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# Long-Run Relationship between Marketing of Bank Services and the Performance of Deposit Money Banks in Nigeria

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## ABSTRACT

This paper investigates whether long-run relationship exists between marketing of bank services and deposit money banks (DMBs) in Nigeria using Monthly data obtained from the Central Bank of Nigeria statistical database from January 2002 to December 2014. Univariate statistics shows that both marketing of bank services and bank performance variables have positive returns, positive skewness and leptokurtic. In addition, they are not normally distributed. The ADF unit root tests show that the marketing of bank services and DMBs performance indicator series are integrated of order one (i.e., I(1)). The empirical results obtained from the cointegration model indicate evidence of positive long-run relationship between marketing of bank services on bank profitability in Nigeria. We recommend among others that deposit money banks should insist on engaging marketing professionals to undertake the marketing services in their banks.

**Keywords:** Marketing of bank services, Bank performance, Deposit money banks, Nigeria.
**JEL Classification:** G21, M31.

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## 1. INTRODUCTION

Numerous problems have been found to militate against the adoption of marketing services in deposit money banks in Nigeria. These problems are classified into internal and external hindrances to the adoption of marketing of bank services in money deposit banks in Nigeria. Notable external factors which act against deployment of marketing of bank services in deposit money banks, according to Obasi (2013) include: government regulations through Central Bank of Nigeria, such as pegging of exchange rate, insecurity, etc. Some of the internal problems include: poor packaging of the bank services, inadequate qualified marketing professionals in many of the banks. For instance, the attitude of most deposit money banks managers suggest that some of the bank managers have little or no idea of what marketing is all about. This is portrayed in the statement erroneously expressed by many that marketing is synonymous with “buying and selling”. They fail to understand that buying and selling are only infinitesimal fractions of vital marketing functions. Obasi (2013) observe for instance, that modern media marketing communication such as the internet and other electronic based media have brought about new challenges to the banking industry. Obasi, Nwachukwu and Oteh (2015) opine that deposit money banks that insists on traditional manual operation will sooner or later be out wiped by those that adopt e-marketing approach in their operations

The perceived lethargic or slow adoption of marketing of bank services in Nigeria seems to suggest that the management of most of the banks do not yet appreciate the vital roles of marketing services in enhancing the performance of their banks and overall national growth. Most of the banks appear to perceive marketing services as only applicable to tangible or physical products. Given that banks are agents of positive change, development and growth in any economy, there is therefore an urgent need to empirically investigate the crucial roles and importance of marketing of bank services and how they relate with deposit money banks’ performance in the long-run in Nigeria.

The objective of this study therefore is to investigate whether marketing of bank services relate with deposit money banks’ performance in the long-run. Evidence of the nature relationship between marketing of bank services and deposit money banks’ performance is valuable to the banking industry participants, regulators, and scholars. The board of directors and top management of banking industry for example would be in interested in understanding the linkage between marketing of bank services and deposit money banks’ performance so as to justify or withdraw the huge financial commitment to marketing. The finding will help the banking system regulators to make policies that will enhance protection of depositors against misleading marketing services. This paper will also contribute to grow existing literature on marketing services and bank performance in Nigeria. The remainder of the paper is organised as follows. Section 2 reviews related literature, while Section 3 presents the methodology and data. Section 4 embodies the empirical results and discussions, and Section 5 concludes the paper.

## 2. LITERATURE REVIEW

The importance of marketing of bank services has, in recent years, been gaining increasing recognition in the banking space. This recognition is evident in the increasing empirical studies that are conducted to its usefulness to bank performance. Olajide and Aremu (2004) for example, evaluate the level of strategic marketing development and implementation in Nigeria's banking industry by analysing a total of one hundred and eighteen responses obtained from questionnaires administered on four banks employees. Results of the study established a strong direct relationship between bank performance and strategic marketing implementation and that strategic marketing of banking services involves the process of examining both the present and future marketing environments, formulating organizational objectives, making, implementing and controlling decisions focused on objectives accomplishment. The study concluded that marketing strategy has direct relationship with the survival of the banks. The authors recommended that managements of these banking institutions are encouraged to pursue the use of strategic marketing with rigour so that these organisations can achieve a sustainable competitive advantage strategy to ensure that the continuing existence of their organizations is guaranteed.

