Environmental Accounting Practices and Share Value of Quoted Deposit Money Banks in Nigeria

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Abstract

The study investigated the effect of environmental accounting practices (EAP) on share value of quoted Deposit Money Banks (DMBs) in Nigeria during the period 2010-2019. Ex post facto research design was used. The population comprised 22 listed DMBs on the Nigerian Exchange Group (NGX) as at December 31, 2019 of which ten with relevant data were selected using purposive sampling technique. Descriptive and inferential statistics were employed to analyse the data collected. Without the intervening effect of bank size, the results revealed that environmental accounting practice has an insignificant positive impact on share value, with a 2.4951 coefficient value and a probability value of 0.2740 higher than the 5% significant level. The results also revealed that EAP has a significant effect on share value when bank size is an intervening variable, as shown by the adjusted R-squared of 0.1470, the F-statistic of 9.5295, and probability of 0.0002. The study concluded that EAP significantly affect the share value of listed DMBs in Nigeria. It is therefore recommended that Nigeria's listed DMBs management should ensure proper waste management, efficient use of energy, and reduce the use of paper in order to avoid negative impacts on their environment. In addition to this, the management of quoted DMBs should disclose information about their EAP in their annual reports.

Keywords: Deposit Money Bank, Environmental Accounting Practices, Green Banking, Market Price per Share, Share Value

1.0 Introduction

Investors invest in shares in order to earn income, and investors make investment decisions by analysing factors that influence the stock price in order to know whether there will be adequate returns on investment. The company environmental impact and environmental improvements are major information considered by investors**.** According to Nagajeyakumaran (2017), by improving economic growth, the stock market contributes significantly to the economic development of a nation, yet it is prone to fluctuations. Because of this, it can be challenging for investors and fund managers to correctly forecast share prices and generate good returns.

Iliemena (2020) opined that every organization's operational environment plays an important role in determining its performance, as no firm could function without it. Green Banking is a form of banking that provides benefits to the environment in which the bank operates. According to Faroque et al. (2016), in order to reduce the carbon footprint of banking services, all DMBs should select methods of renewable energy, automation, and other measures. This is what is meant by "green banking," which is about green transformation of all DMBs internal activities.

Green banking policy and guidelines were initiated by Atiur Rahman in 2011. In Nigeria, the Bankers' Committee adopted the Nigeria Sustainable Banking principles (NSBPs) in 2012. The principles provide guidelines for integrating sustainability into the operations of DMBs in Nigeria One of the principles of NSBP is environmental and social footprint which requires Banks to avoid or minimize the negative impacts of their operations in the environment and promote positive impacts. In order to enable DMBs to achieve their objectives, DMBs should be involved in green banking. No business exists in isolation, each corporate entity is inextricably linked to its surrounding (Dordum et al., 2021). A bank is set up to make profit but profit making should be done in a sustainable way. Environmental accounting is an aspect of accounting that DMBs in Nigeria have not given much emphasis.

Many studies have investigated factors that affect share value, but only a few, such as Adegbie et al., 2020; Charles et al., 2017; Obida et al., 2019**;** Olagunju & Ajiboye, 2022; and Owolabi et al., 2019, have investigated the effect of EAP on share value. This study was carried out in order to fill this gap. The objective of this study was to investigate the effect of environmental accounting practices on the share value of quoted DBMs in Nigeria. The hypothesis tested was H_0: Environmental accounting practice has no significant effect on the share value of DMBs in Nigeria, with or without the intervening effect of bank size.

Statement of Problem: The market price per share (MPS) affects the share value of DMBs in Nigeria. However, the MPS is volatile and changes in MPS cause fluctuations in share value. This makes stock returns to be unstable. Thus, investors need information about factors that cause volatility in MPS in order to predict their returns and minimize risk on investment.

Significance of the study: The result of this study will add to the existing claim that firms' environmental practices are related to share value. Thus, this will enable firms to be environmentally sensitive. In addition, results of this study will enable management of DMBs in Nigeria to know the key environmental accounting practices that enhance share value, this will enable the management to focus more on those EAP to enhance MPS of their banks.

2.0 Literature Review

2.1 Conceptual Review

Share value (SHV): This is also known as market capitalization (MCAP). It is the number of shares issued multiplied by the market price per share (MPS). According to Pavone (2019), MCAP can be obtained by multiplying a company's share price by the total number of shares issued.

Market price per share (MPS): This is the amount at which a share of a company can be purchased or sold in the stock market

Bank Size (BS): It is the log of the total assets of a bank**.**

Environmental Accounting (EAP): Environmental accounting is also known as green accounting or resource accounting and it has various definitions. Sani and Nwite (2020) opined that environmental accounting reports how business operations affect the environment. Dike and Leyira (2018) stated that

environmental accounting refers to the determination of an organization's environmental costs and benefits, and internal issues are mostly addressed, such as calculating the costs of energy use and waste disposal, as well as calculating the advantages of environmental subsidies or the sale of environmentally friendly items. According to Dordum et al. (2021), the environmental expenditure paid by companies to protect the environment, prevent environmental disasters, lessen environmental harm, and uphold or stop infractions of environmental regulations, laws, and policies is known as environmental costs. Akpan and Nkanta (2023) opined that environmental accounting can reveal how much a business or organization contributes positively or negatively to the environment and the quality of human existence.

