Credit Diversification Strategy and Financial Performance of Listed Banks at Nigeria Stock Exchange

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Abstract: The main objective of the study was to determine the integrated risk management strategy and financial performance of listed banks at Nigeria Stock Exchange (NSE). Modern portfolio Theory and Financial intermediation Theory were used to expound on the effect of credit diversification strategy and financial performance. Longitudinal cross sectional survey research design was adopted. The study's target population includes all the 28 listed banks at Nigeria stock exchange. Data was collected from 2009 to 2018 for 20 listed banks in Nigeria. The secondary data sources for the period of between 2009 and 2018 were collected from Nigeria Stock Exchange and annual reports and accounts of the listed banks. The data was collected from audited financial statements of listed banks and other relevant internal report. Data collected was subjected to diagnosis tests of normality, autocorrelation, multicollinearity, linearity, homoscedasticity, stationarity, fixed and random effects. Correlation analysis was carried out to establish the relationship between the dependent and independent variables. Generalized Least Squares (GLS) regression analysis model was used to establish the relationship and significance between the study variables. The formulated hypotheses were tested. The study found out that there are positive relationship between integrated risk management strategy and price earnings ratio which is the measure of financial performance of the listed banks at NSE. Based on the findings, the study concluded that Integrated Risk Management Strategies have a significant effect on financial performance of listed banks at NSE. The study recommends that there is need for the listed banks to effectively manage their risk as it was found that risk management positively influence financial performance of listed banks. The study further recommends that there is need for the management of listed banks to constantly check their banks' exposure to credit risk, insolvency risk, and interest rate sensitivity.
Keyword: credit diversification, risk management, financial firm performance

I.   INTRODUCTION

Managers tend to diversify their business to get more benefits from the current market with minimum risk. Globalization provides an opportunity to expand their business across the border for profit maximization. Thus, corporate diversification strategy becomes important for the expansion and growth of firms in competitive and dynamic environments. The objective of corporate diversification is to increase profitability, market share, debt capacity, growth opportunity, risk reduction, and the need to use human and financial resources efficiently (Afza et al. 2008). In the real world, we witness two types of approach and strategy in banks. We know these two approaches as diversification and concentration strategies. On the one hand, in many countries laws limit the bank exposure to a single borrower (Basel, 1991). On the other hand, some banks decide to get involved in the sectors at which they are specialized and in which they feel a competitive advantage (Chen, Wei, Zhang & Shi, 2013).

Diversification strategy is an important component of the strategic management of a firm, and the relationship between a firm's diversification strategy and its economic performance is an issue of considerable interest to managers and academicians (Kotler & Armstrong, 2008). Corporate diversification is one of the fundamental strategic alternatives available to organizations to sustain growth and search for higher profits. The goal of credit portfolio diversification activities is the reduction of risk of borrowers' non fulfillment of their obligations. This is done through allocation of the proceeds of the deposit and non-deposit credits to different groups of customers in new geographical sectors or regions or through introduction of new types of credits (Rose & Hudgins, 2010).

Li and Greenwood (2004) opined that companies whose products are threatened by environmental uncertainty or by declining phase of their life cycle curve will prefer to engage in diversification to overcome the risk arising from current industries.When firms go for diversification, they need extra capital. According to

Lewellen (1971), diversified firms need more debt financing than non-diversified firms. The effective financial structure maximizes the value for shareholders. There are three types of financial structure in finance theory: investing, financing, and dividend policies (Zulkafli et al. 2015). Furthermore, firms may engage in expanding its product line and activities to different sectors where environmental uncertainty is reduced and, profitability is higher, such that a company may confirm its survival which will make its cash flow more reliable.

