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EDITORIAL

The Journal of Banking is a research and policy-based publication of The Chartered Institute of Bankers of Nigeria (CIBN) which typically focuses on topical issues in the core areas of banking and finance as well as other related disciplines with an emphasis on the implications for banking policy.

On behalf of the Journal Editorial Board and Management of The Chartered Institute of Bankers of Nigeria, we are pleased to present the January – June 2021 edition of the Journal of Banking publication. This edition incorporates the review and update of the publication process of the Journal which was conducted to improve the quality of the Journal and ensure it is aligned with international standards.

Specifically, this edition contains four articles from distinguished authors and thought leaders on topics covering Board Strategies in Nigerian Banking Industry, Efficient Credit Distribution in Deposit Money Banks; Small and Medium Enterprises Growth and Financial Development and Cross Border inflows in Nigeria.

In this edition, Odili Okwuchukwu and Kingsley Onyele, in their research evaluated the different perspectives of financial developments and the impact on variants of international financial flows to Nigeria using data for the period 1986 to 2019. The study which implies the use of Autoregressive Distributed Lag Model for investigation offered several recommendations for the development of the banking sector and stock market respectfully. The paper essentially advocates increased financial development which

significantly influenced cross-border financial flows to Nigeria especially in the long-run. The paper also recommends that financial intermediation by banks should be strengthened, and credit facilities made available to investors at reduced lending rate

Bridget Asuquo and Joseph Denwi explored the dynamics between sectoral credit distribution and economic growth in Nigeria from 1981 to 2020. The study which performed an econometric analysis on the sectoral distribution of deposit money bank credit and economic growth in Nigeria adopted the use of the Engle and Granger Cointegration and Toda & Yamamoto Granger Non-Causality technique of analysis for the study. The significance of the study lies in the investigation of credit distribution techniques of banks and subsequent recommendations that ensures the optimal disbursements of credit facilities to deserving recipients at optimal interest rates.

Olufemi Ogunkoya et al examined the dynamic capabilities and entrepreneurship growth of SME in Ibadan, Nigeria with a sample of over 100 businesses. The study indicates a significant relationship between dynamic Capabilities and entrepreneurship growth. However, SMEs must pay attention to dynamic capabilities that are superior to basic abilities and as well monitor the changing environment . Essentially, the paper is significant because it examines the capabilities required to scale up a business and maintain growth despite the current rough business terrain.

Finally, Ik Muo, O.A Ogunkoya and O.I. Okunbanjo investigated the impact of board operational strategies on shareholders' compensation in the Nigerian banking industry using an ex post facto research design and a multiple regression analysis. The study concludes that operational strategies do not have significant effect on earnings per share and therefore recommends the need to review job descriptions of Risk management, Audit and HR Committees to influence shareholder's compensation in the banking industry.

To conclude, the articles in this edition tackle issues of significance to the banking industry and economy at large. Through empirical research, the authors, not only answered their research questions but recommended actionable solutions to those issues. We have no doubt that the content will be of immense value to our readers and will provoke discussions on further solutions to close gaps not addressed in the research. Potential contributors are therefore encouraged to send intellectual and innovative articles for consideration in upcoming editions.

'Seye Awojobi, Ph.D, FCIB
Registrar/ Chief Executive

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Financial Development and Cross-Border Financial Flows to Nigeria

Odili Okwuchukwu, Ph.D
Kingsley Onyekachi Onyele

Abstract

This study evaluates different perspectives of financial development and how they impact on variants of international financial flows to Nigeria for the period ranging from 1986 – 2019. Financial liberalization that started in Nigeria in 1986 and COVID-19 outbreak that shut down the world economy, led to the choice of the research period. Three indices of financial development such as banking sector development, stock market development and bond market development are constructed with the aid of principal component analysis (PCA). The controlled variables are exchange rates, inflation and interest rates spread. The study employs Autoregressive Distributed Lag (ARDL) model in its estimation. The results shows that, in the long-run, banking sector and stock market development indices have negative and significant impact on FDI. The long-run, bond market development index has positive and significant impact on

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FDI. The investigation reveals that BSD, SMD and BMD have significant and positive impacts on Net FPI flow in the short-run. While in the long-run the index for banking sector development (BSD) has negative and insignificant impact on FPI. Stock market development (SMD) index has positive and insignificant impact on FPI, while, Bond market development (BMD) index has positive but significant impact on PFI. The study concludes that financial development significantly influences cross-border financial flows to Nigeria especially in the long-run. The study recommends that financial intermediation by the banks should be strengthened and credit facilities made available to investors at reduced lending rate. Furthermore, institutional quality of Nigerian stock market should be improved to reduce variations in cross-country financial flows which are best explained by fundamentals like quality of institutions, access to foreign export markets, international price risk mitigation and an ideal macroeconomic policy.

Keywords: Foreign Portfolio Investment, Foreign Direct Investment, Bank Borrowing, Financial Development, Principal Component Analysis, Financial Intermediation

1. INTRODUCTION

Financial flows between nations include foreign direct investment, portfolio investments, transfer payments and bank borrowing. Studies have shown that well-functioning and deep financial systems are critical factors and main drivers of economic prosperity and wellbeing (Matei, 2020: 655; Fuinhas, Filipe, Belucio and Marques, 2019: 2). According to Tsaurai and Makina (2018: 245), financial development may trigger

private investments through better accessibility of corporate organizations to financing. Kapidani and Luci (2019: 89) suggest that access to external finance is a prominent determinant of international capital flows, especially foreign direct investment and foreign portfolio investment flows. Studies such as Islam, Khan, Popp, Sroka and Olah (2020: 20) and Nobakht and Madani (2014: 30) have clearly shown that lack of financial development either in the financial markets or banking sector restricts the preparedness of an economy from reaping the benefits accruing from capital flows such as foreign direct investment and foreign portfolio investment.

The linkages between financial development and capital flows might prove to be beneficial to a resource-scarce economy like Nigeria seeking foreign capital to augment its low savings. Unfortunately, Nigeria scarcely receives the minimum of 5-6% recommended for foreign direct investment inflows to Gross Domestic Product (GDP) while foreign portfolio investment inflows continues to decline in recent years (Fig. 1 & Fig. 2).

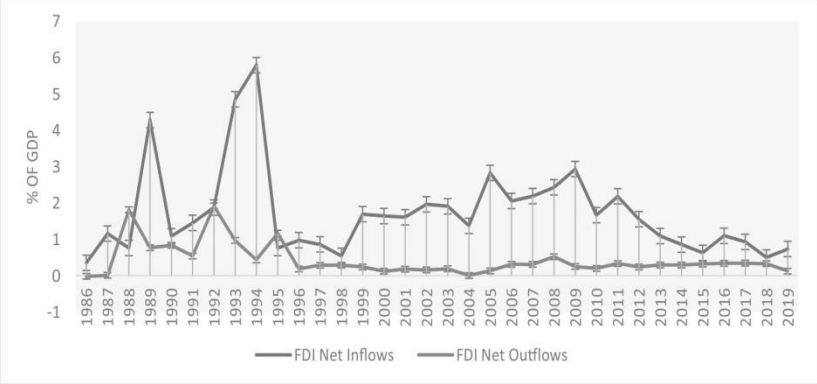

Fig. 1: Trend of FDI flows in Nigeria, 1986-2019.

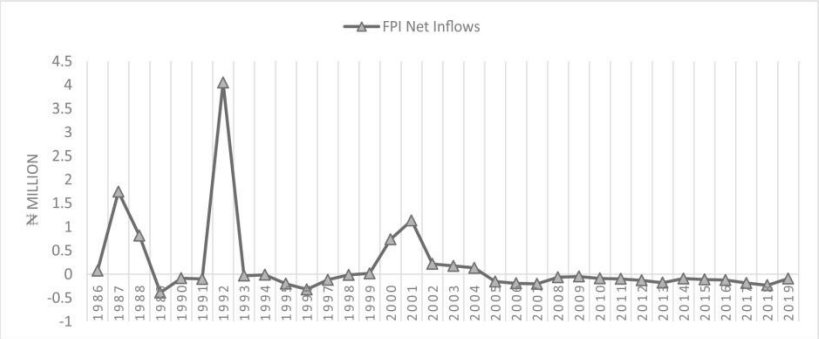

Fig. 2: Trend of FPI flows in Nigeria, 1986-2019

During the period 1986 – 2019, capital flows to Nigeria appeared to be downward trending due to its poor macroeconomic and ailing financial sector amidst the unstable oil prices, the financial liberalization of 1986, lack of financial reforms, global financial crisis of 2008-2009 and economic recession of 2016 (World Bank, 2020: 13).

Figure 1 reveals that despite FDI to GDP ratio increasing to 5.79% in 1994, the values that followed afterwards have been very low, especially after the global financial crisis of 2008-2009. Though, there was slight increase in FDI to GDP ratio in 2016, this did not continue due to the economic recession experienced in Nigeria in the second quarter of the same year. Likewise, Figure 2 shows that after net foreign portfolio inflows recorded its highest value of ₦4.05 billion in 1992, significant decrease was recorded, though, the trend increased persistently but slightly from ₦0.02 billion in 1999 to ₦1.14 billion in 2001(World Bank, 2020: 89). Afterwards, net foreign

portfolio flows into Nigeria turned negative due to several economic crisis faced by the country.

With emphasis on the notable aspects of the financial sector (Banking system, stock market and bond market) that are vibrant and dominates the entire financial system in Nigeria, the present study uses three (3) financial development indicators to assess the influence of banking sector development, stock market development and bond market development. The major goal of this study is to empirically analyze the influence of financial development on cross-border financial flows to Nigeria from 1986 to 2019 that includes years of financial liberalization, political instability and economic crisis.

Significance of the study to the Banking Industry

A sizeable proportion of cross-border financial flows are intermediated by the banks. These flows are likely to be undermined when the financial environment of the recipient economy deteriorates. The findings of this study therefore have important implications for mobilizing private finance and regulating financial system in the following areas in Nigeria:

1. The findings of the study will help to strengthen macro-prudential regulations which will enhance financial stability.
2. The study points to the need for stronger regulation of cross-border banks, including closer cross-border supervisory cooperation, because of the rising importance of regional banks in Africa.
3. Capital-account regulations could be an important

part of the macro-prudential toolkit. Avoiding excessive borrowing in the sovereign and private bond markets will help avoid unsustainable debt levels and the creation of unsustainable fiscal liabilities that could lead to problems with debt repayments.

4. The study will assist international financial institutions to reorient their mandates to focus on business models which will add value by creating significant and unique value chain. These will include accelerating the development of bankable projects and exploring activities that would attract investment into agriculture and manufacturing.
5. The understanding of financial development and cross-border financial flows nexus could assist international financial institutions create more securities that are attractive to pension and insurance funds investors and provide better hedging instruments to mitigate currency and political risk.

Limitations of the study

The constraints faced in this study are associated with the selection of variables. This is because literature on cross-border financial flows identified myriad of factors within the scope of pull and push factors. Hence a model containing many of the variables would likely lead to multi-collinearity which in turn will result to spurious regression outcome (Tellez-Leon & Ibarra, 2019). To overcome this limitation the study employed new variables that are constructed as linear combinations or mixtures of the initial cross-border financial flows indices

(Principal components). Principal components are new variables that are constructed as linear combinations or mixtures of the initial variables. Principal Component Analysis (PCA) is a dimensionality-reduction method that is often used to reduce the dimensionality of large data sets, by transforming a large set of variables into a smaller one that still contains most of the information in the large set.

Other limitations encountered in the course of the study include finance and difficulty in sourcing data especially during these hard times of COVID-19. This limitation was managed through perseverance and adherence to all COVID-19 protocols.

2. LITERATURE REVIEW

2.1 Conceptual Framework

A prominent factor in enhancing the cost-benefit tradeoff from international financial flows is that banks usually play a critical role in intermediating fund flows. Banks behave in different ways from other financial markets participants (Brunnermeier, De Gregorio and Eichengreen, 2012; 2). Practically, a sizeable proportion of cross-border financial flows are intermediated by the banks. These funds are likely to reverse rapidly when financial environment of the host economy deteriorates. Without a global regulatory framework, there could be danger that policy measures that are in the interest of a nation take priority over the international optimal policy. To buttress this point, Brunnermeier *et al.,* (2012: 4-5) stated that foreign regulators may not compel their banks to recapitalize but instead permit them to dispose foreign assets and withdraw from international markets. They also cited a second scenario through ring fencing where each country makes attempts to

acquire the assets of weak multinational banks before the other countries thereby endangering a possibly viable bank.

Efficient financial market amid easy financial accessibility attracts foreign capital. This is informed by the fact that financial market efficiency, removal of information constraints as well as easy access to information technology, and the presence of new financial products and services act as prominent factors that attract foreign capital, especially FPI in the economy (Qamruzzaman and Wei, 2019: 89).

The conceptual framework for this study is presented diagrammatically in Figure 3. Figure 3 captures the interaction between cross-border financial flows and the financial sector indicators. The macroeconomic variables are included conceptually as control variables capable of influencing the financial system and the economy.

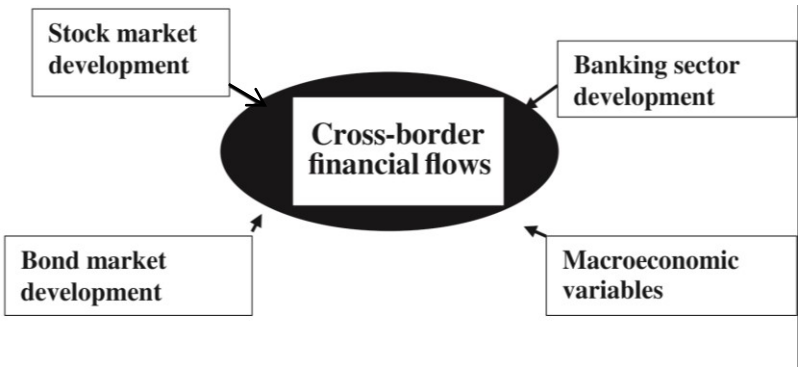

Fig. 3: Conceptual Framework

Source: Conceptualized by the researchers

2.2 Theoretical Underpinning

Schumpeter's (1911: 601) pioneering work on finance-growth nexus stated that a well-developed financial system stimulates growth in technological innovations and advancement by redistributing resources from surplus units to deficit units of the economy. This study is underpinned by the supply leading hypothesis of financial development. The supply-leading hypothesis postulates that money related advancement is the major determinant of financial development. Supply leading entails two prominent functions: to channel financial resources from low-growth sectors to high-growth sectors and to facilitate and promote an entrepreneurial response in the high-growth sectors (Patrick, 1966: 179). This reveals that establishment of functional financial institutions and the services exist before there is demand for them. Consequently, efficiency and development of domestic financial institutions such as banks and financial markets play crucial roles in economic stability that attracts foreign investors in an economy. Bank-based financial institutions accelerate foreign capital inflows by facilitating financial transactions with efficiency and effectiveness (Worldwide Governance Indicators, 2019). Financial openness towards foreign banks allows financial market development in the host economies, which in turn, positively motivates foreign investors to channel their investments to an economy with well-developed financial sector because higher financial integration forces investments towards countries' with well-structured financial sector (Giannetti and Ongena, 2012: 171).

2.3 Review of Related Literature

Kamasa (2020: 276 - 280) investigated the impact of financial reforms on foreign direct investment (FDI) in Ghana. A composite index for financial sector reform was constructed comprising various reform policies that were implemented between 1987 and 2016. The Autoregressive Distributed Lag (ARDL) bounds test was applied to establish cointegration between variables. The study controlled for other covariates that affect FDI such as trade openness, exchange rate, gross domestic product per capita, inflation to avoid the possibility of endogeneity and serial correlation. Results from the analysis reveal that reforms aimed at deepening the financial sector boosted FDI inflows. The results reveal that competitive reforms have the highest impact on FDI followed by privatization reforms with positive and significant elasticity coefficients. Behavioral based reforms reveal a positive effect on FDI.

Islam *et al.,* (2020: 19-22) investigated the nexus between financial development and FDI for seventy-nine (79) Belt and Road Initiative (BRI) countries as they are entering a new height of integration, international trade, and mutual development. The empirical findings of conventional and robust estimators show that financial development of BRI host countries attracted significant FDI, while the institutional quality played a significant role in moderating this relation. The in-depth analysis offers the insight that development of financial markets is less attractive to FDIs.

Sasmaz and Gumus (2018: 30-35) examined the impact of the interaction between banking sector development and FDI on

economic performance in Turkey from 1960-2017. The Zivot-Andrew approach to unit root test is applied. The Autoregressive Distributed Lag (ARDL) is the major tool used to analyze the data and the Toda-Yamamoto causality test is conducted. From the ARDL output, the interaction between banking sector development and FDI inflows causes positive effect on economic growth. The Toda-Yamamoto causality test results identify a unidirectional causality from banking sector development to FDI and economic growth.

Nwosa (2015: 370-376) ascertains the linkages between capital inflows and stock market development for the period spanning from 1986 to 2013 in Nigeria. Capital inflow is categorized by foreign direct investment (FDI) and foreign portfolio investment (FPI) while stock market development is measured by market capitalization, turnover ratio and value traded ratio. The study uses error correction modeling techniques. From the estimation, it is revealed that market capitalization and value traded ratio are the most significant variables that influences foreign portfolio investment while none of the stock market development variables significantly influence FDI in the long-run. The short-run estimation shows that market capitalization is the sole variable that significantly influences both foreign direct investment and foreign portfolio investment, while value traded ratio only has significant influence on FDI.

2.4 Gap in Literature

First, the prior studies like Kamasa (2020: 276 - 280); Qamruzzaman and Wei (2019: 100-108); Tsaurai and Makina (2018: 250-254) investigated the linkages between financial development and FDI inflows while net FDI outflows was

ignored. Hence, this study looks at the aspect of financial development as it affects FPI outflows to bridge this gap. Secondly, none of the prior studies investigated how net FPI flows have been affected by financial development which is also a research gap this study aims to fill.

3. DATA AND METHODOLOGY

3.1 Data and Model Specification

The analytical framework for this study is in line with the methodology employed by Destek, Sinha and Sarkodie (2020: 5-7), but it is modified to capture and test the influence of financial development on cross-border financial flows to Nigeria.

