

**EFFECT OF INCOME DIVERSIFICATION ON BANK  
PERFORMANCE IN NIGERIA**

**DEPOSIT MONEY BANKS**

**(A Case Study of Union Bank Nig. Plc)**

**BY**

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**BEING A RESEARCH PROJECT SUBMITTED TO THE  
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## **CERTIFICATION**

This is to certify that this research study was conducted by **ADEBOWALE SHUKURAH ARIKE** with Matriculation Number **HND/23/BFN/FT/0196** and this work has been read and approved as meeting the requirement for the award of Higher National Diploma (HND) in Banking and Finance, Institute of Finance and Management Studies (IFMS), Kwara State Polytechnic.

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## **DEDICATION**

To the Almighty God, for His grace and guidance throughout this research.

This work is dedicated to my family, whose unwavering support and encouragement have been my driving force.

Finally, to my lecturers and mentors, whose knowledge and insights have been a valuable resources to me.

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## ABSTRACT

*This study examined the effect of income diversification on financial performance of deposit money banks (DMBs) in Nigeria. Variables considered were commission, foreign exchange incomes, and firm age, which are proxies for income diversification and financial performance proxied by Tobin's  $Q$  ratio. The purposive sampling technique was used to select the 8 banks classified by Central Bank of Nigeria to be Domestic Systematically Important Banks in Nigeria. Data collected from the annual reports and the Nigerian Stock Exchange website for a period 2008-2018 were used. Statistical tools used were the descriptive statistics and econometric analysis using the panel data. Findings showed that while commission income has a significant positive effect on Tobin's  $Q$  ratio of DMBs, foreign exchange income and firm age each have a significant negative effect on Tobin's  $Q$  ratio of DMBs in Nigeria. It is recommended that banks in Nigeria minimize their income from foreign exchange to maximize performance since income from these transactions tend to inhibit bank financial performance.*

***Keywords: Banks, Commission, Financial Performance, Income Diversification.***

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

The banking sector across the globe plays a major role in the business of financial intermediation and has grown over the years, resulting in the diversity and complexity of its operations. Following this development, deposit money banks (DMBs) have advanced from what used to be their core line of business, which is, mobilizing deposits and advancing loans, to other financial noninterest earning intermediation services such as derivative arrangements, provision of financial guarantees, investments, foreign exchange transactions, among others.

Diversification is one amongst the expansion strategies taken only firms. Osifo & Osagie (2020) asserted that diversification improves corporate companies' performance reason being that it allows for the leveraging of resources to support new projects, thus complementing the final performance of the company firm. They documented that by utilizing prior assets, diversification enables corporate enterprises to develop the necessary exigency for increasing shareholders' value. Diversification is done in diverse forms which might assume penetration, development of the market and development of products. When an organization needs to expand, take advantage of economies of scale, or boost revenues, diversification strategies are implemented. The term diversification has been referred to as a technique that permits a corporation to urge towards a business that's not associated with its current business and which enables it to provide new products for brand new and existing markets.

Technological advancements, new entrants and therefore the evolution of banking innovations have seen changes in ways within which consumer's access and

demand various products and services and the way organizations operate. Organizations that seek to survive various business cycles or to remain competitively ahead of others hunt for means to diversify. Nigeria's banking sector has witnessed significant growth in deposits, assets, products offering over the previous couple of years. The players in this sector are now faced with so much contention owing to improved technology and increased number of industry players. With such competition banks are subtly coerced to use diversification strategies to enable their survival within the industry. Banks have been under pressure from competition due to increase in their involvement in unconventional intermediation methods like investment banking, banc-assurance and delving into previously dangerous industries (Gamra and Plihon, 2011). Diversification is an important study topic for financial intermediaries in both underdeveloped and advanced economies, since banks' operations have expanded outside the conventional boundaries and intermediary roles they perform between the excess and deficit unit of the economy but into different sorts of activities within the financial market (Olaewaju, Titilayo & Stephen, 2017). Even though banks profit from diversification in terms of economies of scale, the process may also make agency issues worse (costs) thanks to the actual fact that managers (insiders) may expand the financial activities within the bank as long as the institution's diversification strategy grants them personal benefits (Olaewaju et.al, 2017). However, in order for banks to really accomplish the ultimate objectives of diversification in all ramifications, there must exist proper supervision of the diversification activities involved.

On the other hand, for some Banks (DMBs) in Nigeria, instead of diversification to engender an improved banks' performance, it often leads to crisis and they continue to struggle to remain solvent, liquid and strive for survival despite the fact that they render more services than their traditional roles. Instead of



diversification to diminish agency problem faced by DMBs, the problem keeps increasing that several of these banks continue to go into Mergers over and again. Could it be that the ventures diversified into are not properly managed or diversification has no substantial effect on Banks' financial performance? It is not possible for banks to reduce agency costs and maximize shareholders' wealth without necessarily widening their investment tentacles via diversification so as to reap the huge benefits. Surprisingly, Banks continues to strive towards survival despite the level of their diversification of loans, deposits, assets and liabilities (Olawaju et.al, 2017). It is a known fact that diversification also exposes a bank to several kinds of risks and if the management team lacks the necessary expertise to manage these risks efficiently and effectively, it can lead to disastrous outcomes for the bank. Hence, it may lead to conflict of interest between the banks and investors (Olawaju et.al, 2017). Numerous studies have examined the banks' profitability in order to uncover the factors that create variations in the earnings of Banks in Nigeria because the banks' performance is such a pressing topic. It appears that majority of the studies on diversification focus more on income diversification strategy only and its impact on bank performance. Therefore, In regards to diversification as a strategy, this study takes into consideration four different diversification strategies which includes Asset Diversification (proxied by lending and non-lending assets), Deposit Diversification (proxied by demand deposit, savings deposit, time deposits, certificate of deposits CDs, and the deposits by other financial institutions), Investment Diversification (proxied by stocks, Loans and advances, government securities) and Product Diversification (proxied by online banking services, use of Automated Teller Machines, agency banking and so on). These diversification strategies are the independent variables while dependent variable is Return on Equity (ROE) which serves as a proxy for Banks' Performance. Diversification's impact on the banks' performance has been the subject of some studies. Osifo (2020) examined

foreign diversification and banks' performance, Vidyarthi (2019) looked into Dynamics of income diversification and DMBs' performance in India, Adeleke, Odebeatu & Adeoye (2018) investigated product diversification as a strategy for banks' survival. Olarewaju, Migiro & Sibanda (2017) examined Operational Diversification and banks' performance in Sub-Saharan Africa. Sameh & Hellara (2017) studied Diversification and DMBs' performance using a simultaneous equation approach. Thus, this paper analyses different Diversification strategies (Asset, Deposit, Investment and Product) and how they affect the performance of Nigeria's quoted banks.