Ekerte (2005) carried out a study to examine the level of involvement of Nigerian Merchant Banks in marketing activities. It was also the aimed at analysing how marketing activities of banks in Nigeria have influenced the performances of the banks using Spearman's Rank Correlation Coefficient (R) and Kendall Coefficient of Concordance in testing the study hypothesis. The study revealed that most of the banks offer similar services and all of them have marketing department. From the outcome of the study, it was inferred that there is a significant positive relationship between marketing budget and profitability of the banks. The study concludes that the banks appreciate the roles of marketing in the achievement of overall objective of the banks. As a part of what will improve the effectiveness of the banks, it was recommended among others that the marketing department should be strengthened and improved with adequate human and material resources.

Oke (2012) examined the impact of marketing strategies on bank performance in Nigeria for the period after bank consolidation Analysis. The research methodology employed in the study was Data Envelopment Analysis (DEA). In using this model, revenue and operating profit were the output variable, while advertising was the input variables. Among other findings, the study revealed the significance of the marketing variables in relation to bank performance. He therefore concluded that there is a connection between marketing activities and bank performance.

Promotion as a function of marketing was examined by Aliata, Odondo, Aila, Ojera, Abougo and Odera (2012). They carried out a study examine the influence of promotional strategies on bank performance. The major objective of the study was to examine the nature and influence of the relationship between the bank's promotional strategies and its performance. It also sought to determine the importance of promotional strategies in explaining the bank's performance. The study employed a descriptive sample survey to gather and select data for the study. The data obtained were analyzed using correlation analysis to ascertain the relationship between the bank's promotional strategies and its level of performance. On the other hand, regression analysis was used to explain its performance. From the outcome of the study, they established a positive relationship between promotional strategies and profit of the bank.

The study of Ogbadu and Abdullahi (2013) evaluate the fundamental role of marketing in the Nigerian banking sector. The aim was to determine the role of marketing in Nigerian banking sector. Data obtained for the study was manually computed with the use of Analysis of Variance Model (ANOVA). This was done to ascertain the extent of marketing practice in Nigerian banks and to determine the role marketing places in the banking sector. Findings from the study revealed that marketing is moderately being practiced in Nigerian banks. They equally revealed that the role of marketing in Nigerian banks is highly significant and contributed immensely to the survival and competitiveness of the banks. In conclusion, the study remarked that marketing is pivotal to the performance of banks in Nigeria.

Abubakar (2014) investigates the impact of marketing strategies on banks financial performance of banks with specific reference to First Bank of Nigeria PLC by applying regression analysis and T-test on data derived from the audited financial report of the bank from the period of 2007-2011. Findings from the study indicate that there is a positive significant relationship between marketing communication methods and financial performance as measured by ROA. The researcher recommends among other a better equipped, functional and result oriented marketing department for banks.

The investigation of Islam and Raham (2015) was on the impact of service marketing mix and their impact on bank marketing performance. The main objective of the study was to analyse the present position of service marketing mix elements practiced by the banking sector in order to determine the relationship between service elements of marketing mix with the marketing performance of the banking sector. Data for the study was drawn from both primary and secondary data for statistical analysis and literature review respectively. The tools of data analysis adopted were descriptive statistics, one way analysis of variance (ANOVA) and multiple regressions. They conclude that marketing services influence the performance of the banking sector.

