The effects of financial risks on financial performance of commercial banks in Nigeria

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LIST OF ABBREVIATIONS

ROA	Return on Asset
ROE	Return on Equity
OE	Operational Efficiency
NIM	Net Interest Margin
CBN	Central Bank of Nigeria
NDIC	Nigerian Deposit Insurance Corporation
FSR	Financial Stability Reports
CR1	Credit Risk-1
CR2	Credit Risk-2
LR	Liquidity Risk
OR	Operational Risk
MR	Market Risk
GDP	Gross Domestic Product
IMF	International Monetary Fund
BCBS	Basel Committee on Banking Supervision

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Kesan Risiko Kewangan Keatas Prestasi Kewangan Bank Komersial di Nigeria

ABSTRAK

Kajian ini menyelidik kesan risiko kewangan keatas prestasi kewangan bank-bank komersial terpilih di Nigeria. Hasil kajian semasa dalam hubungan risiko kewangan dan prestasi kewangan di Nigeria memberikan keputusan yang berbelah bahagi dan tidak konklusif, lagi pula fokus mereka tertumpu kepada komponen risiko kewangan secara individu, tidak menyeluruh. Data daripada laporan kewangan teraudit 16 (enam belas) buah bank terpilih yang tersenarai di bursa saham Nigeria telah dikumpulkan selama tempoh 7 tahun (2009 hingga 2015), memberikan sejumlah 112 cerapan. Pendekatan panel data diguna pakai dalam kajian model analisis berdasarkan langkah berikut: ujian unit punca; ujian Hausmann terhadap pilihan kesan rawak atau tetap; dan pengujian hipotesis. Kajian ini menggunakan perisian, Stata versi 13 untuk tujuan analisis. Angkubah bersandar digunakan dalam kajian ini terdiri daripada prestasi kewangan bank melalui proksi pulangan keatas asset; keefisienan operasi; dan marjin faedah bersih; sementara angkubah tak bersandar terdiri daripada risiko kewangan yang berproksikan risiko operasi; risiko kredit; risiko kecairan; dan risiko pasaran. Angkubah terkawal yang digunakan dalam kajian ini termasuklah saiz bank dan kadar pertumbuhan KDNK. Berdasarkan analisis kesan rawak pada model, risiko kredit-1 (CR1) ternyata memberikan kesan negatif yang signifikan keatas pulangan keatas asset (ROA) dan marjin faedah bersih (NIM), memberi cadangan bahawa semakin rendah risiko kredit-1 (CR1), maka prestasi bank dalam terma ROA dan NIM menjadi lebih baik. Risiko kredit-2 (CR2) dan risiko pasaran juga memberikan impak positif yang signifikan keatas NIM, memberikan cadangan bahawa semakin kecil risiko kredit-2 (CR2) dan risko pasaran, maka semakin bagus prestasi bank dalam terma NIM. Analisis kajian ini juga mendapati bahawa risiko kecairan bukanlah merupakan determinan atau faktor penting kepada prestasi kewangan dalam sektor perbankan komersial di Nigeria, berbanding dengan risiko operasi. Dalam analisis kesan tetap, didapati bahawa risiko operasi dan risiko pasaran mempengaruhi keefisienan operasi (OE) secara signifikan dan positif, memberikan cadangan bahawa kenaikan risiko operasi dan risiko pasaran akan meningkatkan prestasi bank dalam terma OE. Dengan itu, hasil kajian memberi implikasi bahawa bank komersial haruslah mengguna pakai pendekatan pengurusan yang proaktif untuk penambah baikan pengurusan risiko dalam usaha memaksimumkan prestasi kewangan. Kajian ini juga memberikan cadangan bahawa kajian lanjutan perlu dilakukan dengan merujuk kepada hubungan di antara risiko kewangan dengan prestasi kewangan melibatkan sektor lain dalam ekonomi melalui siri masa atau perbandingan antara negara.

