

Nigerian Journal of Rural Finance and Entrepreneurship

[Current](#)[Archives](#)[About ▾](#)

About the Journal

The NJRFE is a bi-annual double-blind peer-review journal to ensure originality and relevance with emphasis on theoretical, empirical and conceptual articles on the general areas of all entrepreneurship fields, rural finance, management and economics. It invites papers from individual, scholars and groups across the globe to submit their manuscripts on the general areas of all entrepreneurship fields, rural finance, management and economics for publication in its Maiden Edition Vol. 1, No 1 & 2, 2023 of the journal. Papers submitted should not have been published elsewhere and are not currently considered for publication in another journal. The publication is twice a year June and December.

Editorial Team

• EDITORIAL COMMITTEE MEMBERS

1. Dr. Idris Bashir Bugaje
Editor in Chief
08034001270
2. Dr. Hussaini Suleiman
Editorial Secretary
08029153724
3. Dr. Auwalu Inusa
Managing Editor
08069486493
4. Abdulmumini Suleiman Richifa
Member
08038136037
5. Shamsudeen Salisu Muazu
Member
08033876999

• EDITORIAL BOARD MEMBERS

1. Dr. Idris Bugaje
Director,
International Centre of Excellence
for Rural Finance and
Entrepreneurship, A.B.U Zaria.
Nigeria
2. Dr. Hamisu M. Ya'u
Deputy Director,
International Centre of Excellence for
Rural Finance and Entrepreneurship,
A.B.U Zaria. Nigeria
3. Asso. Prof. Aisha Mahmud
Hamman,
Federal Inland Revenue Service,
Abuja Nigeria.
4. Prof. Azmawani Abd Rahman
President/CEO,
Putra Business School,
Malaysia.

ENTREPRENEURSHIP EDUCATION AND ENTREPRENEURIAL INTENTION THROUGH THE LENS OF THE THEORY OF PLANNED BEHAVIOUR AND ENTREPRENEURIAL ALERTNESS

B. Y. Tanko, N. Abdullahi, I. A. Aliyu

1-20

EFFECT OF INTELLECTUAL CAPITAL ON START-UP INTENTIONS OF NIGERIAN YOUTH: ROLE OF FINANCIAL CAPITAL

A. S. Richifa, O. D. Y. Malachy, N. Abdullahi, S. Abdullahi

21-37

TOWARDS A DETERMINATION OF THE BEARING OF CONTACT WITH REVENUE AUTHORITIES ON TAX COMPLIANCE IN SOUTH-SOUTH NIGERIA

P. G. Owota, S. Ogoun

38-50

WORK FLEXIBILITY AND EMPLOYEES' PERFORMANCE IN HOSPITALITY INDUSTRY

M. A. ALAO

51-61

ROLE OF EARNINGS MANAGEMENT IN THE FINANCIAL STABILITY OF NIGERIAN BANKS: A STUDY ON RETURN ON ASSETS (ROA), RETURN ON EQUITY (ROE), AND NON-PERFORMING LOANS (NPLS)

R. A. Tolani, S. Abdullahi, A. I. Aliyu

62-76

FACTORS INFLUENCING STUDENTS' INTENTION TO PURSUE ENTREPRENEURIAL VENTURES: THE MODERATING ROLE OF PERCEIVED BEHAVIOURAL CONTROL

S. Y. Muhammad, I. Bugaje, A. Inusa

77-87

INTERNAL CONTROL PRACTICES AMONG MICRO AND SMALL ENTERPRISES IN NORTH-EASTERN NIGERIA

I. Y. Adamu

88-98

IMPACT OF TRAINING AND DEVELOPMENT ON ORGANISATIONAL EFFICIENCY AMONG LOCAL GOVERNMENT COUNCILS IN YOBE STATE, NIGERIA

U. M. Kachalla, H. A. Chiroma

99-109

MODERATING ROLE OF ORGANIZATIONAL CULTURE ON THE IMPACT OF INNOVATION CAPABILITY ON SMALL AND MEDIUM ENTERPRISES (SMEs) PERFORMANCE IN KADUNA STATE, NIGERIA

M. S. Saidu, N. Abdullahi, A. A. Gemu, T. B. Musa

110-122

CREDIT RISK IN ISLAMIC AND CONVENTIONAL BANKING SYSTEMS: EVIDENCE FROM NIGERIA

A. T. JIMOH, S. I. KHALEEL, T. I. ABDULMAJEED, M. A. ORILONISE

123-135

FACTORS INFLUENCING THE SUCCESS OF WOMEN-OWNED SMALL AND MEDIUM ENTERPRISES IN KATSINA STATE, NIGERIA

S. L. Ladan, A. A. Unyime, N. A. Emmanuel, U. M. Idara , U. A. Abasifreke

136-150

FORECASTING OF INFLATION RATES IN WEST AFRICA USING AUTOREGRESSIVE INTEGRATED MOVING AVERAGE MODEL

S. B. Mu'azu , S. L. Ladan, A. A. Unyime, A. Mohammed

151-161

BEYOND OIL: NIGERIA'S ECONOMIC RESILIENCE AND LESSONS FROM THE GLOBAL FINANCIAL CRISIS

F. K. Wahab , A. T. Idera, E. A. Akintade , H. M. Jawondo

162-172

GLOBAL MARKETING AND ITS IMPACT ON BLUE ECONOMY TO INDUSTRIAL GROWTH IN YENAGOA BAYELSA STATE.

