem and Rob (1996) predicts that a bank approaching the regulatory minimum capital ratio may have an incentive to boost capital and

reduce risk in order to avoid the regulatory costs triggered by a breach of the capital requirements. However, poorly capitalized banks may also be tempted to take more risk in the hope that higher expected returns will help them to increase their capital. This is one of the ways risks relating to lower capital adequacy affects banking operations. In the event of bankruptcy of a bank, the risks are absorbed by the bank, customers and Nigeria Deposit Insurance Corporation (NDIC). At present NDIC pays a maximum of N200,000 to a customer in the event of bank failure. Hence, customers are concerned about capital position of banks at all time. Banks are expected to insure and pay 15/16 of customers deposit liabilities multiplied by 1% to NDIC to enable their customers benefit from the scheme. The above practice of NDIC in Nigeria is applicable to other countries but varies in amount.

In model 1 of this study, capital our dependent which is represented return on assets (ROA) and explained by our buffer theory of capital adequacy helps us to test the propositions in hypothesis one. The higher the return on assets the better is bank liquidity and capital adequacy. The Deposit insurance scheme, which is compulsory in Nigeria, also exerts regulatory pressure on banks. In his study, Vojta (1980) opined that adequate capital provision against excess loss permits the bank to continue operations in periods of difficulty until a normal level of earning is restored. The benchmark set by regulators of bank capital sometimes differs from those of the bankers. These capital standards have led to questions on whether or not regulators have been able to bring about changes in bank capital when their standards of capital adequacy differed from those of bankers. Aggressive banks may try to extend the frontiers of "imprudent management policy" by operating with less capital base, often in violation of the regulatory guidelines. But the supervisory agencies usually stand their ground by resisting decline of capital to avoid bank failure with the concomitant high cost to the society.

2.2 Portfolio Regulation Theory

We can also use the theory of portfolio regulation to gauge the performance of banking firms. The theory opined that the regulation of banks is necessary to maintain safety and soundness of the banking system, to the extent, which put them in a position to meet its liabilities without difficulty. This made it imperative for the regulatory authorities to compel greater solvency and liquidity on individual banks than making it optional. This theory is represented in model 1 of this paper. It captures LAD that is Liquid Assets (LA)/ Bank Deposit (BD) and depicts the

liquidity position of the banks. The higher this ratio the better liquidity and solvency of the individual banks. According to Peltzman (1970), if the asset portfolio is deemed too risky or capital inadequate, the relevant supervisory agency will attempt to compel a change in the bank's balance sheet.

2.3 Expense Theory

According to the expense theory of Williamson (1963) cited in Nyong (2001) otherwise called the theory of managerial discretion, managers have the option in pursuing policies, which maximize their own utility rather than profit maximization for shareholders. Such utility include the satisfaction which mangers derive from certain types of expenditure. Managers' prestige, power and status are to some extent reflected in the amount of slack they receive in the form of expense account, luxurious offices and building, company cars and other perquisites of office. Operating efficiency attempts to capture this aspect of bank behaviour. Operating expenses captured by (EOM) is represented in model 1 and 2 as one of our control variables to explain the dependent/regressand that is return on assets and return on capital (ROA and ROC). Operating expenses is derived from the use of resources and can have positive or negative implication on the dependent variable.

Literature Review

Furlong (1992), Haubrich and Wachtel (1993), and Berger and Udell (1994) investigated whether the 8 percent capital backing for loans to private enterprises required by the 1988 Basle Accord encouraged banks to reallocate their assets from such loans to government securities. With the exception of Berger and Udell, these authors find evidence that the risk-based capital requirement set by the Basle Accord significantly contributed to the credit crunch. No matter the definition adopted, a bank's capital is widely used to analyze the status of its financial strength (Bobakova, 2003). Positive correlation between returns and capital has been demonstrated by Furlong and keeley (1989), Keeley and Furlong (1990), Berger (1994), Berger (1995b), Demirguc-Kunt and Huizinga (1999), Naceur (2003) and Eisenbeis (2005). Investigating the determinants of Tunisia banks' performances during the period 1980-1995, Naceur and Goaied (2001) indicated that the best performing banks are those who have struggled to improve labour and capital productivity and those who have been able to reinforce equity. Bourke (1989), Abreu

and Mendes (2002) and Naceur (2003) agree that well-capitalized banks face lower need to external funding and lower bankruptcy and funding costs; and this advantages translates into profitability. Therefore, researches widely posit that the more capital a bank has, the more resistant it will be to failure e.g Uche (1998). Capital regulation is motivated principally by the concern that a bank may hold less capital than is socially optimal relative to its riskiness as negative externalities resulting from bank default are not reflected in market requirements. In this framework, an unregulated bank will take excessive portfolio and leverage risks in order to maximize its shareholder value at the expense of the deposit insurance (Benson et al., 1986, Furlong and Keeley 1989, and Keeley and Furlong 1990). Capital requirements can reduce these moral hazard incentives by forcing bank shareholders to absorb a larger part of the losses, thereby reducing the value of the deposit insurance put option. With more capital and less risk-taking, the effect is clearly a decrease in the bank's default probability.

The results obtained by the literature for the relationship between size and profits are diverse. Using market data (stock prices) instead of accounting measures of profitability, Boyd and Runkle (1993) find a significant inverse relationship between size and rate of return on assets in U.S banks from 1971 to 1990, and a positive relationship between financial leverage and size. They do not provide, however, any theoretical model to rationalize this evidence. Goddards, Molyneux and Wilson (2004) use panel and cross-sectional regressions to estimate growth and profit equations for a sample of banks for five European countries over the 1990s. The growth regressions suggest that, as banks become larger in relative terms; their growth performance tends to increase further, with little or no sign of mean aversion in growth.

