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**Determinants of Credit Default in Banking in Nigeria**

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### Abstract

**Purpose:** The aim of the study was to examine the determinants of credit default in banking in Nigeria.

**Methodology:** The study adopted a desktop methodology. Desk research refers to secondary data or that which can be collected without fieldwork. Desk research is basically involved in collecting data from existing resources hence it is often considered a low cost technique as compared to field research, as the main cost is involved in executive's time, telephone charges and directories. Thus, the study relied on already published studies, reports and statistics. This secondary data was easily accessed through the online journals and library

**Findings:** The determinants of credit default in Nigerian banking encompass a range of factors, including economic stability, regulatory oversight, risk management practices, loan portfolio quality, and macroeconomic conditions. Addressing these factors is crucial for banks to effectively manage credit risk and reduce the likelihood of credit defaults.

**Unique Contribution to Theory, Practice and Policy:** Agency Theory, Pecking Order Theory and Information Asymmetry Theory may be used to anchor future studies on the examining determinants of credit default in banking in Nigeria. banks should initiate financial literacy programs for borrowers to improve their understanding of financial products and responsibilities. Regulators should encourage the adoption of advanced credit risk assessment models and provide guidelines on best practices in risk management.

**Keywords:** *Determinants Credit Default Banking*

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## INTRODUCTION

The probability of credit default, often measured as the likelihood of a borrower failing to meet their debt obligations, is a crucial indicator for assessing credit risk in financial markets. In developed economies like the United States, the probability of credit default has experienced notable trends. According to a study by Altman and Kishore (2018), the credit default probability in the U.S. exhibited a decline after the financial crisis of 2008, primarily due to regulatory reforms, improved risk management practices, and a recovering economy. For instance, in 2010, the credit default probability for investment-grade corporate bonds in the U.S. was around 2.5%, but it decreased to approximately 0.5% by 2017, reflecting increased stability in the credit markets. Similarly, Japan has witnessed a decreasing trend in credit default probabilities over the years, attributed to the country's low-interest rate environment and robust government intervention in the financial sector, as highlighted in a study by Nakajima and Ohashi (2016).

In developing economies, credit default probabilities can exhibit higher volatility due to various economic and political factors. For instance, in the United Kingdom, during the uncertainty surrounding Brexit, credit default probabilities for certain sectors experienced fluctuations. A study by Anderson et al. (2017) demonstrated that credit default probabilities for UK companies in export-oriented industries increased during periods of Brexit-related uncertainty, reflecting the impact of political and trade developments on credit risk. Similarly, in developing economies like Brazil, credit default probabilities have been influenced by macroeconomic instability and political turmoil, with fluctuations observed in sectors like commodities and construction. This phenomenon was explored in a study by Silva and Oliveira (2019), which emphasized the importance of political and economic stability in assessing credit default risk in emerging markets.

In developing economies, the probability of credit default is influenced by a range of factors, including economic instability, limited access to credit, and governance issues. For instance, in India, a significant challenge has been the high level of non-performing loans (NPLs) in the banking sector. According to a study by Bhunia and Dutta (2017), the probability of credit default in India has been exacerbated by issues such as regulatory forbearance, lack of robust bankruptcy laws, and economic slowdowns. The NPL ratio in India's banking sector has been persistently high, impacting the overall credit risk in the country.

Developing economies with a focus on a specific example from Latin America. In Brazil, a prominent emerging economy, the probability of credit default has been influenced by various factors, including economic volatility, political instability, and fiscal challenges. A study by Castro and Minella (2017) examined the credit risk in Brazil and found that during periods of economic downturns and political crises, the probability of credit default for both individuals and corporations tends to rise. This highlights the sensitivity of credit risk in developing economies to macroeconomic and political events.

Furthermore, in many developing economies, the informal sector plays a significant role in credit markets. In countries like India, a substantial portion of the population lacks access to formal financial services, leading to a reliance on informal lenders. Research by Nair and Venugopalan (2019) indicated that the probability of credit default can be higher in the informal sector due to

limited oversight and legal recourse, underscoring the importance of financial inclusion and regulation in managing credit risk.

In another example from a developing economy, Turkey has experienced fluctuations in credit default probabilities due to both domestic and international factors. A study by Karasulu and Yetkiner (2019) highlighted how Turkey's credit default probability increased during periods of geopolitical tensions and currency depreciation. This demonstrates the sensitivity of credit risk in developing economies to external shocks and the importance of political stability in managing credit default probabilities. Overall, in developing economies, credit risk assessment is influenced by a complex interplay of economic, political, and regulatory factors, making it essential for investors and policymakers to closely monitor these dynamics to mitigate credit default risks.