The growth of non-intermediation income activities suggests intermediation activities are becoming less important part of banking business strategies and strategically, banks have shifted their sales mix by diversifying into other income sources. The Nigerian financial sector and the banking industry have undergone series of reforms that brought changes not only in the number of banks and financial institutions but also in the diversity of products and services they render. According to DeYoung and Rice (2004), banks are increasingly exploiting nontraditional avenues of generating income, to the extent that in recent times, almost half of banks' incomes in the US are obtained from nontraditional activities and this reflects not only a diversification of banks into nontraditional activities, but also a shift in the way banks earn money.

The conventional wisdom in the banking industry is that earnings from noninterest products are more stable than loan-based earnings, and that noninterest activities reduce bank risk via diversification (Nisar, Peng, Wang, & Ashraf, 2018).

The banking sector is significant to practitioners and regulators due to its influence on macroeconomic factors such as economic growth, entrepreneurship, resource allocation, poverty alleviation, education, and agriculture (Githaiga & Yegon, 2019).

Inefficient banking operations will derail economic growth by reducing capital investment to produce goods and services (Dietrich & Wanzenried, 2014). Commercial banks' financial services to customers are also revenue generating services for them. Therefore, to increase business performance, commercial banks must strengthen their provision of financial services to consumers, thereby boosting bank income. However, expanding financial services offered to consumers to raise income does not imply that commercial banks would enhance their business efficiency. In contrast, it potentially impairs commercial bank efficiency, as shown in several worldwide research studies. The expansion of financial services supply not only helps commercial banks earn income, but also helps satisfy the demands of consumers in the economy. Therefore, the question is how can commercial banks extend their financial services to meet customers' needs and increase income while guaranteeing business efficiency is a realistic requirement that requires a viable solution. Studies on the impact of income diversification on the performance of commercial banks lead to different conclusions. Resource base view theory and internal market hypothesis suggest that diversification can create firm performance, expand debt capacity and reduce taxes (Zahavi & Lavie, 2013). However, there may be potential costs that reduce resources allocated to better performing segments or misalignment of incentives (Lee & Li, 2012). In the context of the COVID19 epidemic, the operations of the banking system are affected by household income and business revenue both directly and indirectly (Feyen et al., 2021; Maghyereh & Yamani, 2022; McKibbin & Fernando, 2021). Most studies on the banking sector showed that income diversification may improve bank profitability during this health crisis (Li et al., 2021). However, some experimental studies show opposite findings (Paltrinieri et al., 2021). Therefore, research on the impact of income diversification on the bank business performance is still necessary. In recent years, the growth of financial services in Vietnam has grabbed the attention of commercial banks and

produced extremely beneficial outcomes, allowing commercial banks to not only rapidly generate income but better satisfy the demands of clients in the economy. However, on efficiency, it has fallen short of expectations, as seen by the comparatively low ROA or ROE coefficients compared to commercial banks in other nations (Doan Trang, 2019). How to diversify financial services to boost income while also increasing company efficiency has been and continues to be an objective requirement. This paper provides empirical evidence on the impact of income diversification on the business performance of Vietnamese commercial banks from 2010 to 2020.

## **1.2 Statement of the Problem**

The Nigerian banking industry has experienced significant changes in recent years, with increased competition, changing regulatory requirements, and evolving customer needs. Deposit Money Banks (DMBs) in Nigeria are facing challenges in maintaining their profitability and competitiveness. One of the strategies that has been adopted by some DMBs is income diversification, which involves generating revenue from multiple sources beyond traditional banking activities.

Despite the potential benefits of income diversification, such as reduced dependence on interest income and increased revenue streams, many Nigerian DMBs still rely heavily on traditional banking activities. Union Bank Plc, one of the oldest and most established banks in Nigeria, is not immune to these challenges.

The bank's over-reliance on traditional banking activities may expose it to risks associated with fluctuations in interest rates, credit quality, and market volatility. Furthermore, the increasing competition in the Nigerian banking industry may erode Union Bank's market share and profitability if it fails to adapt to changing market conditions.

Therefore, this study seeks to investigate the effect of income diversification on the performance of Union Bank Plc. Specifically, the study aims to:

- ❖ Examine the current state of income diversification at Union Bank Plc
- ❖ Investigate the impact of income diversification on the bank's financial performance
- ❖ Identify the challenges and opportunities associated with income diversification in the Nigerian banking industry

By addressing these research objectives, this study aims to contribute to the understanding of the role of income diversification in enhancing the performance of Nigerian DMBs, with a specific focus on Union Bank Plc. The findings of this study will be useful to bank management, policymakers, and regulators in developing strategies to promote financial stability and competitiveness in the Nigerian banking industry.

### **1.3 Research Questions**

- i. What is the impact of income diversification on the financial performance of Union Bank Plc?
- ii. How has income diversification affected the risk management practices of Union Bank Plc?
- iii. What are the challenges faced by Union Bank Plc in implementing income diversification strategies?
- iv. How has income diversification influenced the competitiveness of Union Bank Plc in the Nigerian banking industry?

## **1.4 Objectives of the Study**

- i. To examine the impact of income diversification on the financial performance of Union Bank Plc
- ii. To analyze how income diversification affected the risk management practices of Union Bank Plc
- iii. To find out the challenges faced by Union Bank Plc in implementing income diversification strategies
- iv. To determine how income diversification influenced the competitiveness of Union Bank Plc in the Nigerian banking industry

## **1.5 Research Hypotheses**

H0: Income diversification has no significant impact on the financial performance of Union

Bank Plc.

H1: Income diversification has a significant impact on the financial performance of Union Bank Plc.

H0: Income diversification does not reduce the risk exposure of Union Bank Plc.