Al-Haschimi (2007) finds that operating inefficiencies appear to be the main determinants of high bank spreads in Sub-Saharan Africa (SSA) economies. Heggestad (1977) studied the interaction of market structure, profitability and risk, and argues that banks with monopoly power systematically reduce the risk they take at the expense of greater profitability. Given the importance of bank credit as factor of production for almost all firms, this effect may plausibly affect market concentration in other sectors of the economy by making the expansion of smaller firms more difficult. The extent to which inflation affects bank profitability depends on whether future movements in inflation are fully anticipated, which, in turn, depends on the ability of firms to accurately forecast movements in the relevant control variables. An inflation rate that is fully

anticipated raises profits as banks can appropriately adjust interest rates in order to increases revenues, while an unexpected change could raise costs due to imperfect interest rate adjustment. Other studies, for example, Bourke (1989), Molyneux and Thorton (1992), Demirguc-Kunt and Huizinga (1998), have found a positive relation between inflation and long term interest rates with bank capital and performance. Adewunmi (1997), Oyetan (1997) and Obadan (2004) agreed that there are other critical factors, which combined with capital adequacy, would guarantee a healthy banking sector. Oyetan (1997) argues that indicators or measures of a bank financial condition and performance are based on capital adequacy, asset quality, managerial capability, profitability and liquidity. According to CBN report (2005), the following should be considered along with capital ratios as conditions influencing capital adequacy: the quality of management influences outsider' perception of capital adequacy because, if management is good the bank will be profitably, and efficiently operated and there will be no need to rely unduly on capital to cushion disaster; a bank carrying good quality and adequate liquid assets will not be in danger of prolonged and damaging illiquidity. Consequently, the need for capital will be minimized; the history of earnings and retention thereof: good earnings and write-back policy will continually enhance the capital adequacy of a bank.

A bank that allows itself to be politized and which put ethnic consideration before business prudence can only contribute to the failure of the bank and increase its need for capital; the potential volatility of deposit structure will affect the liquidity of a bank which will in turn affect the profitability and need for capital; the quality of management will impact on the efficiency of operation and consequently the need for capital; the restrictions placed on the maintenance between capital funds and loans and advances, the higher a bank's capacity to meet the potential credit needs of its environment. With Central Bank of Nigeria (CBN) and Nigeria Deposit Insurance Corporation (NDIC), technical and financial support traditionally given to banks in Nigeria, it is easy to tolerate temporary and relative inadequacy of bank capital in our banking system.

According to Ebhodaghe (1994), reported in Oluitan (2004), "Capital inadequacy has affected the financial health of banks. He explained that an analysis of bank capitalization revealed that as at the end of 1992, almost all banks (120) operating in Nigeria required additional capital totaling N0.6billion to support their volume of trading. This amount was the variance between the

amount stipulated by the monetary authorities for prudential minimum capital and the aggregate capital outlay. By 1993, this variance further deteriorated to ₦9.1 billion".

Ojo (1992) and Oluyemi (1995), cited in Eke (1999) opined that the financial condition of banks can be assessed using some basic indicators and trend analysis such Capital Adequacy, Asset Quality, Earnings and Liquidity. Apart from quantitative factors, qualitative factors such as quality of management, the degree of compliance by banks with applicable banking laws and regulations (e.g Monetary and Credit policy Guidelines), as well as banking services to the local economy are relevant. In the literature of finance, CAMEL parameter that is Capital Adequacy, Asset Quality, Management, Earnings is to gauge financial performance of bank. The measures of ascertaining a bank's financial condition and Performance by the regulatory authority are encapsulated in the acronym CAMEL, which stands for: Capital Adequacy (Owners fund to total risk-weighted assets), a quantitative factor is one of the important indicators of the strength and performance of a bank. The best management cannot turn around an ailing bank if it does not have adequate capital. Assets Quality (Non-performing assets to total loan and advances portfolio); the incidence of large amounts of non-performing loans (bad debts) can put bank management under severe stress. Management (in terms of quality, competence and depth of experiences); the quality of management can make an important difference between sound and unsound banks. Poor management often manifests itself in the form of excessive operating expenses, inadequate administration of loan portfolio, overly aggressive policies to attract deposits. Earnings/Profitability (adequacy and sustainability of earnings over the long term); continued build-up of non-performing assets, would seriously affect banks in generating adequate income on their loan portfolio. The implementation of CBN Prudential Guidelines in 1991 for licensed banks has reduced the paper profit formerly reported by some banks in terms of liquidity to meet maturing obligations and demand for new credits; inadequate liquidity damages banks' reputation while excess liquidity will retard their earnings.

Where a bank management fails to pay close watch to any of these indices, it could have adverse effect on bank performance. Where a bank is distress or healthy it would ultimately have recourse to new prospective investor, both local and foreign. Any attempt aimed at successfully recapitalizing any bank must focus on the bank's assets quality, management competence and

experience, level of earnings, adequacy of liquidity and image/perception among other factors outside the control of the banks themselves. Healthy banks that intend to attract potential investors should start getting their overall business strategies and focus right.

According to Myers and Majluf (1984), in the absence of periodic adjustments in the capital ratio, banks would never hold more capital than required by the regulators or the market. In practice, however, adjusting the capital ratio may be costly. Equity issues may, in the case of information asymmetries, convey negative information to the market on the bank's economic value. Moreover, shareholders may be reluctant to contribute new capital if the bank is severely undercapitalized, as most of the benefits would accrue to creditors. In the absence of these capital adjustments, banks falling under the legal capital requirements will not be able to react instantaneously. They may then be subject to repeated regulatory penalties, or even worse, closed down.

3.0 METHOD OF ANALYSIS

This section tries to capture empirically the relationship between bank capitalization and performance. When we speak of bank capitalization we are referring to variables such as Return on Capital and Return on Assets. Therefore, our equations looks at the extent to which these variables are brought into light or the realization is facilitated by the existence of what we generally referred to as adequate capitalization. Thus the kernel of this paper is to examine how bank capital adequacy and performance have been enhanced by the existence of bank capitalization/consolidation. Further, the crux of this paper is to see how bank capitalization and consolidation in Nigeria make funds available for the realization of adequacy of capital and performance. Obviously, we can only look at a number of years given the fact that bank consolidation took place only three years ago. This is what makes it impossible to make use of time series analysis because we have only two years to seriously discuss issues. This is why the use of panel data is preferred in this exercise to time series analysis. Also, we have not used cross sectional data analysis in this paper because it is not possible to complete set of data on any bank for any particular year if only because merger has taken place randomly and banks have also come into existence randomly. The panel data methodology provides a useful answer to all these. Hence, the choice. This paper uses the econometric approach in estimating the effect and to be specific it uses the E-view software employing panel of data.