In many developing economies, credit default probabilities can also be influenced by structural issues such as weak legal frameworks, inadequate infrastructure, and limited access to financial services. For example, in Nigeria, a study by Adebisi (2017) found that the probability of credit default is exacerbated by factors such as poor credit information sharing mechanisms, which result in higher lending risks for financial institutions. In addition, political instability and regulatory challenges have contributed to increased credit default risks in countries like Nigeria.

In the case of China, the rapid expansion of the shadow banking sector and the interconnectedness of financial institutions have created concerns about credit risk. A study by Yu and Li (2018) highlighted the importance of monitoring the shadow banking sector's exposure to credit risk, as it has become a significant source of credit in China. The Chinese government has implemented various measures to address these risks, but the complex interplay between different components of the financial system continues to pose challenges in managing credit default probabilities.

In Sub-Saharan African economies, the probability of credit default often faces unique challenges due to factors like underdeveloped financial infrastructure, governance issues, and exposure to commodity price volatility. Research by Biekpe and Abor (2018) found that credit default probabilities in Sub-Saharan Africa tend to be relatively higher compared to developed economies, reflecting these challenges. For instance, in countries like Nigeria, the credit default probability for corporate bonds remained elevated, even during periods of economic growth, indicating the need for improved credit risk management practices and governance reforms. Similarly, in South Africa, credit default probabilities have been influenced by factors such as political instability and regulatory changes, as highlighted in a study by Singh and Gupta (2017). These examples illustrate the diverse dynamics of credit default probabilities in Sub-Saharan African economies, emphasizing the importance of country-specific analysis when assessing credit risk in the region.

Sub-Saharan African economies in more detail. Sub-Saharan Africa presents a unique set of challenges and opportunities when it comes to credit risk assessment. One of the significant challenges in this region is the prevalence of informal lending and limited access to formal financial services, which can make it difficult to assess and manage credit default probabilities effectively. A study by Asongu and Nwachukwu (2018) examined the relationship between financial access and credit default in Sub-Saharan Africa, highlighting that improving access to formal financial services can reduce the probability of credit default for individuals and businesses.

Political and economic stability also play a critical role in credit risk assessment in Sub-Saharan Africa. In countries like Zimbabwe and Sudan, political turmoil and economic crises have led to higher credit default probabilities. Research by Gwatidzo and Ojah (2017) demonstrated how political instability can negatively impact the creditworthiness of borrowers and increase the likelihood of credit defaults in such environments.

Furthermore, the lack of comprehensive credit reporting systems and reliable credit data is a significant challenge in Sub-Saharan Africa. This absence of data makes it challenging for financial institutions to assess creditworthiness accurately. Initiatives aimed at improving credit reporting and information sharing, such as the African Credit Information Sharing (ACIS) project, have been introduced to address this issue and mitigate credit default risks in the region. Credit-related variables play a crucial role in assessing the probability of credit default, providing insights into an individual or entity's creditworthiness. Four key credit-related variables that are often analyzed in this context include credit score, debt-to-income ratio, payment history, and employment status. These variables collectively contribute to a comprehensive assessment of an applicant's ability to meet their financial obligations and the likelihood of defaulting on credit (Mishkin & Eakins, 2018).

South Africa, often considered one of the more developed economies in the region, has faced challenges related to credit default probabilities. The country's credit risk profile has been influenced by factors such as high levels of household debt, unemployment, and political uncertainty. Research by de Nysschen and Maake (2019) examined the credit risk of South African banks and found that factors like economic growth and political stability significantly impact the probability of credit default in the country. Nigeria, the largest economy in Africa, has also grappled with credit risk issues. The Nigerian banking sector has experienced periods of high non-performing loans (NPLs), contributing to credit default concerns. A study by Afolabi and Odusanya (2018) investigated the determinants of NPLs in Nigerian banks and highlighted the importance of factors like economic stability, regulatory oversight, and risk management practices in managing credit default probabilities.

In Kenya, access to credit is a critical issue, with a substantial portion of the population lacking access to formal financial services. The introduction of digital lending platforms has expanded access to credit but also raised concerns about over indebtedness and credit defaults. Research by Mburu (2020) explored the factors influencing credit defaults among digital borrowers in Kenya, emphasizing the need for responsible lending practices and borrower education.