H1: Income diversification reduces the risk exposure of Union Bank Plc

## **1.6 Significance of the Study**

This study aims to contribute to the understanding of the impact of income diversification on the performance of deposit money banks in Nigeria. The findings of this study will be significant to:

**Banks:** By understanding the effects of income diversification, banks can develop strategies to improve their financial performance and competitiveness.

**Regulators:** The study's findings can inform policy decisions related to the regulation of deposit money banks in Nigeria.

**Investors:** The study can provide insights into the financial performance and risk management practices of deposit money banks in Nigeria.

### **1.7 Scope and Limitation of the Study**

This study will focus on the impact of income diversification on the performance of Union Bank Plc, a Nigerian Deposit Money Bank. The study will examine the bank's financial performance, risk management practices, and competitiveness in the context of income diversification.

**Case study approach:** The study will focus on a single case study, Union Bank Plc, which may limit the generalizability of the findings to other DMBs in Nigeria.

Despite these limitations, the study aims to provide valuable insights into the impact of income diversification on the performance of DMBs in Nigeria, with a specific focus on Union Bank Plc

### **1.8 Definition of Terms**

**Income Diversification:** The strategy of generating revenue from multiple sources to reduce dependence on a single source of income.

**Financial Performance:** The financial health and stability of a bank, measured by indicators such as profitability and return on equity.

**Deposit Money Banks:** Financial institutions that accept deposits and make loans.

**Non-Interest Income:** Income generated from non-traditional banking activities, such as fees and commissions.

**Risk Management:** The process of identifying, assessing, and mitigating risks that could impact a bank's financial performance.

**Competitiveness:** The ability of a bank to compete effectively in the market and maintain its market share.

**Financial Stability:** The stability of the financial system and the ability of banks to withstand economic shocks.

**Diversification Strategy:** A plan to diversify a bank's revenue streams and reduce dependence on a single source of income.

**Risk Exposure:** The potential loss or risk that a bank faces due to its business activities.

**Financial Inclusion:** The access to financial services for individuals and businesses.

## **1.9 Organization of the Study**

This paper is divided into five sections:

Section one discusses the introduction, following the introduction is section two which focuses on literature review and hypotheses development

Section Two: conceptual review, theoretical review and review of empirical studies.

Section three harps on the methodology

Section four which focuses on the estimation results and discussion of findings, and finally

Section five presents the conclusion and recommendations.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Conceptual Framework**

##### **2.1.1 The Concept of Diversification**

Diversification can be defined as the process of allocating capital in a way that reduces the exposure to any particular asset or risk. A common path towards diversification is to reduce risk or volatility by investing in a variety of assets. If asset prices do not change in perfect synchrony, a diversified portfolio will have less variance than the weighted average variance of its constituent assets, and often less volatile than the least volatile of its constituents (O'Sullivan & Sheffrin 2003). According to Stroh, and Patrick (2012), banks gain when they shift to non-interest income and reduced volatility in profits.

The banking industry is the backbone of any economy and a diverse, profitable and stable banking system is the pre-requisite for strong and prosperous economies (Nisar, et al. 2018). However, despite the paramount importance of the banking industry in Nigeria, banking concentration and the level of domestic credit is very low owing to increase in non-performing loans whose resultant effect is unprecedentedly increasing defaults in repayment of loans, poor banking practices, non-compliance to banking regulations, unstable economic and political conditions. Hence, the need for deposit money banks to reposition their operational strategy into alternative revenue source and shift their revenue mix by diversifying into related line of businesses other than intermediating funds between the surplus and deficit units.

Theoretically and empirically, the impact of diversification on bank performance and stability has been debated on by scholars across the globe and is still debatable.

According to portfolio theory, diversified banks benefit from economies of scope which improve performance and reduce risk (Elsas, Hackethal, & Holzhäuser, 2010). Incomes from different sources which are uncorrelated or imperfectly correlated with each other result in steady and stable streams of overall bank profits (Chiorazzo, Milani, & Salvini, 2008). On the contrary, if the diversified activity is inherently riskier than the traditional banking business, the costs of diversification may outweigh the benefits, and banks may become riskier and their overall performance may deteriorate (Boyd, Stanley, & Hewitt, 1993). This effect would further magnify if incomes from different activities are highly correlated.

In line with the above arguments, existing empirical studies reported mixed evidence on the impact of income diversification on banks' performance. Studies (such as Berger, Iftekhhar, & Mingming, 2010 and Maudos, 2017) reported a negative impact of diversification on bank performance. On the other hand, Elsas et al., (2010) and Sanya & Wolfe (2011) found a positive association between noninterest income diversification and performance. However, studies (such as Lee, Yang, & Chang, 2014; Li & Zhang, 2013) conclude that income diversification does not increase performance. Similarly, Stiroh and Rumble (2006) and De-Jonghe (2010) argue that an increase in income diversification has a negative effect on banks' stability, while Sanya and Wolfe (2011), and Lee, et al. (2014) found that income diversification increases bank performance and stability.

Given the inconclusive nature and inconsistency in their findings, this study believes additional evidence would be needed to validate whether banks' income diversification affects financial performance. Thus, this study investigates income diversification in the Nigerian banking sector, with emphasis on the effect of income diversification on financial performance of some selected DMBs in Nigeria from 2008 to 2018. This is the knowledge gap this study seeks to fill.

### **2.1.1.1 Asset Diversification and Banks' Performance**

Asset Diversification refers to the act of dividing one's investable capital between different asset classes to manage risk better (Tavaga, 2022). It was first coined by Harry Markowitz in 1952. Broad diversification wherein investors distribute their investments into over several asset classes including large, mid or small cap stocks such as energy, healthcare, financial or technology stocks; or even investing in emerging markets, many investors mistakenly believe they have achieved appropriate diversification. They have basically made investments in a number of equities asset class sectors, and as a result, they are susceptible to market ups and downs. The relationship between asset classes might alter over time, thus close monitoring is crucial. To mitigate against investment risks, investors should avoid choosing investments that are highly correlated (Ayeola, Ismail & Sufahani, 2017). Hence, the paper hypothesizes:

H01: Asset Diversification affects Nigeria banks' performance minimally.