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The Effects of Financial Risks on Financial Performance of Commercial Banks in Nigeria

ABSTRACT

This study investigates the effects of financial risks on financial performance of selected commercial banks in Nigeria. The existing researches on financial risk and financial performance relationships in Nigeria are sketchy and inconclusive as well as they are more focus on individual financial risk components. Data on audited financial reports of the selected sixteen (16) commercial banks listed in the Nigerian stock market have been collected for the period of 7 years (2009-2015), making up to 112 data observations. Panel data approach is employed in the study for the analytical model with the following steps: unit root test, Hausman test for random or fixed effect choice and hypothesis testing. The study use software, Stata version 13 for the analysis. The dependent variables in this study comprise of bank financial performance proxy by return on asset; operational efficiency; and net interest margin, while the independent variables consist of financial risk proxy by operational risk; credit risk; liquidity risk; and market risk. The controlled variables used in this study include bank size and GDP growth rate. Based on random effect analysis on the model, credit risk-1 (CR1) has a negative significant effect on return on asset (ROA) and net interest margin (NIM), suggesting that the lower credit risk-1, is the better the bank performance in terms of ROA and NIM. Credit risk-2 (CR2) and market risk also has a positive significant impact on NIM, suggesting that the lower credit risk-2 and market risk, is the better the bank performance in terms of NIM. The analysis also found that liquidity risk is not important determinant to the financial performance of commercial banking sector in Nigeria, as compared to operational risk. In fixed effect analysis, operational risk and market risk significantly affect operational efficiency (OE) positively, suggesting that the higher operational risk and market risk, the better the bank performance in term of OE. Hence, the findings recommend that commercial banks should adopt proactive approaches to improve risk management in order to maximize financial performance. The study contributes to the understanding of the relationship between financial risk and financial performance, evidently useful for policy makers and future researchers as referral. The study also suggests that future research might possibly examine the nexus between financial risks and financial performance with regards to other sectors of the economy and across countries comparison.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

The commercial banks are the most dynamic financial intermediaries that perform crucial financial functions in diverse economies of the world; they engage in risk transfer, deals with complex financial instruments and markets, provide market transparency, offer a payment mechanism in its operations, match supply and demand in financial markets and also perform risk management functions. Despite the fact that new opportunities for commercial banks have opened up, especially in product development, market penetration strategy and provision of bundles of different services, they have also brought with it new risks as well, which banks are expected to manage and overcome (Kenny, Jumoke, & Faderera, 2014). The strength of the banking system is an essential pre-requisite to ensure the economic growth of any country and its long-term sustainability, because as financial intermediaries with complex functions, banks play a crucial role in the operation of most economies (Halling and Hayden, 2006) cited in (Arif & Anees, 2012). Besides, any economies that have a versatile banking sector will be able to withstand negative shocks and contribute to the stability of the financial system and hence; insolvencies of banks can result in a systemic crisis (Athanasoglou, Brissimis, & Delis, 2008). Apart from the key functions performed by banks, taking risks is an inherent element and these constraints could hinder a bank's capability to conduct its business or take advantage of opportunities that would enhance its business (Aleksandar, 2015).

Therefore, the management of risk in the financial institutions is not simple, for two reasons. First, the implications of poor management of financial risks can have

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significant impacts for a wider number of stakeholders, including shareholders, employees, the national and local economies (Holmes, 2002). And second, the nature of risks within the organizations is far more complex than the simple risks we have to manage as individuals (Holmes, 2002). For that reason, modern financial corporations have need of essential skill in managing its inherent risk, thus, the rewards can be great for institutions who manage its risk well (Holmes, 2002). Obviously, it is widely believed that risk and bank failure has been a subject of debate in recent times, and has sparked the interest of many researchers for the past few decades. However, the current increase in global trend on banks collapse and financial crises has raised questions as to the efficacy of financial risk on financial performance in the banking sector (Maytham, 2013). It is opined that the objective of any financial institution is to maximize the potential for success and minimize the probability of future losses.