Claessens and Yurtoglu (2013) explain that a good governance system is beneficial for the firms through better access to finance, good financial performance, and more desirable treatment of stakeholders. Should banks diversify their loans or concentrate on those firms whose business they are familiar with? There are some research works on the relationship between diversification and performance of banks, however there is no consensus so far, because findings of different countries vary, with evidences supporting both opinions. On one hand, traditional banking theory suggests that banks should diversify their loans to decrease credit risk, which is also in accordance with portfolio theory (Markowitz, 1959). The view is due to asymmetric information, diversification reduces financial intermediation costs (Demyanyk& Van Hemert, 2011). In practice, Basel Committee on Banking Supervision (1991) reported that many banking crises in the last three decades were caused by concentration, indicating that risk is highly associated with diversification. Empirical studies in Argentina and Austria are in favor of this point of view (Bebczuk& Galindo, 2004). On the other hand, corporate finance theory states that firms would enjoy additional benefits resulting from reduced cost if they concentrate their activities on specific sectors which they have expertise in or are familiar with (Hayden et al., 2007).In addition, the diversification strategy is less attractive because it also induces competition. Corporate diversification and firm performance have attracted much attention from scholars and investors in the past few decades yet most empirical works on corporate diversification have been concentrated on few developed countries such as China, U.S., Germany and U.K. while studies in the context of developing nation such as Nigeria are scarce. Empirical evidence can be found to support this argument in Italian banking sector, German banking sector, Brazilian banking sector and small European banks (Hayden et al., 2007).

Chen and Tzeng (2011) observed that increase in the performance of firms due to business diversification occurs when the marginal benefits are greater than the marginal costs of diversification. Firms with enough managerial and financial capacity could easily diversify into other industries since diversification is perceived as investment behavior. Therefore, performance is a possible determinant of diversification decision.

Credit Risk diversification strategy in commercial banks in Nigeria.

The banking sector in Nigeria consists of 40 commercial banks, other private banks and micro finance banks. These banks provide various services for their clients including loans, guarantees, current accounts, savings accounts, time deposits, transfers in the country and abroad as well as services for storing items of value. The Central Bank of Nigeria continues to supervise to ensuring financial stability in the country, which represents the main target of the law (Central Bank of Nigeria, 2014). The Central Bank of Nigeria, like all the banks of other countries, functions in accordance with the Basel II framework (Eikenhout, 2015) that was standardized from 1 January 2008. Risk management strategies include diversification designed to cut back risk by combining various investments. Diversification gain from shifting into non-interest income in bank's revenue and reduced volatility of bank profits (Otieno, 2012). A diversified portfolio that combines a variety of loan products that belong to different asset classes in an optimal way will help a bank survive much. Diversifying bank's activities forms part of the risk management practices. Several studies have been undertaken to analyze the benefits of international portfolio diversification in developed as well as in emerging markets. Ali-Yrkko (2015) classifies the bank's motive to diversify as an economic, management and value maximization motive.

Financial Performance of commercial Banks in Nigeria.

Financial Performance in broader sense refers to the degree to which financial objectives has been accomplished and is an important aspect of risk management. It is the process of measuring the results of a firm's policies and operations in monetary terms (Damondaran 2013). The significant changes that have occurred in the financial sector of developing economy like Nigeria have increased the importance of performance analysis of modern banks. Casu et al (2006) observed that performance analysis is an important tool used by various agents operating either internally to the bank or who form part of the bank's external operating environment. Among the large set of performance measures for banks used by academics and practitioners alike, a distinction can be made between traditional, economic and market-based measures of performance. Traditional measures of performance are similar to those applied in other industries, with return on assets (ROA), return on equity (ROE) or price earning(P/E) ratio being the most widely used as external measure of performance. In addition, given the importance of the intermediation function for banks, net interest margin is typically monitored. The return on assets (ROA) is the net income for the year divided by total assets, usually the average value over the year. Return on assets equals net income divided by average total assets.

Another major yardstick for measuring performance in the banking industry is the CAMEL approach. This approach is equally used by the monitoring authority to assess the level of performance of banks, before making any pronouncement on their soundness, solvency and liquidity position. The acronym CAMEL means: C= Capital Adequacy A= Assets M= Management E= Earning L= Liquidity. This serves as a major tool for assessing solvency level of banks by the monitoring authority.

Research Problem

Risk diversification in the bank is done with the goal of reduction of volatility of the bank operations through reduction of concentration of sources (deposits), costs (credits) and the proceeds from funds (Dawood, 2014). By creating diversification in their deposits, banks intend to reduce exposure to the risk of liquidity. The bank is exposed to the risk of liquid withdrawals or acceptable loan applications increase (Rose & Hudgins, 2010).Most empirical research found a positive relationship between diversification and corporate performance. But due to self-interest, inexperience, incompetence and opportunistic behavour of most managers, most diversification strategy leads to negative or low performance of companies in Nigeria (Ade, 2010). Most of studies on this area were conducted in developed countries such like; United States of America (USA) Germany, UK, and China. Studies that have explored the subject of diversification and financial performance in Nigeria are seen to be very limited.Also previous studies as to whether there are relationship between Risk diversification and Financial Performance were inconclusive as there are empirical evidences that showed both negative and positive impact of diversification on Financial Performance of the Banks.In summary, there are some confounding and conflicting views that Risk diversification strategy has effect on the financial performance of the listed banks at Nigeria Stock Exchange,hence, form the significance of this study.