### **2.1.1.2 Deposits diversification and DMBs' performance**

The goal of this diversification approach is to shield banks from liquidity risk exposures, particularly when their borrowing capacity is limited or expensive. This risk can be brought on by unanticipated customer withdrawals or an increase in the number of acceptable loan requests. (Tavaga, 2022). To be specific, accounts (demand, saving, time deposits) increases the effectiveness of bank borrowing, which will lower cost of lending. Hence, the paper hypothesizes:

H02: Deposits diversification affects Nigeria banks' performance minimally.

### **2.1.1.3 Investment diversification and DMBs' performance**

Putting all of your eggs in one basket is a dangerous move, according to Gupta (2011). As a result, diversifying your portfolio of investments is a key financial principle. The chance of a sudden/unexpected outcome is reduced by spreading investments among several unrelated investments (Matthew, Yusufkibet & Bokongo 2016). Diversification among different asset classes is pertinent as it reduces a portfolio's sensitivity to market swings (Onuorah & Osuji, 2014). Hence, the paper hypothesizes:

H03: Investments diversification affects Nigeria banks' performance minimally.

### **2.1.1.4 Product diversification and DMBs' performance**

This is a tactic employed by a business to boost profitability and achieve higher sales volume from new products. It can take place at the corporate level or at the business level. More options and variety for products and services are made possible by diversification. If done right, diversification significantly improves a company's profitability and brand image (Githaiga, 2021). There are various product diversifications for banks which include agency banking, bancassurance, electronic cards system, mobile banking system and so on (Ehiedu et. al., 2021). Hence, the paper hypothesizes:

H04: Product diversification affects Nigeria banks' performance minimally.

## **2.1.2 The Concept of Financial Stability**

Financial stability is a state in which the financial system is resistant to economic shocks and is fit to smoothly fulfill its basic functions of intermediation of financial funds, management of risks and the arrangement of payments. Padoa-Schioppa (2002) contends that "financial stability is a condition where the financial system is

able to withstand shocks without giving way to cumulative processes, which impair the allocation of savings to investment opportunities and the processing of payments in the economy”. The emphasis here is on the shock-absorbing capacity or resilience of the financial system, so that it can continue to carry out its essential functions of resource allocation and provision of payments services. The reference to payments services here is important because like disruptions to the intermediation function, disturbances to the payments system have the capacity to inflict adverse effects on the level of economic activity (Davis, 2001). Credit risk is by far the most significant risk faced by banks and the success of their business depends on accurate measurement and efficient management of this risk to a greater extent than any other risks (Giesecke, 2004). According to Chen and Pan (2012), credit risk is the degree of value fluctuations in debt instruments and derivatives due to changes in the underlying credit quality of borrowers and counterparties. Credit risk management maximizes bank’s risk adjusted rate of return by maintaining credit risk exposure within acceptable limit in order to provide framework for understanding the impact of credit risk management on banks’ profitability (Kargi, 2011).

### **2.1.3 Foreign Exchange Transaction Income**

Foreign exchange (FOREX) has been a major concept in international banking. Without foreign exchange, international banking would be impossible as it represents the financial part of the commercial transactions which is conducted through the payment and settlement systems of the banks (Osundina, Osundina, Jayeoba, & Olayinka, 2016). Thus, foreign exchange as defined by the Business Dictionary (2015) is any currency other than the local currency which is used in

settling international transactions and also a system of trading in and converting the currency of one country into that of another. According to O'Sullivan and Steven (2003), exchange rate is the value of a nation's currency in terms of another nation's currency, that is, it is the required amount of units a currency can buy for a certain amount of units of another currency. In Nigeria, it is the value of Naira in relation to other currencies such as United States Dollar, Japanese Yen, British Pounds, and so on. In the same vein, foreign exchange includes monetary authorities claims on foreigners in the form of bank deposits, treasury bills, short term and long term government securities and other claims usable in the event of a balance of payment deficit, including non-marketable claims arising from inter-central bank and inter-governmental arrangements, without regard to whether the claim is denominated in the currency of the debtor or the creditor (Babazadeh & Farrokhnejad, 2012).

Foreign exchange transaction simply means an agreement of exchange of currencies of one country for another at an agreed exchange rate on a definite date. It is the term used to describe all operations conducted by businesses or individuals that are denominated in a currency other than a company's functional currency. Foreign exchange transaction refers to the sale and purchase of foreign currencies.

International businesses such as e-commerce multinationals or banks selling packages worldwide make hundreds or even thousands of foreign currency transactions a day, which are likely to render them vulnerable to foreign exchange risk. Firms working with more than one currency are requested to report their transactions in their financial statements in their functional currency, using the daily spot exchange rate. Sometimes, the interval between a firm's commitment being undertaken and payment being made may extend for a significant period of time. In these instances, the fluctuations of the exchange rate between the transaction currency and reporting currency can cause variations in the reported amount of the

transaction, which can impact the company's profit margins. These variations are recorded in financial statements as foreign exchange gains or losses. Where such variations result in an exchange gains it is known as foreign exchange transaction income, otherwise losses.

Often, DMBs engage in foreign exchange or foreign currency transactions which are outside their normal business operations and earn income in the form of non-interest income. The non-interest income earned results from the fluctuation in the exchange rate between the transaction currency and reporting currency which brought about variations in the amount of transaction reported in the financial statements. Examples of foreign exchange transaction income include income from foreign currency and hedging transactions pertaining to foreign currency translation of receivables and payables as well as of currency derivatives and other hedging transactions, income from translation of financial statements in foreign currencies which contained gains from the translation of companies whose local currency is different from the functional currency.

However, banks mitigate financial statements volatility caused by fluctuations in exchange rate using foreign exchange derivatives to hedge foreign exchange risk through the application of hedge accounting measures in the case of any envisaged foreign exchange loss. Flowing from above, the first hypothesis of this study is presumed as follows:

#### **2.1.4 Commission Income**

Commission is a service charge assessed by a broker or investment advisor in return for providing investment advice and/or handling the purchase or sale of a security. Banks are in the business of providing full-service as agents or brokers to customers, hence derive much of their profits from charging commissions on client's

transactions. The income derived from commission charged on client's transactions is known as commission income. Commission income therefore, refers to income earned by brokers and agents in making sales or closing a deal. It is the primary revenue account of businesses that principally make earnings from making sales or closing deals for third parties.

Examples of commission income include real estate brokers' commission, stock brokers' commission, insurance agencies commission, travel agencies commission, and so on.