O. Raymond, G. Ebiye , I. P. Afia

173-185

IMPACT OF ENTREPRENEURIAL PASSION AND PERCEIVED BEHAVIORAL CONTROL ON ENTREPRENEURIAL INTENTION AMONG UNIVERSITY STUDENTS

U. Suleiman , Z. Dabo, H. Yusuf, M. Abdu

186-195

ENTREPRENEURSHIP EDUCATION: A STRATEGY FOR THE DEVELOPMENT OF VOCATIONAL AND TECHNICAL EDUCATION

G. O. Ituma , S. E. Esheya

196-205

EVALUATING THE POTENTIALS HINDERANCE TO WOMEN ENTREPRENEURSHIP IN SAMARU ZARIA KADUNA STATE NIGERIA

Z. Gora, H. Y. Muhammad



NIGERIAN JOURNAL OF RURAL FINANCE AND ENTREPRENEURSHIP (NJRFE)

*A Journal of the International Centre of Excellence for Rural Finance and
Entrepreneurship (ICERFE),
Ahmadu Bello University, Zaria, Nigeria*

CREDIT RISK IN ISLAMIC AND CONVENTIONAL BANKING SYSTEMS: EVIDENCE FROM NIGERIA

¹JIMOH, Abdulrazaq Taiye, ²KHALEEL, Sa'adatu Ibrahim,
³ABDULMAJEED, Tajudeen Idera & ⁴ORILONISE, Mubarak Abiodun

¹Department of Finance, University of Ilorin

^{2,3}Department of Banking and Finance, University of Abuja

⁴Department of Accounting, University of Ilorin

¹jimoh.at1@unilorin.edu.ng, ²aadah1993@gmail.com, ³abdulmajeed.idera@uniabuja.edu.ng,

⁴orilonise.ma@unilorin.edu.ng

¹+2348064363986

Abstract

Islamic banking has been characterised by high credit risk exposure as receivables take higher portion of the banks' assets which are only held till maturity as discounting is not allowed. The high level of exposure may affect their performance in relation to conventional banks. However, there is dearth of research on the comparative analysis of credit risk exposure of Islamic and conventional banks in Nigeria. This study therefore investigated the level of credit risk of Islamic banks in comparison with that of conventional deposit money banks in Nigeria. Data were collected from annual reports of the selected banks and analysed via Wilcoxon Signed Ranks Test. The study found that Islamic banks had significantly lower loss provision ratio than conventional banks ($\eta = 2.99 < 4.89$; $p = 0.001$). Non performing financing was also found to be significantly lower for Islamic banks than conventional banks ($\eta = 4.99 < 5.27$; $p = 0.220$). However, Islamic banks had higher but insignificant level of cost to loan asset ($\eta = 16.67 < 11.72$; $p = 0.530$). Based on these findings, the study concluded that Islamic banks have lower level of credit risk exposure than their conventional counter-parts in Nigeria. The study thus recommended moderate provision for loss financing to reduce cost and enhance profitability.

Keywords: Conventional banks, Credit risk, Islamic banking, Nigeria, Profitability

Introduction

Banking, regardless of its modalities, is all about credit creation through which profits are made for banking firms and shareholders' wealth are promoted. It is also this process that fosters financial intermediation through which funds are mobilized by banking institutions and then channeled as lending for productive activities within the economy. Theoretical literature establishes certain costs attributable to financial intermediation of banks, indicating that banks are not charity organization but profit-making entities. Such profits come majorly from credit creation activities regardless of whether their operational modalities are conventional or Islamic. While conventional banks make their profits on lending via interest charges, Islamic banks earn theirs on profit sharing basis. However, how customers respond to repaying their debts under the various lending or financing arrangements may determine the quantity or level of profit on a banking transaction. This is accurate since credit is the



main product of financial intermediation, and credit risk always follows. Reducing credit risk can directly affect the value and performance of financial intermediaries and erode banks' capital bases (Michael & Enang, 2022). In other words, both conventional and Islamic banking activities are now plagued by credit risk. Credit risk is the inability of a client to pay his financial commitments to the banks when they become due.

Even though both Islamic and conventional banking both involve credit risk, the two banking types handle risk in different ways. Compared to their traditional counterparts, Islamic banks appear to be more exposed to credit risk. A greater percentage of Islamic banks' assets, for example, are receivables, which they are only permitted to maintain until maturity because Shariah prohibits discounting (Li, 2016). When a counterparty defaults, the problem is exacerbated because banks are not allowed to penalize defaulters or charge any accrued interest (Jimoh, et al, 2022). Consequently, in contrast to conventional banking, Islamic banks face challenges in measuring and analysing credit risk due to the distinct structure and contractual framework of Islamic financing (Susanto, Octavio, & Wardani, 2020).

It should be noted that no consensus has been reached on Islamic banking having higher credit risk than conventional banking. In fact, some researchers noted that credit risk is lower for Islamic banks. According to Chamberlain, Hidayat and Khokhar (2020), conventional banks exhibit higher credit risk when compared with their Islamic counterparts. The lower degree of exposure may be attributed to the borrowers' (customers') religiosity, which may motivate them to keep their end of any agreement made under Islamic financing contracts (Susanto, *et al.*, 2020). Notwithstanding the conflicting stands on the level of credit risk exposure, it is important to ascertain the level of risk exposure of Islamic banking model relative to conventional banking for the purpose of banking market competition. This is particularly necessary for Islamic banks in countries like Nigerian where Islamic banking market is still evolving.

