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RISK ASSETS MANAGEMENT AND PROFITABILITY OF BANKS IN NIGERIA: A CAMELS MODEL APPROACH

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Abstract

Risk asset management is very central in measuring profitability in the banking system due to the roles the banking system plays in any economy which calls for adequate and efficient management of their credit system. The main objective of this study centered on risk asset management and profitability of Banks in Nigeria. The study utilized secondary data from the annual report of the selected bank. Descriptive statistic of mean, standard deviation, t – value and p - value was used to analyze the collected data through Statistical Package for Social Sciences. Findings revealed that all the explanatory variables have significant impact on the risk assets in the banking industry since adequate and efficient risk asset management strategies play significant role in evaluating banks profitability. The study recommends that

aggressive credit policy should be put in place to ensure that all loans are recovered within the time frame and the current risk management policy should be maintained or better still improved upon.

Keywords: Asset, Banks, Camels, Profitability, Risk, Uncertainty,

1.1 Introduction

Risk is associated with uncertainty and reflected by way of charge on the fundamental basics of business and it capital, which is the cushion that protects the liability holders of an institution. Risks are inter-dependent and events affecting one area of risk can have ramifications and penetrations for a range of other categories of risks. Foremost thing is to understand the risks associated with banking and to ensure that these risks are properly confronted, effectively controlled and rightly managed as each transaction that a bank undertakes changes its risk profile. The extent of calculations that need to be performed to understand the impact of each such risk on bank transactions makes it nearly impossible to continuously update the risk calculations. Hence, providing real time risk information is one of the key challenges of risk management exercise.

Till recently all the activities of banks were regulated and hence operational environment was not conducive to risk taking. Better insight, sharp intuition and longer experience were adequate to manage the limited risks, but profiting in business without exposing to risk is like trying to live without being born. Everyone knows that risk taking is failure prone as otherwise it would be treated as sure taking. Hence risk is inherent in any walk of life in general and in financial sectors in particular. Risk is the chance or probability that some unfavorable event would occur such that financial position or cash flow stream of the bank is adversely affected. It arises from the uncertainty associated with future events and since rational bank managers are able to anticipate some future events, even the bad ones, risk arises therefore from unanticipated changes (Sinkey, 1992). Risk taking is central to the business of banking; it is a necessary companion of bank profitability.

In other words, banking businesses has profitability on one side and risks on the other hand. Unfortunately, little is heard of bank risks, but banks profitability commands newspapers headlines. Perhaps, the only time Nigerian are conscious of banking risk is when there are cases of bank failures. According to Malkiel (1982), little is known or written about risks because of the difficulty of measuring it from the onset. Malkeil (1982) stated that: “the quest for better risk

measures is not simply an amazing exercise that accomplishes only the satisfaction of protecting academics for protecting investors".

The typical profit or loss statement of any bank often indicates that more than 60% of its total income is usually generated from interest on loans and advances granted to their various customers (Ezikwe, 1980). In other words, banks profitability to a very large extent depends not only on the volumes of its loan but also on the quality of such loans and advances. The major role of deposit money banks in the financial sector of the economy is that of acting as financial intermediaries. They mobilize and channel funds from surplus economic units to deficit ones to facilitates business transactions and economic development. Of the major risk facing banks, is the risks asset management. Risks asset management comprises the actions that are taken to keep the risk associated with any banks assets at an acceptable minimal level. It is the management procedures designed in order to minimize the adverse effects of possible financial losses and distress that threaten the profitability of the organization.

In the banking industry, controlling and managing risks is an integral part of the entire management process. Organizations have come to understand the essence of having a sound system for monitoring and controlling risk inherent in their assets. To effectively measure and manage these various risks to which financial institutions are exposed to, it is imperative that the focus of regulations should have shifted from compliance issues to a risk base supervisory framework that will ensure adequate stability in the banking industry. However, it is not always easy to determine a quality creditor loan without proper analysis of the risk associated with banks assets. During the distress wave and consequent collapse of so many deposit money banks in Nigeria, most banks were largely wrecked as a result of poor assets management couple with bad lending and credit management administrative policies (Agusto, 2004).

Banks that have to balance profitability and liquidity by engaging in high risk investment have often been found to end up precarious situations. This is the situation of the banks which came under severe systematic distress in 1990's culminating in government liquidating twenty banks on 16th January, 1998. Many of these banks were largely wrecked as a result of the factors mentioned above. It is based on this background that this study focused on risk asset management and profitability of Banks in Nigeria, using the CAMEL model approach in order to establish the quality of risk control or management in relation to bank assets that could or may lead to profitability or not. To achieve the main objective of this study, the null hypothesis below was formulated and tested.