Objectives of the Study

The objective of the study was to determine credit risk diversification strategy and financial performance of listed banks at Nigeria Stock Exchange.

Research Hypotheses

Credit Risk diversification strategy has no significant effect on financial performance of listed banks in Nigeria Stock Exchange.

Scope of the Study

This study combined theoretical considerations (Modern Portfolio theory (MPT) and financial intermediation and delegated monitoring theory). The theories were found relevant in view of the practice of diversification of loan assets. Financial performance of listed banks in Nigeria Stock Exchange. These are the banks that play a critical role in economic development of a country by mobilizing resources for investment. The study focuses on risk diversification in the Nigerian banking sector as a strategy of risk management and how it has affected the financial performance of listed banks at the Nigeria Stock Exchange. This study gave special and specific focus to concept of risk management with a view to examining how to improve or enhance its practice in the Nigerian banking industry. The study population comprised of 28 listed banks that are actually engaged in risk management process whose financial performance impacts (otherwise) on the economic development of the country. The study's period is 10 years from 2009 to 2018. The scope of this study include the bank-specific attributes of credit risk diversification whose operational and professional roles in banking business cannot be quantified.

II. LITERATURE REVIEW

Modern Portfolio Theory

Markowitz (1952) extended his work by introducing a model of portfolio theory. He theorized a relationship between risk and return. Markowitz's model of portfolio theory emphasizes on risk return trade-off in terms of mean-variance efficient portfolio, hence the introduction of the efficient frontier of various assets combination and weight. An efficient frontier of an investment domain represents a set of "efficient portfolios" that maximizes expected returns at a given level of portfolio risk, or that minimizes portfolio risk for a given expected return.

MPT is a mathematical formulation of the concept of diversification in investing, with the aim of selecting a collection of investment assets that has collectively lower risk than any individual asset (Bierc, 2003). When the prices in the stock market falls, the prices in the bond market may rise giving movement in opposite direction that has a risk reducing effect on the portfolio at large as a result of collection of both assets (Mandelbrot& Hudson, 2005).Neo-classical financial theory (NCFT) applies these two powerful options of diversification and asset allocation and came up with modern portfolio theory (MPT) and capital asset pricing model (CAPM) (Lai &Azizan, 2012). NCFT however postulates that any internal risk management effort

undertaken by the firm to reduce its idiosyncratic (firm specific) risk will be of no value to shareholders because shareholders can easily employ the mentioned two risk management options and arguably at a cheaper cost, to attain the same purpose and effect through building an investment portfolios (Bierc, 2003). This argument holds true unless firm-specific risk management can prove to result in the increase of the present value of the firm's cash flow. As such, internal risk management by the firm should focus only on reducing its systematic risk by such ways of hedging or buying insurance (Bierc, 2003).

This conclusion of NCFT somehow runs counter to the initial value proposition of corporate risk management by the CFT (Tasche, 2004). For instance, Markowitz's model of portfolio theory would suggest that if managers could find ways to minimize the firm's cash flows volatility, or "total risk", then they could create value for shareholders as long as the stabilized cash flows would not come at the expense of their expected value (Woon, Azizan&Samad, 2011). NCFT such as CAPM, which extended Markowitz's portfolio theory, demonstrated that in equilibrium, the "market portfolio" is the only one efficient portfolio that applies to all investors, regardless of their risk preferences. Hence, therein gives rise to the notion of beta. Thus, according to CAPM, beta risk is the only risk that investors should be concerned about in equilibrium (Chatterjee, 1999). Notwithstanding so, according to another school of thought such as the classic efficient market theory, even the management of systematic risk is futile.