## 3. METHODOLOGY AND DESCRIPTION OF DATA

### 3.1. Description of Data

The data for this study are monthly time series of marketing services variables and bank performance variables in Nigeria. While the banking system total assets proxy bank performance; private sector savings, time and demand deposits proxy marketing services. The rationale in selecting the marketing services proxies is that the key essence of embarking on marketing services is to increase the deposit base of the banking system. Hence it is expected that effective marketing service would increase deposits base vice versa. Similarly, an increase in bank performance is expected directly related to increase in bank assets. Hence bank asset is an appropriate proxy for bank performance. The data sample ranges from January 2002 to December 2014, and were obtained from Central Bank of Nigeria (CBN) statistical bulletin for various years.

### 3.2. Methodology

To investigate the nature of long-run relationship between marketing services and bank performance, we plot time series graphs, estimate univariate statistics, unit roots tests and cointegration analysis. The time series plots are used to visualise line relationship between the marketing services and bank performance variables. The univariate analysis are accomplished by computing mean, standard deviation, skewness, kurtosis, and Jarque-Bera statistic for the level and return series of marketing services and bank performance variables. The unit roots tests are conducted to ensure that the series being studied are integrated of the same order, whereas the cointegration analysis are conducted to evaluated whether long-run relation exist between marketing services and bank performance variables.

The major benefit of cointegration analysis is that cointegrating regression can be modeled by a straight forward regression involving the levels of the variables so long as they are integrated of order one. To investigate the long-run relationship between marketing services and the performance of deposit money banks in Nigeria, the cointegrating regression is specified as follows:

$$BP_t = \alpha_0 + \beta 1PSD_t + \beta 2PTD_t + \beta 3PDD_t + \mu_t \qquad (1)$$

Where the deposit money bank performance variable ($BP_t$)andmarketing of bank services variables ($PSD_t$, $PTD_t$ and $PDD_t$) are nonstationary variables and integrated of order one. In other words, $BP_t \sim I(1)$; $PSD_t$, $PTD_t$, and $PDD_t \sim I(1)$. In order for the $BP_t$and $PSD_t$, $PTD_t$, and $PDD_t$ to be cointegrated, the estimated residual from the equation 1 should be stationary (i.e., $\mu_t \sim 1(0)$).

Engle and Granger (1987) demonstrate that there is a direct correspondence between the econometric concept of cointegration and the economic concept of long-run equilibrium. We will, therefore, accept that a long-run relationship exists between marketing of bank services and deposit money bank performance (i.e. cointegrated) if the error term ($\mu_t$) from the equation 1 is stationary.

## 4. EMPIRICAL FINDINGS AND DISCUSSIONS

### 4.1. Graphic Presentation

Figure 1 presents a graph of the log-level series for the marketing of bank services and deposit money bank performance series in Nigeria for the January 2012 to December 2014 period. Observe from Figure 1, that the private sector saving series has upward trending movement with fluctuations but the private sector time deposits exhibit more fluctuation than the saving deposit though the series has a relatively stable movement before the first quarter of 2006. A major noticeable spike in all the series is seen in the first quarter of 2006, which occurred as a result of the 2005 banking consolidation. Notice also that the private sector time deposits series show a very significant downward spike at the last quarter of 2011. This is associated with the shock to the Nigerian banking sector as a result of the global financial crisis which led to nationalisation of three banks. Another major noticeable feature of the Figure 1 is that all the series exhibit signs of non-stationarity, as they do not appear to be mean reverting.