In reality, risks are uncertainties and in the banking sector, such as Nigeria, financial institutions encounter a large number of risks in their operations (Aleksandar, 2015). Financial institutions are cautious in their operations, which often expose them to risk, and the poor management of its risk affects their financial performance, and in extreme cases leads to their failure. The study of Khan and Ahmed (2001) posits that the success and going concern of any financial institutions depend critically on the efficient management of these financial risks. Furthermore, Akkizidis and Khandelwal (2008); Al-Tamimi and Al-Mazrooei (2007) affirms that in order to provide better returns to shareholders; it is highly relevant to implement a good risk management strategy thereby mitigating the adverse effects of loss. For that reason, in management, risk arises when the actual return of an investment is different from expected return, and a fundamental idea in finance is the relationship between risk and return on investment (Stephen, 2015). Thus, the study examines the effects of financial risks on financial performance of

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commercial banks in Nigeria. This chapter discusses the background of the study in relation to its rationale. It also presents the problem statement, the research questions, and the objectives of the study. Optimally, the scope and significance of the study are highlighted, as well as the organization of the study.

1.2 Background of the Study

The relationship between financial risks and financial performance has posed the question, whether there is any contributory relationship between financial risks and performance; and whether financial risk can be identified, measured and controlled while successful financial performance is targeted (Ugoani, 2015). The question arises if financial risk has any effect on financial performance and what should be the nature of that performance. Other obvious question remains, why the necessity for financial risk cognizance which often poses a threat to institutions financial performance in today's world. Ordinarily, risk has a very long history as it can be said to have been in existence like human existence. It has defiled a universal definition as every author's attempt display a different orientation (Kenny *et al.,* 2014).

In fact, a number of businesses in every aspect are faced with a lot of uncertainties in their operations. Due to differences in management, control and exposure, the risk incurred by banks differs from financial to non-financial risk in the present changeable and unstable economic environment (Abdul, Khan, & Nazir, 2012). The big economies of the world were not only affected by the financial crisis, but emerging economies have also been badly affected, as many financial institutions with badly functioned sub-prime mortgage has either collapsed and or are facing near collapse because of lending to firms and people with bad and unreliable credit (Joel, 2012; Kinthinji, 2010). Although banks often take excessive risks, which are the causes of banking crisis in Nigeria, but also

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because of differences in management and operations, the risk appetite across banks differs (Joel, 2012). The past decade has seen dramatic losses in the banking industry, and it has become a major source of concern for the stakeholders in the banking industry with the spate in which banks are failing in Nigeria (Aruwa & Musa, 2014; Ugoani, 2015). The Nigerian commercial banking industry experienced a series of problems right from the early 30s down to the middle of the first decade of the new millennium (Stephen, 2015).

In recent times, some commercial banks have been wound up leaving customers to their fate (Uwuigbe, Uwuigbe, & Oyewo, 2015). It is important to note that the major causes of the winding up of some of these banks is the poor management of their risk, finance and credit. Many of them were writing off huge amounts of debts yearly and also reflected some going-concern issues that related to their management of credit and finance (Uwuigbe *et al.,* 2015). Didactically, in 1930, for instance, 21 banks failed. In 1958 when the Central Bank of Nigeria was founded, about nine banks failed. Still in 1989, about seven banks failed. In 2006, the numbers of banks were reduced to 24 from 87 (Stephen, 2015). As if it is not enough, the number continued to fluctuate from 25 to 24 and so on. The most-recent record of bank failure in Nigeria was 2011 where six banks failed, and three banks were acquired by the Asset Management Corporation of Nigeria (AMCON) and number of banks reduced to twenty (20) (NDIC, 2015). Most recently, two (2) out of the twenty (20) banks in Nigeria failed to meet the minimum prudential capital to risk-weighted asset (CAR) of 10% in 2015 compared to three banks in 2014 (NDIC, 2015). Perhaps this problem is subject to recurrence. The question always is: does it mean that these banks are not managing their risks at all; or is it that they are managing them poorly? It is bewildering indeed when one begins to examine the Nigerian scenario of the financial crises (Stephen, 2015). In view of the exposure of banks in recent years

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to volatile financial risks, it is imperative to examine the effects of financial risk on financial performance of commercial banks in Nigeria.