In Nigeria, Credit risk is a key issue that has contributed to bank underperformance and failure in recent past. Failure of banks in emerging market economies like Nigeria resulted majorly from improper lending practices as well as lack of expertise to adequately assess credit risk (Ogbulu & Eze, 2016). The poor performance and eventual failure of some of these banks were indicated by poor loan quality, high credit risk and high non-performing loans, among others (Kolapo, Ayeni, & Oke, 2012). For Islamic banks, Adewale and Elena (2019) identified some reasons for credit risk exposure to include lack of valuable securities, absence of good titles to properties and lack of proper financial documentation. Although Ijaiya et al (2021) stated that high credit risk is associated with Islamic banking across Africa, primarily from Murabaha financing, empirical evidence specific to Nigeria is still lacking.

Sequel to the conflicting reports of past empirical researches, this study deemed it fit to contribute to literature by reassessing the levels of credit risk between the banking model. Apart from the conflicting report of past empirical studies, a dearth of research still exists in Nigeria on comparison of credit risk levels of Islamic and conventional banks. This becomes necessary to establish competitive position of the evolving Islamic banks in the Nigerian banking market. This study was therefore conducted to empirically investigate the level of credit risk of Islamic banks and compare the credit risk level with that of conventional deposit money banks in Nigeria.



Literature Review

Concept of Credit Risk

Credit risk is the likelihood that a bank trading partner (borrower or partner) won't be able to fulfil his financial commitments as per the terms set forth with the bank (Helmy, 2012). Li and Zou (2014) defined credit risk as the possibility that counterparties in loan transactions and derivatives will default, and will not be able pay back the principal and interest on timely basis. Credit risk may also be described as the danger of loss resulting from a debtor's failure to make payments on a loan or other line of credit (principal, interest or both). The risk is also known as counterparty risk. As such, credit risk is the possibility that a counterparty or loan borrower will not fulfill its responsibilities in line with the terms that were agreed upon (Kwabena, 2014).

Several reasons have been highlighted for credit risk exposures in banks. Bankruptcy, fraud and legal issues as well as technical defaults were mentioned by Van Gestel and Baesens (2008) as some of the causes of borrower's inability to repay his loan as agreed. That is, a debtor (borrower) may refuse or not be able to settle his loan if he is under financial stress or on the verge of filing for bankruptcy. Also, in the event of fraud or a legal issue, such a debtor may choose not to fulfill its debt service obligations. Another point identified is technical defaults which might be caused by information system defects (Kwabena, 2014; Van Gestel & Baesens, 2008).

Credit Risk in Islamic and Conventional Banking

One of the main issues that financial institutions, the banking industry, deal with is credit risk (Ahmed, Nizam & Ahsan, 2023). The biggest and most visible source of credit risk in the majority of banks is loans. However, a bank's operations contain additional sources of credit risk. They cover both on-and off-balance sheet activity as well as those recorded in the banking and trade books. In addition to loans, banks are increasingly exposed to counterparty or credit risk in a variety of financial products. These consist of trade finance, foreign exchange transactions, bankers' acceptances, swaps, bonds, stocks, options, and financial futures. They also involve the settlement of transactions (Kwabena, 2014).

According to Jimoh, et al., (2022), Islamic banking exposes to a variety of credit risks based on the kind of contract (funding) involved. When a consumer does not pay for the manufactured goods as agreed upon, the bank is exposed to credit risk of *Istisna* (Jimoh, et al., 2022). It occurs in the murabahah and musharakah profit-sharing contracts when the business owner declines or neglects to send the bank's portion of the profits (Al-Wesabi & Ahmad, 2013). The credit risk associated with Murabaha arises from the buyer's inability to pay the seller when the items are delivered or from his failure to fulfill his instalment payments as per the agreement with the bank (Boumediene, 2011). Another way by which credit risk comes up in Murabaha transactions is when buyers decline to accept delivery of the item they have purchased, even after the bank has potentially paid for the products' supply (Ijaiya et al., 2021). This kind of defaults in meeting obligations by customers occurs mostly in non-binding Murabaha when the goods do not meet the customers' specifications (Iqbal & Mirakhor, 2011).



Credit risk and Bank Performance

The primary source of revenue for banks is the creation of credit. The lender and the borrower are both exposed to significant risk in this procedure. The business of the bank could be seriously jeopardized if a trading partner fails to meet its contractual commitments on time or at any later point. Conversely, depositors are put at risk of bankruptcy when a bank with a high credit risk files for bankruptcy. According to Ekinci and Poyraz (2019), credit risk is commonly characterized as the most significant risk that impacts a bank's performance. The bank's performance and profitability are both impacted by the large percentage of non-performing loans on its balance sheet. Beyond the aforementioned hazards, banks are especially vulnerable to credit risk. Consequently, the existence and expansion of financial institutions now depend heavily on efficient credit risk management (Afriyie & Akotey, 2012).

