Original Research Article

Tax planning and Profitability of Nigerian Deposit Money Banks: Evidence from Dynamic Panel Model

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Abstract

Corporate tax represents the transfer of wealth from corporate entities to the government. It is a veritable source of revenue generation to the government while it is a burden on corporate entities. Therefore corporate entities are always reluctant in its payment while government forcefully collects it from their profit. Amidst this divergence is the examination of corporate tax planning and profitability of Nigerian listed deposit money banks. The study adopted an ex post facto research design by obtaining relevant data of sampled 9 banks from 2012 to 2018 from their annual financial statements. Findings from the study show that tax planning (effective tax rate) has a significant negative effect on profitability. The study further found a significant positive effect of capital adequacy ratio as a control variable on profitability. However, no evidence of the negative effect of bank age and bank size on profitability is established by the study. The study, therefore, concludes that tax planning has a significant negative effect on the profitability of Nigerian deposit money banks. Going by the findings from the study, it is recommended that money deposit banks should engage the services of a tax consultant and also make use of a reasonable level of debt in their overall capital structure so as to reduce their tax burden and ultimately improve their profitability.

Keywords: Tax planning, capital adequacy, age, size, profitability and GMM.

JEL Classification Codes: G21, G32

1. INTRODUCTION

Profitability matters significantly for long term growth and survival of any business outfit. Profitable firms can increase their level of operation, meet the needs of customers, diversify into other areas of business, be able to withstand competition from firms in similar industries and enjoy economies of scale with the attendant reduction in the cost of production. The ability of a business to make profit is reflected in its income in excess of direct and indirect costs of earning such revenue basically from operating and investing activities (Owolabi & Alu, 2011). Profitability is significant to the success of banks and by implication to the successful functioning of the economy as profitable banks are better positioned to render quality financial intermediation of fund effectively and efficiently. Aside the vital financial intermediation role played by the banking sector, other prominent roles played include payment of tax to the government to finance its expenditure towards achieving macroeconomic long term developmental objectives and for maintenance of law and orders. The government, therefore, remains one of the significant claimants in companies' profit and such claim manifest in form of corporate tax. Corporate tax is a veritable source of revenue to the government as all companies, regardless of their sizes, are statutorily required to pay 30% of their net profit to the government. By implication, corporate tax remains one of the significant factors that affect firms'

profitability and also has implication on shareholders' wealth maximization as it reduces distributable earnings to shareholders.

According to Nwaobia, Kwarbai and Ogundajo (2016), there is often reluctance on the part of taxpayers regarding fulfilling their civic responsibility of paying tax arising from multiplicity in tax structure, which makes effective tax rates far higher than the statutory rate of company income tax. Taxpayers are therefore always looking for strategies to reduce the tax burden. The quest to reduce corporate tax payable has propelled many firms to adopt different strategies that are capable of reducing their tax expense. According to Olarewaju and Olayiwola (2019), virtually all companies are rational to the extent that they want to pay less tax and benefit from tax savings on their tax liability. They argued further that this quest is informed by the fact that shareholders' wealth maximization remains the fundamental objective of any profit-oriented business outfit and that this can only be archived by minimizing cost and tax burden on their profit. Among important strategies used by companies in reducing their tax burden legally is 'tax planning'. Tax planning depicts the ability of a company to legally reduce its tax obligations through the utilization of different loopholes in the tax system. Salawu and Adedeji (2017) argued that effective tax rate refers to the acceptable

yardstick for tax planning effectiveness which is based on actual average tax payable on a taxpayer's income before tax, as distinct from the statutory tax rate imposed on taxpayers. Tax planning, according to Olarewaju and Olayiwola (2019) refers to an arrangement that involves competent financial dealings within the boundaries of the law to reduce tax liability.