The Nigerian banking industry has historical concern, and it is said that banking failures in recent years are attributed to a lot of weaknesses as identified in the NDIC (2014) report such as: declining asset quality and attendant large provisioning requirement, inadequate debt recovery efforts, weakness in board and management oversight, inaccurate in financial reporting, poor book-keeping practices, non-performing insider-related facilities, and the significant exposures to the capital market through share loans to individuals and marginal loans to stock broking firms and oil & gas sector as well as frauds attributable to weak internal control systems (NDIC, 2014). The issue addressed in this thesis is whether financial risk, as an important aspect of business, had any effect on financial performance of commercial banks in Nigeria. Basically, the businesses of commercial banks are risky in nature, hence risk-taking is of paramount importance in their day to day operations and indeed returns are in part the reward for successful risk-taking in business. For instance, the non-performing assets are as a result of unfortunate events of the past in the present, risk management system is the proactive action in the present for the future (Kenny *et al.,* 2014; Bessis, 2002; Holmes, 2002). Tafri, Rahman and Omar (2011) noted that effective and efficient management was essential for the sustenance of business growth and continuous profitability and performance of banks. Based on today's tasking economic and financial environment, adoption of a stable risk-return profile is vital in achieving continuous shareholders' value (Tafri *et al.,* 2011).

Therefore, banking services have expanded to include services directed at individuals and risk in these smaller transactions are generally high (Oyedotun, 1994; Tufano, 1996; Philip, 2007; Ugoani, 2010). As such, risk is a threat to the survival and achievement of banks and may be often referred as the systematic or unsystematic risk

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(Wanjohi, 2013). The study of Wanjohi (2013) further opines that systematic risk is the risk that is inherent to the entire market or market segment, and could also be referred to as un-diversified risk while unsystematic risk also known as diversified risk is the risk which is specific to a firm. Diversified risk can be managed through appropriate diversification (Joel, 2012). Hence, banks are often face with the possibility that the financial risk embedded in their daily financial activities could have adverse impacts on profitability (Aleksandar, 2015). Such impact could either result in a direct loss of earnings or erosion of capital or may result in imposition of constraints on the bank's ability to meet its business objectives (Aleksandar, 2015).

The study of Jorion & Khoury (1996) postulate that financial risk arises from possible losses in financial markets due to movements in financial variables. It is usually associated with leverage with the risk that obligations and liabilities cannot be met with current assets. Hence, financial risk may be caused by variation in operations, variation in market prices, default risk and liquidity gap that affects the cash flows, its financial performance and competitive position in product markets (Maytham, 2013; Tafri *et al.,* 2011). For the purpose of this study therefore, the definition according to the study of Amin *et al.* (2014), Ongore & Kusa (2013) was adopted where they define financial risk to imply the probability that the financial activities of banks will result in losses of financial outcome caused by lending, investing, accepting deposits and borrowing. It was documented in the study of Jarrow and Turnbull (2000), Aaron, Armstrong and Zelmer (2012), Aruwa and Musa (2014), FSR (2015), Haneef *et al.* (2012) that the major risks faced by banks are credit, liquidity, operational and market risk. In fact, the study of Kumaran (2012) which was confirmed in Al-Tamimi *et al.* (2015) revealed that the risk common with conventional banks as financial intermediaries are credit, market risk, liquidity risk and operational risk. Therefore, the focus in this study will use the term

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financial risks to broadly cover operational risk, liquidity risk, credit risk, and market risk. It is imperative to take the issue of financial risks very important in the modern day banking, not only for their survival and performance, but also for economic growth and development (Ariffin & Kassim, 2009). The choice of financial risk activities of each institution can be affected by manager's behaviour towards risk (risk appetite and risk aversion) and corporate governance (Wanjohi, 2013). Moreover, Iqbal & Mirahhor (2007) note that a robust risk management framework which supports and sustains the management of financial risks can help banks to reduce their exposure to financial risks, and enhance their ability to compete in the international market.