Banks may experience symptomatic distress due to the fact that certain customers' qualities and their business environment carry a high perceived risk. For this reason, bank authorities and regulators take the issue of credit risk in bank lending activities very seriously. In other words, bank regulators place much emphasis on risk management particularly credit risk (Kayode et al, 2015). Credit risk is expected to be effectively managed as poor management tends to affect bank performance negatively. Ineffective credit risk management causes nonperforming loans (NPLs) to mount up, which has turned into a major issue for the Nigerian banking sector. Non-Performing Loans (NPLs) have a direct impact on bank performance since they decrease bank liquidity, restrict loan growth, and impede the expansion of the real sector (Kayode et al, 2015).

Measuring Credit Risk

The main goal for measuring credit risk is to be able to quantify the possible losses from credit operations. That is an estimate of credit risk made because it is nearly impossible to determine the exact quantity of losses from such exposure (Spuchl'áková, Valášková & Adamko, 2015). Researchers have identified two distinct approaches for measuring credit risk. These are default mode approach and market-to-market approach (Spuchl'áková, et al., 2015). In the default mode approach, the amount of assets on balance sheets that are subject to credit risk are displayed. The whole loan amount plus any accumulated interest and fees are represented as the credit risk or potential loss when the loan was granted to the customer (Kollar, 2014). This might be remedied if high-quality collateral was available. The bank does not create reserves or make adjustments to the loans while employing this strategy. The reserves will only begin to accumulate as a warning of potential credit loss in the event that the client breaches the conditions of the loan arrangement (Gavlakova & Kliestik, 2014).

The market-to-market approach to measuring credit risk employs continuous models. It is distinguished by the fact that, in contrast to discrete models, which function on a system of only two possibilities for the client's situation (failure or success), the debtor can obtain a variety of values (Kollar, 2014).

Credit risk has been measured with different ratios in empirical studies on conventional and Islamic banking systems. Loan loss provision, non-performing loan, loan and advances are commonly used to measure credit risk in past researches on credit risk in conventional banks (Michael & Enang, 2022; Hamza, 2017). Non-performing financing ratio and financing Impairment Provision ratio have also been used in relation to Islamic banks (Ijaiya, et al, 2021). The measures seem to be the same for both conventional and Islamic banks as the



observed difference was only in the nomenclature. Loans in conventional banking is regarded as financing in Islamic banking due to the fact that Islamic banks mostly, finance customers need rather than giving loan to the customers.

Theory of Anticipated Income

This study was situated within the framework of anticipated income theory. According to Mohammad, Prajanti and Setyadharma (2020), the theory of anticipated income was proposed by Prochanow (1944) on the basis of credit extension terms of commercial banks. According to the theory, the bank plans the term loan's liquidation from the borrower's anticipated income, regardless of the type and characteristics of the borrower's business. Jibril (2021) views the theory as a cash flow approach to lending which supported a term loan of a duration greater than one year but less than five years. This implies that banks rely on the recovery of their loan portfolios as a source of liquidity; as a result, instances of loan default can be effectively managed to lower loan loss reserves and improve bank performance (Jibril, 2021).

The theory expatiated further that banks should be able to offer extended long-term credit as long as loan principal repayments and interest can be anticipated. Based on the anticipated come, scheduled payments made according to a defined time frame. Also, regular cash flow from the customer's payback schedule will help the bank satisfy its liquidity requirements. One of the weaknesses of the anticipated income theory is its assumption that all loans may be billed at the planned period without considering the potential of a debtor defaulting on credit owing to internal or external circumstances (Mohammad, et al., 2020). The foundation of the theory of anticipation of income is the low loan application volume to banks, which leads to excess liquidity and low bank profitability, particularly during periods of economic weakness. This notion pushes banks to extend long-term loans more aggressively. One of the most notable features of the anticipated income theory is its future-oriented approach to bank loan and advance granting (Kolapo, Ayeni, & Oke, 2012).

Fapetu, Seyingbo and Owoeye (2017) stated that the theory satisfies three goals of profitability, safety, and liquidity and that makes it preferable to the shiftability and the commercial bill theories. It was further argued that the theory is significant since it provides a means of evaluating a borrower's creditworthiness. This is because it supplies the banks with standards for assessing a borrower's likelihood of making timely loan repayments (Fapetu, et al, 2017). This means that anticipated theory also provides a framework for identifying and managing credit risk in banks. The anticipated income theory was therefore selected for this study because it provides guide to banks in making sufficient loan provisions to prevent potential loss.

Empirical Review

Empirical literature indicates that mixed reports have been given regarding the comparative analysis of credit risk levels between Islamic and conventional banks. Some researchers reported that Islamic banks exhibited higher credit risk, some found higher exposure for conventional banks while some others found no significant difference in the level of credit risk between the two banking models. Some of the empirical findings of past researchers are presented in this section.

Kabir, Worthington and Gupta (2015) evaluated the credit risk of 156 conventional banks and 37 Islamic banks across 13 countries between 2000 and 2012. Market-based credit risk



measure was used within the framework of Merton's distance-to-default (DD) model. For comparison purposes, accounting information-based Z-score and nonperforming loan (NPL) ratio were computed. Results of analysis for distance-to-default model indicated significantly lower credit for Islamic banks than for conventional banks. Conversely, the results of the Z-score and NPL ratio analysis showed that Islamic banks have much higher credit risk. Ferhi and Chkoundali (2015) assessed credit risk of the Islamic and conventional banks in 28 countries for periods from 1999 to 2010. A sample of 99 Islamic banks and 110 conventional banks were taken for the study. The study employed the generalized method of moments (GMM) estimate the level of risk in the two banking systems. It was found and reported that the selected conventional banks exhibited higher credit risk than the Islamic ones.