The argument is that it will not add value to shareholders since the costs of such activities like hedging and buying insurance policies will completely offset the value of eliminating such systematic risk. Hence, a zero sum game ensued for shareholders (Bierc, 2003). Risks are combined into a portfolio leading to a residual risk. This residual risk is smaller than all the risks combined, making it cheaper for hedging and insuring (Tasche, 2004). The risk decrease of the portfolio is explained by the modern portfolio theory. This theory assumes that different assets in a portfolio work in opposite directions on a certain event, causing the negative movement to be cancelled out or minimized by the impact of the positive movement. This decreases the total risk of the portfolio (Eikenhout, 2015).

Financial Intermediation and Delegated Monitoring Theory

Diamond (1984) developed a theory of financial intermediation based on minimum cost production of information useful for resolving incentive problems whereby banks share gross cost advantages in collecting information. The theory explains the benefits of bank diversification by bringing out the cost benefits accruing to a diversified intermediary and the monitoring efficiency attained by adding risks. By increasing the risk tolerance of banks, diversification reduces the delegated monitoring cost beyond what borrowers can achieve on their own and banks are able to earn a return beyond what is payable to the fund suppliers (depositors) while at the same time reducing its probability of bankruptcy through enhanced monitoring effectiveness. The theory envisioned two types of diversification; diversification by increasing the number of agents in the intermediary (sharing risks) and diversification by increasing the number of projects carried out by one intermediary (adding risk).The former approach works because each independent risk is shared by different number of agents while the latter is what Samuelson (Diamond, 1984) calls the "fallacy of large numbers", but addition of independent risks reduces the entrepreneur risk and the fallacy of large numbers stops being a fallacy.

However, the financial intermediary envisioned by Diamond is a pure asset transformer whereby the only diversification possible is that of adding independent identically distributed projects by one agent or what he called diversification within the intermediary. This reduces the entrepreneur cost of intermediation since for all projects with less than perfect correlation; the delegation cost for projects monitored by a single intermediary would be less than the sum of delegation costs for monitoring proper subsets of them by several intermediaries through sharing risks.

Diamond approaches diversification from a cost reduction perspective and recommends the latter approach by arguing that diversification within the intermediary would be key to possible net cost advantages due to the strong similarities between an intermediary and its depositors. As such, intermediation would be potentially viable where the delegation costs (equal to the risk premium) (Jaouadi&Zorgui, 2014). This is reduced by the centralization of monitoring to a single intermediary with several projects. The financial intermediation and delegated monitoring approach explains bank diversification both in the context of risk and that of risk neutrality. In the risk neutral model, the reasoning behind diversification is that diversification increase the probability that the intermediary has sufficient loan proceeds to repay a fixed debt claim to depositors thus reducing the probability of bankruptcy. In the risk aversion model, on the other hand, diversification increases the financial institutions risk tolerance toward each loan, allowing the risk bearing necessary for incentive purposes to be less costly.

The delegated monitoring model predicts a well-diversified financial intermediary with capital structure consisting mainly of debt, arising from deposits, but a low probability for default despite the high leverage. The theory also identifies a number of conditions for a financial intermediary to be viable. First, depositors must receive an expected return of R per unit deposit; secondly, financial institutions must receive an

expected return net of monitoring costs and deadweight penalties incurred which is at least zero; and lastly, each entrepreneur must retain an expected return at least as high as he would by contracting directly with depositors. The third is a necessary condition for bank diversification because if diversification does not reduce the transaction costs of monitoring to a level lower than the depositors can obtain by transacting directly with the borrowers, the bank would not be able to pay interest to depositors and retain an expected return net of monitoring costs and therefore the depositors would be better off contracting directly with borrowers.

Empirical Review

This section contains review of previous literature related to the effect of various risk management strategies on financial performance. Empirical review was done to identify the research and knowledge gaps in this field of risk management strategies and financial performance of listed banks at NSE.

In Yibing et al.,(2013) the effects of credit diversification on the Chinese banks' return and risk from the aspect of sector was investigated. Panel data on 16 Chinese listed commercial banks during the 2007–2011 period is used for the study. We construct a new diversification measure, taking systematic risk of different sectors into consideration by weighting them with their betas and compare the results with those of more conventional measure HHI. We find that sectorial credit diversification is associated with reduced return and also decreased risk at the same time, which however, contradicts existing findings in developed countries such as Italy and Germany, and also in emerging economies such as Brazil and Argentina.