The major empirical model is constructed as expressed in equation (1) as follows:

$$CF_t = \beta_0 + \beta_1 BSD_t + \beta_2 BMD_t + \beta_1 SMD_t + \beta_1 EXR_t + \beta_1 INF_t + \beta_1 IRS_t + \varepsilon_t \quad . \quad (1)$$

Where,

t and ε_t Represents time period and stochastic term. CF Denotes cross-border financial flows (FDI inflows, FDI outflows and net FPI). BSD, BMD, SMD, EXR, INF and IRS indicate banking sector development, bond market development, stock market development, exchange rate, inflation and interest rate spread respectively. The annual data spanning 1986–2019 were collected. The variables used for constructing the financial development index and net FPI were obtained from CBN statistical bulletin while FDI inflows and outflows were sourced from WDI.

3.2 Techniques for Data Analysis

Autoregressive Distributed Lag (ARDL)

This study applied the autoregressive distributed lag (ARDL) approach proposed by Pesaran *et al.* (2001: 289-300) to estimate the validity of the co-integration between variables and to determine both the long-run and the short-run coefficients of the variables. The ARDL technique allows variables that are stationary in levels [I(0)] or first-differenced form [I(1)] to be integrated in a single model. The relevant ARDL procedure of equation 1 can be expressed as follows:

$$\begin{aligned}\boldsymbol{\Delta CF_t} = \delta_0 &+ \sum_{j=1}^{p}\left(\delta_{1j}\Delta CF_{t-j}\right) \\ &+ \sum_{j=0}^{p}\left(\delta_{2j}\Delta(BSD)_{t-j}\right) + \sum_{j=0}^{p}\left(\delta_{3j}\Delta BMD_{t-j}\right) \\ &+ \sum_{j=1}^{p}\left(\delta_{4j}\Delta SMD_{t-j}\right) + \sum_{j=1}^{p}\left(\delta_{5j}\Delta EXR_{t-j}\right) \\ &+ \sum_{j=1}^{p}\left(\delta_{6j}\Delta INF_{t-j}\right) + \sum_{j=1}^{p}\left(\delta_{7j}\Delta IRS_{t-j}\right) + \\ \beta_1(BSD)_{t-1} + \beta_2(BMD)_{t-1} &+ \beta_3(SMD)_{t-1} + \beta_4(EXR)_{t-1} + \\ \beta_5(INF)_{t-1} + \beta_6(IRS)_{t-1}\,\varepsilon_t \quad (2)\end{aligned}$$

where, Δ and P indicate the difference operator and lag length, respectively. According to equation (2), the null hypothesis of no co-integration between variables is tested against the alternative hypothesis. The optimal lag length (p) in equation (2) was chosen with Schwarz information criteria (SIC). If

there is evidence of co-integration in the model, the long-run ARDL equation is estimated as follows:

$$\boldsymbol{CF_t} = \beta_1(BSD)_{t-1} + \beta_2(BMD)_{t-1} + \beta_3(SMD)_{t-1} + \beta_4(EXR)_{t-1} + \beta_5(INF)_{t-1} + \beta_6(IRS)_{t-1}\ \varepsilon_t \quad (3)$$

Finally, short-run coefficients of the variables are estimated with error-correction model (ECM) expressed in equation 4 as follows:

$$\boldsymbol{\Delta CF_t} = \delta_0 + \sum_{j=1}^{p}(\delta_{1j}\Delta CF_{t-j}) + \sum_{j=0}^{p}(\delta_{2j}\Delta(BSD)_{t-j}) + \sum_{j=0}^{p}(\delta_{3j}\Delta BMD_{t-j}) + \sum_{j=1}^{p}(\delta_{4j}\Delta SMD_{t-j}) + \sum_{j=1}^{p}(\delta_{5j}\Delta EXR_{t-j}) + \sum_{j=1}^{p}(\delta_{6j}\Delta INF_{t-j}) + \sum_{j=1}^{p}(\delta_{7j}\Delta IRS_{t-j}) + ECM_{t-1} \quad 4)$$

where, the error-correction term ECM_{t-1} denotes the speed of adjustment parameter and the expected sign of this coefficient should be negative with statistical significance.

Principal Component Analysis (PCA)

In the initial stage of the data analysis, Principal Component Analysis (PCA) was applied. Principal components represent new variables that are constructed as linear combinations of the initial variables. These mixtures are done in a way that the novel variables (i.e., principal components) are not correlated and the information associated with the initial variables is compressed into the first components. PCA tries to put

maximum possible information in the first component, then maximum remaining information in the second and so on. Geometrically speaking, PCA gives information concerning the data that explains **maximal amount of variance**, that is, the lines that contain most information of the data. The Principal Component Analysis (PCA) which is used to generate banking sector development (BSD), bond market development (BMD) and stock market development (SMD) is based on the following steps:

1) **Standardization:** The reason for this step is to standardize the range of the continuous initial variables so that each one of them contributes equally to the analysis. That is, if there are large variations between the ranges of initial variables, those variables with larger ranges will dominate over those with lower ranges, which will lead to biased results. So, transforming the data to comparable scales can prevent this problem. Mathematically, this can be done by subtracting the mean and dividing by the standard deviation for each value of each variable. All the variables are transformed to the same scale after standardization.
2) **Covariance matrix computation:** This is to show how the variables of the input data vary from the mean with respect to each other, or in other words, to see if there is any relationship between them because variables may be highly correlated in such a way that they give redundant information. To identify these correlations, the covariance matrix is computed. The covariance matrix is computed as "*p x p"* system matrix (where *p* represents the number of dimensions) that has

the covariance entries associated with all possible pairs of the initial variables.

3) **Compute the eigenvectors and eigenvalues of the covariance matrix to identify the principal component.** Eigenvectors and eigenvalues represent the linear algebra concepts that are computed from the covariance matrix in order to show the *principal components* of the data. Eigenvectors associated with the covariance matrix are actually *the directions of the axis where there are most variance* (most information) called Principal Components. Eigenvalues are the coefficients linked to eigenvectors, which reveal the *amount of variance associated with each principal component.* By ranking the eigenvectors in order of their eigenvalues, highest to lowest, the principal components in order of significance are given.

4) **Feature vector:** Computation of the eigenvectors and ordering them by their eigenvalues from highest to lowest reveals the principal components in order of significance. In this step, the aim is to choose whether to keep all the components or remove those of lesser significance (low eigenvalues), and form with the remaining ones a matrix of vectors called *feature vector*. Therefore, feature vectors are matrix that has eigenvectors that one decides to keep. This makes it the first step towards dimensionality reduction, because if one chooses to keep only $\boldsymbol{p}$ eigenvectors (components) out of $\boldsymbol{n}$, the final data set will capture only $\boldsymbol{p}$ dimensions.

5) **Recast the data along the principal component axes:** In this last step, the objective is to use the feature

vector constructed using the eigenvectors of the covariance matrix, to reorient the data from the initial axes to the ones represented by the principal components (hence the name PCA). This is done by multiplying the transpose of the initial data by the transpose of the feature vector.

4. RESULTS AND DISCUSSION

4.1 Principal Component Analysis (PCA)

Building on the reasons advanced by Destek *et al.,* (2020: 8), this study used principal component analysis (PCA) to develop a set of financial development indices which includes three sub-indices. The first phase of the analysis is focused on the construction of sub-indices such as banking sector development (BSD), stock market development (SMD) and bond market development (BMD) of financial development using principal component (PCA) analysis. The outcome of the PCA is as displayed in Table 1: BSD index was constructed with deposit money banks' assets (DMBASST_GDP), financial sector deposits (FSDPST_GDP), liquid liabilities of banks (LIQLIAB_GDP) and private sector credit (PSC_GDP). SMD index was constructed with market capitalization (MCAP-GDP), turnover ratio and value of shares traded-to-GDP (VST_GDP). BMD index was developed with variables such as domestic public sector debt-to-GDP (DPUBS_GDP), debt of private sector-to-GDP ratio (DPRVS_GDP) and international public debt-to-GDP ratio (INTLPDS_GDP).

Regarding BSD index, the eigenvalues of the PCA indicate that the PCA 1 (first principal component) is the optimal PCA as it

explains approximately 90.96% of the standardized variance. The individual contributions of DMBASST_GDP, FSDPST_GDP, LIQLIAB_GDP and PSC_GDP in PCA1 were the weights used to obtain the BSD index.

For SMD index, about 81.37% of the standardized variance was explained by the PCA1 (first principal component). Here, the individual contributions of MCAP_GDP, TURNOVER and VST_GDP in PCA1 were the weights used to construct the SMD index.

In the case of BMD index, the first principal component analysis (PCA1) explained approximately 62.08% of the standardized variance and the individual weights of DPUBS, DPRVS and INTLPDS were applied in constructing the BMD index.

Table 1: Principal component analysis

Banking Sector Development (BSD) Index				
	PCA 1	**PCA 2**	**PCA 3**	**PCA 4**
Eigenvalues	3.638362	0.293382	0.059675	0.008581
Proportion	0.9096	0.0733	0.0149	0.0021
Cumulative proportion	0.9096	0.9829	0.9979	1.0000
Variables	**Vector 1**	**Vector 2**	**Vector 3**	**Vector 4**
DMBASST_GDP	0.485376	-0.674101	0.366487	0.419149
FSDPST_GDP	0.517800	-0.236394	-0.212069	-0.794372
LIQLIAB_GDP	0.485159	0.647659	0.586569	-0.033084
PSC_GDP	0.510797	0.265035	-0.690399	0.438397

Stock Market Development (SMD) Index				
	PCA 1	**PCA 2**	**PCA 3**	**PCA 4**
Eigenvalues	2.441183	0.503267	0.055550	--
Proportion	0.8137	0.1678	0.0185	--
Cumulative proportion	0.8137	0.9815	1.0000	--
Variables	**Vector 1**	**Vector 2**	**Vector 3**	**Vector 4**
MCAP_GDP	0.552342	-0.695608	0.459399	--
TURNOVER	0.546866	0.718291	0.430110	--
VST_GDP	0.629171	-0.013662	-0.777147	--
Bond Market Development (BMD) Index				
	PCA 1	**PCA 2**	**PCA 3**	**PCA 4**
Eigenvalues	1.862276	0.949757	0.187967	--
Proportion	0.6208	0.3166	0.0627	--
Cumulative proportion	0.6208	0.9373	1.0000	--
Variables	**Vector 1**	**Vector 2**	**Vector 3**	**Vector 4**
DPUBS	0.696277	0.020635	0.717476	--
DPRVS	-0.428561	0.813808	0.392494	--
INTLPDS	0.575789	0.580767	-0.575479	--

Source: Computed by the Author, 2021, Using E-Views 10.0

The graph (Fig. 3) displays the trend of BSD, SMD and BMD indices as constructed with the principal component analysis. The time plot shows that all the indices (BSD, SMD and BMD) fluctuated significantly. For instance, at the inception of the Structural Adjustment Programme (SAP) that triggered financial liberalization in 1986, all the indices trended upwards except SMD which could be due to the fact that the Nigerian stock market was just acclimatizing with foreign financial

markets. In periods of economic crisis such as the global financial crisis of 2008-2009, it can be seen that all the indices recorded negative values but the SMD rose more rapidly than the BSD and BMD indices probably due to quantitative easing embarked upon in the United States which created much liquidity and pushed capital, through portfolio investments, to emerging market economies and developing economies in need of financial resources. Similarly, the economic recession that hit Nigeria in the second quarter of 2016 significantly undermined the stock market as the SMD index trended below zero though BMD trended downwards but remained positive as the government raised debt instruments to generate funds towards resuscitating the economy from the recession. This clearly shows that financial development in Nigeria has not been stable.

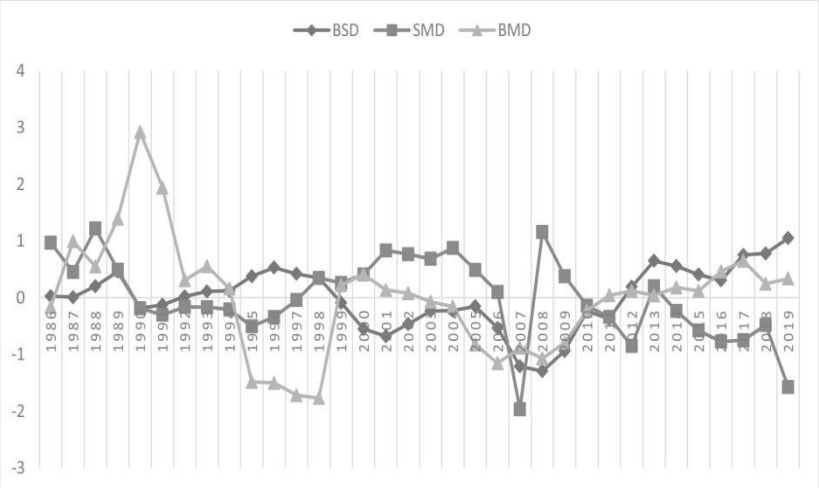

Fig. 3: Time plot of financial development indices

Source: Computed by the Author, 2021, Using E-Views 10.0

4.2 Test of Stationarity

The stationary properties of the data are examined using Dickey & Filler and Philipp & Perron unit root test to show the order of integration. The unit root results have been summarized in Table 2. The variables are of mixed level of integration, that is, I(0) and I(1). This situation, according to Paseran, Shin & Smith (2001: 289-300) necessitates the application of the Autoregressive Distributed Lag (ARDL).

Table 2: Unit root test results

	ADF based unit root test		**PP based unit root test**	
Variable	**I(0): Level**	**I(1): 1st Difference**	**I(0): level**	**I(1): 1st Difference**
FDIINF	-4.3530 {0.0080}	-	-4.2433 {0.0105}	-
FDIOTF	-1.8941 {0.6334}	4.9284 {0.0043}	-5.1967 {0.0010}	-
FPI	-9.6858 {0.0000}	-	- 12.1301{0.0000}	-
BSD	-1.7299 {0.7143}	- 4.3320{0.0087}	-1.4517 {0.8258}	-4.2212 {0.0113}
SMD	-4.2283 {0.0109}	-	-4.2406 {0.0105}	-
BMD	-3.85645 {0.0271}	-	-2.4240 {0.3613}	-5.2387 {0.0009}

EXR	-2.3310 {0.4064}	-4.1589 {0.0131}	-1.6374 {0.7558}	-3.9109 {0.0232}
IFR	-4.3544 {0.0022}	-	-2.8080 {0.0680}	-6.8693 {0.0000}
IRS	-3.2340 {0.0268}	-	-3.1727 {0.0308}	-

Source: Computed by the Author, 2021, Using E-Views 10.0
Note: Figures in parenthesis { } represents the p-values

4.3 ARDL Estimation

The results of the bounds test for the three models are presented in Table 3:

Table 3: ARDL bounds test

Ho: no long-run relationship				
$\boldsymbol{FDIINF = f(BSD, SMD, BMD, EXR, IFR, IRS)}$				
Test statistic	**Value**	**Signif.**	**I(0)**	**I(1)**
F-statistic	7.225400	5%	2.27	3.28
K	6	1%	2.88	3.99
$\boldsymbol{FDIOTF = f(BSD, SMD, BMD, EXR, IFR, IRS)}$				
Test statistic	**Value**	**Signif.**	**I(0)**	**I(1)**
F-statistic	5.698274	5%	2.27	3.28
K	6	1%	2.88	3.99
$\boldsymbol{FPI = f(BSD, SMD, BMD, EXR, IFR, IRS)}$				

Test statistic	**Value**	**Signif.**	**I(0)**	**I(1)**
F-statistic	11.71932	5%	2.27	3.28
K	6	1%	2.88	3.99

Source: Computed by the Author, 2021, Using E-Views 10.0

Note: I(0) and I(1) represents lower and upper bounds values

The outcome of the ARDL bounds test indicates that the test for the three models is highly significant at 1% level. This is because the value of the F-statistics 7.225400, 5.698274 and 11.71932 are greater than the upper bound, that is, I(1) and lower bound, that is, I(0) critical values. This situation warrants that the null hypothesis of "no long-run relationship" or "no co-integration" is rejected irrespective of whether the series associated with the variables are at level, that is, I(0) or first difference, that is, I(1) or a blend of both. Based on this premise, the presence of long-run relationship between capital flows (FDIINF, FDIOTF and FPI), financial development indicators (BSD, SMD and BMD) and macroeconomic variables (EXR, IFR and IRS) is confirmed.

The long-run coefficients under the ARDL framework are presented in Table 4: From the long-run estimation, it is seen that the index for banking sector development (BSD) has negative coefficients across the models. This indicates that a unit increase in BSD caused a reduction of 0.86 units, 0.19 units and 0.08 units in FDINF, FDIOTF and FPI, respectively.

However, BSD has statistically significant impact on FDIINF and FDIOTF while its impact on FPI was statistically insignificant.

Table 5: Long-run estimates of the ARDL model

	FDI inflows (FDIINF)	**FDI outflows (FDIOTF)**	**Net FPI flows (FPI)**
Variable	**Coefficient & {Prob.}**	**Coefficient & {Prob.}**	**Coefficient & {Prob.}**
BSD	-0.86 {0.00}	-0.19 {0.00}	-0.08 {0.20}
SMD	-0.29 {0.04}	-0.17 {0.00}	0.01 {0.88}
BMD	0.07 {0.43}	0.13 {0.00}	0.28 {0.00}
EXR	-0.00 {0.06}	-0.00 {0.06}	-0.00 {0.00}
IFR	0.04 {0.00}	-0.01 {0.04}	0.01 {0.22}
IRS	0.11 {0.02}	-0.08 {0.00}	0.06 {0.00}
C	-0.10 {0.86}	1.58 {0.00}	-0.38 {0.19}

Source: Computed by the Author, 2021, Using E-Views 10.0

Note: Figures in parenthesis { } are the probability values

The measure of stock market development (SMD) index shows that both DFIINF and FDIOTF are negatively impacted while FPI is positively impacted. For instance, across the models, the coefficient of SMD implies that FDIINF and FDIOTF decreases by 0.29 units and 0.17 units respectively due to a unit

increase in SMD. On the other hand, a unit increase in SMD causes an increase of approximately 0.01 units in FPI. SMD index is statistically significant in influencing FDIINF and FDIOTF but statistically insignificant in attracting FPI inflows. For all the variants of capital flows, bond market development (BMD) index exert positive impact all through. For FDIINF, the estimated coefficient of BMD indicates that a unit increase in the BMD index brought about 0.07 unit increase in FDINF. BMD index causes FDIOTF to rise by approximately 0.13 units. For PFI, a one unit increase in BMD causes FPI to increase by approximately 0.28 units.