H_O: CAMELS model have no significant impact on risk assets and profitability of banks in Nigeria

2.1 Literature Review and Theoretical Framework

According to Nwankwo (1990), risk is a hazard, choice, loss or chance of bad consequences or exposures to mischance. Nwankwo (1990) stressed further that risk is a variability of possible outcomes from that which was expected. Kurfi (2002) views risk management as the principle or technique devised with a view of promoting and to ensuring the effective management of risks. Kurfi (2002) posited that risk analyses serves on the screening of various components of bank facilities which assets, credit or loan prepositions, monitoring or continuing lending relationships with the bank for the purpose of identifying risks inherent in the bank lending policy.

In a bid to explain more clearly, Osaze (1980) viewed bank risk as that part of un-foreseen circumstances that are inherent in the operation of banking practice. By this, it includes asset management policy, credit management policy, and debts collection policy. This explain that risk is not only associated with other organizations, but also banks are even more vulnerable to risk. According to Thomson (2001), risk management entail clearly identifying risk, measuring them correctly and clearly, monitoring them continuously and keeping them within prudent bounds that will ensure banks profitability. It involves the application of general management concepts to a specialized area such as credit control and lending habit of Deposit Money Banks. Risk management as opined by Williams and Heinz (1987), is the identification, measurement and treatment of property liability and personal risk exposure. This definition takes into cognizance both systematic and unsystematic risk and also considers internal and external factors.

The term risk asset management according to Mamman (2004), in its broadest sense has to do with belief and trust. It is this trust upon which the entire system of banking is based (Lot, 1980). Pandy (2000) sees risk asset as an essential marketing tool, which acts as a bridge for the movement of goods through production and distribution stages of production. Risk asset therefore forms the basis of economic functioning by mobilizing funds from surplus economic units to deficit economic units (Mamman, 2004). Adekanye (1984) views the term risk asset management from a banking perspective as loan and advances from banks to customers. Johnson (1971), looks at risk asset management from two perspectives as short-term trade credit extended by suppliers to buyers in conjunction with sales and bank credit and as short term loans and advances from Deposit Money Banks.

Risk asset as asserted by Ramumoorthy (1976), has three distinctive characteristics, implication of futuristic, present of risk and economic value basis.

This justifies the need for risk asset management, which is the efficient control and coordination of loanable funds so as to keep credit and the investment in risk asset at optimal level (Pandy, 2000). To Johnson (1971), risk asset management is a procedure involving a set of complex interrelated decisions, which greatly involve high degree of risk and uncertainty at the same time and culminates into the control of credit extension.

Kolb (1983) notes that risk asset management requires first, determination of quality of credit, credit and terms and collection procedures used in each of this consideration optimal policy is the main focus. Vanhorne (1998) maintained that risk asset management involves trade-off between the additional probability and the cost resulting from a change in any of the elements involved. While Moshin and Ahmed (1980) stressed that reforms on loanable fund most cover the cost and boost turnover that what can possibly be earned on immediate cash transaction in assessing risk asset management, Mehta (1974) stated that, three C's are held relevant, character, capital and capacity. Occasionally, two other collateral and conditions are added (Mamman, 2004).

It is necessary to note that these variables are not the end in themselves, but a means to an end (Roa, 1989). Bank managers or credit managers have to ponder over them jointly and not one or some in isolation, and it is possible to drop some when deciding to grant credit or not, especially where the cost of analysis is higher than the expected benefit. The art of banking is surely to know when to accept the risk. But first the able banker must be able to appreciate, and assess that risk (Mather, 1955).

The assumption and management of risk is the very essence in the banking business. Risk asset management is an art or science or indeed a judicious mix of both, could form the subject of an interesting of conclusive debate. There could however, be little argument to whether or not risk taking and risk asset management in banking requires the deployment of special skills and judgment. For it is in this field that banking ability of the individual or the organization is most critically tested (Mamman, 2004).

In most recent years, there have been tremendous changes in the banking industry. The traditional skills of individual customer credit risk assessment remain as valid as ever, but today risk managers must employ new techniques and have a wider perception of risk taking (Nwankwo 1990). The modern banker must be a businessman on a broader sense, coping with all the risk associated with managing a business enterprise in a rapidly evolving market place. Risk enters

into many aspect of the management of banking business, at board and executive management levels, there is the ultimate responsibility of ensuring the protection and remuneration of organizations capital base with all the associated decisions and the timing of the amount of external funding.