Doaei, Ahmad and Ismail (2014) focused on credit diversification and financial performance in Bursa Malaysia. The study was done in 102 manufacturing firms listed in Bursa Malaysia during 2006 to 2010. Two regression models were run with return on assets (ROA) as a dependent variable. Also, the main independent variables are total product diversification (TPD), related product diversification (RPD), unrelated product diversification (UPD), international diversification (ID). The results showed product diversification and unrelated diversifications are not significant; however, related diversification and international diversification have negative impact on financial performance. This research failed to considered sectoral diversification of credits and was based on product diversification.

Chen and Lin (2014) examined the effect of diversification on risk and return of Taiwan domestic commercial banks using unbalanced panel data from 1997 to 2009. Returns were measured using ROA, ROE and Net Interest Margin (NIM) while risk was measured using a ratio of non-performing loans to total loans (NPL), the ratio of loan loss provision (LLP) and a Z-score measure of insolvency risk. Diversification was assessed as revenue diversification and credit diversification and measured using HHI. The study reported a significant negative effect of loan diversification on all three profitability measures. However, credit diversification improved the NPL ratio and therefore reduced a bank's risk. This study was based on Taiwan economy which is more developed than Nigerian economy. Herfindahl-Hirschman index (HHI) was used to measure while this study will use ratio of sectorial loan to total loan.

Iqbal, Hameed and Qadeer (2012) conducted a study on impact of diversification on firms' performance. The data was collected through secondary research and Stock Exchanges sites were the source of information to collect the data of the companies. Total 40 companies were selected on the basis of Specialization Ratio (SR). Companies whose information were available and remained in the same category for the entire 5 years (2005-2009) were included in sample. The results of this study showed that there is no positive relationship between diversification and firms' performance.

Santarelli and Tran (2013) conducted a study on diversification strategies and firm performance. The study applied parametric and semi-parametric approaches to control for sample selection and endogeneity of diversification decision in both static and dynamic models. After controlling for industry fixed-effects, empirical evidence from firm-level data showed that diversification had a curvilinear effect on profitability: it improves firms' profit up to a point, after which a further increase in diversification is associated with declining performance. This implies that firms should consider optimal levels of product diversification when they expand product offerings beyond their core business.

III. METHODOLOGY

The study used panel data to carry out the research analysis for 10 years starting from 2009 till 2018. The study examined the data in order to know which model will be adopted from fixed effect and random effect model. In the case of fixed effect model, it was assumed that the variables that have effect on financial performance vary over time but have fixed effect across the entire period under study. Assumption of the fixed effect model include homogeneity of the estimates across the entities and the error term between the entities μ_{it} is equal to zero. A fixed effect model assumes correlation between error term μ_{it} and the predictor variables. However, in the case of a random effect model, the variation across entities is assumed to be random. The error term between the entities μ_{it} is equal to zero and is estimated(Guharati, 2003).

The fixed effect model and random effect model is given in equation 1 and 2 respectively below:

$Y_{it} = \beta + \beta_i X_{it} + \varepsilon_{it}$ ……………………………………………Fixed effect model (Equation 1)

$Y_{it} = \beta + \beta_i X_{it} + \mu_{it} + \varepsilon_{it}$ …………………………………Random effect model (Equation 2)

A Hausman test was carried out to investigate whether the data collected violated the assumption of the fixed effect model and to know which model to adopt. The null hypothesis for Hausman is the preferred model is the random effect model. The decision rule is based on Chi-Square statistic p-value of the Hausaman test less than 0.05 indicated that the preferred model is the random effect model otherwise, it is fixed effect (Torres-Reyna, 2007).

The following model was used in line with the objectives of the study:

$Y_{it} = \beta_0 + \beta_1 X_{1it}$ …………….......3.1

Where: Y_{it} —Dependent Variable:

Y_{it}--- Financial Performance (P/E) Ratio,

X_1= Credit Diversification Strategy

IV. RESULTS

Generalized Least Squares Univariate Model

Generalized least square (GLS) model was therefore considered and adopted for the study to correct the violations. The GLS fitted allow for heteroscedastics errors, cross-sectional dependence and fitted an estimated coefficient for first order differenced in order to correct the violations.