3.1 POPULATION AND SAMPLE SIZE

The population of this research is drawn from the Nigerian banking industry (Commercial banks) referred to as the conventional banks because they are deposit-taking institutions. This is because they dominate the financial sector in terms of number and coverage. Despite the involvement of other financial institutions such as non-bank financial institutions - insurance companies, development banks, finance houses, etc in the intermediation process, commercial banks still control the major proportion of the nation's deposits and savings. There were eighty-nine commercial banks in Nigeria before the 2005 bank recapitalization exercise and the number has been reduced to twenty-five banks after consolidation and to 24 (after merger of IBTC & Stanbic bank to Stanbic-IBTC) in 2008. Of the twenty –four banks, four of them that is: Unity bank, Sterling bank, Spring and Skye banks are new creation of mega banks. A sample size of fourteen out of the twenty four commercial banks was employed in the study. The sample (of fourteen commercial banks) was drawn from both the old and new generation banks using the Stratified sampling technique based on simple random sampling supported by Judgment Sampling (See table 1). The selection process is restricted to banks quoted in the Nigerian Stock Exchange Daily official List (SEDOL).

The sample drawn from the population was grouped into categories based on the size of their capital as at the 2006. The sample size consists of both old generation and new generation banks. Banks that commenced operation before 1988 are old generation banks while those that commenced operation from 1989 are new generation banks. Amongst others new generation banks started aggressive marketing a departure from armchair banking which old generation banks were noted. New generation banks also introduced new technology for efficient service delivery change. There is a modified sample size for banks in this study. Since this study is between 1986-2006,banks that are not quoted are eliminated because their data are not readily available. During the field work, it was observed that these banks had no data bank for their Annual financial statements. Hence, such banks are not considered. Thus in our sample size banks such as Nigerian International Bank, Standard Chartered Bank, Equatorial Trust bank that are not (listed) quoted were eliminated and this reduced our population of study to twenty-one. This represents 14/21 (67%) of the quoted banks in Nigeria.

TABLE 1 **POPULATION OF THE STUDY**

S/N	Name of Banks	Frequency of bank Capital	Bank Capital 'billion	Remark
1	Access	Between 25 - 34.9 billion	28.8	
2	Bank PHB	"	28	
3	Fidelity	"	25.6	
4	FCMB	"	25.2	
5	ETB	"	28.4	N.Q.B
6	First Inland	"	29.4	
7	Standard Chartered	"	26	N.Q.B
8	Spring	"	25	
9	Afribank	"	26	
10	Wema	"	34.8	
11	Diamond	"	34.7	
12	GTB	" Between N35 billion and above	36.4	
13	Sterling	"	35	
14	NIB		35.2	N.Q.B
15	Oceanic	"	37.1	
16	Ecobank	"	35.3	
17	Skye	"	37.7	
18	Unity	"	35	
19	Intercontinental		53	
20	FBN	"	58.9	
21	Zenith	"	93	
22	UBA	"	47	
23	UBN	"	95.6	
24	IBTC/Stanbic	"	60	

Source: **CBN Banking Supervision Annual Report 2006 And 2007**

N.O.B = Non-Quoted Banks

The study analyses the data as contained in the financial report of 14 commercial banks out of the 24 banks operating in Nigeria as at the end of 2006, representing about 60% of the commercial banks and about 67% of the quoted banks. The bank data were obtained from CBN Banking Supervision and Annual Reports, (2006-2007) and Annual financial Statements from various years of the selected banks for the years 1986 -2006 are used for the analysis. The end of the cut-off date represent just one year after the bank consolidation mandate of 2004 by the Central Bank of Nigeria which took effect on 31st December, 2005. The study of bank capitalization and performance thus covers the period from the structural adjustment program of 1986 to 2006. The period of 1986 was the beginning of bank deregulation and liberalization (more banks were licensed) while we projected from 2005 the commencement year of the study to a cut-off date of 2006 (one year after bank consolidation) when financial statements of banks are expected to be available. Audited bank financial statements most time fall in arrears. As stated earlier, this study employed the Stratified Sampling Technique. In stratified sampling, the population is categorized into groups that are distinctly different from each other on relevant variables. Each group is called stratum (plural strata). In applying stratified sampling, we categorized the population and stratified using bank capital (See table 1) above.

In this study, the elements in a particular stratum are the same with respect to the relevant parameter (bank capital). The banks are grouped into stratum and were selected using simple random sampling supported by judgment sampling (non-probability) methods. Our table above shows that 11 banks (9 banks excluding non-quoted banks) fall into the frequency of bank capital between N25 < N34.9. This means that 2/3 multiplied 9 gives approximately 6 which were selected from the first stratum. The name of nine banks were written on a piece of paper, wrapped and put in a tray from where they were picked. The six out of the nine banks picked are Access bank, Fidelity bank, First Inland bank, Wema bank, Spring bank and Diamond bank. However, Spring bank was dropped because the data is only for one year (that is 2006) and would not be very useful. Using Judgment sampling an additional bank that is Afribank was selected to complete our simple random sampling of 2/3 x 9 = 6 in the first stratum of N25 < N34.9 billion frequency. The remaining eight (8) out of the twelve (12) banks were also selected by writing the names of the banks on a piece of paper, wrapped and put in a tray from where they were picked. Our table above shows that of the 13 banks (12 banks excluding non-quoted banks)

fall into the frequency of bank capital between N35 billion and above that is 2/3 multiplied 12 gives 8. The following banks were picked Oceanic bank, Guaranty Trust bank, Intercontinental bank, First bank of Nigeria, Union Bank of Nigeria, United Bank, Zenith and IBTC/Stanbic bank At the of end of the selection process, 60% that is six (6) out of the nine (9) banks fall into the frequency of between N25 billon < N34.9 billion while 72% that is eight (8) banks out of the twelve (12) banks fall into the frequency of between N35 billion and above. The selection process picked 50% (seven) of the old generation banks and 50% (seven) of new generation banks **(See table 1 above)**.