The ECM reveals the speed of adjustment from shock and its coefficient is expected to be negative, statistically significant and with a value between 0 and 1 (Paseran *et al.,* 2001: 289-300). The results of the error correction model (ECM) are presented in Table 5.

Approximately 4%, 26% and 44% of short-run shock/disequilibrium/discrepancies in the FDIINF, FDIOTF and FPI models are corrected every year. The Adj. R-squared of the ECM shows that the indicators of financial development and macroeconomic variables accounted for approximately 82%, 97% and 91% of the total variations in the various components of capital flows (FDINF, FDIOTF and FPI) respectively while the remaining unexplained variations are due to the error term.

Table 5: Error correction model (ECM)

	FDI inflows (FDIINF)	**FDI outflows (FDIOTF)**	**Net FPI flows (FPI)**
Variable	**Coefficient & {Prob.}**	**Coefficient & {Prob.}**	**Coefficient & {Prob.}**
CF(-1)*	-1.69 {0.00}	-1.32 {0.00}	-2.87 {0.00}
D(BSD)	-0.30 {0.43}	-0.26 {0.00}	0.45 {0.03}
D(SMD)	-0.47 {0.00}	-0.08 {0.01}	0.06 {0.04}
D(BMD)	0.53 {0.02}	0.17 {0.00}	0.34 {0.04}
D(EXR)	-0.05 {0.04}	-0.09 {0.03}	-0.01 {0.04}
D(IFR)	0.04 {0.00}	0.00 {0.12}	0.04 {0.00}
D(IRS)	-0.02 {0.62}	-0.02 {0.01}	0.12 {0.00}
ECM(-1)	-0.04 {0.01}	-0.26 {0.02}	-0.44 {0.01}
R-squared	0.86	0.98	0.94
Adj. R-squared	0.82	0.97	0.91
Durbin-Watson stat	2.49	2.48	2.52

Source: Computed by the Author, 2021, Using E-Views 10.0

Note: Figures in parenthesis { } are the probability values

The negative and statistically significant CF(-1)* across the models show that previous years' FDIINF, FDIOTF and FPI cause significant impact on current year's capital flows.

4.4 Diagnostic Tests

The diagnostic tests of the ARDL model are presented in Table 6.

Table 6: Diagnostic Tests

FDIINF model		
Tests	*Statistic*	*Prob.*
Serial correlation	3.127376	0.0714
Heteroscedasticity	1.444009	0.2311
Jarque-Bera	1.8812	0.3903
FDIOTF model		
Tests	*Statistic*	*Prob.*
Serial correlation	0.890889	0.4358
Heteroscedasticity	1.067952	0.4562
Jarque-Bera	0.5221	0.7702
FPI model		
Tests	*Statistic*	*Prob.*
Serial correlation	2.064346	0.1733
Heteroscedasticity	1.827444	0.1375
Jarque-Bera	0.0822	0.9597

Source: Computed by the Author, 2021, Using E-Views 10.0
Note: Null hypothesis is accepted if $p > 0.05$

The results presented in Table 6 demonstrate that the ARDL model passes the diagnostic tests. There is no evidence of autocorrelation and heteroskedasticity at 5% confidence level and that the model passes the test for normality.

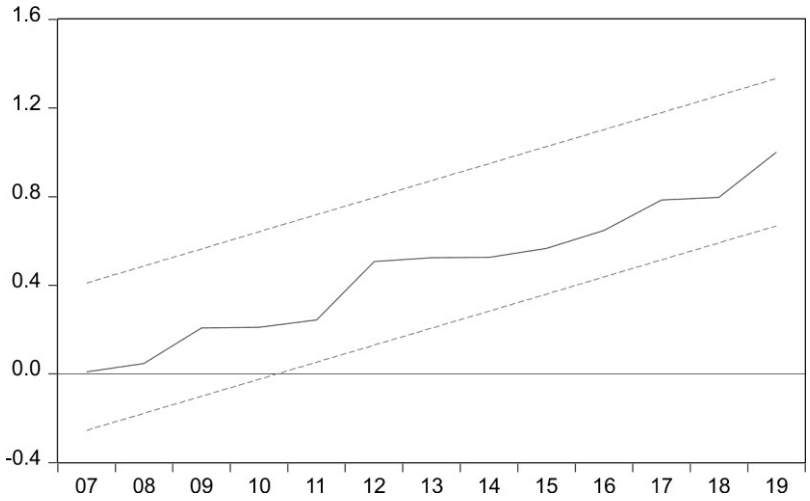

Fig. 4 CUSUM test for FDIINF estimation

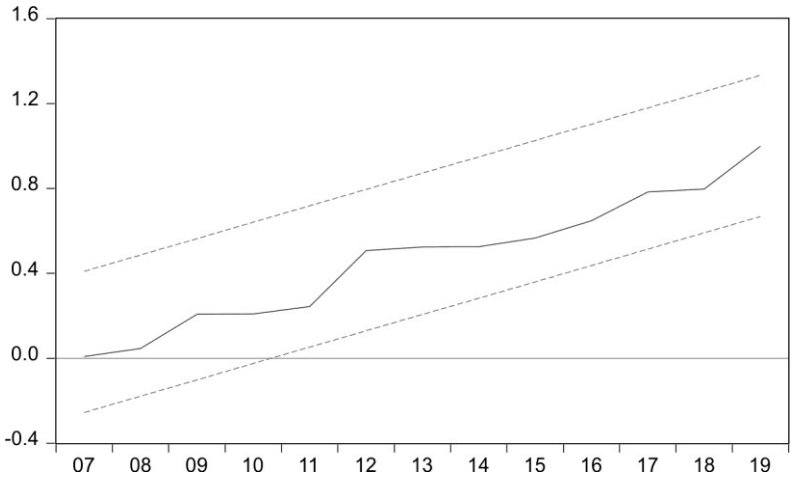

Fig. 5 CUSUMSQ test for FDIINF estimation

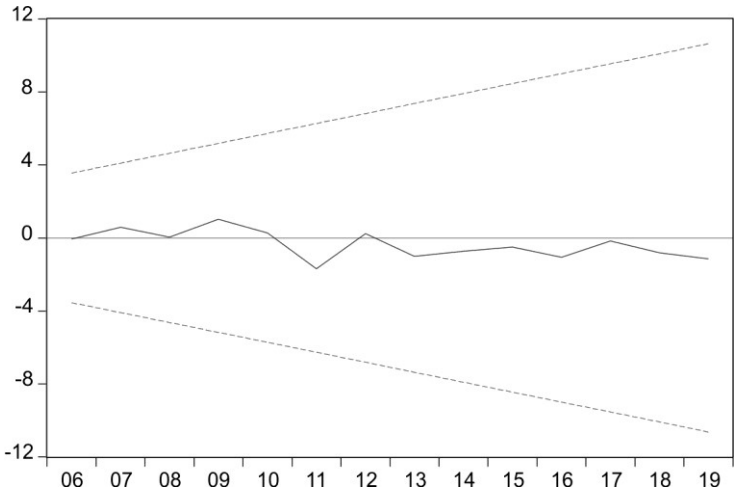

Fig. 6 CUSUM test for FDIOTF estimation

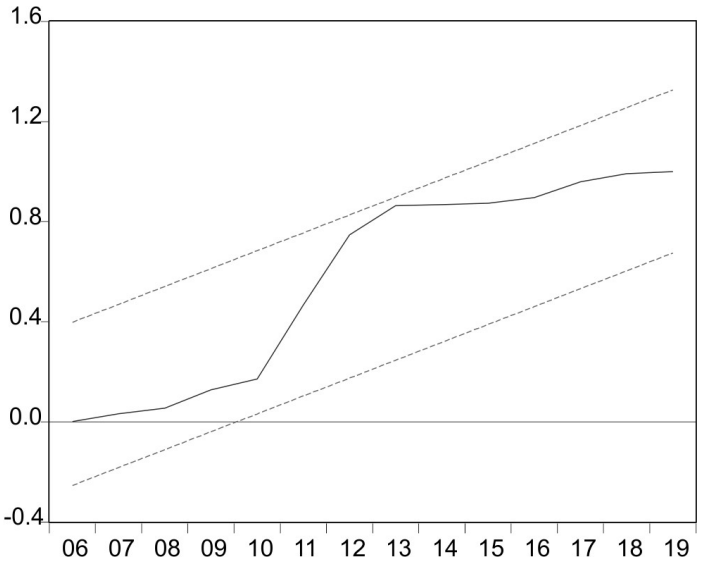

Fig. 7 CUSUMSQ test for FDIOTF estimation

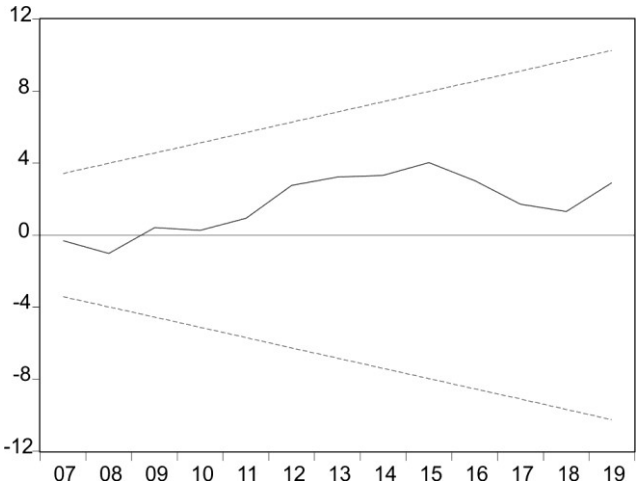

Fig. 8 CUSUM test for FPI estimation

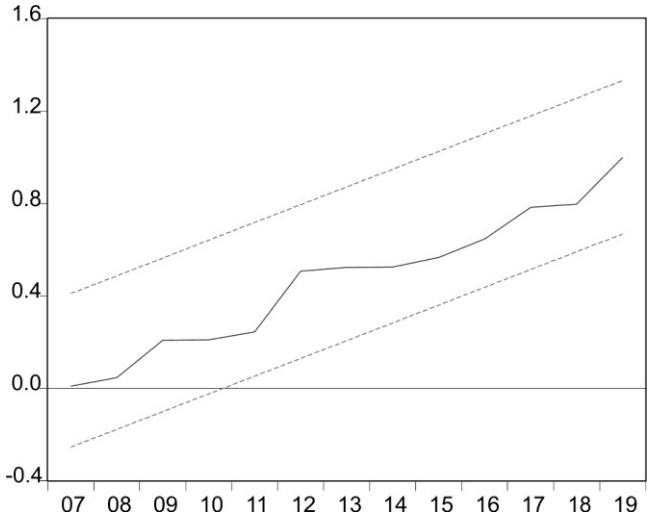

Fig. 9 CUSUMSQ test for FPI estimation

Source: Computed by the Author, 2021, Using E-Views 10.0

To test the stability of the ARDL estimates, the cumulative sum (CUSUM) and the cumulative sum of squares (CUSUMSQ) are applied. Graphical representation of CUSUM and CUSUMSQ are presented in Figures 4 to 9 respectively. The plots of both CUSUM and CUSUMSQ are within the boundaries, proving the stability of the ARDL estimation. The model appears to be stable and properly specified given that none of the two tests statistics is outside the critical bounds.

4.5 Discussion of Findings

The findings of this study show that in the short-run, BSD has negative and insignificant impact on FDIINF, while, it had negative and statistically significant impact on FDIOTF. Though, few studies used BSD in measuring financial development but studies such as Qamruzzaman & Wei (2019: 100-108); Tsaurai and Makina (2018); and Sasmaz and Gumus (2018) found positive impact of BSD on FDI inflows in developing economies and Turkey, respectively. This contradicts the findings of this study and may be due to economic differences. BSD has significant and positive impact on Net FPI flow in the short-run. This indicates that time lag exists in financial intermediation by the banks. From the long-run estimation, it is seen that the index for banking sector development (BSD) has negative coefficient. These findings show that the Nigerian banking system is lagging behind in terms of development, thus discouraging foreign investors who may have already well-developed banking sector in their home countries.

SMD index has significant impact on components of capital flows (FDIINF, FDIOTF and FPI) in the short-run. It is seen

that while the SMD index exerts negative impact on FDIINF and FDIOTF, its impact on FPI is positive. This could be attributed to some uncertainties that may be associated with investments in the early stages. In the long-run, stock market development (SMD) index has positive and insignificant impact on FPI. This could be attributed to the fact that Nigeria being a developing market economy and highly integrated with advanced markets is often exposed to risk and susceptible to financial shocks in the global financial system through various transmission mechanisms as experienced during the global financial crisis in 2008/2009 and the recently COVID-19 induced financial crisis. Studies such as Tsaurai & Makina (2018) and Amissah (2018: 244-254) found a significant positive impact of stock market development in emerging countries and Ghana respectively. On the other hand, Nwosa (2015: 369-376) reveals that SMD significantly influences FPI through increase in market capitalization and value traded ratio. The contradiction between the findings of Nwosa (2015: 369-376) and that of this study could be attributed to the choice of financial development variables.

BMD impact on FDIINF is insignificant. This could be due to the fact that yield on Nigerian bonds are often low compared to those of advanced countries, thus foreign investors may not often subscribe to them but rather choose to issue such securities in their home countries, thus increasing FDIOTF as indicated by the results. BMD index positively and significantly impact on FPI in the short-run. This could be due to the fact that issuance of bonds helps both private and public to raise funds that are often invested in viable investments that eventually stabilize the economy, thereby attracting foreign

investments. In the long-run, Bond market development (BMD) index also exerts positive impact on PFI. The statistically significant and positive impact of BMD on FPI is generally attributed to the fact that government often float bonds in foreign currency (especially, the US Dollar) in the international financial markets, thus eliminating the risk of exchange rate as the US Dollar rate is more stable than the Nigerian currency (Naira) which makes Nigeria a destination for FPIs. However, the studies reviewed did not consider BMD in their analysis.

The study controlled for the impact of macroeconomic variables such as exchange rate (EXR), inflation rate (IFR) and interest rate spread (IRS) because capital flows may bypass financial development indicators as it makes its way into a country because of other factors apart from the level of the financial development (Sanusi, 2002: 1). EXR has positive and significant impact on FDIINF, FDIOTF and FPI in the short-run, implying that exchange rate influences capital flows amidst financial sector development indicators. On the other hand, interest rate spread (IRS) tends to impact positively and significantly on FPI flows while its impacts on FDIINF and FDIOTF are negative, and insignificant in the case of FDIINF. The inclusion of macroeconomic variables in financial development – capital flows model has been supported by Kamasa (2020: 271-284).

5.0 CONCLUSION AND RECOMMENDATIONS

This study evaluated different indices of financial development and their impact on foreign portfolio investments in Nigeria from 1986 to 2019. The investigation revealed that BSD, SMD and BMD have significant and positive impact on Net FPI flow

in the short-run. While in the long-run the index for banking sector development (BSD) has negative and insignificant impact on FPI. Stock market development (SMD) index had positive and insignificant impact on FPI, while, Bond market development (BMD) index also exerts positive but significant impact on PFI. The results show that, in the long-run, banking sector and stock market development indices has a negative and significant impact on FDI inflows and outflows, while, bond market development index has positive and significant impact on FDI outflows. Based on the findings, the study concludes that financial development significantly influences cross-border financial flows in Nigeria especially in the long-run. The study therefore recommends:

1. Financial intermediation by the banks should be strengthened and credit facilities made available to investors at reduced the cost of borrowing - interest rate.
2. The institutional quality of Nigerian stock market should be improved to reduce variations in cross-border financial flows which are best explained by fundamentals like quality of institutions, access to foreign export markets, international price risk and an ideal macroeconomic policy.
3. Policies that will strengthen the value of the naira should be pursued to reduce foreign exchange rate risk.

6.0 CONTRIBUTION TO KNOWLEDGE

1. The studies reviewed used variables such as market capitalization-to-GDP ratio, bank assets-to-GDP ratio, deposits-to-GDP ratio, private sector credit-to-GDP ratio and money supply-to-GDP ratio to measure

financial development. These measures are inappropriate for capturing financial development as all these variables are highly correlated. To measure financial development, this study used the principal component analysis to develop indices for banking sector development, stock market development and bond market development in Nigeria so as to reduce the likelihood of multi-collinearity in the analysis.

2. The study analyzed the financial development–capital flows nexus in a disaggregated way.
   Separating the financial development indicators into sub-segments like banking sector, the stock market, and the bond market, and separately investigating the effectiveness of these sectors allows for more consistent policy implications (Destek *et al.,* 2020: 1-14).
3. The long-run and short-run association between financial development and capital flows was analyzed and a comprehensive financial development index based on principal component analysis was developed for Nigeria.

7.0 Suggestions for further studies

The world is dynamic and cross-border financial flows are being influenced by myriad of factors such as national restrictions, borrowing, social welfare schemes, technological advancement and insecurity. These factors can increase or undermine cross-border financial flows. This study empirically analyzed the influence of financial development on cross-border financial flows to Nigeria from 1986 to 2019 based on foreign direct investments and foreign portfolio investments. The study therefore suggests that further studies should

consider the inclusion of Debt and Transfer payments as cross-border indicators and insecurity as a control variable that may determine international financial flows.

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An Econometric Analysis of Sectoral Distribution of Deposit Money Banks Credits and Economic Growth in Nigeria

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Abstract

This paper explored the nexus between sectoral credit distribution and economic growth in Nigeria from 1981 to 2020 by examining the effect of deposit money banks credits to the agricultural, industrial and service sectors on real gross domestic product (GDP). In doing this, the study accounted for the role of financial development and adopted the unit roots, cointegration and Toda and Yamamoto granger non-causality techniques. The result of the Engle and Granger cointegration test reveals no long run equilibrium relationship between deposit money banks credit to agricultural sector, industrial sector, service sector, financial development and real GDP. The result of the causality test reveals that demand-led hypothesis holds in Nigeria as unidirectional causality was found running from real GDP to financial development. Also, the study found bi-directional causality between credit to agricultural sector and industrial sector. Results show unidirectional causality from financial development to deposit money

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banks' credit to the service sector. The work recommends that the Central Bank of Nigeria (CBN) should set up a real sector credit scheme and ensure that commercial banks disburse credit facilities at an interest rate in the region of 7 – 14 percent.