Generalized Least Squares Univariate Model of Credit Diversification and Firm Performance

The first objective of the study was to evaluate the effect of credit diversification on financial performance of listed banks at Nigeria Stock Exchange. The GLS was fitted to empirically determine the credit diversification and financial performance of listed banks at Nigeria Stock Exchange. The first indicator was private loan asset diversification. The results of which were as presented in Table 3. The Wald Chi-square statistic p-value was found to be 0.560 for private loan assets diversification which is greater than the alpha value =0.05. The implication of this was that the GLS model fitted is generally insignificant and that the estimated coefficients of the explanatory variables are jointly equal to zero. This means that private loan assets diversification has insignificant effect on the financial performance of the listed banks at Nigeria stock Exchange.

Generalized Least Squares Model Summary of private loan assets diversification

  Coefficients: generalized least squares
  Panels: homoscedatic

Table 3:

Model Statistics		Panel observation	
		Number of obs	200
Estimated covariances	1	Number of groups	199
Estimated autocorrelations	0		
Estimated coefficients	2	Obs. Per group: min	1
Wald chi2(4)	0.34		
Prob> chi2	0.5600		

The model coefficients estimates are presented in Table 4. The coefficient estimate of private loan assets diversification was found to be 0.0002573 with z statistic .058. The p-values to the coefficient were greater than 0.05. This implied that private loan asset diversification has no effect on the financial performance of the listed banks at Nigeria stock Exchange. This result was similar to the findings of Adzobu (2015). However, it contradicts the findings of Yibing et al.,(2013). The equation generated from the model fitted is given next.

$Y_{it} = .0013218 + .0002573CD_{Sit}$

Table 4: Coefficients Table- Generalized Least Squares Univariate Model for Private Loan asset Diversification

	Coefficient	Std. Err.	Z	P>|z|
CD_S	.0002573	.0004414	0.58	0.560
Constant	.0013218	.0001233	10.72	0.000

Note: CD_s = Private loan asset Diversification

The GLS for the second indicator was also fitted. The second indicator was government loan asset diversification. The results of which were as presented in Table 5. The Wald Chi-square statistic p-value was found to be 0.051 for government loan asset which is slightly greater than the alpha value =0.05. The implication of this was that the GLS model fitted is generally insignificant and that the estimated coefficients of the explanatory variables are not jointly equal to zero. This means that government loan asset have insignificant effect on the financial performance of the listed banks at Nigeria stock Exchange.

Table 5: Generalized Least Squares Model Summary for Government Loan Asset

Coefficients: generalized least squares

Panels: homoscedatic

Model Statistics		Panel observation	
		Number of obs	200
Estimated covariances	1	Number of groups	199
Estimated autocorrelations	0		
Estimated coefficients	2	Obs. Per group: min	1
Wald chi2(4)	3.81		
Prob> chi2	0.051		

The model coefficients estimates are presented in Table 6. The coefficient estimate of government loan asset was found to be .0066924 with z statistic 1.95. The p-values to the coefficient were greater than 0.05. This implied that government loan asset has no effect on the financial performance of the listed banks at Nigeria stock Exchange. This results was similar to the findings of Oyerinde (2014). However, it contradicts the findings of Faisal, Melati , Lim and Hashim (2011). The equation generated from the model fitted is given next. $Y_{it} = .0066924 + .0003135CD_{iit}$

Table 6: Coefficients Table- Generalized Least Squares Univariate Model for Government Loan Asset Diversification

	Coefficient	Std. Err.	Z	P>|z|
CD_i	.0066924	.0034299	1.95	0.051
Constant	.0003135	.0005511	0.57	0.569

Note: CD_i = Government Loan Asset.

V. FINDINGS

Credit diversification strategy and financial performance of listed banks at Nigeria Stock Exchange

The objective of this study was to determine the credit diversification strategy and financial performance of listed banks at Nigeria Stock Exchange. The hypothetical statement drawn from it was that credit diversification strategy has no significant influence on financial performance of listed banks at Nigeria Stock Exchange. Descriptive statistical analysis indicated a wide variability and spread among the listed banks as regards the efficiency in the employment ofcredit diversification. The significance of coefficients of variation

in the model also confirmed higher degree of variation especially as regards the spread of credit loans of the banks. The results from the panel least regression model employed indicated that credit diversification has statistical significant influence on financial performance of listed banks at Nigeria Stock Exchange. Also the coefficients of correlation showed a positive linear relationship between credit diversification and financial performance of listed banks at Nigeria Stock Exchange. This suggests that the overall model applied can significantly be predictive of the outcome variable, thus leading to the submission that credit diversification strategy has significant influence on financial performance of listed banks at Nigeria Stock Exchange

The basic theoretical foundation that fits for the interpretation of this findings are: the modern portfolio theory as well as the financial intermediation theory. The theories have advocated that risks are combined into a portfolio leading to a residual risk. This residual risk is smaller than all the risks combined, making it cheaper for hedging and insuring.Hence, such that credit diversified to different sectors are likely to reduce the overall portfolio risk to the bank.