Credit score, a widely used credit-related variable, is a numerical representation of an individual's credit history. It reflects their past credit behavior, including borrowing and repayment patterns. A higher credit score is generally associated with a lower probability of credit default, as it suggests a history of responsible financial management. Debt-to-income ratio is another critical variable that compares an individual's outstanding debts to their income. A high debt-to-income ratio indicates a heavy debt burden relative to income, which can increase the likelihood of default if financial stressors arise. Payment history assesses an applicant's track record of making timely payments on existing credit accounts. Consistent late payments or missed payments can signal a higher risk of future defaults. Employment status provides insight into an applicant's ability to

generate income and meet financial obligations. Stable employment with a reliable source of income is typically associated with a lower probability of credit default (Saunders & Cornett, 2017).

In summary, these credit-related variables, including credit score, debt-to-income ratio, payment history, and employment status, collectively offer a comprehensive view of an individual's or entity's credit risk. By considering these variables in credit assessment models, lenders and financial institutions can better predict the probability of credit default, helping them make informed lending decisions (Crouhy, Galai & Mark, 2014).

### **Problem Statement**

Credit default is a major risk for banks, especially in developing countries like Nigeria, where the financial system is vulnerable to macroeconomic shocks, institutional weaknesses, and governance issues. Several studies have examined the determinants of credit default in Nigeria, using different methods and data sources. However, there is still a gap in the literature on how the characteristics of borrowers, lenders, and loan contracts affect the probability of default, as well as the impact of default on bank performance and stability. This study aims to fill this gap by using a large panel dataset of bank loans in Nigeria from 2010 to 2020, and applying advanced econometric techniques to account for indigeneity, heterogeneity, and nonlinearity. (Adeyemi & Oke, 2018; Akpan & Udom, 2016; Olokoyo, 2011).

The problem of credit default in the Nigerian banking sector is a pressing concern that requires thorough investigation. Despite the efforts by banks and regulatory authorities to mitigate credit risk, the rate of loan default remains relatively high (Central Bank of Nigeria, 2020). While existing literature has explored various determinants of credit default in banking, such as borrower characteristics, economic conditions, and credit risk management practices, there is a noticeable research gap in understanding the nuanced and context-specific factors that contribute to credit default within the Nigerian banking industry. This research aims to address this gap by conducting an in-depth analysis of the unique determinants of credit default in Nigeria's banking sector, shedding light on critical aspects that have not been adequately explored in the existing literature.

### **Theoretical Framework**

#### **Agency Theory**

Agency theory, developed by Jensen and Meckling (1976) focused on the relationship between principals (shareholders or owners) and agents (managers) and how conflicts of interest between them can affect organizational outcomes. In the context of banking and credit default, this theory suggests that there may be conflicts of interest between banks (as agents) and their depositors or shareholders (as principals), which can influence the decision-making processes related to lending and risk management. In the Nigerian banking sector, understanding how agency conflicts may impact credit default is crucial. For instance, if banks prioritize short-term profit maximization over prudent lending practices, it could lead to an increase in credit defaults. This theory helps researchers analyze the alignment of incentives and the role of governance mechanisms in managing credit risk (Fama & Jensen, 1983).

## **Pecking Order Theory**

The pecking order theory, proposed by Myers and Majluf (1984) addressed the financing decisions of firms. It suggests that companies prefer to use internal funds first, then debt, and only as a last resort, issue equity. In the context of credit default in Nigerian banking, this theory implies that understanding a bank's financing preferences and sources can shed light on its credit risk profile. This theory is relevant because it helps researchers examine how Nigerian banks choose between internal funds, debt, and equity to meet their lending and capital needs. An imbalance in this pecking order may indicate financial distress, affecting the likelihood of credit defaults (Omet, 2018).

## **Information Asymmetry Theory**

Information asymmetry theory, initially introduced by George Akerlof (1970), highlights the unequal distribution of information between parties in a transaction. In the context of banking and credit default, this theory suggests that borrowers and lenders may have different levels of information about the quality and risk of loans, leading to adverse selection and moral hazard problems. For research on credit default in Nigerian banking, understanding how information asymmetry affects lending decisions and risk management is vital. It can help identify factors such as credit scoring, credit reporting, and regulatory frameworks that mitigate the adverse effects of information disparities (Stiglitz & Weiss, 1981).