Keywords: Sectoral Credit Allocation, Economic Growth, Deposit Money Banks and Toda and Yamamoto.

1. Introduction

In the global ecosystem, the banking sector plays a very pivotal role as the key mobilizer of financial resources and the apportionment of same through its intermediation function (FI), thereby helping to accelerate global economic growth and development. Soyibo & Adekanye (1992) stated that capital mobilization is gathering funds from excess monetary section or sector in form of savings and effective allocation of such funds to the deficit sectors to motivate investments and increase macroeconomic factors. At the forefront of the financial intermediation role of the banking sector, the deposit money banks have been an extremely habitual channel in both developed and emerging economies. It is evident that the effective and efficient operationalization of any economy is strongly linked to the strength and stability of her banking industry. According to Lucas (2010), for several years now, economists and monetary experts globally have painstakingly supported amplifying capital formations in advanced and emerging economies. This is because the accumulation of capital from the surplus units through the banking subsector and the onward appropriation of capital to the various real

sectors of an economy, namely agriculture, industrial, construction and the services sectors provide these sectors with loanable funds for further expansion, diversification of investments and job creation. Lucas (1990) also stated that real sector in any nation like Nigeria is the basic and main fulcrum by which monetary expansion and advancement are produced or crystalized. Furthermore, the endogenous theory of economic growth fittingly posits that growth in an economy is a function of the huge capital accumulation through savings and its subsequent re-investment.

The need to achieve sustained economic growth is consequent on the plethora of positive externalities that can manifest from it. These effects range from a stable macroeconomic environment, increase in foreign direct investment and foreign portfolio investment, increased job opportunities, favourable trade balance, increased standard of living, possibility of a reduced divergence between economic classes and reduction of poverty, among others. The desire for these strengthens the push by successive government in Nigeria, through policy prescriptions, to achieve semblance of economic growth.

Economic growth in Nigeria has been below potential, and not commensurable with her vast natural and human resources. Considering the period from 2011 to 2014, economic growth averaged 5 percent, year-on-year basis. In 2015, the economy contracted by 3.964 percent in the first quarter, compared to the 5.945 percent growth recorded in the fourth quarter of 2014. Further dip was experienced in the first quarter of 2016, as the economy declined to 2.112 percent. With negative growth of -0.666 percent and -1.487 percent in the second and third

quarters of 2016, the Nigerian economy slipped into recession (NBS, 2016).

While effort has been made to boost the economy through policy strategies such as the Economic Recovery and Growth Plan (ERGP) of 2017, increased government spending from N7.44 trillion in 2017 to N10.59 trillion in 2020 and reduction in monetary policy rate from 14 percent in December, 2017 to 11.5 percent in January, 2021, the economy slumped, contracting by -6.104 percent and -3.40 percent in the second and third quarters of 2020, respectively (Federal Ministry of Budget and National Planning, 2020; Kyarem and Ogwuche, 2017; Uche, 2019; CBN, 2021; NBS, 2020).

Economic growth in Nigeria has mirrored movement in the international price of crude oil, making the Nigerian economy an oil-dependent economy. This suggest that, economic growth in Nigeria could only be achieved through the oil sector. With the discovery of commercial quantity of crude oil, sectors of the Nigerian economy such as agriculture, industrial and service have assumed the passenger seat in steering economic growth. Classical economists have stressed the importance of capital and bank credit in prosecuting economic growth (Arodoye and Edo, 2015). Deposit money banks credit to agriculture, industrial and service sectors could position them as leading drivers of the Nigerian economy and aid the quick process of the diversification of the Nigerian economy. Realising this, the Central Bank of Nigeria (CBN) by policy engineering, has raised the loan-to-deposit ratio (LDR) of deposit money banks to 65 percent, which necessitated a jump

in deposit money banks credits from N13,086.20 billion in 2015 to N20,373.49 billion in 2020 (CBN, 2020).

In the light of this, this study examined if sectoral credit distribution by deposit money banks can spur economic growth in Nigeria. This study achieves this by structuring the paper into 5 sections. Section 1 outlines the motivating factor for this study. Theoretical and empirical reviews were presented in section 2. We outlined the methodology in section 3. Section 4 covers the results of the study and discussion. Conclusions and recommendations are offered in section 5.

2. Literature Review

This section of the work provides a pathway through which the theoretical and empirical background underpinning the paper shall be considered, the plethora of both theoretical and empirical literature show the underlying linkages between the financial sector credit outlay to the real sector and the growth of the real sector of any economy. This survey nonetheless will appraise a handful of this theoretical and empirical literature. In furtherance, a critical explanation of the basic principles underlining this study that are indeed sophisticated to the non-experts and amateur scholars shall be explored, concepts such as financial intermediation, capital formation and real sector remain defined as alluded to in the preamble of the study.

Theoretical Literature

Theoretically, this work is backed by an outline of literature applauding the relationship between credit apportionment to the real sectors and the performance of the real sector.

Supply Led Finance Hypothesis

The main aspect of this theory which was spread by Patrick (1966) mentioned some notable part which finance plays in motivating monetary expansion and advancement of nations globally. He posited that supply led finance or finance induced growth and development is the capacity of financial resources or capital formation to create, support and expand productive economic activities. The theory is of the view that to facilitate the growth and development of the real sector of an economy, the financial sector must first and foremost be developed to serve as the building block for the evolution of the real sector of the economy. It also stated that the presence of monetary firms helped to strengthen capital gathering from excess point in monetary sector to allocation to deficit fund demanding entrepreneurs in any nation (Arikpo & Adebesi 2017).

Demand-Following Finance Hypothesis

Resulting from the thoughts of Robinson (1952), the demand-following hypothesis holds that the need for financial services is propelled largely by increased economic activities. Expressed differently, the hypothesis preached that the development of the financial sector comes from increased demand for financial services which is derived from improvement in economic activities (Akbas, 2015).

As expressed by Ogbonna, Uwajumogu, Godwin and Agu (2013), the argument of the hypothesis is that economic activities influence development in the financial sector. By inference, a more developed financial sector or system is but a response to an advanced economy. For a demand-following hypothesis to hold, causality has to run from economic growth

(measured using a standard index) to financial development (Kar, Nazlıoğlu and Ağır, 2011; Menyah, Nazlioglu and Wolde-Rufael, 2014).

Financial Repression Hypothesis

This concept is among the financial liberalization theory first presented by Mckinnon (1973) and Shaw (1973) and these ideas faulted overbearing impact of government in areas of regulation and interfering in effective operation of monetary sector. The proponent of the hypothesis posits that the government undue interference in the optimal operation of the financial industry should be whittled down or be removed in its entirety. That further accredited the lackluster performance of the banking industry to government regulation, fixing of interest rate and the setting up of credit limits that the banks can grant.

Deposit money banks along with other profit-maximizing based entities and equally when government interrupts the industry main operation target which is maximizing profit, these firms are rendered ineffective thereby affecting the entire economy. From the foregoing, the theory is of the view that the financial sector of any nation should be deregulated and allowed to function within the barometer of the invisible hand market template of demand and supply.

Endogenous Growth Theory

Several economists including Romer (1986), Lucas (1988) and Rebelo (1991) articulated this theory in the 1980s and some antithesis theory to neoclassical exogenous expansion based concept that sees monetary expansion to be dependent.

Conversely, the endogenous growth theory summarily posits that economic growth is inherent and self-propelled and is not a determinant of exogenous factors, the proponents of this theory principally credited economic growth to a function of three inherent fundamental pillars which are the in-built technological advancement, capital formation and the human resource availability within the confines of the economy. The theory keenly believes that capital aggregation (formation) through the financial sector intermediation function plays a frontal role in the crystallization of economic productivity and growth.

Empirical Literature

This section of the literature review assesses earlier study on the subject matter under searchlight.

The study by Eburajolo and Aisien (2019) which focused on Nigeria, considered the effect of the distribution of commercial banks' credit to the real sector on economic growth. Using time series data, which extended from 1981 to 2015, the work probed if bank credit to the agricultural and manufacturing sub-sectors does enhance economic growth. Three equation were specified and analyzed using cointegration and the autoregressive distributed lag (ARDL) method. The study accounted for the role of financial sector development by fitting the variable in the specified models. From the short and long run result of the analysis carried out, commercial bank credit to the manufacturing and agricultural sector significantly affect economic growth. The growth effect of sectoral commercial banks' credit was found to be enhanced by the development of the financial sector. Oladapo and Adefemi (2015) who used the

ordinary least square method found that during the intensive regulation regime of 1960 – 1985 in Nigeria, only credit to government, personal and professional had positive and significant impact on economic growth. They show by empirical investigation that, during the deregulation period of 1986 – 1995 sectoral banks' credit were insignificant in stimulating growth. However, sectoral allocation of banks' credit contributed positively to economic growth during the guided deregulation regime of 1996 – 2010.

Olusegun, Akintoye and Dada (2014) disclosed that the effect of commercial banks' credit on economic growth in Nigeria varies with the sector to which the credits were made. Sampling data from 1970 to 2011, the ordinary least squares result reveals that, previous year's credit to the service sector contributed more to non-oil gross domestic product (GDP) in comparison to current year's credit to the sector. Furthermore, increases in previous and current year's credit to other sector contract non-oil GDP. The study used identical methods on quarterly data from 1997 Q1 to 2014 Q4. Paul (2017) summarily concluded as informed by the vector error correction result that, bank credit to manufacturing, agriculture and general services are facilitators of economic growth in Nigeria. Onyia (2019) using the ordinary least squares method reported a positive and significant relationship between sectoral credit allocation and performance of the real sector in Nigeria. Odinakachi, Chris-Ejiogu and Kalu (2020) aligned partly with these findings as their ordinary least squares result suggests credit to manufacturing sector significant boost total output. In contrast, they found credit to agricultural sector to be insignificant in stimulating the Nigerian economy. In

investigating the nexus between sectoral distribution of bank credit and economic growth in Sri Lanka from 2005 to 2017, Muthusamy, Dewasiri, Weerakoon and Amarasinghe (2018) showed, using the autoregressive distributed lag (ARDL) method, that sectoral bank credits significantly affect economic growth in the short run. In the long run, it was revealed that only industrial sector credit drives economic growth, as distribution to other sectors were insignificant in impacting growth. Applying similar method, the work by Alzyadat (2021) disclose uneven impact of sectoral bank credit on non-oil GDP in Saudi Arabia from 1970 to 2019. The result of the regression analysis showed positive and significant long run impact of all sectoral credit, with the exception of the mining and agricultural sectors, on non-oil economic growth.

Yakubu and Affoi (2014) who investigated the nexus between commercial banks' credit and economic growth in Nigeria from 1992 to 2012 concluded, based on the result of the ordinary least square, that commercial bank credit contribute positively to the growth of the Nigerian economy. Studying 10 European countries in a panel framework, the analysis performed by Korkmaz (2015) using the fixed effect estimator revealed banks' credit affect economic growth, but not inflation. In a single country analysis, Adeyinka, Ojo, Abiodun and Akanmu (2018) reached similar conclusion using the ordinary least squares method as the result showed that commercial banks' credit enhances economic growth in Nigeria. Ayeomoni and Aladejana (2016) who applied the autoregressive distributed lag (ARDL) method found that, from 1986 to 2014, credit to agriculture negatively affected economic growth in Nigeria. Ume, Obasikene, Oleka, Nwadike and Okoyeuzu (2017) used

the autoregressive distributed lag (ARDL) method to show that volume of banks' credit had positive and significant impact on manufacturing sector output in Nigeria from 1986 to 2013. Elijah (2019) corroborated this finding as the autoregressive distributed lag (ARDL) result revealed both short and long run positive impact of banks' credit on manufacturing output in Nigeria. Baker (2021) reported a direct and significant relationship between commercial bank credit and economic growth in Iraq using the ordinary least squares method.

Timsina (2014) indicated using ordinary least squares and granger causality test to show that private sector credit significantly stimulate the economy of Nepal only in the long run. Olowofeso, Adeleke and Udoji (2015) who used quarterly data from 2000 Q1 to 2014 Q4 argued that credit to private sector fosters economic growth in Nigeria. The fully modified ordinary least square (FMOLS) result contends that government expenditure and nominal exchange rate are positive determinant of output. They noted that, increased prime lending rate inhibited economic growth. Amoo, Eboreime, Adamu and Belonwu (2017) found similar result in Nigeria when the fully modified least squares (FMOLS) method was used. Incorporating annual data from 1993 Q1 to 2013 Q4, the result of the regression analysis disclosed that even where monetary policy, infrastructure, trade openness and investment climate are low, private sector credit enhances economic growth. Bakang (2015) empirically showed that credit to the private sector, liquid liabilities, commercial bank deposits and commercial-bank assets had positive and significant effect on economic growth in Kenya. The results draws from the use of cointegration and error correction

mechanism (ECM) techniques and observations of the behaviour of the series from 2000 to 2013. The findings of Majeed and Iftikhar (2020) indicated insignificant effect of private sector credit on economic growth in Pakistan. This followed the use of the fully modified ordinary least squares (FMOLS) method as the series were sampled from 1982 to 2017.

Employing cointegration, vector error correction model (VECM) and Toda-Yamamoto techniques, Lawal, Olayanju, Ayeni and Olaniru (2019) observed absence of long run relationship between banks' credit to agricultural sector and agricultural gross domestic product in Nigeria. Among others, unidirectional causality from agricultural credit guarantee scheme to agricultural GDP was established, as data collected from 1981 to 2015 were used.

The investigation by Abina and Obi (2020) revealed bi-directional causality between service sector contribution to gross domestic product and bank credit to service sector; bank credit to general commerce and commercial sector contribution to GPD; and production sector contribution to GDP and bank credit to production sector in Nigeria. Informed by the ordinary least square result, bank credit to the production sector, general commerce and service sector contributed positively to economic growth from 1980 to 2019. Joseph (2020) found no causality between bank credit and economic growth in Tanzania using the Granger method. He however disclosed a long run positive and significant impact of bank credit on economic growth.

Agbanike, Onwuka, Enyoghasim, Ikuemonisan, Ogwuru and Osigwe (2018) confirmed the validity of the finance-led growth hypothesis in Nigeria, with data from 1981 to 2014. The model fitted using the seemingly unrelated regression (SUR) estimator points to a positive and significant impact of bank credit to industry, agriculture, commercial and real estate and construction sectors on these sectors contribution to real GDP. Ubesie, Echekoba, Chris-Ejiogu and Ananwude (2019) presented varying conclusion using quarterly data from 2008 Q1 to 2017 Q4 and the ordinary least squares method. The regression result denotes insignificant effect of banks' credit to industrial, agricultural, wholesale and retail trade and building and construction on the sectors contribution to real GDP.

3. Materials and Method

Data

The time series for this study is secondary data sourced from the Central Bank of Nigeria (CBN) annual Statistical Bulletin. The period for which this study covered extended from 1981 to 2020. The study used real gross domestic product (GDP) in measuring economic growth. Other variables fitted in the model were Deposit Money Banks' credits to the agriculture sector, industrial sector and service sector and financial development. Due to the fact that credits are disbursed through Deposit Money Banks, the effect of credit distribution to the various sectors of the economy and credit policies of the Central Bank of Nigeria (CBN) on the Nigerian economy will depend on how developed the financial sector in Nigeria is. We accounted for this by including the level of financial

development in our model. Financial development was proxied by ratio of M3 to gross domestic product (M3-to-GDP).

Methodology

The paper adopted the Ex-Post facto research design. The basis for the adoption of the design originates from the nature of the data used as they are past evolution of the variables. In investigating the effect of sectoral credit distribution of deposit money banks on economic growth in Nigeria, the analytical procedure of the paper starts off by carrying out descriptive analysis of the data. This is followed by determining the order of stability of the variables. The stability of the variables is done through unit root testing, primarily to avoid obtaining misleading estimates and reaching wrong inferences. The stationarity of the series is determined using the augmented Dickey-Fuller (ADF) (1979) test and the Kwiatkowski, Phillips, Schmidt and Shin (KPSS) (1992) unit root test. The study adopts both approaches to unit root testing in order to carryout confirmatory analysis and ensure the appropriateness of the maximum order of integration that goes into the causality test. Both tests are unique as the hypothesis tested are exact opposites. The ADF approach tests the null hypothesis of non-stationarity, while the KPSS approach tests the null hypothesis of stationary series.

The model expressed thus is estimated when conducting the augmented Dickey-Fuller (ADF) test on the series.

$$\Delta Y_t = c + \varphi t + (\beta - 1)Y_{t-1} + \sum_{i=1}^{m} \beta_i \Delta Y_{t-i} + \mu_t \quad (1)$$

In testing for unit root using the KPSS method, the following model is estimated.

$$Y_t = c + \alpha T + p \sum_{i=1}^{m} \theta_i + \mu_t \quad (2)$$

Where;

Y = variable series

The study proceeding upon determining the order of integration of the series to cointegration determination. The argument of the cointegration test is that, if the linear combination of two non-stationary series or I(1) series produce errors that are stationary or I(0), then a long run equilibrium relationship exists between the non-stationary series. The paper applies the Engel and Granger (1987) two-step method over the Johansen and Juselius (1990) method in testing for cointegration between the series, as the specified model is a single equation model. The method involves estimating a static regression model using the ordinary least squares methods (OLS) and conducting a unit root test on the extracted residuals. If the residuals are found to be stationary in levels, then the series are cointegrated. However, since the residuals are the product of an estimation, the critical values of the Augmented Dickey-Fuller (ADF) test cannot be relied upon. The study adopts the critical values provided by Engel and Shoo in testing the null hypothesis of level relationship between the series. The Toda and Yamamoto (1995) (TY) granger non-causality test is adopted in testing the supply-led and demand-following hypotheses in Nigeria. The

Toda and Yamamoto (1995) causality approach is chosen over the traditional Granger test (1969) as the former is flexible as it allows for causality testing irrespective of the integration process of the series or whether cointegration exists between the series, unlike the Granger (1969) causality test which accommodates only level series (Diabate, 2017; Inusah, 2018). The model specification for the Toda and Yamamoto (1995) granger non-causality test is given thus;

$$Y_t = a_0 + \sum_{i=1}^{k} a_i Y_{t-i} + \sum_{i=k+1}^{k+dmax} \emptyset_i Y_{t-i} + \sum_{j=1}^{k} a_j X_{t-j} + \sum_{j=k+1}^{k+dmax} \emptyset_j X_{t-j} + \epsilon_{1t} \ldots\ldots\ldots\ldots\ldots\ldots (3)$$

$$X_t = \delta_0 + \sum_{i=1}^{k} \delta_i X_{t-i} + \sum_{i=k+1}^{k+dmax} \omega_i X_{t-i} + \sum_{j=1}^{k} \delta_j Y_{t-j} + \sum_{j=k+1}^{k+dmax} \omega_j Y_{t-j} + \epsilon_{2t} \ldots\ldots\ldots\ldots\ldots\ldots (4)$$

Where;
Y_t and X_t are variables in the system;
a_0 , ω, δ, ∅ are coefficients to be estimated which provide information on the direction of causality.
$dmax$ is the maximum order of integration of the system; and
k represents the optimal lag length.