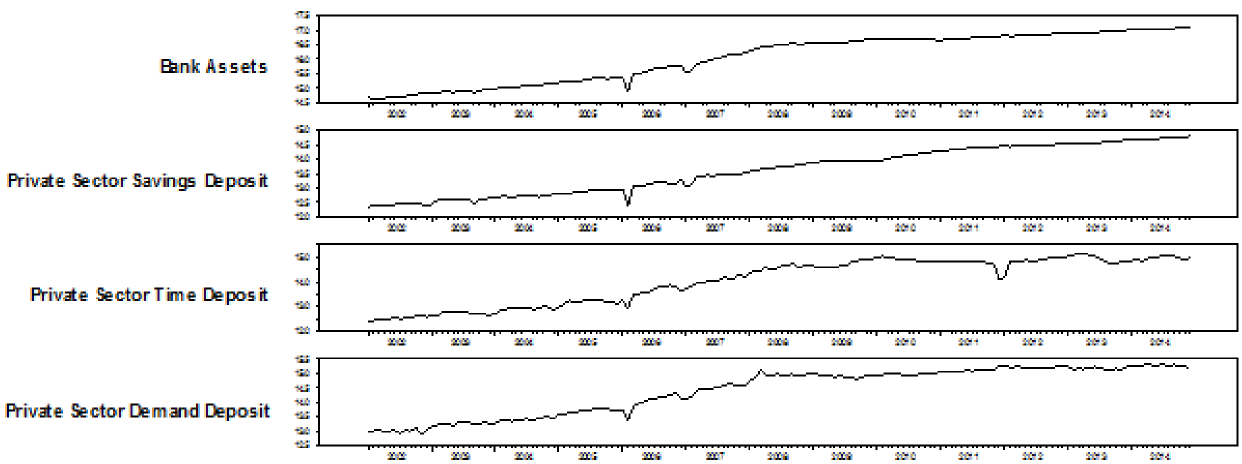


**Figure-1.** Graph of Level of Marketing Service and Bank Performance Series in NigeriaJanuary 2002 to December 2014
**Source:** Authors' computation

The time series graph of the returns series of the marketing of bank services and deposit money bank performance in Nigeria are presented in Figure 2. A visual inspection of the Figure 2 shows that the returns series show signs of returning to their mean suggesting that they are stationary. The only significant spikes are observed in the first quarter of 2006, after bank consolidation.

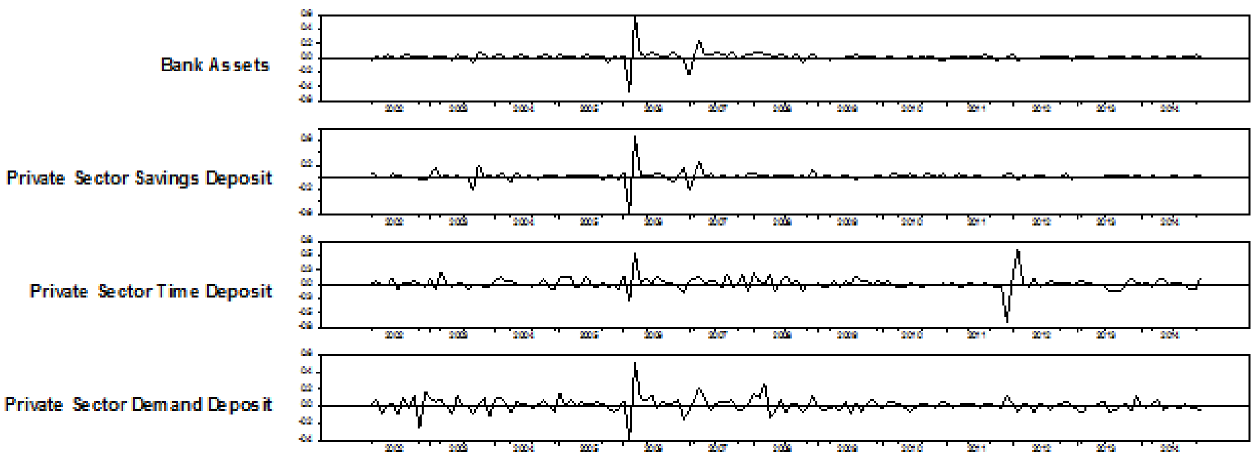


**Figure-2.** Graph of Returns of Marketing Service and Bank Performance Series in Nigeria January 2002 to December 2014
**Source:** Authors computation