The crux of the Basel II Accord in modeling credit risk is classifying the credit risk exposure of each lending activity in terms of appropriate risk weights. Within the current generation of credit risk models, banks employ either of two conceptual definitions of credit loss, termed the Default Mode (DM) paradigm or the Mark-to-Mark (MTM) paradigm. The DM models consider only two states of the world: default and no-default. In contrast, the MTM models allow for credit upgrades and downgrades as well as defaults in estimating loan value losses and gains and hence capital reserves. On an average, the DM models are more popular and convenient in terms of usage.

Within the DM paradigm, a credit loss arises only if a borrower defaults within the planning horizon. For instance, for a standard term loan, in the absence of a default event, no credit loss would be incurred. However, in the event that a borrower defaults, the credit loss would reflect the difference between the bank's credit exposure (the amount it is owed at the default) and the present value of future net recoveries (cash Payments from the borrower less workout expenses). There are several examples of DM Models. These are, Credit Risk Plus, Moody's KMV/structural model and Credit Portfolio View (can be used as either a MTM or DM model). Interestingly, within the class of DM models one may also classify the discriminate analysis models.

Coming back to specific models, in Credit Risk Plus, default is modeled as continuous variable with a probability distribution. In effect, under credit risk plus, small business loans and mortgages can be thought of as independent events, with a small probability of default, with each loan's probability of default being independent on others loans. This assumption makes the defaults probabilities of a loan portfolio resemble a Poisson distribution. Moody's KMV uses this theoretical framework to predict default and arrive at the expected default frequency (EDF) of the firm. The starting point of the analysis is the proposition that when the value of a firm's assets falls below a threshold level, the firm defaults. The Value-at-Risk (VaR) analysis use asset returns distributions and predicted return parameters to estimate potential portfolio losses (David 1997). In such a framework, provision for credit losses should cover expected losses.
In Credit Portfolio View, the probability of default is estimated by using simulated values of macroeconomic variables. The idea in these classes of models

is to explicitly factor in the impact of business cycles on the probability of default for each class of borrowers. The Credit Metrics model is familiar to econometricians as an ordered probit model. Credit events driven by movements in underlying unobserved latent variables. The latent variables are assumed to depend on external risk factors. Common dependence on the same risk factors gives rise to correlations in credit events across obligors. Another approach to MTM modeling is through reduced form models. The logic of this approach is to predict PD based only on the prices of the firm's traded liabilities. These models do not depend on the balance sheet structure of the company and, hence, are commonly referred to as "reduced form" models. These models essentially find the probability of default from the term structure of yield spreads between risk-free and risky corporate securities.

Several model of the banking firm have been developed to deal with specific aspects of bank behaviors but none is acceptable as descriptive of all bank behavior. Although, the portfolio theory approach plays an important role (Clark, 1986). According to the portfolio balance model of asset diversification, the optimum holding of each asset in a wealth holders portfolio is a function of policy decisions determined by a number of factors such as the vectors of rates of return on all assets held in portfolio, a vector of risks associated with ownership of each financial assets and the size of the portfolio (Agu, 1992). It implies portfolio diversification and the desired portfolio composition of commercial banks are results of decisions taken by the bank management. Further, the ability to obtain maximum profit depends on the feasible set of assets and liability determined by the management. In accordance to the portfolio theory, many studies have introduced some useful variable in the profit function of commercial banks, below is a brief review of the ones relevant to the formulation of the model in the present study.

Sinkey (1975) used multiple discriminate analyses to empirically identify the features of problem banks. He postulated that there are several factors, both financial and operation, which might be used to diagnose possible problems in a bank's performance. The factors are assets composition, loan characteristics, capital adequacy, sources and uses of revenues, efficiency and profitability. Several others have attempted to identify the characteristics of high-performance banks. Ford and Olson (1978) asserted that the elements beyond the control of management contribute modestly in the banks rate of return. They reported that financial determinants of high performances banks are: interest on deposits, gross loans to total deposit, gross charge-off to loans, municipal bonds, securities income to securities, payroll expenses to employees, overhead to earnings assets,

operating expenses to earning assets, loan loss proving to earning assets, loan income to gross loans, interest on deposits to time and saving deposits. Similar variables are included in the model of banks performance used by Baker (1978).