Often, brokers and financial advisors present themselves as being fee-based rather than commission-based. The difference between a commission-based and a fee-based advisor is while a commission-based advisor derives his income from selling investment products, such as mutual funds and annuities, and conducting transactions with the client's money, a fee-based advisor charges a flat rate for managing a client's money, regardless of the type of investment products the client ends up purchasing. This flat rate is either a fixed naira amount or a fixed percentage of assets under management. On this basis, our second hypothesis is formulated as follows:

H 02 : Commission income has no significant effect on Tobin's q ratio of Deposit Money Banks in Nigeria.

### **2.1.5 Firm Age**

Firm age is one of the most important factors used to decompose the forces which affect survival into industries and firm attributes. On average, roughly 5-10% of the firms in a given market leave that market over a span of a single year (Agarwal & Gort, 2002). Kumar (2004) argues that while older firms obtain experience-based economies of scale, they are also prone to inertia and rigidities in adaptability, which



could lead to lower performance. Agarwal and Gort (2002) posit that as firms get older, they start seeking outside help to function while Liargovas and Skandalis (2008) argue that mature firms possess sophisticated skills because they have enjoyed the advantages of learning and are not prone to the liabilities of newness, and therefore, they have a superior performance. The age of a firm may have an impact on firm's performance, hence the introduction (age) as a control variable in this study. We would expect a positive relationship between age and deposit money bank's financial performance in Nigeria.

## **2.2 Theoretical Framework**

### **2.2.1 Modern Portfolio Theory**

The Modern Portfolio Theory (MPT) of 1952 is an investment theory developed by Markowitz. MPT is an investment framework for the selection and diversification of investment portfolios based on the maximization of expected returns of the portfolios and the simultaneous minimization of investment risk (Fabozzi, Gupta, & Markowitz, 2002). This theory develops a framework where, any anticipated return has different expected outcomes, thus, guides the investor on ruling on investment portfolios. It is one of the most important and influential economic theories dealing with finance and investment management. The fundamentals of MPT are asset's risk-return on the overall investment portfolio. This theory is anchored on the belief that risk-averse investors could actually come up with investment portfolios to boost or maximize expected returns based on a given level of market risk, emphasizing that risk is an inherent part of higher reward. The MPT shows that specific risk can be removed through diversification. The two main concepts in "Modern Portfolio Theory" are that:

(1. An investor's goal is to maximize return for any level of risk

(2. Risk can be reduced by creating a diversified portfolio of unrelated assets.

The Modern Portfolio Theory (MPT) is adopted in this study as the most appropriate economic theory on finance and investment management, because literature on banks' diversification of products and services essentially from interest based activity towards noninterest based activity and its characteristics revolve principally around the modern portfolio theory. Also, a number of factors such as complete information available in the markets, investing in portfolio stocks rather than individuals, diversified portfolios held by investors over short observation periods and many more are the reasons for the choice of MPT model in explaining the risk-return trade-off. Moreover, the core concept of MPT is on diversification and portfolios investment. Additionally, other economic theories on finance and investment management like capital assets pricing model (CAPM) and Arbitrage Pricing Theory (APT) were upshots and iterations of MPT of Markowitz (1952).

### **2.2.2 The Market Power Theory**

The MPT argument builds from Porter in 1980 as cited by Mulwa et.al, (2016). The theory asserts that a corporation should be positioned in its surroundings utilizing a variety of strategies to distinguish itself out from its rivals. Diversification serves as one of such strategies to overcome competition (Mulwa et.al, 2016) and enables a firm build strong market powers (Adem, 2022). Companies can gain market dominance through diversification in three different ways: cross-subsidization. As such, the theory posits a favorable correlation between performance and diversification.

The RBVT on its own, is a strategy to position a business unit as a foundation for a multi business firm and emphasizes the firm's ability to exploit the potential synergies between resources to produce higher performance as postulated by

Wernerfelt in 1984, Barney in 1991, Teece et al., in 1997 and Montgomery, 1994 (Adem, 2022). The RBVT technique uses Porter's five competitive forces to identify the conditions under which a firm's resources produce high returns over extended periods of time. Since the possession of a resource by one party has a negative impact on the costs and/or revenues of later acquirers, it explains how resource benefits accrue to a firm by assuming the existence of resource position barriers that allow the holders of a resource to maintain a sustainable competitive advantage over other holders and third parties. The holder can be considered to benefit from a resource position barrier or a first mover advantage in such a situation (Lieberman and Montgomery, 1988). The RBV theory not only provides a prescription for improving a firm's financial performance but also recommends diversification by building on the resource capacities to enter new markets.

### **2.3 Empirical Framework**

Empirical studies have shown a strategic goal of income diversification. These may be internal capital market results, competitive advantage, shareholder value, management rights, economies of scale, resource utilization, copying subsidies, lower bank spreads, market strength, and improving performance (Githaiga & Yegon, 2019). According to the resource-based view theory, financial service expansion will increase the bank's operational efficiency because more resources will increase the bank's economies of scale (Fiordelisi et al., 2011; Klein & Saidenberg, 2010). Loan diversification effects positively a bank's financial strength (Shim, 2019). In the context of the negative impact of the COVID-19 shock, income diversification can play an essential role in helping banking systems deal with the COVID-19 pandemic (Maghyreh & Yamani, 2022). In contrast, the corporate finance theory argues that banks should exploit their knowledge and expertise in a certain field or group, not diversifying their income (Jahn et al., 2013; Šeho et al.,

2021; Tabak et al., 2011). Diversification can increase inefficiencies. Diversification increases agency costs because managers' devaluing activities reduce their risk (Amihud & Lev, 1981); reduces incentives for competition surveillance and diversification (Winton et al., 1999); increases income volatility (De Jonghe, 2010).

Sibel, & Ihsan (2012), studied the effect of diversification on 50 Turkish Banks' Performance between 2007 and 2011. The paper analyzed forty banks and used ROA (Return on Assets) and ROE (Return on Equity) as measure of performance and Herfindahl Index (HI) as a measure of diversification. The number of credits and the amount of credits that banks let borrowers' use are employed as control variables. It was observed that both ROA and ROE are explained by diversification. Damankah et al (2015), in their study of income diversification by Ghanaian banks analyze the relationship between non-interest income and profits of banks from the year 2002 to 2011 and also considers the risk associated with bank income diversification. They found that interest income remains the highest contributor to bank profits in Ghana. They also found that revenue from noninterest sources play an augmenting role in times where there are short falls in interest revenue. They also found that non-interest revenue is becoming increasingly relevant and contributes to bank profit stability. They concluded that the increasing reliance of banks in Ghana on none traditional income however comes with volatility in their earnings.