Ferhi (2018) evaluated the credit risk of Islamic and conventional banks in 14 countries of the Middle East and North Africa region. 58 Islamic banks and 89 conventional banks were selected for period from 2005 to 2015 period were selected. Generalized method of moments (GMM) was used measure the difference in the credit risk levels between the selected Islamic banks and conventional banks. The findings demonstrated that the Islamic banks had a lower credit risk than the conventional ones. In contrary, Lassoued (2018) made a country-level comparative analysis of credit risk for Islamic and conventional banks in Malaysia. The study selected 22 conventional banks and 17 Islamic banks covering 2005 to 2015. Using the generalized least squares (GLS) approach to data analysis, it was found that Islamic banks recorded higher degree of credit risk than their conventional counterparts in Malaysia.

Alkhawaja and Görmüş (2019) studied credit risk in Islamic and Conventional banks in Turkey from 2008 to 2017. Panel data were collected and fixed effect model was estimated with Regression technique. The study used non-performing loan ratio to proxy credit risk. It was reported that loan loss provision had positive effect on non-performing loan ratio for both Islamic banks and conventional banks. Different results were however found for the effect of Net Interest Margin, capital adequacy, Loan to Deposits ratio, and Loans to Assets ratio. The study concluded that Islamic banks and conventional banks differ in the level of credit risks with many measures except for loan loss provision and loan to assets ratios. Susanto, Octavio and Wardan (2020) investigated the levels of the credit risk of Islamic and conventional banks in a comparative study of Indonesian banks. The study selected a sample of 11 Islamic banks and 95 conventional banks for period between 2003 and 2018. Dynamic panel regression of GMM estimators were estimated. The study concluded that no major difference could be found in the level of the credit risk between Islamic and conventional banks.

/

On credit risk management, Akram and Khalil ur Rahman (2018) compared the credit risk management of Islamic banks and conventional banks in Pakistan between 2004 and 2016. Data were collected from annual financial reports of the five conventional banks and four Islamic banks were selected for the study. Multiple regression, correlation and descriptive analyses were conducted and the study found that Islamic banks performed better than their conventional counterparts in terms of credit risk management.

From the above empirical review, it is clearly evidenced that no consensus has been reach on which of the banking models- Islamic or conventional, has higher exposure to credit risk. Higher level of credit risk was found was Islamic banks by researchers like Kabir et al (2015) when the risk was measured with non-performing loan ratio. The same result was later found with Islamic banks having higher level of credit risk, by Lassoued (2018). Conversely, Kabir et al (2015) reported that conventional banks' credit risk was higher when the Merton's



distance-to-default (DD) model was applied. Also, Ferhi and Chikoundali (2015), Ferhi (2018) found that conventional banks exhibit higher credit risk exposure than Islamic banks. However, results from Alkhawaja and Görmtiş (2019) and Susanto, et al (2020) showed that no significant difference could be found between the two banking models in terms of credit risk exposure. In terms of risk management, Akram and Khalil ur Rahman (2018) reported that Islamic banks manage their credit risk better than their conventional banks.

Materials and Methods

The study made a comparative analysis of credit risk exposure between Islamic and conventional banks in Nigeria. The study was restricted to the listed banks that have national authorisation for banking business. As a result, 9 conventional banks and 1 Islamic bank were selected for the study. The conventional deposit money banks were Access Bank, FCMB, Fidelity Bank, First Bank, Guaranty Trust Bank, Stanbic Bank, Sterling Bank, Unity Bank and Zenith Bank. Jaiz Bank was selected as the only listed Islamic bank with national license as at the time of this research. Data were collected from annual reports of the selected banks for 12 years period from 2012 to 2023. For each variable, data were averaged for the conventional banks for the purpose of comparison with those of the selected non-interest financial institution (Islamic bank). The data were analysed using both descriptive and inferential statistics. The descriptive analysis was done via analysis of summary statistics of mean, minimum, maximum and standard deviation, while wilcoxon signed ranks test was conducted for inferential analysis. The study had earlier conducted normality and levene test of homogeneity to check for compliance of the data set with parametric assumptions. The apparent violation of these assumptions led to the selection of wilcoxon signed ranks test for the study.

Results and Discussion

Table 1: Descriptive Statistics

Variables	Obs.	Minimum		Maximum		Mean		Std. Deviation	
Bank ID	N	Conv. Banks	Islamic Banks	Conv. Banks	Islamic Banks	Conv. Banks	Islamic Banks	Conv. Banks	Islamic Banks
LPTL	12	2.28	0.35	15.60	9.05	4.89	2.99	3.63	2.25
NPLR	12	2.73	1.23	15.22	10.87	5.27	4.49	3.56	3.10
CTLA	12	6.57	3.86	38.31	61.23	11.72	16.67	8.70	16.76

Source: Author's computation (2024)

Table 1 presents summary statistics of credit risk variables for conventional and Islamic banks in Nigeria. The observation (N) of 12 indicates that the data were obtained for the banks over a period of 12 years. According to the Table, loss provision to total loan (LPTL) shows a mean value of 4.89 for conventional banks and 2.99 for Islamic banks. This means that loan loss provision was found on average, to be about 5% of the total loan for conventional banks. In the case of Islamic banks, the loss provision was found to be approximately 3% of the banks' total financing. The minimum ratios of LPTL for the models of banking were recorded as 2.28 and 0.35 respectively. That is, the least LPTL for conventional banks was about 2.28% while that of Islamic banks was found to be around



0.35% for the period under investigation. Similarly, Table 1 shows the maximum value for LPTL both conventional and Islamic banks as 15.60 and 9.05 respectively. The descriptive statistics results on loss provision to total loan as measure of credit risk showed that conventional banks made higher provision for loan losses than Islamic banks during the periods of the study. This indicates higher credit risk exposure on the part of conventional banks.