There is no doubt as to the fact that studies have been conducted on tax planning and firms' profitability in Nigeria (See Fagbemi, Olaniyi and Ogundipe, 2019, Nwaobi et al. 2016 and Ogundajo&Onakoya, 2016). Aside from the work of Fagbemi et al. (2019) that focused tax planning and financial performance of Nigerian deposit money banks; however, most of the studies focused on non-financial firms. The central gap identified in the work of Fagbemi et al. (2019) is the methodological gap in the area of analysis. The referenced study applied static regression analysis which is prone to the problem of homogeneity of variables and may produce an unreliable result. This study, therefore, examines the effect of tax planning on the profitability of Nigerian deposit money banks from a dynamic perspective using generalized methods of the moment from 2012 to 2018.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT
The effect of tax planning and financial performance has been the outcome of some prior empirical literature (Fagbemi et al. 2019). Companies that can reduce their effective tax rate are likely to optimize profitability and by implication, maximize shareholders' wealth. Tax planning has been regarded by Sathaya and Thatphong (2019) as the transfer of wealth from the government to corporate entities, and this, in turn, should increase profitability as a substantial amount of wealth is saved as tax. In Accounting and Finance literature, the nexus between tax planning and profitability have produced conflicting arguments. Some schools of thought have found that tax planning through effective tax rate improves firms' financial performance in terms of profitability as it is believed that tax savings reduce the amount of tax to be deducted from net profit. Scholars that have found a significant positive effect of tax planning on profitability include Sathaya and Thatphong (2019).Contrarily, other categories of scholar belonging to the second school of thought have found a significant negative effect of tax planning on profitability (see Fagbemi et al. .2019, Olarewaju and Olayiwola; 2019; Ogundajo & Onakoya, 2016). The rationale for the finding may be due to the effective tax rate being above the normal tax rate due to firms' inability to manage their tax liabilities effectively. Arising from the empirical argument in literature, the study hypothesizes in a null form that:

H_{01}: Tax planning has no significant effect on the profitability of Nigerian deposit money banks.

Theoretical Review
This study is anchored on Hoffman's Tax Planning Theory. Hoffman (1961) argued that corporate entities that are efficient use legal means to divert cash from tax authorities to their corporate purse. According to this theory, the firm should only engage in tax planning activities when there is a tendency to reduce taxable income to the barest minimum in such a way that will not negatively affect accounting income as the firm is assessed by appropriate tax authority based on taxable income and not accounting income. Therefore, firms should

deepen their efforts in the tax planning activities that shrink the income that is subject to taxation, rather than on accounting profit (Fagbemi et al .2019).Hoffman (1961) argued for the existence of a direct association between tax planning activities and financial performance of an entity to the extent of net tax planning benefit arising from a direct consequence of tax planning being higher than the cost.

3. METHODOLOGY
Research Design
The study used an *ex post facto* research because the data are sourced from the financial statement, which relates to the event that has happened in the past that the researcher cannot manipulate.

Source of Data
Data for the study were obtained from the annual financial reports of the sampled 9 banks that produced relevant data from 2011 to 2018.

Population, Sample and Sampling Technique
The population for the study included 15 DMBs. The sample size chosen is 9, which represents 60% of the entire population of the study. The study adopts a purposive sampling technique based on size and the

ability of the banks to generate data for the sampled periods. The sampled banks are GTBank Plc, UBA Plc, Access Bank Plc, Zenith Bank Plc, Sterling Bank Plc, Union Bank Plc, Fidelity Bank Plc, Wema Bank Plc and Unity Bank Plc. These deposit money banks are selected based on size.

Data Analysis Instrument
The study analyzed the data of the study by using the generalized method of moment, which is appropriate when the number of cross-section exceeds the time series. The model is also chosen due to its ability to correct the problem of homogeneity, which characterized the ordinary least square method.

Variable Description and Measurement
Dependent variable: the dependent variable of the study is captured by the return on asset (ROA).

Independent variables: The only independent variable of the study is tax planning which is proxied by the effective tax rate.