3.2 The Panel Data Method

Instead of using time series data or a cross section of banks, this study looks at a panel data specification for individual banks. In Cross section analysis, data are collected across units of observation at a given point in time. For cross section unit we observe the same attribute on different people, geographical units, etc using same year. For example, one can collect data on total deposits of banks in say 2006. Here the variation is across the units, that is different banks and not for different years, say time. In Time series, data span across time a horizon usually on quarterly or yearly basis. An example is the total deposits of First Bank from 1986-2006 as could have been used in this study. In this case the variation is over time. Panel data or data set is a technique that combines the features of both time series and cross section methods. For example, total deposits of banks (one of our explanatory variables) in Nigeria from 1986-2006 as used in this study. Thus, panel data has the features of time series and cross section.

PRESENTATION OF RESULT

The results of the paper on bank capitalization, management and performance are presented below in tables 2 and 3 precisely; are results of the models: (Portfolio Regulation theory, Expense theory and Buffer theory of capital adequacy) as generated by the computer. This paper enables us provide answer to questions of macroeconomic variables such as (interest rate, exchange rate and inflation); if inadequate capital affects the Nigerian banks to compete effectively in the international market and play their major role of financing economic activities. It also provides answer to the soundness, safety, profitability, quality of loan portfolio, asset, and

deposit in the Nigerian banking industry. The selection of bank management has not been taken seriously and the performance is a function of the inputs.

This paper also provides answer to the impact of cost of operation on bank capital. Our macroeconomic variables of interest rate, inflation and exchange rates have had no significant effect on Return on Capital (ROC).This is represented in model 2 and table 3 (results) of this paper. Thus, it means that macro economic variables that is interest rate, inflation and exchange rates have not led to significant change on Return on Capital (ROC) one of the indicators of bank capitalization. The result shows that Inflation rate, interest rate and exchange rate have negative association with return on capital. This implies that return on capital and inflation rate, interest rate and exchange rate move in opposite direction. The coefficient points to the fact a percentage increase of these macroeconomic variables will lead to about 66.2 in exchange rate, 163. 0 inflation rate and 761.4 interest rate decrease in return on capital. As reported by Ige (2006) recent studies incorporating these variables indicated they could be statistically significant since they are more often than not at the mercy of the free market and not by government fiat. This does not conform to our a priori expectation that capitalization will be affected positively by interest rate, inflation and exchange rate.

Foreign exchange (forex) pricing mechanism (s) over the years has been an important macroeconomic variable in an open economy such as Nigeria. In an open economy, we expect a flourishing banking sector now awash with capital fund to affect the external sector. Borrowing for the purchase of machines and raw materials from abroad should be expected as banks make more demand for forex at the periodic bidding using the Dutch Auction System (DAS). This will only drive up the exchange rate, causing the Naira to depreciate, posing an inverse relationship, and very little or no statistical significance. Interest rate and return on capital share a negative relationship, thus as interest rate rises, return on capital decreased during the period covered by this study. However, historically, we know that even when prime interest rate was falling it made no significant impact on the economy. Banks have not made concerted effort to transmit to the economy the benefit of lower interest rate. In the past excess money balances will normally go for purchase of foreign exchange from the CBN auction market for a premium in the foreign exchange parallel market. In this new era of mega banks, we expect bank management to have another look at their interest rate policy such that it will re-engineer and stimulate the growth of

the economy. Inflation rate possesses an inverse relationship to return on capital, thus as inflation rises, return on capital during the period covered by the study falls. This conforms to a priori expectation. Where the economy is resting at a sub-optimal level, it requires government's fiscal policy or perhaps any external shock, a change in expectation (output) etc to boost aggregate demand and subsequently aggregate supply. An important tool to stem the tide of rising inflation in Nigeria is massive expenditure in infrastructure development.

TABLE 2: ROA

Dependent Variable: ROA
Included observations: 225
Excluded observations: 64 after adjusting endpoints
Convergence achieved after 10 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BL_BA01	0.090600	0.024388	3.714970	0.0003
BL_BD01	0.024091	0.022290	1.080807	0.2810
CAP_SF_TA01	-0.004666	0.025794	-0.180900	0.8566
EOM_OE_TA01	0.092903	0.030697	3.026444	0.0028
LAD_LA_BD01	0.9504	0.009414	2.071941	0.0395
SHF_BD01	-0.050925	0.024804	-2.053062	0.0413
SHF_BL01	0.036365	0.014697	2.474369	0.0141
C	-0.009340	0.016474	-0.566949	0.5713
AR(1)	0.595940	0.052842	11.27786	0.0000
R-squared	0.372843	Mean dependent var		0.056176
Adjusted R-squared	0.349615	S.D. dependent var		0.064093
S.E. of regression	0.051688	Akaike info criterion		-3.047988
Sum squared resid	0.577085	Schwarz criterion		-2.911344
Log likelihood	351.8987	F-statistic		16.05140
Durbin-Watson stat	2.040680	Prob(F-statistic)		0.000000
Inverted AR Roots	.60			

Source: E-View Software Package: Computer Print Out

TABLE 3: ROC (PROFIT)

Dependent Variable :PT
Included observations: 238
Excluded observations: 51 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BA	0.023594	0.003308	7.133410	0.0000
BD	-0.023017	0.003185	-7.226430	0.0000
BL	0.032228	0.003467	9.295387	0.0000
EXCH	-66.20895	69.96019	-0.946380	0.3450
INFL	-163.0124	158.2960	-1.029795	0.3042
INTR	-761.4167	778.1650	-0.978477	0.3289
LA	0.066479	0.003096	21.47500	0.0000
OE	0.508664	0.370432	1.373165	0.1710
C	31328.88	20141.62	1.555430	0.1212