Another measure of credit risk used in this study is non-performing loan ratio (NPLR). From Table 1, NPLR of conventional banks showed an average ratio of 5.27 and 4.49 which means that non-performing loan/financing takes approximately 5.3% and 4.5% of the total loan/financing of conventional and Islamic banks respectively. NPLR also indicates that conventional banks had higher exposure to credit risk than their Islamic counter-parts. The result was buttressed by the minimum and maximum values of NPLR for the two banking models, as reported in the Table. In the Table 1, conventional banks had minimum NPLR of 2.73 whereas the ratio was 1.23 for Islamic banks. Also, conventional banks recorded higher maximum value of NPLR (15.22%) than their Islamic counterparts (10.87%).

Finally, cost to loan asset (CTLA) was used to measure credit risk exposure of the banks. It is assumed that operating cost tends to influence loan pricing decision of the banks. Banks may react to increase in operating cost by increasing the interest on loan. In the same vein, Islamic banks with high operating cost tend to cover for the cost with increased profit margin on their cost-plus financings. However, arbitrary increase in interest rate or profit margin may result in higher default rate. Thus, operating cost as percentage of loan asset was used to measure credit risk in this study. According to Table 1, CTLA has mean values of 11.72 and 16.67 for conventional and Islamic banks respectively. In other words, conventional banks have lower operating cost to loan asset ratio than Islamic banks. This means that the credit exposure of Islamic banks might have been induced by higher operating cost. Similar result was found for CTLA of the banks in terms of their maximum ratios. The Table shows that conventional banks had a maximum of 38.31% while that of Islamic banks was 61.23%. Conversely, lower minimum and maximum values of CTLA were reported for Islamic banks during the period under investigation. Conventional banks had a minimum CTLA ratio of 6.57% and this was high than the ratio of 3.86% recorded for Islamic banks for the same study period.

Table 2: Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
LPTL	.269	24	.000	.735	24	.000
NPLR	.215	24	.006	.826	24	.001
CTLA	.280	24	.000	.705	24	.000

a. Lilliefors Significance Correction

Source: Author's computation (2024)

Kolmogorov-Smirnov and Shapiro-Wilk tests of normality were conducted and the results were reported in Table 2. Normality is a major assumption of parametric tests which hypothesized that the sample was drawn from normal population. That is, the sample data were normally distributed. Using Kolmogorov-Smirnov and Shapiro-Wilk tests, the null hypothesis that the sampled data do not significantly different from normal distribution will



be rejected if the p-value is less 0.05. According to Table 2, Kolmogorov-Smirnov test of normality showed that the p-values of all the credit rate variables, LPTL (0.000), NPLR (0.006) and CTLA (0.000) were less than 0.05 significant level. Also, the Table showed that the Shapiro-Wilk test result buttressed that of the Kolmogorov-Smirnov with all p-values less than 0.05. The null hypothesis was therefore rejected and it was confirmed that the data were not normally distributed. Based on the result, the normality assumption was violated indicating that parametric tests analysis could not be done in this study.

Table 3: Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
LLPTL	4.866	1	22	.02
NPLR	7.028	1	22	.008
CTLA	3.758	1	22	.010

Source: Author's computation (2024)

Table 3 presents Levene test's result which was used to check homogeneity of variance. Homogeneity of variance is another assumption of parametric tests which holds that variances are equal for all observed groups. The assumption is violated if the p-value of levene's test is less than 0.05. That is, if the result is significant, it means the variances are heterogeneous. In such a case, parametric tests cannot be used for data analysis. From Table 3, results of levene's test showed that the p-values of the credit risk variables were less than 0.05. Therefore, the assumption of equal variances was rejected.

Based on the results of normality and homogeneity of variances tests displayed in Tables 2 and 3 above, it is obvious that parametric test could not be applied to analyse the significance of the differences in credit risk level established in with descriptive statistics. The study therefore resorted to non-parametric test. Wilcoxon Signed Ranks which is a non-parametric equivalent of paired-sample t-test was employed and the result was presented in Table 4.

Table 4: Wilcoxon Signed Ranks Test Statistics^a

Variable	LPTL	NPLR	CTLA
Z	-7.255 ^b	-4.941 ^b	-.628 ^c
Asymp. Sig. (2-tailed)	.001	.022	.530

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

c. Based on positive ranks.

Source: Author's computation (2024)

Results of Wilcoxon Signed Ranks Test was presented in Table 4 to analyse the significance of the differences in credit risk levels between the two banking models. Negative ranks mean that conventional banks have higher level of credit risk exposure that Islamic banks while positive ranks indicate higher risk exposure for Islamic banks.