The study, which is hinged on the finance-led and demand-following hypotheses, follows the works of Paul (2017) and Odinakachi, Chris-Ejiogu and Kalu (2020) in specifying the functional relationship between sectoral credit distribution and economic growth in Nigeria. This study makes improvement

and structural changes to the models specified by the aforementioned scholars by considering sectoral credit to the industrial sector and accounting for the role of financial development in the growth effect of deposit money banks' credits.

The model is given as;

$$RGDP = f(CRAGRI, CRIND, CRSERV, FD) \quad (5)$$

Where:
$RGDP$ is real gross domestic product, $CRAGRI$ is deposit money banks' credit to the agricultural sector, $CRIND$ is deposit money banks' credit to the industrial sector, $CRSERV$ denotes deposit money banks' credit to the service sector, and FD is financial development (measured using ratio of M3-to-GDP).
In log-linear econometric form, equation (5) is rewritten as;

$$RGDP_t = \phi_0 + \phi_1 lnCRAGRI_t + \phi_2 lnCRIND_t + \phi_3 lnCRSERV_t + \phi_4 FD_t + \varepsilon_{1t} \quad (6)$$

where:
ϕ_0 constant of the model,
ϕ_1 - ϕ_4 are coefficients to be estimated.
From economic postulations, we expect ϕ_1 - ϕ_4 > 0.

4. Results and Discussions

Table 1: Summary Statistics

Var.	Mean	Max.	Min.	Kurtosis	JB	Prob	Obs.
$RGDP$	36843.40	71387.83	16048.31	1.79441	5.0836	0.0787	40
$CRAGRI$	160.9836	1049.678	0.5906	6.0449	39.3157	0.0000	40
$CRIND$	1474.386	7576.764	2.7500	3.9027	16.2248	0.0003	40
$CRSERV$	1968.519	7664.238	2.0200	2.1267	6.0153	0.0494	40
FD	15.2332	24.8952	8.4642	1.7319	5.1992	0.0743	40

Note: JB = Jarque-Bera Statistics

Source: Own Compilation using E-Views 10

A review of the descriptive nature of the data for this study is critical in the sense that it avails us the opportunity to analyze the trend, normality as well as the central tendency of the variables among others. An evidential report drawn from the descriptive statistics in the table above reveals the mean values of N36844.40 billion, N160.9836 billion, N1474.386 billion, N1968.519 billion and 15.2332 percent of gross domestic product for real GDP, deposit money banks' credit to the agricultural sector, deposit money banks' credit to industrial sector, deposit money banks' credit to services sector and financial development in that order. Their maximum and minimum values of the series as shown in parenthesis are (maximum N71387.83 billion and minimum N16048.31 billion for real GDP), (maximum N1049.678 billion and minimum

N0.5906 billion for CRAGRI), (maximum N7576.764 and minimum N2.750 billion for CRIND), (maximum N7664.238 and minimum N2.020 billion for CRSERV) and (maximum 24.8952 percent and 8.4642 percent of GDP for FD). A further assessment of the kurtosis of the variables indicates that the variables of banks' credit to agricultural and industrial sectors follow a leptokurtic distribution as they have excess positive kurtosis. This means that, over the study period there has been broader fluctuations in deposit money banks' credit distribution to the agricultural and industrial sectors. In contrast, we discover that the variables of real GDP, deposit money banks' credit to the services sector and measure of financial development (ratio of M3-to-GDP) have negative excess kurtosis as they follow a platykurtic distribution. Similarly, the Jarque-Bera (JB) statistics judging by the variables individual probability values reveals that real GDP and financial development are normally distributed, while deposit money banks' credit to agricultural, industrial and service sectors are not normally distributed as deduced by their respective Jarque-Bera statistics.

Unit Root

Given the inherent non-stable characteristics of the data set for this work, thus, the assessment of the unit root of these variables is necessary in order not to carry-out a spurious analysis and this work adopts the ADF and KPSS unit root tests to determine the stability of the variables. The empirical results of the unit root test carried out at 5% level are as tabulated below.

Unit Root Test

Table 2: Unit Root Test

Variables	ADF		KPSS		Decision
	Level	1st_diff.	Level	1st_diff.	I(d)
$InRGDP_t$	-1.0540	-3.7731***	0.7349	0.2925***	I(1)
$lnCRAGRI_t$	-1.0069	-7.1200***	0.7680	0.2084***	I(1)
$lnCRIND_t$	-0.6492	-4.1474***	0.7622	0.1703***	I(1)
$lnCRSERV_t$	-0.9043	-8.9954***	0.7411	0.1778***	I(1)
FD_t	-0.7152	-5.7156***	0.6418	0.1690***	I(1)

Note: *The Schwarz Bayesian information criterion was used for lag selection. Test statistics were reported. *, ** and *** denote significance at 10%, 5% and 1% levels, respectively for ADF. ADF test, the null hypothesis: Series has a unit root. KPSS test, the hypothesis: series is stationary.*

Source: Author's Computation (2021)

An analysis of the unit root test results above indicates that all the variables captured in the model comprising $InRGDP_t$, $lnCRAGRI_t$, $lnCRIND_t$, $lnCRSERV_t$ and FD_t were non-stationary at levels connoting that all the series have unit root at levels as ascertained by the unit root test result. However, after the first difference of the variables, they all attained stationarity at 5% probability level. Consequently, given that the variables are now stationary and integrated of order one I(1), therefore this study is well-positioned to undertake a co-integration evaluation of the variables to establish their long-run relationship using the Engle and Granger (1987) two-step cointegration method.

Cointegration

The outcome of the cointegration test for which the Engle and Granger (1987) two-step technique is used is summarily presented in Table 3 below. The reason for the use of Engle and Granger (1987) method flows from the integration process of the variables as they were all stationary in first difference, that is, I(1). Reported in the Table 3 are the test statistics and critical values estimated using the $egranger$ command in STATA 16.0.

Table 3: Result of Engle and Granger Co-integration Test

Variable		Z(t)
ECM_t		-3.593
Critical Value		
1%	-5.548	
5%	-4.783	
10%	-4.409	

Note: Null hypothesis: Series are not cointegrated.
Source: Author's Computation (2021)

Table 3 shows that the test statistics value of -3.593 is less than the 5 percent critical value of -4.783 in absolute terms. In light of this, the study fails to reject the null hypothesis of no level relationship. This implies that the residual (ECM_t) is not stationary in level and there is no long run equilibrium relationship between real gross domestic product, deposit money banks' credit to the agricultural sector, industrial sector, service sector and financial development.

Causality Test

Table 4: Toda and Yamamoto Granger Non-Causality Test Results

Variables	Df	Direction of Causality	Chi-Sq.[1]	Chi-Sq.[2]
RGDP CRAGRI	2	No Causality	0.4627	0.8648
RGDP CRIND	2	No Causality	0.3710	0.8762
RGDP CRSERV	2	No Causality	0.9590	0.4011
RGDP FD	2	$Real\_GDP \longrightarrow FD$	1.9183	4.8133*
CRAGRI CRIND	2	$CRAGRI \leftrightarrow CRIND$	6.6637**	8.7072**
CRAGRI CRSERV	2	No Causality	3.8355	2.5089
CRAGRI FD	2	No Causality	0.6600	3.0330
CRIND CRSERV	2	No Causality	2.7909	3.4076
CRIND FD	2	No Causality	3.2454	0.0587
CRSERV FD	2	$FD \longrightarrow CRSERV$	9.9175***	1.0629

Note: *, ** and *** denote rejection of null hypothesis at 10%, 5% and 1% asymptotic p-value. Df = degree of freedom.

Source: Own computation using E-Views 10

Table 4 reveals predominantly absence of causal link between paired series. From the result of the Toda and Yamamoto granger non-causality test, the supply-leading and finance-led hypotheses does not hold in Nigeria as we found absence of causality running from financial development to economic growth and bank credit to economic growth, respectively. Our findings validate the findings of Joseph (2020), but failed to align with the discoveries of Agbanike, Onwuka, Enyoghasim, Ikuemonisan, Ogwuru and Osigwe (2018) whose findings

support the finance-led growth hypothesis in Nigeria. However, empirical results support the existence of demand-following hypothesis as a unidirectional causality running from real gross domestic product to financial development is found to exist. Further examination reveals bidirectional causality between deposit money banks' credit to service sector and deposit money banks' credit to industrial sector. The causation between deposit money banks' credit to service sector and financial development was unidirectional, as causality is found to run from financial development to deposit money banks' credit to the service sector.

5. Conclusion and Recommendations

The paper concerned itself with the analysis of sectoral deposit money banks' credit distribution and economic growth in Nigeria. The result of our analysis indicates that causality runs from economic growth to financial development in Nigeria for the duration of the study. The result also indicates financial development granger cause deposit money banks credit to the service sector. Our results indicate that demand-led hypothesis holds in Nigeria, leading to the conclusion that development in the Nigerian financial sector is propelled by buoyancy of the Nigerian economy.

We make the following recommendations as informed by our findings.

i. The monetary authorities should through its regulatory power mandate deposit money banks in Nigeria to give out loans to key sector investors at an interest rate in the range of 7 – 14 percent.

ii. A real sector credit scheme should be implemented by the Central Bank of Nigeria as part of her development finance programmes wherein credit facilities are distributed to investors in the real sector, particularly those in the agricultural sector.

iii. A policy strategy towards growing the Nigerian economy, through the use of fiscal policy, monetary policy or exchange rate policy, should be pursued as such will speed up the development of the financial sector and help drive the local economy through injection of credit.

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Dynamic Capabilities and Entrepreneurship Growth of Selected Small and Medium Enterprises (SMEs) In Ibadan Southwest Local Government Oyo State, Nigeria

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Abstract

The study investigates dynamic capabilities and entrepreneurship growth among selected small and medium enterprises (SMEs) in Ibadan Southwest Local Government, Oyo State, Nigeria. This study adopts survey research design in which primary source of data is used in carrying out this study. A total number of one hundred and twelve (112) questionnaires out of one hundred and sixteen (116) was completely filled and returned as the sample size of this research study. The data collected are tested and analyzed using descriptive statistics, multiple regression and correlation coefficients which reveal that the overall

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regression model is fit with aid of SPSS. The finding indicates that there is significant relationship between dynamic capabilities and entrepreneurship growth. Results showed that there is no significant relationship between sensing capabilities and entrepreneurship growth (R^2 = 0.723, F-statistic = 28.098, β = 11.437, t = 13.221, p<.05); and there is no significant relationship between seizing capabilities and entrepreneurship growth (R^2 = 0.650, F-statistic = 21.296, β = 0.804, t = 15.678, p<.05). The study concluded that entrepreneurship growth success arises in knowing which capabilities are important to SMEs in terms of daily survival and which are necessary for a sustainable competitive advantage is critical to the ongoing viability of the firm growth. The study therefore recommends among other that SMEs must pay attention to dynamic capabilities that are superior to basic abilities and monitor the changing environment.

Keywords: Dynamic Capability; Entrepreneurship Growth; Sensing Capabilities; Seizing Capabilities; SMEs

1.0 Introduction

The concept of dynamic capabilities is an approach that promotes a better understanding of knowledge restructuring (Di Stefano, Peteraf and Verona, 2014; Li and Liu, 2014). Dynamic capabilities are the ability of a company to adapt its process and resource-base, including knowledge, in response to changes to environmental variables (Helfat, Finkelstein, Mitchell, Peteraf, Singh, Teece and Winter, 2007). Although the field of dynamic capabilities research is increasingly converging towards this common definition (Giudici and Reinmöller, 2012), recent

reviews of the literature reveal that the understanding of the concept of dynamic potentials differs sharply between two major sub-flows that depend on seminal works of Teece, Pisano and Shuen (1997) and Eisenhardt and Martin (2000) **(**Di Stefano et al., 2014**).**

In a dynamic, rapidly changing and intensely competitive global environment that we have today, the crucial nature of dynamic capabilities is manifested by its rapid use in the development of small and medium enterprises (SMEs) throughout the strategic literature (Corbo, 2012; Namusonge, Muturi and Olaniran, 2016). Globally, dynamic capacity is considered an essential condition for entrepreneurship, product development, SME growth and profitability. In the private sector, organizations operate in a dynamic competitive market to achieve entrepreneurial growth. Dynamic capabilities are often a prerequisite for survival, the ability to innovate is always considered the most important factor for developing and sustaining competitive advantage as well as for developing entrepreneurship, and value creation by organizations (Letangule and Letting, 2012).

Over the decades, research has shown that SMEs create entrepreneurship to add to their knowledge in order to facilitate revenue growth (Mcgrath, Venkataraman and MacMillan, 1994). Also, SMEs create entrepreneurship to improved profitability (Zahra, 1993), improved competitiveness (Kuratko, Covin and Garrett, 2009) and innovation (Ferreira et al., 2015) as an important dynamic engine of growth (Burgelman and Doz, 2013; Morris, Kuratko and Covin, 2011; Soriano and Huarng, 2013). This ensures a deeper

understanding of entrepreneurship in organizational environments, especially the role it plays in enabling SMEs and the potential to integrate well into an organization's resources and strategies and, consequently, to drive organizational performance to higher levels. The nature and complexity of the relationships and activities that exist between dynamic capabilities and business development have not been fully studied in the field of SMEs, especially when the effect of potential opportunities in determining entrepreneurial development cannot be ruled out (Oghojafor and Ogunkoya, 2015).

The rapidly changing business environment has made an increased dependence on SMEs to achieve and maintain competitiveness, improve profitability and succeed in today's dynamic market (Shamsuzzoha et al., 2013; Stanimirovic, 2015). This has been a pedal for innovation-related activities, which tend to be technology-based (Siegel, 2011) and designed to achieve better and greater efficiency (Consoli, 2005; Igun, 2014).

Entrepreneurship contributes to the quality and growth of a sub-sector, economy industry or even a country because it is seen as a catalyst that is considered as mechanism for the development and sustenance of a nation's economic growth (Soriano and Huarng, 2013). The role of entrepreneurs is vital for the creation of new economic activities that contribute to value creation (Huarng and Yu, 2011) and the creation of wealth and employment (Avlonitis and Salavou, 2007; Huarng and Yu, 2011). Corporate entrepreneurship has been a growing field of study in recent decades (Shane and Venkataraman, 2000). Entrepreneurship is present in large and stable

organizations (Verheul, Uhlaner and Thurik, 2005) and small and medium enterprises (SMEs) (Ashworth, 2012; Bettiol, Maria and Finotto, 2012)**.** Thus, the form of entrepreneurship business includes innovative practices within organizations (Stopford and Baden-Fuller, 1994), franchising (Shane and Hoy, 1996), acquisition practices (Gartner, 1990) and recognition of opportunities (Renko, Shrader and Simon, 2012). Entrepreneurship encourages competition in today's environment, which has an impact on globalization.

There are challenges to encouraging entrepreneurial activity and potential opportunities in SMEs. According to Hussien (2010), Oyewale, Adeyemo and Ogunleye (2013), Ayodeji (2016) and Namusonge, Muturi and Olawoye (2016), these challenges include a lack of capital investment, poor infrastructure, education and training systems, encumbering regulations, and in general deficiencies in know-how, skills and acquisition. Other barriers include constrained managerial capabilities, difficulty in utilizing technology which results in low productivity and tremendously declined SMEs profitability, growth and idea of new product development in Nigeria. With the dynamism of the environment and changes in consumption pattern and policies, the small and medium enterprises (SMEs) innovating in products has been a challenge; hence their development and survival is not guaranteed (Ibidun and Ogundana, 2014). Though resources are scarce, most SMEs in Nigeria do not employ modern techniques and processes hence they lack innovation culture in products development and they roll out the same products from time to time without innovation and product development to attract and control customers' loyalty. These attitudes serve as

an impediment on the eventual growth and development of SMEs and increase in customer disloyalty in Nigeria (Ibidun and Ogundana, 2014).

The broad objective of this study is to examine the relationship between dynamic capabilities and entrepreneurship growth of selected small and medium enterprises (SMEs) in Ibadan Southwest Local Government, Oyo State. The specific objectives are to: (i) explore the relationship between sensing capabilities and entrepreneurship growth of selected SMEs in Ibadan Southwest Local Government, Oyo State; (ii) determine the relationship between seizing capabilities and entrepreneurship growth of selected SMEs in Ibadan Southwest Local Government, Oyo State.

This study then provides answer to the following questions; (i) Is there any significant relationship between sensing capabilities and entrepreneurship growth of selected SMEs in Ibadan Southwest Local Government, Oyo State? (ii) Is there any significant relationship between seizing capabilities and entrepreneurship growth of selected SMEs in Ibadan Southwest Local Government, Oyo State?

The following research hypotheses were formulated and tested in this study; (i) There is no significant relationship between sensing capabilities and entrepreneurship growth (ii) There is no significant relationship between seizing capabilities and entrepreneurship growth.