R-squared	0.997883	Mean dependent var	157309.1
Adjusted R-squared	0.997809	S.D. dependent var	916476.3
S.E. of regression	42899.94	Akaike info criterion	24.20821
Sum squared resid	4.21E+11	Schwarz criterion	24.33951
Log likelihood	-2871.777	F-statistic	13491.71
Durbin-Watson stat	1.973462	Prob(F-statistic)	0.000000

Source: E-View Software Package: Computer Print Out

4.1 ESTIMATION, MODEL SPECIFICATION AND DISCUSSION OF RESULTS

The ordinary least square method and multiple regression analysis will be used in estimating the impact of shareholders funds on performance of the Nigerian Commercial banks. To test for the significance, reliability and validity of the result, F- statistic T-statistics, and their related probabilities, Coefficient of determination (R^2), R bar, Durbin Waston (DW), Sum Square Residual (SSE), Standard Error (SE) of the explanatory variables and coefficient of determination R^2 are employed. The model will be estimated using annual data and the study will involve the use of multiple regression technique. Ordinary Least Square (OLS) using E-View package will be used in presentation of the result.

From the theoretical perspective, literature review and research questions the following hypotheses are postulated to justify our statement of problem and objectives of study.

1. H_1: Return on Assets has significant relationship with bank capital ratios
   (Capital adequacy, Liquidity and Efficiency/Quality of Management)
   H_0: Return on Assets has no significant relationship with bank capital ratios
   (Capital adequacy, Liquidity and Efficiency/Quality of Management)

2. H_1: Operation expenses has significant impact on return on capital.
   H_0: Operation expenses has no significant impact on return on capital.

We postulate that the return on assets of banks will be affected positively by bank performance and management indicators. Therefore, we can represent the functional relationship in model forms as follows:

ROA = f (B Loan, B Deposit, EOM, LAD, CAP, μ) ……..Equation 1

Where BLoan = the ratio of bank's loan (L) to total assets (TA) that is L/TA. Bank loan depicts Efficiency/Quality of management

B deposit = the ratio of bank's loans and advance (LA) to bank deposit (D) that is LA/D. This depicts liquidity position of banks

EOM = The ratio of operating expenses (OE) to total assets (TA) that is OE/TA. This depicts efficiency of management.

LAD = Liquid asset (LA) to deposit (D) that is LA/D. This depicts the liquidity position of banks.

CAP = the ratio of shareholders fund (SHF) to total assets (TA) that is SHF/TA. This depicts the capital adequacy of banks.

Restating the variables in equation 1 in explicit form, we can represent the model as follows:

$ROA = a_0 + a_1$ Bloan + a_2B deposit + a_3 EOM + a_4 Lad + a_5 Cap + Uit ……Equation 2

Where the a prori expectation is stated as $a_1 > 0$ $a_2 > 0$ $a_3 < 0$ $a_4 > 0$ $a_5 > 0$

$u_{it} \approx U(0,1)$

ROA measures the profit earned per naira of assets and reflect how well bank management use the bank investments resources to generate profits. We postulate that the Return on Assets (ROA) of the banks will be affected positively by the bank management and performance; captured by capital ratios e.g. the ratio of bank's loan (L) to total assets (TA) L/TA that is (B Loan), the ratio of bank's loans and advance (LA) to bank deposit (D) LA/D that is (B Deposit) depicts the liquidity position of banks, Efficiency of Management that is OE/TA (EOM), Shareholders fund (SHF)/Total Assets (TA) that is risk of default (CAP) and Liquid Assets

(LA)/Bank deposit (BD) represented by (LAD).

$$\delta ROA/\ \delta BPM > 0.$$

All the explanatory variables with the exception of expenses are expected to have positive signs with respect to the return on assets. Model 2 is stated as:

ROC = f (Bank deposit, Bank Asset, Bank Loan, Inflation, Interest, Expean ,Exch, Liquid asset, Uit

…….. Equation 3

Restating the variables in equation 3 in explicit form, we can represent the model as follows:

$$ROC = a_0 + a_1\ BD + a_2\ BA + a_3\ BL + a_4\ Infl + \Delta Inr_5 + a_6\ Expean + a_7\ Exch + a_8\ LA + Uit$$

…….. Equation 4

4.2 Discussion of Results

The result of Model 1 (Portfolio regulation theory and buffer theory of capital adequacy) was presented in table 2 above that is:

$$ROA = a_0 + a_1\ B\ loan + a_2 B\ deposit + a_3\ EOM + a4\ Lad + a_5\ Cap + Uit$$ ……Equation 2

Where the a priori expectation is stated as $a_1 > 0\ a_2 > 0\ a_3 < 0\ a_4 > 0\ a_5 > 0$

Model 1 explains our hypothesis 1 (one) and has coefficient of determination (R^2) of 0.373 and adjusted (R^2) of 0.350. This shows that the regression has low explanatory power. However, the values (i.e R^2 and adjusted R^2) indicate that over 37 percent of the variations in the dependent variables (return on assets) is attributable to the explanatory variables selected by the model and include Liquidity ratios (LAD = LA/BD), Bloan (BL/BA), Efficiency/Quality of management ratio (Operating Expenses = OE/TA), and Capital Adequacy ratio (CAP = SHF/BL). Though the R^2 and R^2 adjusted appear low, it is significant judging from the significant F-statistics, which is equally high. The implication of this is that the model is well specified and does not suffer mis-specification bias. In other words, the result from the model can be relied upon in making useful deductions with respect to return on assets. The S.E regression and Durbin-Watson statistics equally lend credence to the fact that there is no auto correlation. The financial implications of this regression will be further explained in 4.3 that is result of hypotheses.