According to Table 4, LPTL was found to be based on the negative ranking. This means that conventional banks have higher LPTL than Islamic banks. The result was found to be significant with Z statistic of -7.255 and p-value of 0.01 which less than 0.05 level of significance. This implies that, in terms of loss provision to total loan, credit risk exposure of conventional banks is significantly higher than that of Islamic banks. Similarly, NPLR recorded negative ranks indicating that non-performing loan ratio was higher for conventional banks. This also implies that conventional banks exhibited higher credit risk exposure during the period under investigation. Wilcoxon test showed that the higher NPLR reported for conventional banks was significant at 0.05 level of significance with Z-statistic and p-value of -4.941 and 0.022 respectively.

Conversely, cost to loan asset (CTLA) ratio was found to have positive ranking which means that CTLA ratio was lower for conventional banks than Islamic banks. However, the result was not significant with p-value (0.530) greater than 0.05 level of significance. This implies that the observed difference cost to loan asset as a factor contributing to higher credit risk was not statistically significance. Z-value of 0.628 also testifies to the insignificance of the difference.

Discussing the findings of descriptive and inferential analyses, it was revealed that conventional banks had higher loss provision ratio than Islamic banks in Nigeria. This indicates the higher level of credit risk exposure of conventional banks relative to their Islamic counterparts. Higher loan loss provision shows attempt to mitigate higher risk exposure. The finding was in tandem with Ozili and Outa (2017) that loan loss provision is mainly used by banks as a credit risk management tool to mitigate expected losses on bank loan. Comparatively, Ferhi (2018) had earlier reported similar findings that conventional banks were exposed to higher level of credit risk than Islamic banks in North Africa. In contrary, Lassoued (2018) reported that Islamic banks recorded higher degree of credit risk than their conventional counterparts in Malaysia.

In terms of non-performing loan ratio as a measure of credit risk, the study found higher non-performing loan with conventional banks. A high non-performing loan ratio is an indication of higher credit risk with high probability of failure in collection of unpaid loan balances. This finding is consistent with Alkhawaja and Görmüş (2019), Ferhi and Chikoundali (2015) and Kabi et al. (2015) which found that conventional banks had higher non-performing loans than Islamic banks.

This study however revealed that Islamic banks had higher ratio of cost to loan asset than conventional banks. It implies Islamic banks may react to increase in operating cost by increasing profit margin on their cost-plus financings. Since it is assumed that high operating cost can influence loan pricing decision of the banks, high cost to loan asset ratio could be an indication of high credit risk exposure for Islamic banks. The difference in cost to loan asset ratio between the two banks was however found to be statistically insignificant. The insignificant report could be linked with the finding of Susanto et al (2020) that no significant difference could be found between the two banking models in terms of credit risk exposure.

Summarily, the lower level of credit risk established for Islamic banks relative to conventional banks in Nigeria, tends to boost their performance as the banks will be able to lower their loss provision while focusing on customers repayment of their obligations as



suggested by the anticipated income theory. This is expected to improve their competitiveness in the Nigerian banking market.

Conclusion and Recommendations

Since Credit risk has been identified as a major factor contributing bank to failure in emerging market economies like Nigeria, it became imperative to evaluate the level of credit risk exposure in conventional and Islamic banks in Nigeria. This is to ascertain the performance of the banks in the area of credit risk management as they compete in the market for financial intermediation. The study therefore made a comparative analysis of loss provision, non performing facilities and cost to loan asset, between Islamic and conventional banks in Nigeria. The study found that Islamic banks exhibited significantly lower loss provision and non-performing facilities than conventional banks. However, cost to loan asset was found to be insignificantly lower for conventional banks in Nigeria. Based on these findings, the study concluded that Islamic banks have lower level of credit risk exposure than their conventional counter-parts in Nigeria. The study thus recommended a moderate level of provision for loss financing so as to reduce the operating cost of the banks and improve their profitability.

References

- Adewale, A.Y. & Elena, P. (2019). Credit risk and the financial performance of Islamic banks in Africa: A critical literature review. A Conference Paper. Retrieved from https://www.researchgate.net/publication/336554491_Credit_Risk_and_The_Financial_Performance_of_Islamic_Banks_in_Africa_A_Critical_Literature_Review
- Afriyie, H. O. & Akotey, J.O. (2012) Credit Risk Management and Profitability of Selected Rural Banks in Ghana. Catholic University College of Ghana
- Ahmed, F., Nizam, K. & Ahsan, N. (2023). Credit risk management and default risk: Empirical evidence from United Kingdom. *Journal for Business Education and Management*, 3,(2), 95-110.
- Akram, H. & Khalil ur Rahman (2018). Credit risk management: A comparative study of Islamic banks and conventional banks in Pakistan. *ISRA International Journal of Islamic Finance*, 10(2), 185-205.
- Alkhawaja , M. M. I. & Görmüş, Ş. (2019). Credit Risk Management: A Comparative Study between Islamic and Conventional Banks in Turkey. *International Journal of Islamic Economics and Finance Studies*, 3, 45-64.
- Al-Wesabi, H. A. H., & Ahmad, N. H. (2013). Credit risk of Islamic banks in GCC countries. *International Journal of Banking and Finance*, 10(2), 97-112. <http://ijbf.uum.edu.my/images/ijbfvol10no2june2013/5-Credit-risk-of-Islamic-banks-in-GCC-countries.pdf>
- Boumediene, A. (2011). Is credit risk really higher in Islamic banks? *Journal of Credit Risk*, 7, 97- 129.
- Chamberlain, T., Hidayat, S., & Khokhar, A. R. (2020). Credit risk in Islamic banking: Evidence from the GCC. *Journal of Islamic Accounting and Business Research*, 11(5), 1055-1081.
- Ekinci, R. & Poyraz, G. (2019). The Effect of Credit Risk on Financial Performance of Deposit Banks in Turkey. *Procedia Computer Science*, 158, 979-987