Recommendation

With increased competition, the need to be efficient in banking operation requires continuous update of knowledge all over the world. Drawing from the findings and the conclusions of this study, the following recommendations (managerial and policy based) are presented so as to improve risk management and financial performance of listed banks at Nigeria Stock Exchange.

Managerial Recommendation

Credit diversification strategy for the banks must be improved for it to commensurate with present operational activities or realities of the banks. Its review must be the focus of the regulators of the industry and should be continuous or time frame bound. Banks should also work on their operational expenses particularly overhead which constitute larger part of the expenses they daily incur. This will no doubt go a long way to reducing total expenses of the banks and improve profitability and financial performance generally for the banks. They should specifically work on share price and earnings of the banks as a major components of the bank's financial performance.

Policy Recommendation

The presentcredit diversification process laid down by the CBN seems not to be adequate for the present banking activities in Nigeria anymore. In agreement with prior recommendations, the regulatory and monitoring machinery of the CBN and other allied institutions should improve on the use of ICT. The IMF report of Article IV consultation had advised the CBN to conduct risk management review, so as to identify any potential risk management requirements for the Nigerian banking system. To this end, credit risk management reporting as a vital instrument to monitoring bad loan/credit management is advocated for all banks, in line with the submission of the Credit Bureau Association of Nigeria.

REFERENCES

[1]. Adamu, N., Zubairu, I. K., Ibrahim, Y. M. & Ibrahim, A. M. (2011).Evaluating the impact of product diversification on financial performance of selected Nigerian construction firms. *Journal of construction in developing countries*, *16*(2), 91-114.

[2]. Adzobu, L. D. (2015). The effect of loan portfolio diversification on banks' risks and return: Evidence from an emerging market. *Managerial finance, 43*(11), 47-56.

[3]. Afza, Talat, Choudhary, S. &Mian, S. N. (2008). Diversification and Corporate Performance: An Evaluation of Pakistani Firms. South Asian Journal of Management 15: 7–18.

[4]. Ali-yrkkö, I. (2015). Mergers and Acquisitions. *No 792, Discussion Papers from The Research Institute of the Finnish Economy.* https://econpapers.repec.org/RePEc:rif:dpaper

[5]. Bebczuk, R. & Galindo, A. (2008). Financial crisis and sectoral diversification of Argentine banks, 1999-2004. Applied Financial Economics, 2008. 18: p. 199-211.

[6]. Bierc, G. J. (2013). Risk management infrastructure can boost corporate performance. *Financial Exec., 19 (3): 59-61. Belmont DP (2004). Value added risk management in financial institutions.*

[7]. Casu, B., Girardone, C. &Molyneux P. (2006). *Introduction to banking.* Essex, England: Pearson Education Limited.

[8]. Central Bank of Nigeria, 2014

[9]. Chatterjee, S. (1999). Real business cycles: a legacy of countercyclical policies?*Business Review. Federal Reserve Bank of Philadelphia (January 1999): 17–27.*

[10]. Chen &Tzeng (2011). International evidence on the value of corporate diversification', Journal of Finance, vol.54, pp2215–39.

[11]. Chen, Y. & Lin, Y. (2014). Income and Loan Perspectives: Do Taiwan Banks Benefit from Diversification? *Management Review*, *29*, 141-145.

[12]. Claessens, Stijn&Burcin, Y. (2013). Corporate governance in emerging markets: A survey. Emerging Markets Review 15: 1–33.

[13]. Damodaran, A. (2013). *Corporate Finance: Theory and Practice*, (2nd ed.). New Delhi: John Wiley and Sons.

[14]. Dawood, U. (2014). Factors impacting profitability of commercial banks' in Pakistan for the period of (2009-2012*). International Journal of Scientific and Research publications, 4*(3), 1-7.