Ali-Abdula (1994) on the other hand, using two accounting measures of banks performance (return on assets and return on equity) in Bahrain commercial banks found out that the gulf crisis, loan to deposit ratio, operating costs, and bank size are inversely related to the low measures of performance, whereas a two bank concentration ratio, loan to total assets ratio, individual deposits to total ration and government ownership in bank's stock are directly related to the bank's profitability. Similar variables were included in a simple correlation analysis used by Agu (1992). Therefore the portfolio theory approach was used in line with some accounting ratios which incorporated CAMELS model in this study.

3.1 Methodology

The population of this study is made up of all the listed deposit money banks operating in Nigeria as at 31st December, 2014. For the purpose of achieving the main objective of this study, only one (1) of the oldest existing and profitable bank was selected, which is First Bank of Nigeria Plc. due to the pivotal roles it have been playing in the Nigeria financial sector. The study utilized secondary data extracted from the annual reports of First Bank of Nigeria Plc., which was subsequently analyzed using simple descriptive statistics of mean, standard deviation, t value and p value through Statistical Packages for Social Sciences (SPSS). The CAMELS model is an acronym for Capital Adequacy, Asset Quality, Management Quality, Earnings Potential, Liquidity and Sensitivity to Market Risk which are determined as explained below.

Capital Adequacy: This is the ratio of capital to risk-weighted assets. It is defined as Equity capital – Fixed Assets/Total Loan + Securities (CAR). A sound capital base strengthens confidence of depositors.

Asset Quality: This is the ratio of non-performing loans to total loans. The gross non-performing loans to gross advances ratio is more indicative of the quality of credit decisions made by bankers. It is given as Earnings before Income Tax/Productive Assets (EBTPA) Higher ratio is indicative of poor credit decision-making.

Management: This is the ratio of non-interest expenditures to total assets which can be one of the measures to assess the working of the management. It is defines as Net Income/Total Asset (ROA). This variable, which includes a variety of

expenses, such as payroll, workers compensation and training investment, reflects the management policy stance.

Earnings: It can be measured as the return on asset ratio and calculated Earnings After Tax/Operating Income or sales.

Liquidity: Cash maintained by the banks and balances with central bank/total asset ratio (TLTA) is an indicator of bank's liquidity. In general, banks with a larger volume of liquid assets are perceived safe, since these assets would allow banks to meet unexpected withdrawals.

Sensitivity to Market Risk: This is measured by Market Price per Ordinary Equity share/Earnings per Share (PE)

4.1 Result and Discussion

The result and discussion for this paper is based on the data below.

Capital Adequacy

Description	2010	2011	2012	2013	2014
Equity – Fixed Asset	13727	30800	271194	264727	307703
Total loan – Securities	175657	147708	344372	532966	700338
Percentage	7.81	20.85	78.75	49.67	43.94

Assets Quality

Description	2010	2011	2012	2013	2014
EBIT	16128	22097	38020	46110	31491
Total Asset	47253	46708	68453	86327	99167
Percentage	34.13	47.31	55.38	53.41	31.76

Management Efficiency

Description	2010	2011	2012	2013	2014
Net Income	14069	16371	30473	35074	26936
Total Asset	47253	46708	68453	86327	99167
Percentage	29.77	35.05	44.39	40.63	27.16

Earnings Management

Description	2010	2011	2012	2013	2014
NPAT	14069	16371	30473	35074	26936
Sales	61243	79299	130600	185189	207524
Percentage	22.97	20.64	23.33	18.94	12.98

Liquidity Management

Description	2010	2011	2012	2013	2014
Cash (CBN)	49444	60881	88302	140353	74894
Total asset	47253	46708	68453	86327	99167
Percentage	1.05	1.30	1.27	1.63	0.76

Sources: Annual Reports for the various years

The bank capital adequacy shows that 2010, 2011, 2012, 2013 and 2014 has 7.81%, 20.85%, 78.75%, 49.67% and 43.94% respectively. 2012 and 2013 recorded the highest and lowest growth with 2010, 2011 and 2014 has lowest capital adequacy in that order. Asset quality revealed that: 34.13%, 47.31%, 55.38%, 53.41% and 31.76% for 2010 through 2014 respectively. The highest been 2012 while lowest was 2014 respectively. The asset quality of this bank has average of 44.40% within the period under considerations.