### 4.2. Descriptive Statistics

Table 1 shows the results of univariate statistics for the marketing of bank services and deposit money bank performance level and return series respectively. The average private sector savings deposit, private sector time deposit and private sector demand deposit, which are proxy for marketing of bank services, are approximately ₦1.1 trillion, ₦1.8 trillion, and ₦2.4 trillion respectively. On the other hand, return series show that the mean return for bank assets (proxy for deposit money bank performance), private sector savings deposit, private sector time deposit and private sector demand deposit for the study period are 1.58%, 1.60%, 1.67%, and 1.44% respectively. These imply that private sector time deposit has the highest rate of change whereas the private sector demand deposit has the lowest. The standard deviation shows that the private sector time deposit equally has the highest variability from the average, while deposit money bank performance indictor has the lowest. These imply that the bank assets have remained relatively stable over the study period.

The distribution of marketing of bank services and deposit money bank performance indicators are not consistent with the normality assumption. In a normally distributed series, the skewness is zero (0), excess Kurtosis is zero (0), and Jarque-Bera coefficient is equal to zero (0). Positive or negative skewness, excess kurtosis and Jarque-Bera statistics indicate support against the normality assumption (Gujarati, 2003; Emenike, 2015). From Panel B of Table 1, skewness is 1.09, 0.38, 0.12, and 0.58 for deposit money bank performance, private sector savings deposit, private sector time deposit and private sector demand deposit respectively. These show, at 5% significance level, that the private sector time deposit is not skewed whereas the other series are positively skewed. Positive skewness implies that there are more positive returns than predicted by normal distribution (Opare, Emenike and Ani, 2015). Kurtosis is 39, 35, 15, and 10 for bank assets, private sector savings deposit, private sector time deposit and private sector demand deposit respectively. These suggest that return distribution of all the series are peaked. Jarque-Bera estimates indicate that all the series are normally distributed.

**Table-1.**Descriptive Statistics

| | Mean | Standard Deviation | Skewness | Kutorsis | J-B. Stat. |
|---|---|---|---|---|---|
| | Level Series | | | | |
| BA | 12581854.38 | 8008951.66 | .082 | -1.487 | 14.546 |
| PSD | 1084384.19 | 752126.28 | .507 | -1.157 | 15.381 |
| PTD | 1760403.03 | 1157966.79 | -.010 | -1.621 | 17.086 |
| PDD | 2381390.96 | 1416632.30 | -.110 | -1.587 | 16.684 |
| | Return Series | | | | |
| DBA | .0158 | .07177 | 1.096 | 39.930 | 10328.357 |
| DPSD | .0160 | .08626 | .380 | 35.450 | 8120.090 |
| DPTD | .0167 | .11180 | .128 | 15.275 | 1507.269 |
| DPDD | .0144 | .08444 | .586 | 10.253 | 687.847 |

**Note:** DBA, DPSD, DPTD and DPDD are the return series of bank performance, private sector savings, time and demand deposits.

### 4.3. Unit Root Test

In Table 2, we present results of unit roots tests on the log-level and return series of the marketing of bank services and deposit money bank performance indicators for the January 2002 to December 2014 period. The critical value of the tests is at 5% level of significance to avoid the problem of accepting a false null hypothesis. The critical value of the Augmented Dickey-Fuller (ADF) test is -3.439 for both the level and first difference series. Both the marketing of bank services and deposit money bank performance series are not stationary at levels. These are evidenced in the computed tau values being less than theoretical values in absolute terms.

At first differences, however, the computed tau values of the deposit money bank performance (-17.507), private sector savings deposit (-13.351), private sector time deposit (-14.171) and private sector demand deposit (-16.197) of the ADF exceed the critical values (-3.439) at 5% significance level. These results imply that the bank performance, private sector savings deposit, private sector time deposit and private sector demand deposit series are integrated of order one.

