

Risk Management and Financial Performance of Banks in Nigeria

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Abstract

Risk management issues in the banking sector do not only have greater impact on bank performance but also on national economic growth and general business development. The bank's motivation for risk management comes from those risks which can lead to underperformance. This study focuses on the association of risk management practices and bank financial performance in Nigeria. Secondary data sourced was based on a 4year progressive annual reports and financial statements of 10 banks and a panel data estimation technique adopted. The result implies an inverse relationship between financial performance of banks and doubt loans, and capital asset ratio was found to be positive and significant. Similarly it suggests the higher the managed funds by banks the higher the performance. The study concludes a significant relationship between banks performance and risk management. Hence, the need for banks to practice prudent risks management in order to protect the interests of investors.

Keywords: *risk management, credit risk, financial distress, reputable risk, bank performance.*

Introduction

Financial crisis has not only rocked big economies of the world but developing economies have been badly affected. Many financial institutions have either collapsed and or are facing near collapse because of badly functioned subprime mortgage lending to firms and people with bad and unreliable credit. Banking crises in Nigeria have shown that not only do banks often take excessive risks but the risks differ across banks. Most banks quality of assets have deteriorated as a result of significant dip in equity market indices. The CBN governor in 2009 maintained that some banks were faced with liquidity constraints. Thus their activities were reduced because of their response to the perceived risk of lending to each other making profits and returns to suffer. This led not only to liquidity and credit shortages and a significance loss of public confidence in banks; but also contagion the entire financial system and the economy.

The fact is that banks have a dominant position in developing economic financial systems and are engines of economic growth (King and Levine, 1993; Levine, 1997).

The lessons learnt from financial crisis are to open awareness of the government and business etc. People on the important role of implementing good risk management in Nigeria. Thus, as a way out of the tide, the CBN on July 6 2004 introduced measures to make the entire banking system a safe, sound and stable environment that could sustain public confidence in it (Owojori et al, 2011). According to the then CBN Governor, it is now time to set up a structure that creates a strong base relative to the kind of economy we are operating where banks become channels to do proper intermediation (The Obasanjo Economic Reforms on the Banking sector, 2005).

Hence, a 13-point agenda to stabilize the base of the banking sector was put in place from which a compulsory recapitalization requirement of N25billion for a commercial bank operating a Nigeria is required to possess.

Though, the Nigerian banking sector has been undergoing continuous reform process since 1999 directed at improving the capacity and health of the Nigeria banks. The first major exercise was the assessment of the risk asset quality of banks which led to the removal of eight CEOs and the injection of N600 billion into the banks (BGL 2010) in order to get the banks to lend again.

However, this economic bail out provide the banks with cash and capital, the banks need to strengthen themselves for future success and a way out is an entrenchment of sound risk management framework.

In Nigeria, the financial sector is at its infancy undergoing series of reforms because many of the bank have not been able to establish firm risk management framework particularly credit risk management in order to prevent unfavourable events.

This study seeks to examine the effect of risks management on the financial performance of Nigerian banks. The focus of risk management in quantitative view lies on improving the measurement and management of specific risks such as liquidity, market, and credit risks. Earlier on, literature on risk management focused on single types of risk while missing out on the interdependence of other risk (Miller, 1992), and it was only on the 1990s that academic literature started to focus on an integrated views of risk management (Cumming and Mirtle, 2001; Microlis and Shaw, 2000; Miller, 1992; Nocco and Stutz, 2006; Sabeto, 2010).

Literature Review

Risk is defined as something happening that may have an impact on the achievement of objectives, and it includes risk as an opportunity as well as a threat (Audit Office, 2000). The nature of banking business contains an environment of high risk. So risky in the sense that it is the only business in where proportion of borrowed funds is far higher than the owners equity (Owojori et al., 2011). The banking business in comparison to other types of human endeavour is entirely exposed to risks. Banks no longer simply receive deposits and make loans, they also operate in a rapidly innovative sector with a lot of pressure mount for profit which urges them for continuous product or service development to cross-sell and up sell to satisfy customers. Risks are much more complex and now since one single activity can involve several risks. Risks contain risks (Luy, 2010).