Most reports on the effects of income diversification on performance have been studied in developed countries or non-financial contexts. Research in developing countries, especially in the banking sector, is limited (Brahmana et al., 2018). The banking sector in those countries has undergone some major restructuring and changes (Meslier et al., 2014; Wong & Deng, 2016) to accommodate the rapid development of the socio-economic environment. The aim of banks' income diversification may be similar in developed and developing countries, but the impact

of diversification may differ due to differences in institutional characteristics. Many studies demonstrated that income diversification has a relationship with bank asset size (Berger et al., 2010; Curi et al., 2015; Demsetz & Strahan, 1997). However, the effect of bank size on efficiency is still controversial. McAllister and Douglas (1993) argued that large banks often have advantages of size and greater opportunity to diversify risk than small ones. Larger financial and banking costs will be lower and profits higher (Goddard et al., 2004). In contrast, Vallascas and Keasey (2012) argued that large banks may be less efficient than small banks because they are more motivated to make riskier investments.

Ammar and Boughrara (2019) investigated the effect of revenue diversification on bank performance, shedding light on the impact of the shift towards non-interest income sources. They used a sample of 275 banks from fourteen Middle East and North Africa countries over 1990–2011. The model estimation using the Generalised Method of Moments (GMM) system reveals that diversification, when taken as a whole, improves bank profitability. They also split the non-interest income and found that trading-generating business lines contribute the most to boosting profitability and stability. They found that engaging in non-interest-related activities worsen the benefit-cost trade-off of diversification, induced by the increased insolvency risk.

Nisar, Peng, Wang, and Ashraf (2018) examined the impact of revenue diversification on the profitability and stability of South Asian commercial banks. Data for the study was collected from the annual accounting data for the commercial banks of eight South Asian countries (i.e., Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri-Lanka) over the period 2000–2014. Data for macroeconomic variables are taken from World Bank database and websites of central banks of individual countries and banks. They used revenue diversification

as independent variable proxied by fee and commission income and other non-interest income while profitability/stability is the dependent variable proxied by ROA and ROE. Analyzing a panel dataset of 200 commercial banks from all South Asian countries, they found that overall revenue diversification into non-interest income has a positive impact on the profitability and stability of South Asian commercial banks. They further observed that different types of non-interest income-generating activities have different impacts on bank performance and stability. While fees and commission incomes have a negative impact on the profitability and stability of South Asian commercial banks, other non-interest income has a positive impact. The results imply that banks can benefit from revenue diversification if they diversify into specific types of non-interest income-generating activities. The findings are robust and relevant to the use of alternative measures of revenue diversification, profitability and stability.

Mundi (2019) investigated the impact of changing streams of bank income on bank's profitability in selected banks in India. The focus is that in today's era of competition, income streams of bank are changing. The study examined two income streams of the banks: The fund income and fee income. A database of 74 banks of public, private, and foreign banks was studied over a period of 2005 -2014 and data were collected from the CMIE Prowess. The bank performance was measured using return on equity (ROE) and a control variable, return on assets (ROA). The impact of fund income and fee income on banks profitability was analysed using multiple regressions over the period of study. The study revealed that fee income and fund income impacted moderately and positively on return on equity of banks.

Beak, Yong-Lee, Wan-Lee and Mohanty (2018) examined whether the diversification of operating income in Korean banks has persistently enhanced the performance of Korean banks. The results showed that, despite Korean banks'

efforts to diversify their operating income, these banks do not gain any benefit from the diversification. Thus, bank managers in Korea focus on interest income revenue. The results also show that the increase in non-interest income revenue keeps pace with the growth in expenses, which offsets the diversification effect on the performance of Korean banks. As a result, Korean banks discourage banking diversification and focus on non-interest income revenues.

Adem (2022) analyzed the effect of diversification on bank stability between 2000 and 2020 using panel data encompassing 45 African countries. Findings show a quadratic relationship between diversification and stability; excessive diversification exposes banks to risk. Addai, Tang, Gyimah & Twumasi (2022) reported that, while corruption dramatically lowers bank performance, income diversification increases banks' profit and risk-adjusted profit<sup>715</sup> banks across 52 African nations. Also, countries with high corruption index experiences are not highly diversified. Using the Generalized Method of Moments (GMM), Krishnan, Lunawat & Lunawat (2022) found that, geographic, functional, and loan portfolio diversification is instrumental to the stability of the 48 selected banks in India. Similarly, Uddin, Majumder, Akter & Zaman (2021) used unbalanced panel data approach with specific focus on 32 banks from 2007 to 2016. Findings indicates that a strong positive/direct correlation among asset and income diversity and bank performance. In separate studies, Githaiga (2021) and Nguyen (2018) reported that income/revenue diversification significantly influence bank performance from 2010-2018 and between 2007-2014 respectively. More so, while banks with more diversified funding experiences higher profit efficiency, banks with more diversified assets only experience higher persistent profit efficiency, (Ehiedu, & Olanye, 2014). Using the primary data approach, Maurizio, Tiziana and Javier (2018) reported that, related diversification has a negative effect, while unrelated diversification is a value-creating strategy.

Again, Wachira, Manyuru and Amata (2017) and Ranka, Vladimir & Dragan (2017); & Onodugo, Onur and Ihsan (2016) in separate studies affirmed that, geographical diversification does not significantly affect business value, however industry diversification lowers firm value. Using the primary data approach, Makhoha, Namusonge and Sakwa (2016), Rop, kibet and Bokongo (2016) reported that, portfolio diversification improves firm performance in Kenya having focused on a sample of 43 and 40 banks respectively

## **2.4 Gap in Literature**

The evidence of the impact of this adoption of internet as a delivery channel of financial performance is mixed at both sides. With the use of this websites, customers can now carry out some transactions such as; payment of bills, receive funds, check account balance, apply for loans without having to leave their place of work.