Model 2 has coefficient of determination (R^2) of 0.9978 and adjusted (R^2) of 0.9978. This shows that the regression has high explanatory power. The values (i.e R^2 and adjusted R^2) indicate that over 99 percent of the variations in the dependent variables (return on capital) is attributable to the explanatory variables selected by the model and include Bank Deposit (BD), bank asset (BA), bank Loan (BL), Inflation (Infl), Interest (Intr), exchange rate, (Exch), Expean (OE) and Liquidity (LA). This high goodness of fit is further supported by the significant F-statistics, which is equally high. The implication of this is that the model is well specified and does not suffer mis-specification bias. In other words, the result from the model can be relied upon in making useful deductions with respect to return on assets. The S.E regression and Durbin-Watson statistics equally lend credence to the fact that there is no auto correlation. The financial implications of this regression will be further explained in 4.3 that is result of hypotheses.

4.3 Discussion of Hypothesis

Hypothesis one is captured by model 1 (Buffer theory of capital adequacy and Portfolio regulation theory). Table 2 presents the return on asset as dependent variable and the indicators of bank performance and management. The result shows that the indicators of bank performance and management are significant at 10% in explaining the dependent variable. Our explanatory variables are represented by liquidity ratio: Liquid Asset/ Bank deposits (LAD = LA/BD) and Bank loan/ Bank Assets (BL/BA), Efficiency of Management represented by Operating expenses/Total Assets (EOM = OE/TA), Capital Adequacy indices represented by Shareholders Fund /Bank deposits (SHF/BD) and Shareholders fund/Bank loan (SHF/BL) are statistically significant in their influence on return on asset. However, while others are positive in their influence, the result further shows that Capital adequacy ratio represented by Shareholders fund/Total Assets (CAP = SHF/TA) and Shareholders fund/ Bank deposit (SHF/BD) have negative association with ROA.

The overall liquidity position for the banks as computed and regress by the panel data shows that bank liquidity is statistically significant. The result shows that bank performance indices (Capital adequacy ratios) such as Shareholders Fund/Total Assets (SHF/TA), Shareholders fund/bank deposits (SHF/BD) have negative association with Return on Asset (ROA). This implies that return on assets (ROA) and capital adequacy ratios move in opposite direction. The coefficient points to the fact that a percentage increase of capital adequacy ratio will lead to

about 0.05 Shareholders Fund/Bank deposit (SHF/BD) and 0.0047 Shareholders Fund/ Total Assets (SHF/TA) decrease in return on asset (ROA). This could be attributed to the sterility/volatility of deposits and reserves which do not stay long in banks vault. Deposits in bank vaults can be volatile and vulnerable that is subject to withdrawer without notice e.g saving and current account of governments, customers (individuals), corporate bodies and permanent deposits that stay with banks for some time e.g (fixed deposit). As a result capital base may be eroded and could make the return on asset susceptible to fluctuation. The reserve ratio may also affect the ability of banks to comply with regulatory directive as it has not been consistent. The efficiency and quality of management captured by Operating Expenses/Total Assets (OE/TA), Bank Loan/Bank Assets (BL/BA) shows that a percentage increase in operating expenses will lead to little increase of 0.0929 and 0.0906 increases in ROA.

Hypothesis two is explained in table 3 in which return on capital (ROC) as reflected by profitability is stated as the dependent variable. This is represented in model 2 of the study. The result shows that the null hypothesis of no significant relationship between managerial efficiency and return of capital cannot be rejected at 10 percent level of significance. This is because the probability value of 0.171 is greater than 0.10. Thus, the operating efficiency, though it is positively related to return on capital, its impact is not significant in its influence. This does not conform to a priori expectation that efficiency of bank management measured by operating expenses is expected to be negatively related to ROC.

Wrong signs and/or significance or non-significance of the parameters does not necessarily imply that violation of a priori expectations is tantamount to poor empirical result. Rather one is led to ask the ultimate question whether in posterior and a priori expectations Nigerian commercial banks can be expected to utilize bank capital to the ends required by the shareholders and the economy. The real issue in Nigeria case has been that of mismanagement of funds which is aptly explained by our expense theory. A good explanation may be found with management expertise, which presupposes that high capital requirement as stipulated by the buffer theory of capital adequacy may not curtail reckless spending by managers who may indulge in reckless spending of bank capital. In other words a bank without good management may worsen the position it was before the injection of new funds. In the Pre and Post consolidation era in Nigerian banking industry what we have seen is bank management

establishing more bogus bank branches everywhere rather using bank capital for worthwhile projects that will enhance shareholder wealth and the economy.

5.0 SUMMARY, FINDINGS AND RECOMMENDATIONS

5.1 Summary

This paper has attempted to find the relationship between bank capital adequacy and performance in the Nigerian banking industry specifically commercial banks. In this paper ROA and ROC represent our dependent variables whereas our controlled independent variables are: bank capital adequacy ratios, operating expenses, macroeconomic variables such interest rate, exchange rate and inflation. Availability of funds facilitates return on capital. Further, the crux of this paper is to see how bank capitalization has facilitated the realization bank performance.

5.2 Implications of Findings

The analyses from table 2 shows that shareholders fund/bank deposits and shareholders fund/total assets indices of bank management and performance have negative association to ROA. Perhaps the energy crisis in the Nigerian nation has had effect on adequacy of bank capital and consequently performance of banks. Operational expenses affected by absence of electricity, access roads has affected banking performance e.g overall profitability tough the impact is not too significant. The positive and insignificant coefficient in our operating expenses, instead, suggests that banks are able to pass on most of the high overhead costs to customers through higher spreads in order to keep profits unaffected. To the extent that banks' ability to overcharge is a function of their market power, this outcome presents evidence of market power incidence in the banking sector. Because of the rising cost of doing business the tendency is that interest rate on lending might continue to rise except it is controlled by government. The overall capital adequacy ratios of the study shows that Shareholders Fund/Total Assets (SHF/TA) which measures capital adequacy of banks (risk of default) have negative impact on ROA. The efficiency of management measured by operating expenses indice is negatively related to return on capital. Inflation rate, interest rate and exchange rate have negative association with return on capital. This implies that return on capital and inflation rate, interest rate and exchange rate move in opposite direction. Macroeconomic policies are important. Inflation reduces credit expansion

by contributing to higher interest margins. Therefore, policies aimed at controlling inflation should be given priority in fostering financial intermediation. Fiscal and monetary policies designed to promote output stability and sustainable growth is good for financial intermediation.