Banking risks are classified into credit risk, market risk, and operational risk (Basel Committee on Bank supervision). However, Santomero, (1997) identify six types of risks - systematic or market risk, operational risk, and legal risk. Crouhy, Galai and Mark (2006) also made another classifications of bank risk to include market risk, credit risk, liquidity risk, operational risk, legal risk, business risk, strategic risk, and reputation risk. Thus, the researchers main focus is the effect of risk management practices of Nigeria banks typified by liquidity, credit and capital risks on their financial performance. This is in line with Santomero, (1997) who maintains that the banking industry has long viewed the problem of risk management as the need to control four of the above risks which make up most, if not all, of their risk exposure viz credit, interest rate, foreign exchange and liquidity risk. While the banks recognize counterparty and legal risks, they view them as less central to their customers, and where counterparty risk is significant, it is evaluated using standard credit risk procedures, and often within the credit department itself.

Credit Risk

Credit risk arises whenever a lender is exposed to loss from a borrower, counterparty, or an obligator who fails to honour their debt obligation as they have contracted (Luy, 2010). According to Colquitt (2007), this loss may derive from deterioration in the counterparty's credit quality, which consequently leads to a loss to the value of the debt, or according to Crouhy, et al., (2006), the borrower defaults when he is willingly to fulfill the obligations.

Credit failures in banks is not new or a rare occurrence, they affect their liquidity position as well as cash flows and profits. Hence, Greuning and Bratanovic (2009) maintain that it is a biggest threat to any bank performance and the principal cause of bank failures.

According to Owojori et al., (2011), available statistics from liquidated banks clearly showed that inability to collect loans and advances extended to customers and creditors or companies related to directors or managers was a major contributor to the distress of liquidated banks in Nigeria. When this occurred, a number of banking licenses were revoked by the CBN. As NDIC reports of various years indicate, many banks had their ratios of performing credits that were less than 10% of loan portfolios.

Market Risk

This is the risk of asset valued change associated with systematic factor. According to Santomero (1997), market risk by its nature can be hedged but cannot be diversified away completely. Two market risks that ate of concern to the banking sector are interest rates and relative value of currencies. The banking operation is solely dependent on these as it impact on performance. For instance most banks track interest rate risk closely. They measure and manage the firm's vulnerability to interest rate variation as well.

Liquidity Risk

According to Santomero (1997), liquidity risk can be described as the risk of a funding crisis, such as unexpected event in the form of large charge off, loss of confidence, or a crisis of national proportion like existency crisis. Risk management here centres on liquidity facilities and portfolio structure. Recognizing liquidity risk leads the banks to recognize liquidity itself as an asset, and portfolio design in the face of illiquidity concerns as a challenge.

It is very important at this juncture to talk on the need for risk management. The standard economic theory maintain that managers are suppose to maximize their expected profit without regard to the variability around its expected value. However, Santomero (1995) listed four distinct rationale for risk management. These are managerial self-interest, the non-linearity of the tax structure, the cost of financial distress, and the existence of capital market in perfection.

Risk Management Procedures

The management of the banking firm relies on a sequence of steps to implement a risk management system. Santomero (1997) identify four sequential steps to implement a risk management system. These can be seen as containing the following four parts:

- (i) Standards and reports,
- (ii) Position limits or rules,
- (iii) Investment guidelines or strategies,
- (iv) Incentive contracts and compensation.

In general, these tools are established to measure exposure, define procedures to manage these exposures, limit individual positions to acceptable levels, and encourage decision makers to manage risk in a manner that is consistent with the firm's goals and objectives. To see how each of these four parts of basic risk management techniques achieves these ends, we elaborate on each part of the process below. In Section IV we illustrate how these techniques are applied to manage each of the specific risks facing the banking community.