This study is arranged by starting with section one which discusses the introduction. Section two focuses on theoretical framework and literature review, while section three focuses on

the research design methodology. Section four focuses on presentation of data, analysis, conclusion and recommendation.

2.0 Review of Related Literature

2.1 Conceptual Review

2.1.1 Concept of Dynamic Capabilities

The dynamic capability (DC) was introduced by Teece, Pisano and Shuen (1997) and is a further explanation and extension of the Resource Based View (RBV) (Barney, 1991; Wernerfelt, 1984), as against the competitive forces framework, RBV and DC explain competitive advantage through internal capabilities. The static nature of the RBV is one of its major criticisms, and thus cannot explain competitive advantage in rapidly changing environments, as the emphasis is on the operational capabilities of the organization (Kraaijenbrink, Spender and Groen, 2009). Consequently, Teece, Pisano and Shuen (1997) define dynamic capabilities as the subset or part of the competences and capabilities that allow the organization to create novel products and processes and react to changing market conditions. Winter (2003) demonstrates the distinguishing features of ordinary (operational) capabilities and dynamic capabilities, by defining ordinary capabilities as "zero level" capabilities that "permit a firm to make a living in the short term", and dynamic capabilities as higher order capabilities that operate to extend, modify or create ordinary capabilities.

Dynamic is the outcome of creating new things in conformity with the changing environment. On the other hand, capabilities encompass the integration of new skills and knowledge that repeatedly and continuously ensure work expertise and

reconfigure to the fluctuating external environment. Dynamic capabilities can also refer to the capacity of an organization to reduce connections and as well the utilization of available resources to create new things in line with the changing environment (Jantunen et al., 2012; McKelvie and Davidsson, 2009; Garbellano and Da Veiga, 2019). Dynamic capability is a vital building organizational innovation capacity that stimulates creativity and performance. Most organizations that concentrate on the improvement of strong dynamic capability usually have the ability to drive strategy and adjust to innovation, thereby enabling it to compete with competitors (Fallon-Byrne and Harney, 2017; Mikalef, 2019; Strøm-Andersen, 2019).

The original definition of dynamic capabilities was given by Teece et al., (1997) to mean the firm's ability to integrate, build and reconfigure internal and external competences to address rapidly changing environment. To avoid the repetition of defining capability with capability, from the process perspective, Eisenhardt and Martin (2000) propose another broad definition that dynamic capabilities are a set of specific and identifiable processes such as product development, strategic decision making and alliancing. From the routine perspective, Zollo and winter (2002) sees dynamic capabilities as a learned and stable pattern of collective activities directed to the development and adaptation of operating routines.

2.1.2 Types of Dynamic Capabilities

a. Sensing Capabilities

Sensing capabilities are the firm's activities and processes that are applied for the scanning of the external environment, interpreting information, and searching and identifying market opportunities. Sensing capabilities comprises a firm's ability to

recognize minor and major shifts in the industry environment that could have significant impact on the firm's business based on its current capability position (Hernández-Linares et al., 2020; Ince and Hahn, 2020; Pitelis and Wagner, 2019; Helfat and Raubitschek, 2018; Teece, 2007, 2017; Barney, 2017). As a result, sensing usually relates to the recognition of opportunities and threats and the monitoring of the current capability endowment (Hernández-Linares et al., 2020; Teece, 2009, 2014; Kuuluvainen, 2013; Barreto, 2010).

When there is a fluctuating and unpredictable risk of technology, sensing is the ability to initially realize them, and then learn and understand information concerning those changes. Responding to these changing situations can conceptually solve business problems. Sensing capability can be likened to the capacity to foresee the future and adapt, by developing fresh abilities (Teece et al., 1997; Teece, 2019). Sensing involves the acquisition of knowledge about the external and internal environment for long-term strategic decision-making. Thus, it is a set of dynamic capabilities that includes gaining knowledge about competitors, exploring new technological opportunities, researching markets, listening to customers and suppliers, and exploring other variables of the business system. Through the systematic use of identification activities, companies can discover new opportunities, reveal latent demand, discover early moves by both suppliers and competitors, and identify risks in a timely manner (Wilhelm et al., 2015)

b. Seizing Capabilities

Seizing Capabilities are related to the company's efforts to seize market opportunities and make decisions about strategic investments and business models and how to organise value chains and ecosystems (Teece, 2007). It is the ability to select resources according to changes in capabilities. Strategic business plans evolve and adapt through skills training to meet the demands of new customers and the use of technology to identify changes that will occur. Cost adjustments are usually made to adapt the product to the varying future consumer needs (Teece, 2012; Jantunen et al., 2012). Seizing includes the process of mobilizing and inspiring organizations to develop a willingness to grab opportunities and mitigate risks. The main activities within this project include, among others, business analysis and dissemination, fund raising, strategy implementation planning and innovative business models (Feiler and Teece, 2014).

It is not enough to feel or look for opportunities. New businesses must also be able to "seize" opportunities as soon as they are identified, that is, invest in the necessary technologies, resources and additional assets to create sustainable business models based on opportunities (Chesbrough, 2010; Kindström et al., 2013 ; Teece, 2010). Seizing includes mobilizing resources to explore and develop opportunities and exploit these activities (Teece, 2014). Taking advantage and seizing of opportunities, entrepreneurs evaluate their new and existing capabilities and invest in "appropriate projects and technologies that are likely to be accepted by the market" (O'Reilly and Tushman, 2007; Teece, 2007; Wilden et al., 2013).

c. Transforming Capabilities

After opportunities are sensed and then seized, the dynamic capabilities perspective contends that ventures must continually renew and transform their resources and processes in response to signals from their shifting environment (Teece et al., 1997). Transforming is necessary because existing resources and capabilities become less valuable as competitors replicate them and as markets shift. Thus, to sustain profitability, entrepreneurs must be able to transform their ventures' assets, competencies and business models to address changing market circumstances (Harreld et al., 2007). Transforming is a challenge because, over time, firms become complacent and rigid in their routines. Slight adjustments to business models are often insufficient to sustain the competitive advantage associated with an opportunity (or set of opportunities).

Transforming capabilities represent a firm's ability to orchestrate its asset base, transform resources and processes to new valuable combinations, and build new capabilities through learning (Jantunen, Puumalainen, Saarenketo and Kyläheiko, 2005). Transforming capabilities is the final chain in a procedural perspective on dynamic capabilities and is widely accepted as a core element of dynamic capabilities (Hernández-Linares, et al., 2020; Ince and Hahn, 2020; Teece, 2007, 2017; Barney, 2017; Kuuluvainen, 2013; Barreto, 2010; Eisenhardt and Graebner, 2007; Eisenhardt and Martin, 2000). Transformation relates to the internal creation of new capabilities and the integration of newly created or acquired capabilities (Barney, 2017; Amit and Han, 2017; Capron and Mitchell, 2009; Lavie, 2006).

2.1.3 Entrepreneurship Growth

Entrepreneurship Growth refers to the process of enhancing business skills and knowledge through organized training and institution building programmes. The objective of entrepreneurship growth is to expand the business base in order to accelerate the pace of start-up. This accelerates job creation and economic growth. Entrepreneurship growth is aimed at a person who wants to start or expand his business. In addition, it focuses more on growth potential and innovation (Osemeke, 2012). According to Ayodeji (2016), Entrepreneurship growth is any action or effort made in relation to entrepreneurship in order to develop, mature and gain greater benefits. Esuh and Mohd (2011) added to the body of knowledge that the impact of entrepreneurship growth has been greatly delayed and has therefore been recognized worldwide in various countries around the world.

Mitchelmore and Rowley (2010) have equally contributed to the fact that entrepreneurship growth activities also include those engagements that make entrepreneurship attractive to non-entrepreneurs in order to develop their interests, skills and abilities to participate in entrepreneurship. Thus, looking at the Nigerian economy, Osemeke (2012) explains that the development of entrepreneurship was designed by successive - governments as an action plan aimed at increasing the knowledge, skills, behaviour and attitudes of individuals and groups to take on the role of business people.

2.2 Theoretical Review

2.2.1 Organizational Learning Theory

Following the popularization of the learning organization concept by Senge in 1990, the function of organizational learning in achieving competitive advantage and superior performance is to determine the speed with which an organization learns (Stewart, 1996). Organizational learning theory focuses on how a company builds its knowledge base over time and develops its knowledge base to achieve superior results, such as new product development, high customer retention, SME development, wealth creation and more.

There are various perspectives under this theory including organizational learning, a knowledge-based approach and knowledge management. Organizational learning processes include key elements that support knowledge productivity processes that include finding information, assimilating, developing, and creating new knowledge about products, processes, and services (Verdonschot, 2005).

Organizations need capable individuals to learn and interpret new information and technological changes from the external environment (Birdthistle and Fleming, 2005; Casey, 2005). The members of an organization must be able not only to process information effectively, but also to be creative.

Nigeria firms require competent people that can learn, interpret and store new information and various changes from the external environment (Birdthistle and Fleming, 2005; Casey, 2005). Staff of the organization must not only possess the

ability to process information efficiently, but also to generate new knowledge quicker and faster than other competitors. The literature has also connected organizational learning to major tools for realizing an organization's renewal strategy (Crossan and Berdrov, 2003). Knowledge of the organization is a plus that can be planned and managed to achieve the innovative performance of the firm (Pham and Svierczek, 2006). As a result, organizational learning is known as a basic source of competitive advantage, and is also associated with innovative efficiency in the innovation literature (Lopez, Peon and Ordas, 2005).

2.3 Empirical Review

Lev and Sinkovics (2013) concluded their research on the impact of strategic unity at the international level and its impact on sustainable competitive advantage that high-tech industries enjoy a strategic alliance as a source of product development, gaining international market share and developing sustainable competitive advantages. Lim et al., (2012) concluded in their study that the stronger the IT booth managers are in terms of structural strength in the organizational hierarchy, the stronger the role of IT in the organization and the more sustainable the competitive advantage for the organization.

Feng et al., (2010) conducted a study in China between 2008 and 2009 and concluded that customers' and suppliers' participation throughout the process of attaining sustainable competitive advantages (cost leadership strategy) improves sustainable competitive advantages of the industry. Bobillo et al., (2010) studied 1500 manufacturing firms in Germany, France, the UK, Spain, and Denmark and maintained that organizational factors (e.g. capital markets, financial liaison,

and skilled work force) – differentiation strategies approaches- have positive effect on attaining sustainable competitive advantages.

Njuguna (2012) focused on sustainable competitive strategies adopted by Safaricom Kenya. The study findings indicated that Safaricom Limited was using product choice, differentiation, cost leadership strategy, focus strategy, pricing strategy and market penetration strategy. Application of these strategies resulted into policy formulations and procedures which further enhance the strategy, the business plans which are formulated on continuous innovation of new customer friendly product and low cost strategy. This study used a case study research design. The study findings failed to cover innovation orientation in Safaricom Kenya.

Mathenge (2013) studied innovation on sustainable competitive advantage of telecommunication companies in Kenya. It established that telecommunications companies indicated growth through financial innovations that gave them a sustainable competitive advantage in the ICT. Financial innovation affects positively the performance of telecommunications companies. The study adopted a survey co-relational research design. However, the study was limited to financial innovation of telecommunication companies.

Bakar et al., (2014) conducted a study on entrepreneurship development and poverty alleviation in Malaysia. The sole aim of the paper was to corroborate the relationship between entrepreneurship development and poverty alleviation built on empirical reviews. In this study, a general search was carried

out to accumulate empirical literatures by the name of entrepreneurship development and poverty alleviation in different online database sources such as Google Scholars, Springer Link, Wiley, Science Direct, JSTOR, Emerald full text, Scopus, and EBSCO HOST etc. The empirical findings revealed that innovation, entrepreneurship training & education, family background, government support program, social entrepreneurship, women participation, individual entrepreneurial characteristics, participation of micro, small & medium enterprises, youth empowerment, collaboration of government-university-industry are the main tool for entrepreneurship development which is stimulating employment towards alleviating poverty.

Ogbo et al., (2017) focused on the strategies for achieving sustainable economy in Nigeria taking into consideration the acceptable stakeholders. This work looks at the explosion of the Nigerian population from the year 2005 till date, the modern state of the Nigerian economy and the failed strategies adopted in the past, with a critical look at the acceptable stakeholders, sustainable economy, and the strategic priorities to be considered in the Nigerian context. Theories of modernization (showing the five take off stages), sustainable development, and human development (with the five key capitals) were used to analyze the problem of achieving a sustainable economy in Nigeria. The triple-bottom-line strategy was seen to be a possible solution to the impending problem of unstable economy in Nigeria, intending to social responsibility, environmental protection, and economic priority.

Oladele, Akeke and Oladunjoye (2011) carried out research on entrepreneurship development: a panacea for unemployment

reduction in Nigeria. The study examines the need for promoting employment in Nigeria through the development of entrepreneurship. The study relies on secondary data from the Central Bank of Nigeria's Statistical Bulletin and CIA Fact Sheet and other institutional publications to provide empirical basis for the study. A multiple regression statistical tool was used for the analysis. The result did not support the theoretical formulation in the study. The study however, concludes that the government and its agencies should deliberately encourage entrepreneurial culture and skills development in Nigeria in order to attack the level of unemployment in the country.

Tempelmayr et al., (2019) conducted a study on the performance effect of dynamic capabilities in servitizing companies. Building on existing case research of dynamic capabilities in a servitization context, the study analyzes the impact of dynamic capabilities and especially of sensing, seizing and reconfiguration capabilities on firm performance in a servitization context. The study also analyzes the moderating role of environmental turbulence. The results, which are based on 206 manufacturing companies, show that dynamic capabilities are an essential factor for the performance of a firm in the context of servitization. The study contributes to the literature on servitization and dynamic capabilities by creating evidence that dynamic capabilities have an impact on firm performance in a servitization context.

3.0 Methodology

This study adopted survey research design. The survey design was used to obtain information from the target population concerning the current status of the phenomena through

primary data collection. Survey research is useful in the description of "what exists" in relation to variables or conditions under investigation. The variables here are dynamic capabilities as independent variables and entrepreneurship growth as dependent variable with related sub variables. The study population consists of owners/managers of selected SMEs in Ibadan Southwest Local Government Area that is registered with SMEDAN in Oyo State. The reason for choosing the owners/managers of SMEs is because they are major decision makers in SMEs operational activities. The total number of the entire SMEs in Oyo State is 6137 according to Micro, Small and Medium Enterprises (MSME) National Survey Report (National Bureau of Statistics, 2017).The total number of selected registered SMEs owners/managers for this study is one hundred and sixty three (163) according to Human Capital Unit in Ibadan Southwest Local Government Area of Oyo State.

The random sampling technique was adopted in which the respondents in the population of study have an equal chance of being selected. From the one hundred and sixty three (163) owner/managers in the study area, a total of one hundred and sixteen (116) owner/managers are selected using Taro Yamane's (1967) formula for sample size determination. This study was conducted in Ibadan Southwest Local Government Area, Oyo State. The researchers' choice is due to the availability of the target SMEs willingness to provide information regarding the research variables. Subsequently, the researchers' choice of Ibadan Southwest Local Government Area is because the city was the capital of the Old Western Region and the largest city in Sub Sahara Africa with largely SMEs dominated activities

The data used for this study is cross-sectional in nature. The use of well-structured questionnaire is adopted to gather data on the effect of dynamic capabilities on entrepreneurship growth of selected small and medium enterprises (SMEs) in Ibadan Southwest Local Government Area, Oyo State. The researchers proceed to the field to collect data for this study. This involves going to the selected SMEs to personally administer the questionnaire. This is done with the help of research assistants that were successfully trained on the process to follow in the course of the data gathering. Once the copies of questionnaire are returned, employees are presumed to have given permission to take part in the study. However, the identities of such employees participating in the study are treated as confidential.

The research instrument used for this study is an adapted-designed questionnaire from literature. The questionnaire have ten (10) items which focus on the effect of dynamic capabilities on entrepreneurship growth of selected small and medium enterprises (SMEs) in Ibadan Southwest Local Government Area based on the specific objectives of the study. In order to determine the face and content validity of the instrument a draft copy of the questionnaire was given to experts for scrutiny. The experts examined the instrument and made necessary corrections. The final draft was produced based on the experts' constructive criticisms. The model specification used for this study is a mathematical and diagrammatic model which explains the relationship between the dependent variable (Entrepreneurship Growth) and the independent variable (Dynamic Capability). The mathematical equation below therefore shows the relationship between the dependent variable and the independent variables in a linear form thus:

If, $Y = f(X)$

…… i

If Y represents Dynamic Capability (D_C), and
X represents Entrepreneurship Growth (E_G),
Thus, $D_C = a + b(E_G) + E_t$

…… ii

$$D_C = a + b(E_G) + E_t$$
$$D_C = a + b\,E_G + E_t$$

…… iii

Where, D_C = Dynamic Capability
E_G = Entrepreneurship Growth
a = Intercept of dependent variable (Entrepreneurship Growth)
b = Coefficient of independent variable (Dynamic Capability)
E_t = Error term.

The reliability of instrument is established using the test-retest method, in which the instrument is administered to twenty (20) respondents within a two week interval that did not form part of the study sample. Then, a co-efficient of relationship between the two responses obtained at different times is computed. Cronbach's Alpha co-efficient is used through SPSS and results are shown in Table 3.1:

Table 3.1: Summary of Cronbach's Alpha Test Results

S/No	Variables	No of Items	Reliability
1.	Sensing Capabilities	3	0.824
2.	Seizing Capabilities	3	0.752
3.	Entrepreneurship Growth	4	0.802
	All Variables	10	0.867

Source: ***Authors' Computation, 2021***

4.0 Data Analyses, Discussion and Implication for Management

Table 4.1: Demographic Information

Variables	**Moderating variables**	**Frequency**	**Percentage (%)**
Sex	Male	41	36.6
	Female	71	63.4
Age	18- 25 years	21	18.8
	26-30 years	48	42.9
	31-35 years	39	34.8
	36-40 years	3	2.7
	41 years and above	1	0.8
Marital Status	Single	32	28.6
	Married	78	69.6
	Divorce	2	1.8
Occupation	Trading	32	28.6
	Farming	29	25.9
	Business Centres	21	18.7
	Others	30	26.8
Educational Background	No Formal	4	3.6
	Primary	11	9.8
	Secondary	20	17.9
	Tertiary	77	68.7

Source*: Field Survey, 2021*

The table 4.1 shows that 41 respondents representing 36.6% are male while 71 respondents representing 63.4% are female. This implies that majority of the respondents are female. Also, it reveals that 21(18.8%) of the respondents are 18-25 years,

48(42.9%) are between 26-30 years, 39(34.8%) are between 31-35 years, 3(2.7%) are between 36-40 years, while 1(0.8%) are above 41 years of age. This implies that majority of the respondents are between 26-30 years. Furthermore, it indicates that 32(28.6%) of the respondents are single, 78(69.6%) are married while 2(1.8%) are divorced. This implies that majority of the respondents marital status is married. Additionally, it observes that 32(28.6%) are traders, 29(25.9%) are farmers, 21(18.7%) work as business center operators while 30(26.8%) are others. This implies that majority of the respondents occupation are traders. Lastly, it explains that 4(3.6%) of the respondents have no formal education, 11(9.8%) have primary education, 20(17.9%) have secondary education while 77(68.7%) have tertiary education. This implies that majority of the respondents have tertiary education in their educational qualification.