Management efficiency shows that 2010 through 2014 has the followings ratios 29.77%, 35.05%, 44.39%, 40.63% and 27.16% respectively. The cumulative `mean stood at 27.4%. Earning quality maintained the trend as follows: 22.97%, 20.64%, 23.33%, 18.94% and 12.98% in 2010, 2011, 2012, 2013 and 2014 respectively with an average of 12.77% for the period under consideration. The liquidity ratio maintained with CBN revealed that, 105%, 130%, 127%, 163% and 76% for 2010, 2011, 2012, 2013 and 2014 respectively with an average of 120.2% for the period under review. Results from the simple descriptive statistic of mean, standard deviation, t value and p value are presented in the table below:

Various ratio measuring CAMELS from 2010-2014

Variable	Mean	Std. Deviation	T. Value	P. value
Capital Adequacy	40.2040	27.44679	3.275	0.031
Asset Quality	44.590	11.11615	8.977	0.001
Management Efficiency	35.400	7.20920	10.780	0.000
Earnings Management	19.760	4.11577	10.550	0.000
Liquidity	1.2020	0.32244	8.336	0.001

Source: SPSS Result

Capital Adequacy ratio measure the overall financial condition of banks and also the ability of management to meet the need of additional capital. The mean value of capital adequacy of First Bank stood at 40.2040 and the standard deviation stood at 27.44679 suggesting the bank is sufficient in its capital adequacy. The t value of 3.275 with p value of 0.013 further substantiate the result is significance at 5% significant level. This analysis confirmed that the bank under consideration is efficient in maintaining its capital adequacy.

The quality of assets is an important parameter to gauge the strength of bank. The prime motto behind measuring the asset quality is to ascertain the component of non-performing assets as a percentage of the total assets. This indicates what types of advances the bank has made to generate interest income. The mean of asset quality of the bank was 44.5980 while the standard deviation stood at 11.11615 indicating a healthy development in regards to the asset quality management. The t value was 8.971 and p value was 0.001 shows a significance result at 5% significant level. This result show strong indication that bank has insignificance non-performing asset.

Management efficiency is another important element of the CAMEL model. This ratio involves subjective analysis in measuring the efficiency and effectiveness of management. The management of the bank takes crucial decisions depending on its risk perception. The mean of management efficiency was 35.400 while, the standard deviation was 7.20920. This means that the bank is generating sufficient income from lending operation as a percentage of the total income generated by the bank under the periods under consideration. The t value was 10.780 with p value of 0.000 suggesting that the management is quite efficient as this result shows high significance.

The quality of earnings is a very important criterion that determines the ability of a bank to earn consistently. It basically determines the profitability of bank and explains its sustainability and growth in earnings in future. The mean value of earnings quality was 19.760 and standard deviation was 4.11577 showing good performance. The t value of 10.550 and p value of 0.000 added significance credence to bank earnings quality.

The mean in term of liquidity management of the bank under consideration stood at 1.2020 with standard deviation of 0.032244 suggesting the bank liquidity management is reasonably sufficient. The t value of 8.336 and p value of 0.001further assure the stability in the liquidity position of the bank.

5.1 Conclusions and Recommendations

Camels' model provides a measurement of banks current overall financial, managerial, operational, and compliance performance. The study revealed that the bank excelled in promoting the interest of creditors in maintaining sufficient capital adequacy for the period under review. The bank proved to be good in asset quality and management of efficiency is quite encouraging as it proved to be good in profit per employee perspective. Also, the earnings quality of the bank was equally found commendable as it does not give room for doubt or entertaining

fear by the depositors, while the liquidity management revealed significance improvement which is an indication that the bank is in healthy financial state.

Furthermore, the study revealed that all the explanatory variables have significant impact on the risk asset management in the banking industry since adequate and efficient risk asset management strategies play significant role in evaluating banks profitability. The findings of this study lend weight on the argument that inadequate risk asset management is very detrimental to the performance of banking industry. It also goes to say that inadequate risk asset management affects the bottom line negatively and thus loss of the existing and potential customers' confidence. Banking industry deals with liquid cash and their sensitivity to the management of this liquid is very important if they should survive in the global financial corridor. The study posit that in the wake of banking crises, there is the need for managers of the financial institution with particular reference to the banking industry to be up and doing in their credit policy process. It is recommended that aggressive credit policy should be put in place to ensure that all loans are recovered within the time frame and the current risk management policy should be maintained or better still improved upon

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