(i) Standards and Reports

The first of these risk management techniques involves two different conceptual activities, i.e., standard setting and financial reporting. They are listed together because they are the *sine qua non* of any risk system. Underwriting standards, risk categorizations, and standards of review are all traditional tools of risk management and control. Consistent evaluation and rating of exposures of various types are essential to understand the risks in the portfolio, and the extent to which these risks must be mitigated or absorbed. The standardization of financial reporting is the next ingredient. Obviously outside audits, regulatory reports, and rating agency evaluations are essential for investors to gauge asset quality and firm level risk.

These reports have long been standardized, for better or worse. However, the need here goes beyond public reports and audited statements to the need for management information on asset quality and risk posture. Such

internal reports need similar standardization and much more frequent reporting intervals, with daily or weekly reports substituting for the quarterly GAAP periodicity.

(ii) Position Limits and Rules

A second technique for internal control of active management is the use of position limits, and/or minimum standards for participation. In terms of the latter, the domain of risk taking is restricted to only those assets or counterparties that pass some prespecified quality standard. Then, even for those investments that are eligible, limits are imposed to cover exposures to counterparties, credits, and overall. The recent fiasco at Barings is an illustration of this point.

position concentrations relative to various types of risks. While such limits are costly to establish and administer, their imposition restricts the risk that can be assumed by any one individual, and therefore by the organization as a whole. In general, each person who can commit capital will have a well-defined limit. This applies to traders, lenders, and portfolio managers. Summary reports show limits as well as current exposure

by business unit on a periodic basis. In large organizations with thousands of positions maintained, accurate and timely reporting is difficult, but even more essential.

(iii) Investment Guidelines and Strategies

Investment guidelines and recommended positions for the immediate future are the third technique commonly in use. Here, strategies are outlined in terms of concentrations and commitments to particular areas of the market, the extent of desired asset-liability mismatching or exposure, and the need to hedge against systematic risk of a particular type. The limits described above lead to passive risk avoidance and/or diversification, because managers generally operate within position limits and prescribed rules. Beyond this, guidelines offer firm level advice as to the appropriate level of active management, given the state of the market and the willingness of senior management to absorb the risks implied by the aggregate portfolio. Such guidelines lead to firm level hedging and asset-liability matching. In addition, securitization and even derivative activity are rapidly growing techniques of position management open to participants looking to reduce their exposure to be in line with management's guidelines.

(iv) Incentive Schemes

To the extent that management can enter incentive compatible contracts with line managers and make compensation related to the risks borne by these individuals, then the need for elaborate and costly controls is lessened. However, such incentive contracts require accurate position valuation and proper internal control systems. Such tools which include position posting, risk analysis, the allocation of costs, and setting (Jensen and Meckling (1976), and Santomero, (1984).

Risk Management and Bank Performance

A major objective of bank management is to increase shareholders' return epitomising bank performance. The objective often comes at the cost of increasing risk. Bank faces various risks such as interest risk, market risk, credit risk, off balance risk, technology and operational risk, foreign exchange risk, country risk, liquidity risk, and insolvency risk (Tandelilin et al, 2007). The bank's motivation for risk management comes from those risks which can lead to bank underperformance.

Issues of risk management in banking sector have greater impact not only on the bank but also on the economic growth (Tandelilin et al, 2007). Tai (2004) concludes that some empirical evidence indicates that the past return shocks emanating from banking sector have significant impact not only on the volatilities of foreign exchange and aggregate stock markets, but also on their prices, suggesting that bank can be a major source of contagion during the crisis.

Banks which better implement the risk management may have some advantages: (i) It is in line with obedience function toward the rule; (ii) It increases their reputation and opportunity to attract more wide customers in building their portfolio of fund resources; (iii) It increases their efficiency and profitability. Cebenoyan and Strahan (2004) find evidence that banks which have advanced in risk management have greater credit availability, rather than reduced risk in the banking system. The greater credit availability leads to the opportunity to increase the productive assets and bank's profit.