Control Variables: In an attempt to obtain a robust result, three other control variables that are likely to influence profitability have been introduced. The control variables are:

Table 1   Measurement of Variables

Variable	Acronym	Measure	Expected effect
Dependent variable			
Profitability	ROA	Profit after tax/ total asset	
Independent variables			
Tax Planning	ETR	Profit before tax/Tax payable	+
Control Variable:			
Capital adequacy	CAR	Equity capital/total asset	+
Age	AGE	Natural log of listing years	+
Size	LASSET	Natural logarithm of total asset	+

Model Specification

As a result of the panel nature of data used in the study, panel data methodology was adopted. The specific models for the study are depicted in equations below:

$$ROA_{it}= \beta_0+\beta_1 ROA_{it} +\beta_2 ETR_{it} + \beta_{3it} CAR_{it} + \beta_4 AGE_{it}+ \beta_5 SIZE_{it} + e_{it}\ldots\ldots\ldots\ldots.. (1)$$

Where,

ROA_{it} = Return on Asset of bank i in period t; ETR =effective tax rate of bank i in period t

CAR_{it} = Capital Adequacy Ratio of bank i in period t; $SIZE_{it}$ = Size of bank i in period t

ei_t = Error term

4. ESTIMATION RESULTS AND DISCUSSION OF FINDINGS

The result of the descriptive statistics below shows the characteristics of the data used in the study. Profitability shows an average value of 1.5% with a minimum value of – 10. 5 and a maximum of 12%. ETR shows a mean value of 57% and varies from -3.04 to 38.15. The reason for this is that most of the banks may have profit before tax that is lower than tax payable. CAR has a mean value of 13% and ranges from -61% to 80%. Log inverse of age has a mean of 2.57 and ranges from -2.23 to 3.87. Log inverse of size has a mean of 20.8 and varies from 17.88 to 22.32. As to the normality of the variables, the Jarque- Bera statistics of all the variables are significant at 5% implying that the variables are normally distributed. The Kurtosis value of all the variables shows that they are all leptokurtic given their values in excess of 3. All the variables except ETR are negatively skewed.

Table 2: **Descriptive Statistics**

	ROA	ETR	CAR	AGE	SIZE
Mean	0.015210	0.568391	0.128973	2.568060	20.83668
Median	0.014856	0.118038	0.144139	2.708050	20.89472
Maximum	0.119833	38.15420	0.803866	3.871201	22.32375
Minimum	-0.105138	-3.043419	-0.607458	-2.234926	17.87634
Std. Dev.	0.029251	4.525056	0.143941	0.939029	0.888214
Skewness	-1.159857	8.116677	-1.170257	-2.182997	-0.701367
Kurtosis	10.04176	67.99315	19.39918	11.52542	3.659425
Jarque-Bera	164.9024	13462.90	823.2330	271.4112	6.907199
Probability	0.000000	0.000000	0.000000	0.000000	0.031632
Sum	1.095130	40.92413	9.286065	182.3323	1437.731
Sum Sq. Dev.	0.060751	1453.806	1.471054	61.72430	53.64681
Observations	72	72	72	72	72

Source: *Researchers' Computation (2020) Using E-views 9*

Table 3: Correlation Analysis

	ROA	ETR	CAR	LAGE	SIZE
ROA	1.000000	-0.128108	0.725833	0.231383	0.335946
ETR	-0.128108	1.000000	-0.046204	0.168501	0.039820
CAR	0.725833	-0.046204	1.000000	0.106967	0.089208
LAGE	0.231383	0.168501	0.106967	1.000000	0.178218
SIZE	0.335946	0.039820	0.089208	0.178218	1.000000

Source: *Researchers' Computation (2020) Using E-views 9*

The correlation table above shows that none of the variables has a correlation coefficient in excess of 80%. This implies that there is no problem of multicollinearity in the series.