Table 4.2: Items on sensing capabilities

S/No	ITEMS	$\bar{X}$	S.D	DECISION
1.	Entrepreneurs are allowed to notice market opportunities	3.70	0.57	Very High Extent
2.	Entrepreneurs are allowed to identify, develop and assess opportunities associated with customer needs and problems	3.64	0.65	Very High Extent
3.	Entrepreneurs are allowed to influenced search and learning	3.49	0.65	High Extent
	Average Mean	**3.55**		**Very High Extent**

Source*: Field Survey, 2021*

Table 4.3: Items on seizing capabilities

S/No	ITEMS	$\bar{X}$	S.D	DECISION
1.	Opportunities are seized once they are identified	3.53	0.63	Very High Extent
2.	Entrepreneurs mobilize resources to develop opportunities	3.44	0.69	High Extent
3.	Entrepreneurs evaluate their emerging and existing capabilities	3.42	0.76	High Extent
	Average Mean	**3.38**		**High Extent**

Source*: Field Survey, 2021*

Table 4.4: Items on entrepreneurship growth

S/No	ITEMS	$\bar{X}$	S.D	DECISION
1.	Entrepreneurship growth enhanced standard of living	3.39	0.80	High Extent
2.	Entrepreneurship growth create job opportunities for our customers	3.27	0.88	High Extent
3.	High rate of entrepreneurship growth among the SMEs	3.20	0.87	High Extent
4.	Low rate of entrepreneurship growth among the SMEs	3.28	0.73	High Extent
	Average Mean	**3.25**		**High Extent**

Source*: Field Survey, 2021*

4.1 Hypotheses Testing

There is no significant relationship between sensing capabilities and entrepreneurship growth.

Table 4.5: Summary of Regression Results for the Relationship between Sensing Capabilities and Entrepreneurship Growth

Model Summary					
Model	R	R Square	Adjusted R Square		Std. Error of the Estimate
1	.850[a]	.723	.6717		.5990
a. Predictors: (Constant), Sensing Capabilities					
ANOVA[a]					
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	31.053	1	31.053	28.098	.000[b]
	Residual	55.154	110	0.506		
	Total	86.207	111			
a. Predictors: (Constant), Sensing Capabilities b. Dependent Variable: Entrepreneurship Growth						
b. Dependent Variable: Entrepreneurship Growth						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	37.550	1.536		24.441	.000
	Sensing Capabilities	11.437	0.865	0.009	13.221	.000

Source: Field Survey, 2021

From the table 4.5, there is a significant relationship between sensing capabilities and entrepreneurship growth. The result shows that there is a moderate level of interdependence between sensing capabilities and entrepreneurship growth (β = .850, T = 13.221, P < 0.05). The table also shows that the coefficient of determination (R^2) is .723 which is greater than 5% level of significance (P > 0.05) with an F-statistic of 28.098 and p-value of 0.000. It indicates a relatively strong degree of correlation. The R Square value indicates how much of the dependent variable, "entrepreneurship growth", can be explained by the independent variable, "sensing capabilities". It means that sensing capabilities has 72.3% variation on entrepreneurship growth of selected SMEs in Ibadan Southwest Local Government Area, Oyo State.

There is no significant relationship between seizing capabilities and entrepreneurship growth.

Table 4.6: Summary of Regression Results for the Relationship between Seizing Capabilities and Entrepreneurship Growth

Model Summary					
Model	R	R Square	Adjusted R Square		Std. Error of the Estimate
1	.806[a]	.650	.641		.4657
a. Predictors: (Constant), Seizing Capabilities					
ANOVA[a]					
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	11.967	1	11.967	21.296	.000[b]
	Residual	61.149	110	0.561		
	Total	73.116	111			
a. Predictors: (Constant), Seizing Capabilities						
b. Dependent Variable: Entrepreneurship Growth						
Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.479	.196		2.446	.000
	Seizing Capabilities	.804	.142	.806	15.678	.000
b. Dependent Variable: Entrepreneurship Growth						

Source: Field Survey, 2021

From the table 4.6, there is a significant relationship between seizing capabilities and entrepreneurship growth. The result shows that there is a moderate level of interdependence between seizing capabilities and entrepreneurship growth (β = .806, T = 15.678, P < 0.05). The table also shows that the

coefficient of determination (R^2) is .650 which is greater than 5% level of significance (P > 0.05) with an F-statistic of 21.296 and p-value of 0.000. It indicates a relatively strong degree of correlation. The R Square value indicates how much of the dependent variable, "entrepreneurship growth", can be explained by the independent variable, "seizing capabilities". It means that seizing capabilities has 65.0% variation on entrepreneurship growth of selected SMEs in Ibadan Southwest Local Government Area, Oyo State.

4.2 Discussion of Findings

Having analyzed the data gathered and tested the hypotheses formulated; finding indicates that there is significant relationship between sensing capabilities and entrepreneurship growth as reported by hypothesis I; it also shows that there is significant relationship between seizing capabilities and entrepreneurship growth as reported by hypothesis II. From the analysis result on the relationship between dynamic capability and entrepreneurship growth, at overall level, ANOVA results on the relationship between sensing capabilities and seizing capabilities on entrepreneurship growth of selected SMEs in Ibadan Southwest Local Government Area, Oyo State was statistically significant as the p-value is less than the set value of .05. The findings are in line with the results of Helfat and Raubitschek (2018); and Teece (2017) who confirm that the enterprise might have to transform and re-assign existing capabilities and potentially develop new ones. Dynamic capabilities are important for service-oriented firms, as they allow firms to identify market opportunities and client needs, take action on those opportunities by organizing available resources, and gain a competitive advantage in the process.

In addition, the findings concur with Kindström, Kowalkowski and Sandberg (2013) who develop measures for sensing, seizing and at times, transforming in servitizing companies and focus especially on the dynamic capabilities needed for servicitizing manufacturers that enable them to build their service business. Kindström et al., (2013) in their study states that transforming is a challenge because, over time, firms become complacent and rigid in their routines. Slight adjustments to business models are often insufficient to sustain the competitive advantage associated with an opportunity (or set of opportunities). Entrepreneurs sometimes need to make more substantial transformations in response to environmental disruptions. Wilden et al., (2013) in their study found that during transformation, entrepreneurs engage in activities such as implementing new kinds of management techniques, enacting a new or updated marketing plan, implementing new business processes or engaging in different ways of achieving objectives and targets.

The finding on the first hypothesis shows that there is a significant relationship between sensing capabilities and entrepreneurship growth. The analysis shows that there is a moderate level of interdependence between sensing capabilities and entrepreneurship growth ($\beta = .850$, $T = 13.221$, $P < 0.05$) with a R^2 value of 0.723. This implies that small and medium enterprises (SMEs) without entrepreneurship growth face challenges in creating job opportunity and ends up inconsistently creating them. The finding on the second hypotheses shows that there is a significant relationship between seizing capabilities and entrepreneurship growth. The analysis shows that there is a moderate level of

interdependence between seizing capabilities and entrepreneurship growth ($\beta = .806$, $T = 15.678$, $P < 0.05$) with a R^2 value of 0.650. It means that seizing capabilities has 65.0% variation on entrepreneurship growth of selected SMEs in Ibadan Southwest Local Government Area, Oyo State.

4.3 Conclusion and Policy Recommendation

On the basis of the findings of this study, it can be concluded that SMEs use dynamic capabilities perspective to orchestrate and manage clusters of activity that guide decisions about internationalization, such as (sensing), that prepares, plans, engenderes the SMEs readiness for change (seizing), and changes SMEs so that they capture opportunities and create value (transforming).The study also concludes that entrepreneurship growth success arises in knowing which capabilities are important to SMEs in terms of daily survival and which are necessary for a sustainable competitive advantage which is critical to the on-going viability of the firm growth. Furthermore, due to the position of SMEs within the competitive market, they are forced to make careful use of their resources and maximize them creatively, to the extent that they become innovative and inspire larger corporations. Entrepreneurship is a major contributing factor to the growth of Nigeria's economy. Although, the rate of unemployment is still so high in Nigeria, it needs to be resolved in a timely manner through the encouragement of entrepreneurship development that will provide the unemployed with the necessary skills to be self-employed and also be employers of labour.

The following recommendations are therefore made:

i. SMEs must pay attention to dynamic capabilities that are superior to basic abilities and monitor the changing environment.

ii. Financial institutions should encourage financial inclusion, that is, entrepreneurs should be given easy access to loans. This can go a long way to help investors bring their ideas into reality as we know that capital is a major determining factor in any business plan. There should be reduction in the rate of interest because high interest rates deter aspiring entrepreneurs.

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APPENDIX

QUESTIONNAIRE

SECTION A: Demographics

1.	**Sex:** Male ( )	Female ( )
2.	**Age:** 18-25years ( )	26-30 years ( )
	31-35years ( )	36-40years ( )
	41 years and above ( )	
3.	**Marital Status:** Single ( )	Married ( )
	Divorced ( )	
4.	**Occupation:** Trading ( )	Farming ( )
	Business Centres ( )	Others ( )
5.	**Educational Background:** No Formal ( ),	
	Primary( ),	Secondary( ),
	Tertiary ( )	

SECTION B

Kindly choose the option by ticking the appropriate box that best describes your opinion on each of the statement below. The following response is divided into:

Strongly Agree (SA) - 1
Agree (A) - 2
Undecided (U) - 3
Disagree (D) - 4
Strongly Disagree (SD) - 5

Code	Statements	SA 1	A 2	UN 3	D 4	SD 5
SENSING CAPABILITIES						
SSC1	Entrepreneurs are allow to notice market opportunities					
SSC2	Entrepreneurs are allow to identify, develop and assess opportunities associated with customer needs and problems					
SSC3	Entrepreneurs are allow to influenced search and learning					
SEIZING CAPABILITIES						
SZC1	Opportunities are seize once they are identified					
SZC2	Entrepreneurs mobilize resources to develop opportunities					
SZC3	Entrepreneurs evaluate their emerging and existing capabilities					
ENTREPRENEURSHIP GROWTH						
EG1	Entrepreneurship growth enhanced standard of living					
EG2	Entrepreneurship growth create job opportunity for our customers					
EG3	High rate of entrepreneurship growth among the SMEs					
EG4	Low rate of entrepreneurship growth among the SMEs					

Board Operational Strategies and Shareholders' Compensation in Nigerian Banking Industry

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Abstract

There have been several studies on operational strategies employed by boards across the globe but most of the studies did not see how these strategies could enhance shareholders' compensation. Thus, the objective of the study is to investigate the impact of board operational strategies on shareholders' compensation in the Nigerian banking industry. The study employs ex-post facto research design and secondary data collected from the annual reports of the selected banks- Access Bank, Sterling Bank, First City Monument Bank (FCMB), Eco Bank, Stanbic IBTC, United Bank for Africa, Wema Bank, Zenith Bank, First Bank, and Guarantee Trust Bank. The findings from the multiple regression reveal that Audit and HR committees have significant effect on dividend per share while Risk Management, and Credit & Finance committees do not. The findings further show that Risk Management,

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Audit, HR, and Credit& Finance committees do not have significant effect on earnings per share. The study concludes that operational strategies do not have significant effect on earnings per share. The study suggests that the quality and capability of Credit and Finance committee members should be increased so that the owners of banks will continue to experience high rewards on their investments in the banking industry. Also, there is the need to review job descriptions of Risk Management, Audit and HR committees so as to empower them to influence shareholder compensation in the industry.

Keywords: Board Operational Strategies; Owners' Compensation; Dividend Per Share; Earnings Per Share
JEL Classification: G34, G3

Introduction

The intensity of competition in today's business environment requires the deployment of strategies to guide corporate operations, and these strategies are formulated by the top management. Thus, in the case of banks, the board formulates the operational strategies to achieve the internal control goals (Addo, Rigoni & Cavezzi 2017). These strategies direct the activities of the employees and enable strategic plans to impact on the functional domains (Akingbade, 2020).

Corporate strategies are the set of actions that a firm intends to employ to outsmart its competitors and they focus on the long term goals of the firm (Akingbade 2020). However, there is the need for strategies for short term objectives and that is why

there are operational strategies. Operational strategies play pivotal roles in ensuring the effectiveness of corporate strategies by developing and leveraging capabilities in the domain of customers, new markets and products (Haleem, Jehangir & Baig 2017). In the views of Beckman and Rosenfield (2008), operational strategy is one of the most important factors in the business planning of every firm because it aids a firm routine activities (Muganda 2018). Operational strategies are designed by the board as the top management and hub of corporate governance (Muo 2006) and the board is expected to represent the interest of shareholders by navigating the actions of managers on the trajectory of shareholders' compensation (Hajer & Anis 2018)

The banking industry is important for economic growth because of its role(s) in the economy (Olajide & Okunbanjo 2018). Therefore, the failure of this industry could affect the entire economy of any nation. The Nigerian banking industry, like every industry, encounters series of challenges in its routine banking activities. These challenges include fraud, insider abuse, deterioration of asset quality, undercapitalisation, bad loans among others (Olowosegun & Moloi 2021, Adedeji & Ajulo 2021, Ohiani 2020, Hassan 2018, Gololo 2018). These challenges have made some banks such as Oceanic Bank; Eko Bank, Afribank; Intercontinental Bank and Savannah Bank to go into extinction, collapse, be acquired or merged (Ibrahim, Adesina, Olufowobi & Ayinde 2018, Abu, Okpeh & Okpe 2016, Adeyemi & Fagbemi 2011, Ogbonna & Ebimobowei 2011). Based on this, the CBN is forced to consistently monitor and reform the industry via frequent changes in regulatory policies.

Despite the efforts of the CBN on reforming the Nigerian banking industry, the operational challenges of the banks still persist (Muo 2013). Recently, Polaris Bank was created to acquire Skye Bank and Diamond Bank was merged with Access bank. This is an evidence that all is not well with the operational activities of Nigerian banks. Gololo (2018) mentions that poor operational strategy or control is the factor that paves way for persistence internal challenges of the banks. It is not yet confirmed if the operational strategies of the banks affect how the shareholders will be compensated. It is in line with this that the study wants to ascertain how the operational strategies employed by boards of banks have influenced the confidence of the investors via maximization of the returns from their investments.

2. Review of Related Literature

2.1 Conceptual Review

2.1.1 Board Operational Strategies

Strategy is seen as the range of actions and commitments that are designed, integrated, and coordinated to utilize a firm's resources in order to achieve stated goals. Strategy could be internal and external. The internal strategies deal with the internal operations of a firm in line with its mission while the external strategy focuses on how the firm could outsmart its rivals in the industry. The focus of the study is on internal strategy which has to do with how the boards structure the firms' operations for effectiveness and efficiency. Thus, board operational strategies are the pattern of decisions, which shape the long-term capabilities of any type of operations and their

contributions to the overall mission and vision of the banks. Falola (2020) expresses that board operational strategies involve the inclusion of directors in the committee system of a firm in order to monitor and evaluate the internal activities for the accomplishment of the firms' objectives.

2.1.2 Components of Board Operational Strategies

The operational strategies in the Nigeria banking industry are driven by the activities of the different standing committees of the board, which ensure consistence and effective internal control of the banks' different routine activities. These committees include Risk Management, Credit and Finance, Audit and Human Resource Committees.

Board Risk Management Committee is saddled with the responsibility of managing the risks in the operations of the banks; Credit and Finance Committee is in charge of loans and advances; Board Audit Committee oversees the banks financial reporting and disclosure. Board Human Resource Committee is responsible for creating and/or monitoring value-based systems and policies to ensure that the bank is following required best practices relating to the employees and creating an attractive environment for current and prospective employees.

2.1.3 Shareholders' Compensation

Compensation, in this instance is the total package of financial rewards received by shareholders, who are the owners of the firm, based on their investments in the firm (Adisa, Adeoye & Okunbanjo 2016, Adeoye & Elegunde 2014). Earnings and dividends per share serve as proxies for shareholders' compensation because the two variables show how

shareholders could be rewarded in line with their investment in the firm.

Earnings Per Share, according to Kiboi 2015, is the amount attributed to a unit of share as a proportion of income for a given financial year. It is a firm's earnings divided by the number of ordinary shares issued by the firm. Ordinarily, an increase in the earnings of a firm leads to a rise in dividend per share based on the decision of the board of director (Fama & French, 2001). Dividend is the distribution of earnings (past or present) in real assets among the shareholders of the firm in proportion to their ownership (Kiboi, 2015). Dividend per share (DPS) is the sum of declared dividends issued by a firm for every ordinary share outstanding (Chen & Boyle, 2020).

2.2 Theoretical Foundation

Agency Theory as propounded by Alchian and Demsetz (1972) and further developed by Jensen and Meckling (1976) is the theoretical foundation of this study. Agency theory stresses on principal-agent relationship within a firm. According to Ibrahim, Adesina, Olufowobi and Ayinde (2018), Agency Theory believes that the principals of a firm are the shareholders while the boards of directors are their agents in running the firm. The board protects the interest of the shareholders with the ultimate objective of maximizing the returns on their investment. Investors will like to receive reasonable compensation on their investments and thus they monitor the activities of the board to ensure that their interests are well protected.