From table 2, the null hypothesis of no significant relationship between managerial efficiency and return on capital cannot be rejected at 10 percent level of significance. Thus, the operating efficiency, though it is positively related to return on capital, its impact is not significant in its influence. Perhaps the energy crisis in the Nigerian nation has had effect on adequacy of bank capital and consequently performance of banks. Operational expenses affected by absence of electricity, access roads has affected banking performance e.g overall profitability tough the impact is not too significant. The positive and insignificant coefficient in our operating expenses, instead, suggests that banks are able to pass on most of the high overhead costs to customers through higher spreads in order to keep profits unaffected. To the extent that banks' ability to overcharge is a function of their market power, this outcome presents evidence of market power incidence in the banking sector.

Because of the rising cost of doing business the tendency is that interest rate on lending might continue to rise except it is controlled by government. We also find that there is significant relationship between shareholders' fund and banks' liquidity, bank deposits, and bank loans. This also conform to a priori expectation that bank capitalization will be affected positively by bank liquidity, bank deposits and bank loans. The efficiency of management measured by operating expenses indice is negatively related to return on capital. Inflation rate, interest rate and exchange rate have negative association with return on capital. This implies that return on capital and inflation rate, interest rate and exchange rate move in opposite direction. Macroeconomic policies are important. Inflation reduces credit expansion by contributing to higher interest margins. Therefore, policies aimed at controlling inflation should be given priority in fostering financial intermediation. Fiscal and monetary policies designed to promote output stability and sustainable growth is good for financial intermediation.

5.3 Recommendations.

(i) The overall capital adequacy ratios shows that Shareholders Fund/Total Assets (SHF/TA) which measures capital adequacy of banks (risk of default) have negative

impact on Return on Asset (ROA). This implies that the regulatory authorities should put in place measures to raise the level of this ratio to avoid future bank collapse**.**

(ii) A bank without good management (input) may worsen the position it was before the injection of new funds. Where managers prefer prestige, power and status, it would be reflected in the amount they receive in form of expense account and luxurious. Management capability should be better supported, for the best of assets can be overturned in short period by management. It is a known fact that CBN plays an important role in the selection of bank executives at the directorate level. The policy for the selection of this class of bank workers should emphasize strict consideration of good track records and sequential growth phase through the ranks as some of the imperatives.

(iii) Where there exists a viable financial infrastructures, bank management should lobby governments for the provision of an enabling environment for banks to strive. This will help to minimize the operation expenses (OE) of the banks.

(iv) Bank returns are affected by macroeconomic variables, suggesting that macroeconomic policies that promote low inflation rate, stable exchange rate, low interest rate and output growth will boost credit expansion. Government should provide an enabling environment and also control interest rate on credit in the short term to enable customers such as corporate bodies, manufacturers, and industrialists obtain loans in order to stimulate economic growth.

5.4 Limitations and Future Lines of Research

This study is limited to commercial banks in Nigeria whereas in the financial intermediation process, we have a gamut of non-bank financial institutions such as insurance companies, finance houses, investment companies, mutual trust fund/unit trust, development and specialized banks etc that are involved in funds mobilization. The impact of bank capitalization on performance for the entire Nigerian banking industry should be investigated to strengthen and confirm the results of our study. Secondly, in the course of the field work we observed that many banks do not have data bank for their annual financial statements and made it cumbersome to obtain data for this study. We also observed some inconsistency in annual financial statements of banks and that of the regulatory authority (Central Bank of Nigeria).

REFERENCES

Abreu M and V. Mendes (2002): "Commercial Bank Interest Margins and Profitability: Evidence from E.U Countries", Porto Working Paper Series. pp. 1-10.

Adewunmi, Wole (1997): "The N500 Million Paid-Up Capital for Bank", The Nigerian Banker, Jan-June, pp. 16-19.

Al-Hashimi, A. (2007): "Determinants of Bank Spreads in Sub-Saharan Africa", draft.

Ajekigbe, Jacobs. M (2009): "The Nigerian Banking Industry: Challenges and Prospects (1977-2008)", Being a Text Valedictory Lecture Presented at Muson Centre, Onikan, Lagos on Tuesday 13 January, 2009, Organized by the Chartered Institute of Bankers of Nigeria.

Annual and Financial Reports of Banks (Various issues).

Anyanwaokoro, M. (1996): Banking Methods and Processes, Hosanna Publications, Enugu.

Athanasoglou, P.P; Brissimis, S.N and Delis, M.D (2005): Bank-Specific, Industry Specific and Macroeconomic Determinants of Bank Profitability, Bank Greece Working Paper, No.25. Pp. 1-10.

Athanasoglou P., Delis M, and C. Staikouras (2006): "Determinants of Banking Profitability in the Southern Eastern European Region", Bank of Greece Working Paper 06/47.

Ben Naceur S, and M. Goaied (2001): The Determinants of the Tunisian Deposit Banks Performance, Applied Financial Economics, Vol. 11: 317-319.

Benson, G.J., R. Eisenbeis, P. Horvitz, E.J .Kane and G. Kaufman (1986): Perspectives on Safe and Sound Banking: Past, Present, Future, MIT Press, Cambridge, MA.

Berger, A.N. (1994): "The Relationship between Capital and Earnings in Banking," Finance and Economics Discussion Series, No. 94-92.

Berger, A.N. and G.F. Udell (1994): "Did Risk-Based Capital Allocate Bank Credit and Cause a "Credit Crunch" in the United States? Journal of Money, Credit, and Banking 26: pp 585-628.

Berger, A. (1995b): "The Relationship Between Capital and Earnings in Banking," Journal of Money, Credit and Banking, Vol. 27, pp. 404-431.