Methodology

Empirical Investigation and Methodology

Data for this study consists of annual observations on 10 Nigeria banks between 2006 and 2009. The data was obtained from annual reports and financial statement of the banks. Because the data contains information on cross sectional units observed over time, a panel data estimation technique is adopted. This allows us to perform statistical analysis and apply inference techniques in either the time series or the cross-section dimension. The model takes the form:

$$Y_{it} = \alpha_0 + \beta_{it} X_{it} + e_{it} \quad (1)$$

Where $i = 10$ cross sections and periods $t = 2006 \dots 2009$. Y_{it} is a dependent variable which represents bank profitability measured by the return on equity (ROE), and return on asset (ROA) and X_{it} is a vector of the independent variables which represent liquidity, credit, and capital risks. These variables are cost of bad and doubt loans, non performing loan and liquidity. Other variables include managed funds, equity-total asset ratio, equity-loan ratio and debit-equity ratio. They have been selected on the basis of their potential relevancy to this model, and because of their importance in depicting a bank's real financial position. Some of the independent variables will vary over time and cross sections, whereas others will only vary across sections.

The intercept α_i varies across banks to capture the specific effects for each country. In what follows we discuss the three broad explanatory variables of the model.

RESULTS AND DISCUSSION

The results of the estimations are presented in Table 1 and 2. The correlation matrix of the variables included the model is presented in Table 1. The correlation result showed that all variables display considerable variation between banks justifying the use of panel estimation techniques. The diagnostics statistics such as F-statistics and likelihood ratio indicates that the model is fit. In the first model where return on capital employed (ROCE) was used as dependent variable, cost of bad loan was found to be a negative but significant (5%) influence of bank performance. The result implies an inverse relationship between financial performance of banks measured by ROCE and cost of bad and doubt loans. However, Capital asset ratio measured by debit-equity ratio was found to be positive and significant (5%). This indicates a direct relationship between the two variables. Similarly, managed funds was found to be positive and significant (5%) suggesting that the higher the managed funds by banks, the higher the performance of banks in Nigeria. Similar results were obtained when return on capital asset (ROA) and return on equity (ROE) was used as dependent variables.

Correlation matrix of the variables

	roce	roae	roaa	costof~s	lnnpl	liquid~y	careqla	carder	careqta	manage~d
roce	1.0000									
roae	0.8327	1.0000								
roaa	0.3188	0.4076	1.0000							
costofbada~s	-0.2577	-0.2398	-0.2657	1.0000						
lnnpl	0.4138	0.3855	0.2102	0.4673	1.0000					
liquidity	0.2896	0.3411	0.3412	-0.0053	0.5421	1.0000				
careqla	0.2123	0.2199	0.4608	-0.1021	0.5025	0.6707	1.0000			
carder	0.5701	0.6585	-0.0509	0.2357	0.4702	0.1980	-0.0742	1.0000		
careqta	-0.0191	-0.0621	0.4530	0.1675	0.5098	0.3920	0.6805	-0.3649	1.0000	
managedfund	0.6365	0.5851	0.2465	-0.1862	0.3284	0.1642	0.1824	0.3547	0.0229	1.0000

Table 2. Risk and financial performance of banks (2002-2009)

	ROCE		ROA		ROE	
	N	Standard error	N	Standard error	N	Standard error
Cost of bad and doubt loan	-1.86683*	.5679331	-1.86694*	.6002324	-1.820155	.5979705
Nonperforming loan	.8718109	.798142	.8719665	.8871372	-.1905582	.840355
Liquidity	-.003266	.0465702	.053702	.0570176	.0272605	.0490333
Capital asset ratio						
Equity-loan asset	-4.562367	8.115913	-3.236041	8.707474	-2.799316	8.545156
Debt equity ratio	1.116239*	.4328398	1.775872*	.4419879	1.978411*	.4557323
Equity-total asset	19.67573	24.34957	30.05555	27.80815	40.32142	25.63739
Managed fund	3.163869*	1.414077	5.644284*	1.928017*	2.878907	1.488866
Constant	.733131	3.04999	-.9693843	3.270061	1.25479	3.211301

*, indicates significant at 5%

Conclusion

This study shows that there is a significant relationship between bank performance and risk management. Better risk management in terms of managed fund, reduction in cost of bad and doubt loans and debt equity ratio results in better bank performance. Thus, it is of crucial importance that banks practice prudent risk management and safeguarding the assets of the banks and protect the investors' interests.

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