The business of banks has changed noticeably over the last 15 or 20 years (Calmès 2004). Although deposit taking and lending continue to be key business lines, banks have expanded into other areas, including investment banking and trading, insurance, trusts, brokerage, and mutual funds (Aaron *et al.*, 2012). An important consequence of this shift has been an increase in the exposure of banks to financial markets. As a result, the report of Aaron *et al.* (2012), financial stability report (2015) equally notes that banks like any other business involve taking premeditated risks to generate revenues and are majorly exposed to credit risk, liquidity risk, market risk and operational risk, among others- the risk which may create some source of threat for a bank's survival and success due to the increasing market pressure and underlying complexity in business environment (Jarrow, 2008; Kumaran, 2012). Of course, banking operation requires a lot of risk and numerous risk factors which include market, operational, liquidity and credit risks have been known as important factors in protecting the banks' interests (Ariffin & Kassim, 2009). The study of Diffu (2011) also notes that in assessing bank financial performance, the crisis that affected global financial stability, and the economy in 2007-09 had reinforced the need to rethink some of the approaches adopted by the financial institutions. To this end, it is

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important to obtain a comprehensive view of the key factors such as financial risks which may influence banks' financial performance, including the adequacy of business models in relation to risk appetite, and the question of how this adequacy is handled inside and outside banks through governance processes. Thus, the study will examine the effects of financial risks on financial performance of commercial banks in Nigeria.

1.3 Problem Statement

The nexus between financial risk and financial performance of banks is viewed as an empirical question and thus, the success of banks relative to its financial performance largely depends on the effective management of financial risk, among other things (Ugoani, 2015; Kenny *et al.,* 2014). Besides, there is still no clear consensus on the relationship between financial risks and banks financial performance in Nigeria. Even though it has been measured and conceptualized in many different ways, mostly in developed economies, the link still remains a challenging construct in emerging economies. In other words, there have been several presentations in different fora, these are largely theoretical and not empirical. However, it is not proven as existing studies are sketchy and inadequate because most current studies in Nigeria largely focus on financial risk components separately (credit & liquidity risk), while most of these studies are conducted independently of each other (Kargi, 2011; Kolapo, Ayeni, & Oke, 2012; Olawale, 2011; Aruwa & Naburgi, 2012). These previous studies done in Nigeria are not exhaustive as they generalize the cause of financial performance based on single risk indicator. This studies did not capture the effect of other variables such operational risk, market risk as a component of financial risk.

On the other hand, there is a problem of financial performance in the banking sector in Nigeria as indicated by the poor management of financial risk indicators over

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the last decades. In fact, the banking industry still exhibits low performance in their service delivery and profits, and of particular note is the failure of six banks in 2011, whereby major financial institution undertakes financial commitments involving risks they did not fully understand, later resulting in major losses, liquidation and unexpected write off (Kayode *et al.,* 2015; Ugoani, 2015; NDIC, 2013). Sadly, these have led to numerous re-structuring, reduction and acquisition in the banking sector (reducing the number of banks from 25 to 20) and few other problems identified in the study include, but not limited to, poor management of credit risk (upsurge in non-performing loans & laxity in credit administration), weak internal control system (surging cases of fraud and operational losses, among others) and poor corporate governance and management, which often expose banks to liquidity risk (i.e. non-compliance with laid down procedures) to mention but a few (Ugoani, 2015; Stephen, 2015).