- Fapetu, O. , Seyingbo, O. A. & Owoeye, S. D. (2017). Credit Risk Management and Interest Income of Banks in Nigeria. *Computational Methods in Social Sciences*, 5(1), 23-35.
- Ferhi, A. & Chkoundali, R. (2015). Credit Risk and Efficiency: Comparative Study between Islamic and Conventional Banks during the Current Crises. *Journal of Behavioural Economics, Finance, Entrepreneurship, Accounting and Transport*, 3(1), 47-56. Available online at <http://pubs.sciepub.com/jbe/3/1/6>.
- Ferhi, A. (2018). Credit risk and banking stability: A comparative study between Islamic and conventional banks. *International Journal of Law and Management*, 60(4), 1009-1019.
- Gavlakova, P., Kliestik, T., (2014). Credit Risk Models and Valuation. *Advances in Education Research*, 51, 139-143.
- Hamza, S. M. (2017). Impact of Credit Risk Management on Banks Performance: A Case Study in Pakistan Banks. *European Journal of Business and Management*, 9(1), 57-64.
- Helmy, M. (2012). Risk management in Islamic banks. ESLSCA Business School.
- Ijaiya, M. A., Jimoh, A.T., Attah, J. A., Abdulmumin, B. A. & Nafiu, I. A. (2021). Murabaha-related credit risk and financial performance of Islamic banks in Africa. *International Journal of Islamic Banking and Finance Research*, 5(1), 60-69.
- Iqbal, Z., & Mirakhor, A. (2011). An introduction to Islamic finance: Theory and practice. Singapore: John Wiley Sons Ltd
- Jibril, M. (2021). Effect Of Firms Attributes On Non-Performing Loans Of Listed Deposit Money Banks In Nigeria. *Journal of Corporate Finance, Management and Banking System*, 1(1), 26-41.
- Jimoh, A. T., Attah, J. A., Bamigbade, D. & Abdurraheem, A. A. (2022). Effects of credit, liquidity, and operational risks on efficiency of islamic banks in Africa. *Journal of Contemporary Business and Islamic Finance*, 2(2), 135-154.
- Kabir, M. N., Worthington, A. & Gupta, R. (2015). Comparative credit risk in Islamic and conventional banks. *Pacific-Basin Finance Journal*, 34, 327-353. <https://doi.org/10.1016/j.pacfin.2015.06.001>
- Kayode, O. F., Obamuyi, T. M., Owoputi, J. A. & Adeyefa, F. A. (2015). Credit Risk and Bank Performance in Nigeria. *IOSR Journal of Economics and Finance*, 6(2), 21-28.
- Kolapo, T. F., Ayeni, R. K & Oke, M.O. (2012). Credit risk and commercial banks' performances in Nigeria: a panel model approach. *Australian Journal of Business and Management Research*. 2(2), 31-38
- Kollar, B., (2014). Credit Value at Risk and options of its Measurement. In: 2nd international conference on economics and social science (ICESS 2014), Information Engineering Research Institute. *Advances in Education Research*, 61, 143-147.
- Kwabena, A. B. M. (2014). Credit Risk Management in Financial Institutions: A Case Study of Ghana Commercial Bank Limited. *Research Journal of Finance and Accounting*, 5(23), 67-85.



- Lassoued, M. (2018). Comparative study on credit risk in Islamic banking institutions: The case of Malaysia. *The Quarterly Review of Economics and Finance*, 70, 267-278.
<http://doi.org/10.1016/j.qref.2018.05.009>
- Li, F. & Zou, Y. (2014). The Impact of Credit Risk Management on Profitability of Commercial Banks: A Study of Europe. Umeå School of Business and Economics.
- Michael, E. I. & Enang, E. R. (2022). Credit risk and performance of banks in Nigeria. *International Journal of Research in Finance and Management*, 5(1): 16-24.
- Mohammad, S. S., Prajanti, S. D. W. & Setyadharma, A. (2020). The analysis of financial banks in Libya and their role in providing liquidity. *Journal of Economic Education*, 10(1), 1-13.
- Ogbulu, O. M. & Eze, G. P. (2016) Credit risk management and the performance of deposit money banks in Nigeria: An error correction analysis. *Applied Economics and Finance*, 3(2), 97-109.
- Ozili, P. K. & Outa, E. (2017). Bank loan loss provisions research: A review. *Borsa _ Istanbul Review*, 1-20.
- Spuchl'áková, E., Valášková, K. & Adamko, P. (2015). The Credit Risk and its Measurement, Hedging and Monitoring. *Procedia Economics and Finance*, 24, 675 – 681.
- Susanto, A. A., Octavio, D. Q. & Wardani, D. T. K. (2020). Comparing credit risk in Islamic and conventional banking using bank-level panel data. *Economica: Journal Ekonomi Islam* 11 (2), 235-262
- Susanto, A. A., Octavio, D. Q., & Wardani, D. T. K. (2020). Comparing Credit Risk in Islamic and Conventional Banking Using Bank-Level Panel Data. *Economica: Journal Ekonomi Islam*, 11(2), 235-262.
<https://doi.org/10.21580/economica.2020.11.2.5027>