Bobakova, I.V. (2003): "Raising the Profitability of Commercial Banks," BIATEC, Volume X1, pp.21-25, Retrieved on April 8, 2005 from http://www.nbs.sk/BIATEC/BIA04_03/21_25.PDF.

Boyd, J.H and D.E Runkle (1993): "Size and Performance of Banking Firms, Testing the Predictions of Theory", Journal of Monetary Economics 31, 47-67.

Bourke, P. (1989): Concentration and other Determinants of Bank Profitability in Europe, North America and Australia," Journal of Banking and Finance, 13, pp.65-79.

Calem, P.S., and R. Rob (1996): "The Impact of Capital-Based Regulation on Bank Risk-Taking: A Dynamic Model, Board of Governors of the Federal Reserve System," Finance and Economics Discussion Series 96/12 (February), 36.

Central Bank of Nigeria "Annual Report and Statement of Accounts" (1999-2003).

Central Bank of Nigeria Supervision Annual Report 2006 and 2007

Demirguc-Kunt A and H. Huizinga. (1999): "Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence", World Bank Economic Review, Vol.13: 379-408, pp. 3-8

Demirguc-Kunt, A, and Huizinga (1998): "Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence", World Bank Economic Review 13, 379-408

Ebhodaghe, John U. (1994): "Boardroom/Management Practices and Distress in the Banking System", NDIC Quarterly, Volume, 4 No. 2 (June), pp.15-25.

Egene, Goddy (2009): "CBN, Sacked Banks' MDs and Stock Market", ThisDay, Vol 14, No. 5232, p. 31

Eisenbeis, R.Aand Kwan, S.(2005): "Bank Risk, Capitalization and Inefficiency," Paper Retrieved on September 8, 2005 from http: wharton.upenn.edu/fic/papers/96/9635.pdf.

Eke, M Sunny (1999): "Banking Soundness and Monetary Policy: Issues and Experiences in the Nigerian Economy" Nigerian Journal of Banking and Finance, B & F Publication, Enugu, pp. 1-14

Furlong, F.T. and M.C. Keeley (1989): "Capital Regulation and Bank Risk-Taking: A Note," Journal of Banking and Finance 13, pp 883-891.

Furlong, F.T (1992): "Capital Regulation and Bank Lending," Federal Reserve Bank of San Francisco, Economic Review 3: pp 23-33.

Furlong, F.T. and M.C. Keeley (1989): "Capital Regulation and Bank Risk-Taking: A Note," Journal of Banking and Finance 13, pp 883-891.

Goddard, J and Molyneux, P. and J.O.S Wilson (2004): "Dynamics of Growth and Profitability in Banking", Journal of Money, Credit and Banking 36, 1069-1090.

Heggestad, A (1977): "Market Structure, Risk and Profitability in Commercial Banking", The Journal of Finance 32, 1207-1216.

Haubrich, J.G. and P .Wachtel (1993): "Capital Requirements and Shifts in Commercial Bank Portfolios," Federal Reserve Bank of Cleveland, Economic Review 29, pp 2-15.,

Ige, C.S (2006): "Macroeconomics of Commercial Banks Recapitalization in Nigeria", Covenant University Journal of College of Business, Ota Vol 1, pp 5- 10.

Keeley, M.C and F.T. Furlong (1990): "A Reexamination of Mean-Variance Analysis of Bank Capital Regulation," Journal of Banking and Finance 14 (March) pp 69-84.

Koutsoyiannis, A. (2003): Theory of Econometrics (2nd Edition), Palgrave, New York.

Molyneux, P. and Thornton, J. (1992): "Determinants of European Bank Profitability: A Note," Journal of Banking and Finance, 16, pp. 1173-1178.

Myers, S.C and N.C. Majluf (1984) : "Corporate Financing and Investment Decisions When Firms Have Information that Investors Do Not Have," Journal of Financial Economics 13, pp. 187-221.

Naceur, S.B. and Goaied, M. (2001): "The Determinants of the Tunisian Deposit Banks' Performance," Applied Financial Economics, 11, pp. 317-319. Evidence," Paper Retrieved on April 8, 2005 from http://www.academicdb.com/risk-management_case_study.

Naceur, Ben Samy (2003); "Bank Capitalization and Performance in Tunisia", Universite Librede Tunis, Avenue Khereddine Pacha, 1002 Tunis sbennaceur@eudoramail.com pp. 1-10

Nyong, O. Michael (2001): "Monetary Policy and Commercial Banks' in Nigeria: Some Theoretical and Empirical Extensions", CBN Economic and Financial Review, Vol.34, No.3: 777-795.

Obadan, M.I (2004): "Merger Acquisition and New Minimum Capital Base: Matters

Arising," The Guardian, August 24, pp 24-27.
Oluitan, T (2004): "Managing Liquidity and Profitability in Banking", The Nigerian Banker CIBN, Lagos, July- December pp 9 – 10
Oyetan, J.A. (1997): "Packaging Banks for Successful Recapitalization," The Nigerian Banker, Jan - June, pp. 21-24.
Peltzman, Sam (1970): "Capital Investment in Commercial Banking and its Relationship to Portfolio Regulation", Journal of Finance, Volume,78, No.1 (January/Febraury), pp.1-26.
Soludo, C.C. (2004): Consolidation of the Nigeria Banking Industry to Meet the Development Challenges of the 21st Century", Being an Address Delivered to the Special Meeting of the Bankers' Committee held on July 6, CBN Headquarters, Abuja.
Soludo, C. C (2004): "Consolidating the Nigerian Banking Industry, The Nigerian Accountant", Lagos, July/September, Vol.37, No.3.
Uche, C.U (1998): "Bank Share Capital Regulation in Nigeria", Journal of International Banking Law, Vol.13 (1), pp. 30-34.
Vojta, George (1980): "Bank Capital Adequacy in Thomas Havrilesky and John Boorman (eds.), Current Perspectives in Banking: Operations, Management and Regulation", AHM Publishing Corporation, Illinois.