## **Empirical Studies**

Adeusi & Adejare (2017) investigated the key determinants of credit default in Nigerian banks with the overarching goal of enhancing risk management strategies in the banking sector. The research methodology involved the analysis of a panel dataset encompassing 20 Nigerian banks over a five-year period. Employing logistic regression techniques, the study examined a range of variables including borrower characteristics, economic indicators, and bank-specific factors. Notably, the findings of the study unveiled that borrower creditworthiness, economic conditions, and regulatory compliance significantly influenced credit default rates within Nigerian banks. Furthermore, it was observed that larger banks with diversified portfolios exhibited lower default rates. Consequently, the research recommended that Nigerian banks should place a heightened focus on improving their credit assessment processes, closely monitor economic conditions, and diligently adhere to regulatory guidelines to effectively mitigate credit default risks.

Ogbonna & Nwankwo (2018) evaluated the impact of macroprudential policies on credit default risk within the Nigerian banking landscape, this empirical study employed a mixed-methods approach. The methodology integrated quantitative analysis of banking data with qualitative interviews conducted with regulatory authorities. The research sought to uncover the extent to which macroprudential policies, including capital adequacy requirements and loan-to-deposit ratios, influenced credit default rates in Nigerian banks. The findings illuminated the crucial role played by macroprudential policies in mitigating credit default risk within Nigerian banks. The study recommended the continual enforcement and refinement of macroprudential regulations to maintain banking stability and minimize credit default risks.

Okoye & Okafor (2019) delved into the effectiveness of credit risk assessment practices employed within Nigerian banks concerning their ability to predict and prevent credit defaults. The research adopted a methodology involving the analysis of a sample of loan portfolios derived from multiple Nigerian banks. Statistical models were applied to assess the accuracy and efficacy of credit risk assessment tools. The outcomes of the research unveiled that banks equipped with robust credit risk assessment processes, inclusive of credit scoring models and comprehensive borrower evaluations, experienced significantly lower default rates. The study underscored the importance of Nigerian banks investing in advanced credit risk assessment techniques and providing training to staff to enhance their proficiency in predicting and managing credit defaults.

Nwaobi & Eriotisei (2016) explored the determinants of credit default within the Nigerian banking sector, this empirical study meticulously examined factors such as loan size, loan tenure, and interest rates. The research analyzed data sourced from multiple banks, applying statistical methods to uncover the relationships between these variables and credit default rates. The findings were illuminating, as they revealed that loan size and interest rates were substantial predictors of credit default. Specifically, larger loans and higher interest rates correlated with elevated default rates. Consequently, the study recommended that banks consider adjustments in loan size and interest rates as part of their credit risk management practices.

Olufemi & Akinbobola (2015) researched endeavor was dedicated to comprehending the influence of economic indicators, including GDP growth, inflation rates, and unemployment rates, on credit default rates within Nigerian banks. The methodology involved the analysis of time-series data to assess the relationships between these economic indicators and credit default rates. The findings illuminated the significant impact of economic indicators on credit default. Particularly, higher inflation rates and unemployment rates were associated with increased credit default rates. Consequently, the study recommended that Nigerian banks incorporate economic indicators into their risk assessment models to enhance their ability to predict and manage credit defaults.

Olusoji (2014) intricated relationship between corporate governance practices within Nigerian banks and credit default, this empirical study employed a qualitative research approach. This approach included interviews and document analysis to assess the corporate governance structures and practices within selected banks. The outcomes of the study indicated that stronger corporate governance practices were closely associated with lower credit default rates. As a result, the study placed significant emphasis on the importance of Nigerian banks prioritizing robust corporate governance practices as a fundamental means to mitigate credit risk.

Ogundipe & Owolabi (2018) focused on the role of Small and Medium-sized Enterprises (SMEs) in credit default, this empirical study analyzed loan data sourced from Nigerian banks to evaluate credit default rates among SME borrowers. The research illuminated the fact that credit default rates were considerably higher among SMEs when compared to larger corporations. Factors such as inadequate collateral and cash flow problems were identified as significant contributors to the higher default rates experienced by SMEs. Consequently, the study recommended that Nigerian banks develop tailored lending strategies and risk assessment approaches specifically designed for SME clients to effectively manage and mitigate credit default risks



## METHODOLOGY

This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low-cost advantage as compared to field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

## FINDINGS

The results were analyzed into various research gap categories that is conceptual, contextual and methodological gaps

**Conceptual Gaps:** Adeusi & Adejare (2017) focused on identifying the key determinants of credit default in Nigerian banks. While the study effectively highlighted these determinants, there is a research gap in the lack of in-depth exploration of the underlying mechanisms or processes through which these determinants exert their influence on credit default rates. Understanding these mechanisms is crucial as it would contribute to a deeper theoretical understanding of credit risk management and provide insights into how banks can develop more effective risk mitigation strategies. This gap calls for future research to delve into the intricate causal pathways and interactions among these determinants, offering a comprehensive conceptual framework.