According to Khan and Ahmed (2001), the survival and the success of any financial institutions critically depend on the efficiency in managing its inherent risks. Recently, the net interest margin of the commercial banks in Nigeria has shrunk in the period as a result of the twin problem of falling yields and increase costs of funds in the sector. The NIM decrease from 8.11% in 2013 to 6.16% in 2014 while the efficiency ratio declined from 61% in 2013 to 48% in 2014; furthermore, return on assets and return on equity also declined by 1.70% and 1.76% in 2014 respectively (CBN report, 2014). In view of the significant exposure of banks, the yield on earning assets also declined to 10.71% in 2014 from 13.10% in 2013. Unaudited profit before tax in the banking industry stood at N588.86 billion as at 31st Dec. 2015, representing a decrease of 2.02% over N601.02 billion reported as at 31st Dec. 2014. These poor financial performances have been questioned on several grounds but then, the financial performance of banks also reflect the behaviour of top management and managers in taking on risk. Banks with high

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profitability are less pressured to revenue creation and thus, less constrained to engage in risk credit offerings (Haneef *et al.,* 2012).

At the same time, high level of non-performing loans is more likely to be experienced by inefficient banks. Besides, the poor financial performance of banks often has a consequential effect on their shareholders. Banks (2004) posit that as long as it is cost effective, some risks can as well be retained as part of the fundamental business operations and actively managed to create value for the stakeholders, while others should be transferred elsewhere. Stulz (1996) perceived that banks can as well improve on financial performance as some risks present opportunities through which the firm can acquire comparative advantage. Generally, the review of literature on financial risk seems to suggest that better risk management practices result in improved financial performance of the banks (Olawale, 2011). By linking financial risks and financial performance, commercial banks can more effectively and efficiently understand the value of implementing a sound risk management framework.

A major challenge in the banking sector has been the poor management of credit risk characterized by the inept credit administration. Soludo (2004) States that there are several instances where board members and managerial staff fail to uphold and promote the basic pillars of corporate governance, because they are preoccupied with the attainment of narrowly defined interests (Ugoani, 2015). Some of the issues have been linked to non-compliance with the laid-down procedures resulting in large quantum of non-performing risk exposures, among a host of other problems (NDIC, 2015). In addition, contrary to the provisions of the CBN, the banks had a breach of insider-related facilities as a percentage of their respective paid-up capital. The directors or significant shareholders are restricted to borrowing up to 10 percent of paid-up capital as stated by the Central Bank of Nigeria's regulations, however, there was a bank with insider-credit

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of more than 700 per cent of its paid-up capital in 2014 (CBN report, 2014). Although, there is the general belief that the banking sector in Nigeria is relatively stable presently with individual banks having good risk profiles and sound risk management frameworks, however, the problem of non-performing loans persisted. For example, the ratio of non-performing credit to shareholders' funds deteriorated from 89 percent in 2002 to 108 percent in 2004. This suggests that the non-performing credit portfolio had completely wiped out industry-wide shareholders' funds. In the same vein, increased non-performing loans by 10.26% were reported in 2014, and NPLs volume increased from N363.31 billion in 2014 to N628.54 billion in 2015, implying a high level of poor management of credit risk in the sector (Ayininuola, 2007; Nnamdi & Nwakama, 2011; NDIC, 2015).

Across the banking industry, the banks are inherently vulnerable to liquidity risk because of their fundamental role in the maturity transformation of short-term deposits into long-term loans, makes both of an institution-specific nature and that which affects markets as a whole (Adarkwa, 2011). Nonetheless, bank failure in Nigeria has also been closely linked to human behaviour (i.e. weak management) which often exposes banks to liquidity risk. It has been observed that most of the banks that failed in 2011 suffered from over provision and loan losses with high level of loan concentration in the capital market and oil & gas sector (NDIC report for years). While oil and gas sector accounted for 25.70 per cent or N3.24 trillion of the total credits of N12.63 trillion at end-December 2014, loan recovery in the banking sector declined by 29.21% in 2015 (CBN report, 2015). Therefore, there is a need for proper management and accountability with respect to liquidity risk, which is part of the major causes of bank failure and poor financial performance in Nigeria (Aruwa & Naburgi, 2012).

Operational risk is another risk that seriously dents the financial performance of banks. The Nigerian banking industry has also been strained by the deteriorating quality

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