Table 4: GMM Analysis for Tax Planning and Profitability

Regressors	Pooled OLS Estimation			Fixed Effect			Random Effect		
	Coeff	t-stat	p-val	Coeff	t-stat	p-val	Coeff	t-stat	p-val
C	-0.138233	-2.512371	0.0152	0.112916	1.090650	0.2815	-0.125538	-2.431074	0.0186
ROA(-1)	0.095638	1.082323	0.2842	-0.050281	-0.595143	0.5549	-0.059433	-0.779413	0.4393
ETR	-0.007392	-1.408109	0.1652	-0.015256	-3.260990	0.0022	-0.008915	-2.007708	0.0500
CAR	0.124437	8.488803	0.0000	0.099467	6.878976	0.0000	0.122180	9.777515	0.0000
AGE	0.003037	1.301982	0.1988	-0.000115	-0.037488	0.9703	0.002987	1.415294	0.1631
SIZE	0.006292	2.353060	0.0225	-0.005083	-1.038347	0.3049	0.005726	2.288506	0.0263
R-square	0.705564					0.827392			0.686640
Adj.R-square	0.676697					0.775208			0.655918
J-stat	51.00000					43.0000			51.00000
Prob J-stat	0.0000					0.00000			0.0000
Durbin Watson	2.097912					2.647687			2.159890
Instrument rank	7			15					7
Hausman Test	15.225620	5	0.0094						

Source:*Researchers' Computation (2020) Using E-views 9*

The result of the Hauman specification reveals that the fixed effect is the appropriate estimation technique. The result of the fixed effect shows that almost 77.5% of the variation in profitability is caused by the independent and control variables of the study. The J-statistic value of 43 with a corresponding probability value of 0.0000 implies the fitness of the model as a whole. The Durbin Watson statistic of 2.648 means that there is no problem of autocorrelation as it is above the threshold of 2. 000.

The finding shows that previous year profitability does not exert a significant negative effect on current year profitability. The negative coefficient may mean that previous year profitability may make bank managers feel relaxed in their strategies of increasing profitability. This shows that last year profitability is not an essential driver of current year profitability. Finding as to the effect of the effective tax rate (ETR) on profitability reveals a significant negative effect of ETR on profitability. The justification for this finding is that some banks may pay an effective tax rate in excess of the statutory rate. This is further buttressed by the maximum value of 38. 15, that indicates that the tax paid in the year is above the profit before tax. This may be due to the payment of deferred tax liability in the current year. The finding of this study is in line with that of Fagbemi et al.(2019) that found a significant negative effect of ETR on the profitability of Nigerian DBMS. The finding is however in disagreement with that of Sathaya and Thatphong (2019) that found a significant positive effect of ETR on firms'profitability

Capital adequacy shows a significant positive effect on profitability. This implies that highly capitalized banks are associated with higher profit. This finding is in line with that of Sanyaolu, Siyanbola, Ogunmefun and Makinde, 2019; Kipruto, Wepukhulu, and Osodo, 2017 and Rahman, Hamid & Khan, 2015that reported a significant positive influence of capital adequacy on the profitability of banks. Age has a negative and insignificant effect on the profitability of Nigerian deposit money banks. This finding shows that age reduces firm profitability but insignificantly. This outcome is in disagreement with that of Ogundao and Onakoya, 2016 and Dogan, 2013that reported a significant negative effect on profitability. Bank size is found to exert an insignificant negative impact on profitability. This shows that larger banks are associated with lower profitability. This may be explained by the fact that larger banks might be associated with high overhead cost, which reduces profitability. This outcome aligns with the findings of Soyemi, Akinpelu and Ogunleye, 2013; Ani, Ugwuanyi, Ezeudu & Ugwuanyi, 2012 while it is in disagreement with that of Rahman, Hamid and Khan, 2015, and Doğan (2013).

5. CONCLUSION AND RECOMMENDATIONS.
The study examined the effect of tax planning on the profitability of 9 selected listed deposit money banks from 2012 to 2018, which represents 72 firm-year observations. The major finding of the study is that tax planning measured by effective tax rate has a significant negative effect on banks' profitability. Following the outcome of the study, it is recommended that deposit money banks should engage the services of tax consultants and as well moderate the level of their use of debt in their capital structure to benefit from the tax shield on interest expenses and thus reduces their tax payable. The study only focused on banking sub-sector, other studies can improve the scope of this study by including other sub-sectors like insurance companies, finance houses and other non-deposit money banks. Also, future studies may focus on firms in the non-financial sector in the country using the generalized method of moment.

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