## CHAPTER THREE

### 3.0 Research Methodology

#### 3.1 Research Design

The ex post facto design served as the study's research design. On the whole, the study covered the whole quoted Deposit Money Banks as at 31st December, 2021. Informed on the ground of data availability/consistency

#### 3.2 Population of the Study

Union Bank was chosen for the study. Sample period adopted was 1999 to 2020 (22years). Data were generated from the audited, annual financial statements/reports of the sampled banks as quoted on the Nigeria Exchange Group (NEX).

#### 3.3 Sample Size and Sampling Techniques

Estimation Techniques The Panel least square estimation served as the estimation techniques. This was conducted using the E-view statistical software [version 9.0].  
C) Model Specification In an attempt to answer the research questions, the study adopted the Panel Least Square (PLS) in line with the findings of Gordini and Rancati (2017).

#### 3.4 Methods of Data Analysis

The model is mathematically represented as follows:

$$ROA = f(AS\text{TD}, \text{DEPD}, \text{INVD}, \text{PROD}) \quad ROA = \beta_0 + \beta_1 AS\text{TD} + \beta_2 \text{DEPD} + \beta_3 \text{INVD} + \beta_4 \text{PROD} + U_t \dots\dots\dots$$

Where: ROA = Returns on Asset

AS\text{TD} = Asset Diversification

DEPD = Deposits Diversification

INVD = Investment Diversification

PROD = Product Diversification

$\beta_1, \beta_2, \beta_3$  and  $\beta_4$  = Beta coefficient values.

Ut = Regression error term

Variable Description and Apriori Expectation Table 1 account for variable description and Apriori expectation:

Denotation	Variable	Nature of Variable	Measurement	Apriori expectation	Reference
ASTD	Assets diversification	Regressor 1	$1 - \left[ \frac{\text{Net Loans}}{\text{Total Earning Assets}} \right]^2 + \left[ \frac{\text{Other Earning Assets}}{\text{Total Earning Assets}} \right]^2$	+	Mulwa & Kosgei (2016)
DEPD	Deposits diversification	Regressor2	$\left( \frac{\text{demand}}{\sum \text{deposits}} \right)^2 + \left( \frac{\text{savings}}{\sum \text{deposits}} \right)^2 + \left( \frac{\text{time}}{\sum \text{deposits}} \right)^2 + \left( \frac{\text{CDs}}{\sum \text{deposits}} \right)^2 + \left( \frac{\text{banks}}{\sum \text{deposits}} \right)^2$	+	Ibrahim (2014)
INVD	Investment diversification	Regressor 3	$\delta_p^2 = c_1^2 \delta_1^2 + c_2^2 \delta_2^2 + 2c_1c_2\delta_1\delta_2\rho$ Where; $\delta_1$ and $\delta_2$ are Standard Deviations of the two underlying assets, $C_1$ and $C_2$ , $\rho$ is correlation between the assets, $C_1$ and $C_2$ are the respective proportions of the two assets in the portfolio.	+	Vaibhav & Ramasubramanian, (2015)
PROD	Products diversification	Regressor 4	Average measurement of the product mix offered by sampled banks	+	Zedek (2016)
ROA	Return on Asset	Regressand 1	Ratio of average asset to net income	Nil	Gordini & Rancati (2017)

*Source: Researcher's Computation 2025*

## CHAPTER FOUR

### 4.0 Data Presentation, Analysis and Interpretation

#### 4.1 Data Presentation

For this section, we present the descriptive analysis of the Union Bank variables.

The data for this research study was analyzed using the E-View statistical package and estimates the relationship using Error correction model and unit root. This method helps the researcher to gain a detailed knowledge and a concise analysis of all the data that includes speed of adjustment in the subsequent years.

**Table 1: Variable Description and Apriori Expectation**

Denotation	Variable	Nature of Variable	Measurement	Apriori expectation	Reference
ASTD	Assets diversification	Regressor 1	$1 - \left[ \left( \frac{\text{Net Loans}}{\text{Total Earning Assets}} \right)^2 + \left( \frac{\text{Other Earning Assets}}{\text{Total Earning Assets}} \right)^2 \right]$	+	Mulwa & Kosgei (2016)
DEPD	Deposits diversification	Regressor2	$\left( \frac{\text{demand}}{\sum \text{deposits}} \right)^2 + \left( \frac{\text{savings}}{\sum \text{deposits}} \right)^2 + \left( \frac{\text{time}}{\sum \text{deposits}} \right)^2 + \left( \frac{\text{CDs}}{\sum \text{deposits}} \right)^2 + \left( \frac{\text{banks}}{\sum \text{deposits}} \right)^2$	+	Ibrahim (2014)
INVD	Investment diversification	Regressor 3	$\delta_p^2 = c_1^2 \delta_1^2 + c_2^2 \delta_2^2 + 2c_1c_2\delta_1\delta_2\rho$ Where; $\delta_1$ and $\delta_2$ are Standard Deviations of the two underlying assets, $C1$ and $C2$ , $\rho$ is correlation between the assets, $C1$ and $C2$ are the respective proportions of the two assets in the portfolio.	+	Vaibhav & Ramasubramanian, (2015)
PROD	Products diversification	Regressor 4	Average measurement of the product mix offered by sampled banks	+	Zedek (2016)
ROA	Return on Asset	Regressand 1	Ratio of average asset to net income	Nil	Gordini & Rancati (2017)

*Source: Researcher's Computation 2025*

## 4.2 Data Analysis

### Descriptive Statistics

The descriptive statistics takes into consideration the mean (average) value, maximum(highest) and minimum (lowest) value, and Standard deviation (variation) value. The result is therefore presented in table 2 below:

***Table 2: Descriptive Statistics for all Study Variables***

	<b>ROA</b>	<b>ASTD</b>	<b>DEPD</b>	<b>INVD</b>	<b>PROD</b>
<b>Mean</b>	17.36000	0.020709	0.383959	0.596100	0.457082
<b>Median</b>	15.69500	0.021700	0.368800	0.556300	0.508550
<b>Maximum</b>	36.34000	0.042300	0.570900	0.861300	0.993300
<b>Minimum</b>	1.630000	0.001700	0.343200	0.500000	0.000000
<b>Std. Dev.</b>	9.330061	0.012544	0.056855	0.107588	0.451358
<b>Observations</b>	<b>220</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>90</b>

*Source: Econometric Views Version 9.0. (2025).*

Table 2 clearly revealed that on the average return on asset (ROA) is 17.36000. Comparably, it reported a low standard deviation value estimated at 9.330061. This suggests that it ROE did not deviate much away from the mean value. Again, deposit diversification denoted by DEPD reported an average value of 0.383959 throughout the study period. However, it reported a maximum (highest) and minimum (lowest) of 0.570900 and 0.343200 respectively. Moreover, it reported a low standard deviation value. This is because it is comparably lower than its mean value. This suggests that the variable deviated much away from the mean value. Furthermore, asset diversification reported an average value of 0.020709 but fluctuated by 0.056855. However, it reported a maximum (highest) and minimum (lowest) of 0.042300 and 0.001700 respectively. Moreover, it reported a low standard deviation value.