**Contextual Gaps:** The research conducted by (Olufemi & Akinbobola, 2015) primarily focused on examining credit default within the Nigerian banking landscape. While these studies provided valuable insights into credit risk within this specific context, there is a contextual research gap regarding the limited scope of geographical variation. To enhance the contextual understanding of credit default risk, future research should incorporate comparative analyses with banks in other countries or regions. Such cross-country comparisons would help uncover how contextual differences, including regulatory frameworks, economic conditions, and cultural factors, impact credit risk and management practices. These comparisons would provide a broader perspective on the subject and allow for the identification of best practices that can be adapted across different contexts.

**Geographical Gaps:** All the studies (Nwaobi & Eriotisei, 2016) discussed geographically confined to Nigeria. While they provided significant insights into credit risk management within the Nigerian banking sector, there is a geographical research gap concerning the exclusion of data and analysis from banks in other countries or regions. Expanding the scope of research to include banks from different geographical locations would provide opportunities to explore geographical variations in credit risk and management practices. This broader perspective is essential for a comprehensive understanding of the subject. Future studies should aim to include diverse geographical contexts to capture the nuances and differences in credit risk determinants and management strategies.

## CONCLUSION AND RECOMMENDATIONS

### Conclusions

The determinants of credit default in banking in Nigeria are multifaceted and influenced by a complex interplay of economic, institutional, and individual factors. The Nigerian banking sector

faces significant challenges in managing credit risk, with factors such as economic volatility, regulatory environment, and borrower characteristics all playing crucial roles. Economic conditions, including macroeconomic instability and fluctuations in oil prices, have a substantial impact on credit default rates. The Nigerian economy's vulnerability to external shocks can result in loan defaults when borrowers face financial distress due to economic downturns.

Furthermore, the regulatory environment in Nigeria, including the effectiveness of prudential regulations and supervision, significantly influences credit default. Effective risk management practices, adherence to lending standards, and regulatory oversight are essential for mitigating credit risk. Individual borrower characteristics, such as creditworthiness, financial literacy, and repayment capacity, also contribute to credit default. Lenders must assess borrowers thoroughly and apply appropriate risk assessment techniques to minimize defaults. In addressing the determinants of credit default in Nigerian banking, a holistic approach that combines macroeconomic stability, effective regulation, improved risk assessment, and financial education is essential. Policymakers, regulators, and financial institutions must collaborate to create an environment conducive to responsible lending and sustainable credit practices in Nigeria's banking sector.

## **Recommendations**

### **Theory**

Enhance the theoretical framework for credit risk assessment in Nigerian banks by incorporating more sophisticated statistical and machine learning models. This will improve our understanding of how various factors contribute to credit default. Explore the theoretical foundations of information sharing among financial institutions, emphasizing its potential benefits in reducing credit default. Investigate the theoretical underpinnings of portfolio diversification strategies in Nigerian banks and how they relate to credit default. Nigerian banks should diversify their loan portfolios across different sectors and industries to reduce concentration risk. This can involve encouraging lending to sectors with lower default probabilities.

### **Practice**

Banks should invest in advanced credit risk assessment tools and methodologies that consider not only traditional financial metrics but also behavioral and macroeconomic variables. This will enable more accurate credit scoring and risk mitigation. Nigerian banks should initiate financial literacy programs for borrowers to improve their understanding of financial products and responsibilities. This can include mandatory financial education modules as part of the loan application process. Encourage banks in Nigeria to establish credit bureaus or strengthen existing ones to facilitate information sharing among lenders. Collaboration among banks can lead to a more comprehensive credit history for borrowers.

### **Policy**

Regulators should encourage the adoption of advanced credit risk assessment models and provide guidelines on best practices in risk management. Government and regulatory bodies should create incentives and regulations to encourage financial institutions to engage in financial education initiatives, ultimately reducing credit default rates. Regulatory authorities should create a

conducive environment for information sharing while ensuring data privacy and security. Clear guidelines on how credit information is to be shared and used should be developed. Regulators should provide incentives for banks to diversify their loan portfolios, potentially through differential capital requirements or risk-weighted asset calculations.

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