[15]. Demyanyk, Y. and O. Van Hemert, Understanding the subprime mortgage crisis. Review of Financial Studies, 2011. 24(6): p. 1848- 1880.

[16]. Doaei, M., Ahmad-Anuar, M. & Ismail, Z. (2014).Diversification and financial performance in Bursa Malaysia. *International Journal of Management and Business Research*, *4*(4), 309-317.

[17]. Faisal .K.,Melati .A., Lim. G. C. &Hashim. K.(2011), Determinants of Bank Profitability in Pakistan: A Case Study of Pakistani Banking Sector, World Applied Sciences Journal 15 (10): 1484-1493, 2011 ISSN 1818-4952

[18]. Hayden, E., Porath, D. and von Westernhagen, N. (2007) Does diversification improve the performance of German banks? Evidence from individual bank loan portfolios. Journal of Financial Services Research, 2007. 32: p. 123-140.

[19]. Iqbal, A. Hameed, I. &Qadeer, M. (2012). Impact of Diversification on Firms' Performance. *European Accounting Review*, *18*(2), 234-261.

[20]. Jahn, N., Memmel, C. &Pfingsten, A. (2013). Bank's concentration versus diversification in the loan portfolio: new evidence from Germany. Bundesbank discussion paper no 53/2013

[21]. Jaouadi, S. &Zorgui, I. (2014). Exploring effectiveness and efficiency of banks in Switzerland. *International Journal of Academic Research in Business and Social Sciences, 4*(4), 313-325

[22]. Jaouadi, S. &Zorgui, I. (2014). Exploring effectiveness and efficiency of banks in Switzerland. *International Journal of Academic Research in Business and Social Sciences, 4*(4), 313-325

[23]. Kotler, P. & Armstrong, G. (2008). Marketing: An Introduction. New Jersey. Prentice-Hall International, Inc.

[24]. Lai, F. W. &Azizan, N. A. (2012). Critical review of literature on enterprise risk management and the cost of capital: The value creation perspective. *African Journal of Business Management,* 6(9), 3126-3135

[25]. Lamido, S. (2009). *We are making the banks safer*. Publication of the Federal Ministry of Information and Commission on Open Government publication, Nigeria, *1(1), 6-7.*

[26]. Mandelbrot, B., Hudson, R. L. &Grunwald, E. (2005). The misbehavior of markets. *The Mathematical Intelligencer*, *27*(3), 77-79.

[27]. Markowitz, H.M.(1959). Portfolio Selection: Efficient Diversification of Investments. 1959, New York: John Wiley.

[28]. Oyerinde, A. A. (2014). Corporate governance and bank performance in Nigeria: further evidence from Nigeria. International Journal of Business and Management, 9(8), 133-139.

[29]. Rose, P. & Hudgins, S. (2010). Bank management & financial services (8th ed.). McGraw Hill.

[30]. Salehi, M. (2008). The role of financial intermediaries in capital markets. *Zagreb International Review of Economics and Business*, *11*(1), 97-109.

[31]. Santarelli, E. & Tran, H. T. (2013). Diversification strategies and firm performance: a sample selection approach. *International Journal of Management and Business Research*, *6*(4), 109-115.

[32]. Tasche, D. (2004). Allocating portfolio economic capital to sub-portfolios. Economic capital: *a practitioner guide*, 275-302.

[33]. Thao, T.P. &Thuy, P.C. (2015). Banking industry development and bank efficiency in an emerging market economy. *Proceedings of the 2ndAsia-Pacific Conference on Global Business, Economics, Finance and Social Sciences,* Danang-Vietnam.Retrieved fromwww.globalbizresearch.org

[34]. Woon, L. F., Azizan, N. A. &Samad, M. F. A. (2011).A strategic framework for value enhancing enterprise risk management .*Journal of global business and economics*, *2*(1), 23-47.

[35]. Yibing, C., Yong, S., Xianhua, W. &Lingling, Z. (2013). *Technological and   Economic Development of Economy*, *20(*2014), 332-352.

[36]. Zulkafli, A., Hadi, A., Husni, H. &Norhidayah, A. B. (2015). Board Governance and Financing Policy: Evidence Form Public Listed Company in Malaysia. Advanced Science Letters 21: 961–65.