Additionally, investment diversification reported an average value of 0.596100 but deviated by 0.107588. However, it reported a maximum (highest) and minimum

(lowest) of 0.861300 and 0.500000 respectively. Moreover, it reported a low standard deviation value.

Lastly, product diversification reported an average value of 0.457082 but fluctuated by 0.451358. However, it reported a maximum (highest) and minimum (lowest) of 0.993300 and 0.451358 respectively. Moreover, it reported a low standard deviation value.

### Correlation Analysis

The correlation analysis tells the direction and degree of relationship between and among variables. Table 3 accounts for the correlation analysis:

**Table 3: Pearson Correlation Analysis of all Study Variables**

	ROE	ASTD	DEPD	INVD	PROD
ROE	1.000000				
ASTD	0.598715	1.000000			
DEPD	-0.283962	-0.138846	1.000000	0.161439	
INVD	0.626597	-0.118068	0.161439	1.000000	
PROD	0.713026	0.131041	-0.129562	-0.116162	1.000000

*Source: Economic Views Version 9.0 (2025)*

### Regression Result

The panel least square estimate is used to test the research hypotheses as stated in table 4

**Table 4: Panel Least Square Estimates**

Dependent Variable: ROA				
Method: Panel Least Squares				
Date: 10/02/21 Time: 23:24				
Sample: 1999 2020				
Included observations: 220				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.031106	3.317190	2.119597	0.0539
ASTD	0.666841	0.299238	2.228464	0.0428
DEPD	-0.041057	0.034613	-1.186169	0.2529
INVD	0.577174	0.182996	3.154018	0.0253
PROD	0.791233	0.123379	6.413021	0.0000
R-squared	0.672523	Mean dependent var		5.407107
Adjusted R-squared	0.638177	S.D. dependent var		0.343692
F-statistic	28.31522	Durbin-Watson stat		1.955290

*Source: Econometric Views Version 9.0 (2025)*

The study evidenced that there was variation of 67.72% on return on asset due to changes in ASTD, DEPD, INVD, and PROD while the remaining 33.28% account for error term. To further substantiate this, the study reported an adjusted R2 value of 63.82%. Again, the global statistics revealed that portfolio diversification proxies jointly affect banks' performance (ROA) significantly. Lastly, the Durbin Watson Statistics estimated at 1.955290 revealed that the model is not serially auto-correlated.

**Table 5: Summary of Test of Hypothesis**

Variables	Prob.	Conclusion
ASTD	0.0428	Reject H0 <sub>1</sub>
DEPD	0.2529	Accept H0 <sub>2</sub>
INVD	0.0253	Reject H0 <sub>3</sub>
PROD	0.0000	Reject H0 <sub>4</sub>

### 4.3 Data Interpretation

The Panel Least Square result in table 4 reported that asset diversification exerts positive coefficient value of 0.666841. This implies that 1% rise in asset diversification(ASTD) will increase bank performance by 66.68%. This is in line with the apriori expectation of this study. More so, asset diversification passed the

test of statistical significance. The implication is that a high degree of ASTD has a high statistical significant effect on bank performance. This result is in line with the findings of Mutega (2016) and Yan, et'al (2016) but contradicts the findings of Chen, Liang & Yu (2018) whose result indicates that diversification generally has a negative effect on the performance of conventional banks.

Additionally, deposit diversification(DEPD) exerts negative effect on return on asset. This is because its coefficient value is negatively signed (-0.041057). Further, it failed the test of statistical significant. This is because its p-value greater than 5% level. The implication is that deposit-based diversification had a marginally significant effect on bank performance. This result is in line with the findings of Hailu &Tassew (2018); Maurizio et'al (2018); Nepali (2018) but contradicts the findings of Ranka et'al (2017); Kipleting & Bokongo (2016).

Furthermore, investment diversification has positive(0.577174) yet significant(0.0253)effect on banks' performance. The implication is that a high degree of INVD improves bank performance significantly. This further revealed that banks can benefit from investment diversification if they diversify into different forms of investments. This result is in line with the findings of Hailu &Tassew (2018); Nepali (2018) but contradicts the findings of Kipleting & Bokongo (2016).

Lastly, product diversification is instrumental to banks' performance in the reviewed periods. This result is in line with the findings of Shim (2019); Rop et'al (2016); Kamwaro (2016) but contradict the findings of Odunayo, et'al (2017); Makokha, et'al (2016).

## **CHAPTER FIVE**

### **5.0 Summary, Conclusion and Recommendations**

#### **5.1 Summary of Findings**

Findings emanating from the study clearly revealed that asset diversification, investment diversification, and product diversification exerted positive high effect on bank performance in Nigeria. Meanwhile, deposit diversification exerted negative yet statistical minimal effect on Nigerian banks' performance. As a result, the study draws the conclusion that quoted banks' performance in Nigeria benefits from diversification.

#### **5.2 Conclusion**

The study analyzes the impact of income diversification by deposit money banks. The study analyzes and assesses the impact of asset size as well as the influence of some control variables for bank operating status on the level of income diversification. Our findings show that there is a positive and significant impact of bank income diversification on the performance of deposit money banks.

#### **5.3 Recommendations**

- i. Older banks should focus on their core intermediary functions and reduce the level with which they diversify into noninterest activities since it lowers their value and financial performance.
- ii. Develop marketing policies that encourage its use and establish the best combination of assets that can yield an efficient portfolio.
- iii. Ensure that diversifiable investment risks are addressed since it reported positive/direct significant/high effect on bank performance.
- iv. The present product diversification policies are sustained



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