**Table-2.** Unit Root Test Result

| | 5% Critical t | Computed t | | 5% Critical t | Computed t |
|---|---|---|---|---|---|
| | Log-level Series | | | Return Series | |
| BA | -3.4394 | -1.1217 | DBA | -3.4394 | -17.5075** |
| PSD | -3.4395 | -2.2933 | DPSD | -3.4396 | -13.3512** |
| PTD | -3.4392 | -1.9089 | DPTD | -3.4394 | -14.1717** |
| PDD | -3.4394 | -0.9392 | DPDD | -3.4394 | -16.1970** |

**Note:** ** indicate significance at the 1% level.

### 4.4. The Long-run Relationship between Marketing of Bank Services and Bank Profitability

This section presents the results of the cointegrating regression and the Engle-Granger Cointegration model estimated to evaluate the long-run relationship between marketing of banking services and bank profitability in Nigeria, which will achieve the third objective of this study. To achieve this objective, we investigate the residuals from the OLS presented in Table 3 for signs of stationarity. If the residuals are stationary, it implies that a long-run relationship exist between marketing of bank services on bank profitability in Nigeria.

Notice from the ADF unit root tests presented in Table 4, that the residuals from the OLS regression are stationary. This can be seen from the computed tau values, which is larger than the critical tau values from the ADF test at 5% significance levels. The 5% critical tau value of (-4.169) for the ADF test is clearly less than computed tau coefficient (-4.695). This finding indicates evidence of positive long-run relationship between marketing of bank services on bank profitability in Nigeria. The findings discussed above are contrary to the null hypothesis no significant relationship between marketing of banking services and the performance of deposit money banks in Nigeria since the computed Engle-Granger *t*-statistic (-4.69) is greater in absolute value than the critical *t*-statistic at 5% significance level (-4.16).Hence, there is long-run relationship between marketing of bank services and bank profitability in Nigeria. For this reason, we reject the null hypothesis of no significant long-run relationship between marketing of bank services and bank performance in Nigeria with 95% confidence. This evidence of long-run relationship between marketing of bank services on bank profitability in Nigeria is not a surprise. Similar findings have been documented in the literature of marketing services and bank profitability. Aila, Ojera, Abougo and Odera (2012), for example, established a positive relationship between promotional strategies and profit of the bank.

**Table-3.** Results of the Cointegrating Regression between Marketing of Bank Services and Bank Profitability

| **Sample Period: 01:2002-12:2014** | ***Coefficients*** | ***T*-stat** | ***P*-value** |
|---|---|---|---|
| Constant | 1.9224 | 19.8151 | 0.0000 |
| PST | 0.3513 | 15.9971 | 0.0000 |
| PTD | 0.2717 | 9.8489 | 0.0000 |
| PDD | 0.3841 | 10.6945 | 0.0000 |
| $R^2$ = 0.995, F(3,152) = 11530.9 [0.000] | | | |

**Table-4.** Results of the Long-run Relationship between Marketing of Bank Services and Bank Profitability

| **Critical Value at 10%** | **Critical Value at 5%** | **Critical Value at 1%** | **Computed Value** | **Engle-Granger Cointegration Test** |
|---|---|---|---|---|
| -3.8645 | -4.1697 | -4.7619 | -4.69521* | |

## 5. CONCLUSIONS

The objective of this study is to investigate the long-run relationship between marketing of bank services and deposit money banks' performance in as Nigeria. To achieve the objective, we employ both preliminary and econometric analyses. The preliminary analyses were conducted using univariate statistic and unit root test, whereas the econometric analysis were estimated using Engle-Granger cointegration analysis. The univariate statistics shows that the marketing of bank services as well as the bank performance indicator variables have positive rate of change, positive skewness, are heavy-tailed, and are not normally distributed. The ADF unit root tests shows that the marketing of bank services and deposit money bank performance indicators are integrated of order one. Results from the Engle-Granger cointegration model indicate that a long-run relationship exist between marketing of bank services and deposit money banks' performance in Nigeria.

The study therefore concludes that long-run relationship exists between marketing of bank services and deposit money banks' performance in Nigeria. Deposit money banks should therefore insist on engaging marketing professionals to undertake the marketing services in the banks. In addition, there is need for banks to invest more in customer relationship marketing in order to understand better who their customers are, so as to serve them better.

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