The board as an agent to the shareholders will have to give report of their activities to the owners of the company and this is where the Stewardship Theory (Donaldson & Davis, 1991) comes in. According to Davis, Schoorman and Donaldson (1997), this theory stresses on the protection and maximization of wealth of the shareholders by the boards, which also have to give feedback the shareholders on the activities of the firms. Stewardship theory believes that the board members should not be guided by personal interests but should align their interest with those of the shareholders (Amole, Muo & Lawal 2021).

In order to maximize the shareholders' wealth, the boards employ different strategies, amongst which is the establishment of different committees including those on risk management, audit, human resource, and, credit and finance, to protect the interest of the shareholders.

2.3 Empirical Review

Georgantopoulos and Filos (2017) investigate how performance of banks is influenced by the structure of the boards in Greece. The study reveals that board independence and size have positive and significant effects on return on equity and return on assets. The study fails to capture shareholder compensation and it is not conducted in the Nigerian banking industry. Njeru (2012) employs content analysis to examine the role of board operational strategies in Equity Bank in Kenya using primary data. The findings reveal that operational strategies have significant impact on the internal activities of the bank especially on information technology. The study is not empirically conducted as the findings could be biased because appropriate statistical tools are not employed and it is not

conducted in Nigeria. The studies of Umar and Sani (2020); Odeleye (2018); Ibrahim, Adesina, Olufowobi and Ayinde (2018); Emeka and Alem, (2016) show direct relationships between corporate governance and performance of firms in Nigeria. The studies do not capture the operational strategies of the firms and despite being investigated in Nigeria, shareholders compensation is not captured.

Hajer and Anis (2018) conduct an analysis on internal governance and bank performance in Tunisia from 2009 to 2011 and concludes that there is no standard governance structure in Tunisia banking industry and asserts that banks should adopt the appropriate operational strategies to improve their financial performance. The study is not conducted in Nigeria and shareholders compensation is not included in its objectives. Also, the period of the study is now stale as banking activities across the globe have changed from 2011 to 2020.

Dzingai and Fakoya (2017) reveals that there is a weak negative relationship between return on equity and board size but a positive relationship between board independence and return on equity. The study indicates mixed results and shareholders compensation is not focused despite not being conducted in Nigeria. Erin, Asiriuwa, Olojede, Ajetunmobi and Usman (2018) investigate risk governance and performance of banks in Nigeria and uses Chief Risk Officer presence and centrality, risk committee independence, and board independence, audit committee as risk governance strategies while return on assets is used as proxy for financial performance. The findings show that all the proxies for risk governance strategies are significantly related to return on

assets except chief risk officer centrality. The study shows mixed results and shareholders compensation is not focused. In addition, Nwidobie (2016) find that corporate governance has no impact on the performance but does not focus on the banks and negative result is reported.

3. Methodology

3.1 Research Design

The study employs ex-post facto research design. This research design is adopted because of the nature of this study. The study embodies historical data and predicts past events on all the variables employed.

3.2 Models Specification

For the purpose of the study, the models are thus stated below:

$DPS_{it} =$

$$\beta_0 + \log\sum_{i=1}^{n}\beta_i RMC_{it} + \log\sum_{i=1}^{n}\beta_i AC_{it} + \log\sum_{i=1}^{n}\beta_i HRC_{it} + \log\sum_{i=1}^{n}\beta_i CFC_{it} + \mu_{it}$$

.....1

$EPS_{it} =$

$$\beta_0 + \log\sum_{i=1}^{n}\beta_i RMC_{it} + \log\sum_{i=1}^{n}\beta_i AC_{it} + \log\sum_{i=1}^{n}\beta_i HRC_{it} + \log\sum_{i=1}^{n}\beta_i CFC_{it} + \mu_{it}$$

……..……2

Where: DPS_{it} = Dividend per share of the i^{th} Bank at period t; RMC= Risk Management Committee; AC= Audit Committee; HRC= Human Resource Committee; CFC= Credit and Finance Committee; Log= Logarithm; Subscript *'t'* indicates time

period; and μ_t is the stochastic disturbance term not included in the estimation model.

3.3 Data Discussion

The data are collected based on the variables employed in the study. The data for the study already made or existing data that are reported in the financial statements of the selected deposit money banks. The nature of the study makes its data to be panel data because of studying different banks at different periods of time

3.4 Source of Data

The study uses secondary data and the data are readily available in the annual reports of the banks. The data are collected on the earning per share and dividend per share as well as risk management committee, audit committee, human resource committee, and credit and finance committee from 2009 to 2019. The data are collected from 10 top performing deposit money banks in the Nigerian banking sector. The selected deposit money banks are Access Bank, Sterling Bank, FCMB, Eco Bank, Stanbic IBTC, UBA, Wema Bank, Zenith Bank, First Bank and GTB. This gives a total observation of 110.

3.5 Method of Data Analysis

The study employs econometric techniques as statistical tools. Unit roots, Hauman test as well as panel regression are employed to achieve the objectives of the study.

4. Results

This part of the study demonstrates the results of the data and the interpretation of the results

4.1 Data Estimation and Presentation of Results

Table 1: Summary of the Unit Root Test for the Variables

Variables	**Levin, Lin & Chu t***	**ADF**	**PP**	**Im, Pasaran & Shin W-stat**
Dividend Per share	-3.4061 (0.003)*	36.8718 (0.054)*	37.6787 (0.004)*	-2.0875 (0.000)*
Earning Per share	-3.0884 (0.001)*	55.6455 (0.000)*	94.7518 (0.000)*	-3.9171 (0.000)
Risk Management Committee	-2.0715 (0.019)*	32.6661(0.037)*	95.1073 (0.000)*	-1.66187 (0.048)
Audit Committee	-3.7998 (0.001)*	35.3389 (0.009)*	104.667 (0.000)*	-2.2778 (0.011)*
Human Resource Committee	-5.3407 (0.000)*	37.9362 (0.004)*	108.746 (0.000)*	-2.50694 (0.006)*
Credit & Finance Committee	-7.7584 (0.000)*	50.7409 (0.000)*	84.8379 (0.000)*	-3.3865 (0.00)

()*= P-value
Source: Researcher's Computation

Table 2: Hausman Test and Redundant Fixed Test for Model One

	Hausman Test			**Redundant Fixed**	
	Chi-Sq Statistic	P-value		Chi-Sq Statistic	P-value
Cross-Section Random	0.9059	0.924	Cross-Section Fixed	19.7470	0.000
Period Random	2.5563	0.635	Period Fixed	5.0477	0.000
Cross-section & Period Random	3.1523	0.532	Cross-section & Period Fixed	11.8678	0.000

Source: Researcher's Computation

Table 3: Panel Regression Results for Model One

	Pooled OLS		**Fixed Effect**		**Random Effect**	
Variable	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
C	1.8939	0.008	2.2870	0.0003	2.1988	0.001
Log (Risk Management Committee)	0.1002	0.781	0.3452	0.1608	-0.0349	0.1481
Log (Audit Committee)	-1.0248	0.001	-0.6715	0.0023	0.7346	0.0006
Log (Human Resource Committee)	0.2244	0.453	-0.5746	0.0236	-0.4826	0.0460
Log (Credit & Finance Committee)	-0.0594	0.822	-0.1301	0.5886	-0.1109	0.6296
Model Summary						
R-Squared	0.101		0.7519		0.1651	
Adj- R-Squared	0.07		0.6855		0.1333	
F-Stat	2.9563	(0.020)	11.329	(0.000)	5.1900	(0.001)

Dependent Variable: Dividend Per Share
Source: Researcher's Computation

Table 4: Hausman Test and Redundant Fixed Test for Model Two

	Hausman Test			**Redundant Fixed**	
	Chi-Sq Statistic	P-value		Chi-Sq Statistic	P-value
Cross-Section Random	0.000	1.000	Cross-Section Fixed	18.522	0.000
Period Random	0.000	1.000	Period Fixed	5.854	0.000
Cross-section & Period Random	0.000	1.000	Cross-section & Period Fixed	11.421	0.000

Source: Researcher's Computation

Table 5: Panel Regression Results for Model Two

	Pooled OLS		**Fixed Effect**		**Random Effect**	
Variable	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
C	2.6617	0.0529	2.5394	0.0348	2.5116	0.001
Log (Risk Management Committee)	-0.5710	0.4129	-0.4297	0.3704	-0.4284	0.3722
Log (Audit Committee)	-1.8158	0.0031	-0.2997	0.4744	-0.5463	0.1905
Log (Human Resource Committee)	1.5468	0.0083	-0.3646	0.4566	-0.1189	0.8029
Log (Credit & Finance Committee)	0.1781	0.7279	0.4290	0.3625	0.4465	0.3281
Model Summary						
R-Squared	0.145		0.7573		0.144	
Adj- R-Squared	0.112		0.6924		0.076	
F-Stat	4.449	(0.002)	11.6670	(0.000)	1.209	(0.001)

Dependent Variable: Earnings Per Share
Operational Strategies and Earning Per Share

4.2 Interpretation of Results

Table 1 shows the unit root test results for the variables. The results show that all the variables have p-values that are less than 0.05% on all methods- Levin, Lin & Chu t*, Augment Dickey Fuller (ADF), Phillip Parson (PP), and Im, Pasaran & Shin W-statistic unit root test employed in the study.

Table 2 shows the Hausman test and Redundant fixed test for model one to ascertain if random effect or fixed effect will be selected for the study. It is revealed that the p-values for

Hausman test are higher than 0.05% significant level while the p-values for redundant fixed are less than 0.05% significant level, thus, fixed effect will be selected to achieve the objective of the study.

Table 3 shows the regression results-pooled, fixed effect and random effect regressions for model one. The pooled ordinary least square shows that 0.07% changes in dividend per share is explained by Risk Management, Audit Committee, Human Resource Committee, and Credit and Finance Committee as proxies for board operational strategies while the remaining 99.93% is explained by other factors not captured in the model. It is also indicated that Risk Management Committee has a positive but insignificant effect on dividend per share in Nigerian banking industry (β = 0.1002; p-value= 0.781>0.05 critical level); Audit Committee has a negative but significant effect on dividend per share in Nigerian banking industry (β = -1.0248; p-value= 0.001<0.05 critical level); Human Resource Committee has a positive but insignificant effect on the dividend per share in Nigerian banking industry. (β = 0.2244, p-value= 0.453>0.05 critical level). Credit and Finance Committee has a negative and insignificant effect on dividend per share (β = -0.0594, p-value= 0.822>0.05 critical level) with f(Prob) of 0.020.

On the fixed effect results, Table 3 shows that 68.55% changes in dividend per share is caused by Risk Management, Audit Committee, Human Resource Committee, and Credit and Finance Committee as proxies for board operational strategies while the remaining 31.45% is explained by other factors not captured in the model. It is also indicated that Risk

Management Committee has a positive but insignificant effect on dividend per share in Nigerian banking industry (β = 0.3452; p-value= 0.1608>0.05 critical level); Audit Committee has a negative but significant effect on dividend per share in Nigeria banking industry (β = -0.6715; p-value= 0.0023<0.05 critical level); Human Resource Committee has a negative but significant effect on the dividend per share in Nigerian banking industry. (β = -0.5746, p-value= 0.0236<0.05 critical level). Credit and Finance Committee has a negative and insignificant effect on dividend per share (β = -0.1301, p-value= 0.5886>0.05 critical level) with F(Prob) of 0.000

On the random effect results, Table 3 displays that Risk Management, Audit Committee, Human Resource Committee, and Credit and Finance Committee as proxies for board operational strategies accounted for 13.33% of the changes in dividend per share while the remaining 86.67% is accounted by factors not considered in the model. It is indicated that Risk Management Committee has a negative and insignificant effect on dividend per share in Nigerian banking industry (β = -0.0349; p-value= 0.1481>0.05 critical level); Audit Committee has a positive and significant effect on dividend per share in Nigeria banking industry (β = 0.7346; p-value= 0.0006<0.05 critical level); Human Resource Committee has a negative but significant effect on the dividend per share in Nigerian banking industry. (β = -0.4828, p-value= 0.0460<0.05 critical level). Credit and Finance Committee has a negative and insignificant effect on dividend per share (β = -0.1109, p-value= 0.6296>0.05 critical level) with f (Prob) of 0.001

Due to the results of Hausman and redundant test, fixed effect should be focused. Thus, the results is expressed in model form

DPS = 2.2870 + 0.3452RMC - 0.6715AC - 0.5746HRC – 0.1301CFC + μ
F-Statistic = 11.3920
F(Prob) = 0.000

It is demonstrated that a change in the unit of Risk Management Committee will cause a rise in dividend per share by 0.3452. However, a change in the unit of Audit Committee, Human Resource Committee and Credit and Finance Committee will cause a decline in the dividend per share of the banking industry in Nigeria. The F-statistic value and F(prob) show that the model is fit and significant to achieve the objectives of the study.

Table 4 showed the Hausman test and Redundant fixed test for model two to ascertain if random effect or fixed effect will be selected for the study. It is revealed that the p-values for Hausman test are higher than 0.05% significant level while the p-values for redundant fixed are less than 0.05% significant level, thus, fixed effect will be selected to achieve the objectives of the study.

Table 5 shows the regression results-pooled, fixed effect and random effect regressions for model two. The pooled ordinary least square shows that 14.5% changes in earnings per share is explained by risk Management, Audit Committee, Human Resource Committee, and Credit and Finance Committee as proxies for board operational strategies while the remaining

85.5% is explained by other factors not captured in the model. It is also indicated that Risk Management Committee has a negative and insignificant effect on earnings per share in Nigerian banking industry (β = -0.5710; p-value= 0.4129>0.05 critical level); Audit Committee has a negative but significant effect on earnings per share in Nigeria, banking industry (β = -1.8158; p-value= 0.0031<0.05 critical level); Human Resource Committee has a positive and significant effect on the earnings per share in Nigerian banking industry. (β = 1.5468, p-value= 0.0083<0.05 critical level). Credit and Finance Committee has a positive but insignificant effect on earnings per share (β = -0.1781, p-value= 0.7279>0.05 critical level).

On the fixed effect results, table 5 further shows that 69.24% changes in earnings per share is caused by Risk Management, Audit Committee, Human Resource Committee, and Credit and Finance Committee as proxies for board operational strategies while the remaining 30.76% is explained by other factors not captured in the model. It is also indicated that Risk Management Committee has a negative and insignificant effect on earnings per share in Nigerian banking industry (β = -0.4297; p-value= 0.3704>0.05 critical level); Audit Committee has a negative and insignificant effect on earnings per share in Nigerian banking industry (β = -0.2997; p-value= 0.4744<0.05 critical level); Human Resource Committee has a negative and insignificant effect on the earnings per share in Nigerian banking industry. (β = -0.3646, p-value= 0.4566<0.05 critical level). Credit and Finance Committee has a positive but insignificant effect on earnings per share (β = 0.4290 p-value= 0.3625>0.05 critical level).

On the random effect results, Table 5 displays that Risk Management, Audit Committee, Human Resource Committee, and Credit and Finance Committee as proxies for board operational strategies accounted for 7.6% of the changes in earnings per share while the remaining 92.4% is accounted for by factors not considered in the model. It is indicated that Risk Management Committee has a negative and insignificant effect on earnings per share in Nigerian banking industry (β = -0.4284; p-value= 0.3722>0.05 critical level); Audit Committee has a negative and insignificant effect on earnings per share in Nigerian banking industry (β = -0.5463; p-value= 0.3722>0.05 critical level); Human Resource Committee has a negative and insignificant effect on the earnings per share in Nigerian banking industry (β = -0.1189, p-value= 0.8029>0.05 critical level). Credit and Finance Committee has a positive and insignificant effect earnings per share (β = 0.4465, p-value= 0.3281>0.05 critical level).

Due to the results of Hausman and redundant test, which show that fixed effect should be focused, the results is expressed in model form:

EPS = 2.5394 – 0.4297RMC - 0.2997AC - 0.3646HRC + 0.4290CFC + μ

F-Statistic = 11.6670

F(Prob) = 0.000

It is demonstrated that a change in the unit of Risk Management, Audit Human Resource Committees will cause a decline in earnings per share by 0.4297; 0.2997; and 0.3646 respectively. But, a change in the unit of and Credit and Finance Committee will cause a rise in the earnings per share.

The F-statistic value and F(prob) show that the model is fit and significant at less than 5% to achieve the objectives of the study.

4.3 Discussion of Results

The study has evaluated functional relationship between board operational strategies and maximization of business owners' wealth in Nigerian banking industry which is measured in terms of committee system, which comprises Risk Management, Audit, Human Resource, and Credit and Finance Committees, as well as dividend payout and earning on shares. The study captured various standing committees in Nigerian deposit money banks and they influence the banks' owners' compensation. Risk Management, Audit, and Human Resource Committees go in different direction with the dividends. However, Credit and Finance goes in the same linear direction with dividend per share in Nigerian banking industry. Similarly, Risk Management, Audit Committee and Human Resource Committee go in different direction with the dividend on the shares of the banks' owners. However, Credit and Finance Committee goes in the same linear direction with dividend per share in Nigerian banking industry. This implies that Credit and Finance Committee is the only standing committee in the Nigerian banking industry that could influence the wealth of the shareholders of the banks. The better the size and capability of Credit and Finance Committee, the higher the financial rewards to be given to the owners of banks in terms of dividend per share and earnings per share.

The findings of the study corroborates with the findings of Ibrahim, et al. (2018); Chenini and Jarboui (2018); Adusei

(2011). However, the findings disagree with the reports of Ibrahim and Danjuma (2020); Dzingai and Fakoya (2017); Georgantopoulos and Filos(2017); Emeka and Alem (2016)

4.4 Summary of Findings, Recommendation and Conclusion

It has been demonstrated that Audit and Human Resource Committees have significant effect on dividend per share; and that board operational strategies do not have significant effect on earnings per share in Nigerian banking industry. Based on this, the study recommends that the capability of committee members for Credit and Finance should be increased so that the shareholders of the banks will continue to experience high rewards on their investments in the banking industry. Also, there is the need to adjust the job description of the Risk Management, Audit and Human Resource Committees in such a way that the committees will influence the earnings and dividend paid to the shareholders. Deposit money banks in Nigeria should consider the reward for the shareholders when creating or setting up standing committee for the operational activities.

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