2.2. **Theoretical Framework**

This study is anchored on stakeholders' theory. The theory was put forward by Edward Freeman in 1984. Stakeholders are people, firms, and groups who are concerned about the decisions and activities of the company, and the company relies on them to achieve its goals (Freeman, 1984). A firm must satisfy the needs of these interested parties in order to survive and achieve its aim in the environment where it is situated. In this study, the stakeholder theory is pertinent because it encourages firms to engage in environmental practices considered necessary by various interest groups so as to maximise their firms' market share value.

2.3 **Empirical Review**

Adegbie et al. (2020) investigated the effect of EAP on share value (SHV) of quoted manufacturing firms on NGX. Purposive sampling was utilized to select ten (10) quoted manufacturing companies from a population of 23 listed Nigerian food and beverage manufacturing companies. The dependent variable (share value) was represented by MPS while the explanatory variable was EAP. Firm size was introduced as moderating variable. The regression results revealed that jointly firm size significantly controlled the effect of EAP on MPS of manufacturing firms in Nigeria Olagunju and Ajiboye (2022) empirically studied the influence of environmental accounting disclosures on market value of financial firms that are listed on the NGX during the period 2012-2020. Data were derived from the financial statements of selected seventy-two firms using purposive sampling. The regression analysis results revealed that environmental accounting disclosures significantly influence market value.

Nguyen et al. (2020) empirically studied the influence of EAP on cost of capital of listed firms in Vietnam during the period 2013-2017. The regression results revealed that companies with more advanced environmental financial accounting practices have reduced equity and debt capital costs. The results revealed that their cost of capital influence environmental financial accounting practices. Iliemena (2020) investigated how listed Nigerian oil and gas companies' corporate performance was affected by EAP during the period 2012-2019. The study used judgemental sampling technique to choose 10 companies. The simple linear regression results revealed that EAP influence companies' corporate performance. Carandang et al. (2020) empirically studied the influence of EAP on company value of quoted oil and mining firms in Philippines during the period 2012 to 2016. The regression analysis results revealed that EAP has an insignificant effect on company value. Lyndon and Harmony (2021) studied DMB's financial performance and environmental accounting in Nigeria**.** The results revealed that return on assets (ROA) was negatively but not significantly impacted by the size of the business, whereas environmental accounting has an

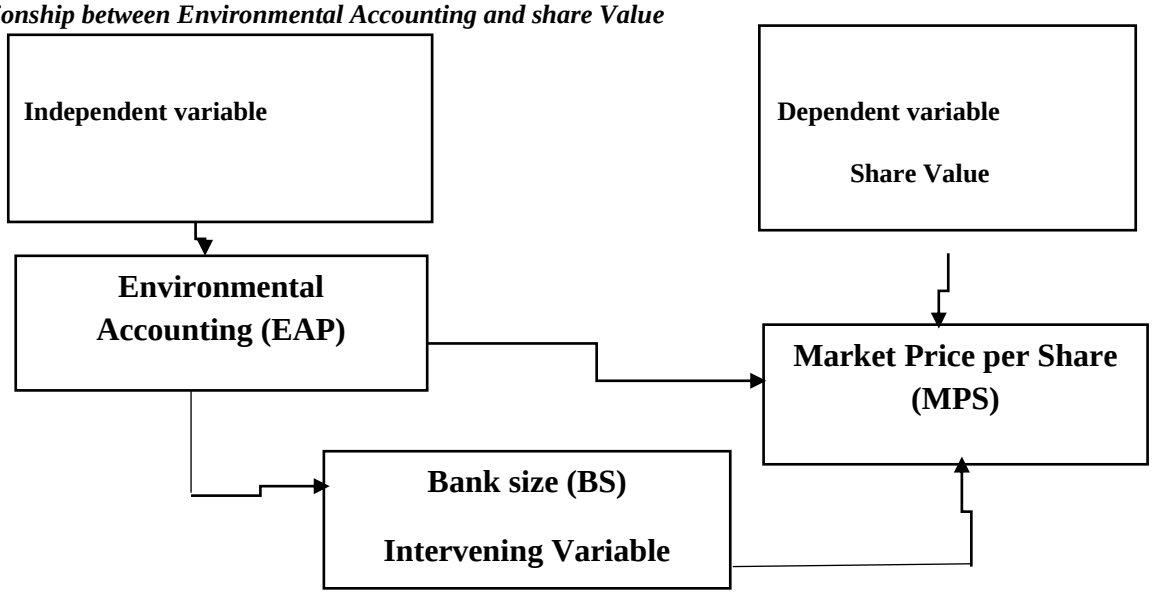
insignificant positive influence on ROA. Ahmed and Musa (2020) investigated how environmental accounting practices are used in Nigeria as a tool for environmental management. The results of the chi-square analysis revealed that EAP influence environmental management positively.

Owolabi et al. (2019) empirically studied the joint effect of environmental disclosure practices (EDP) on the volatility of the share price (VSP) of listed companies on the Nigerian exchange group (NGX) during the period 2002–2016. Data were derived from the annual reports and accounts of seventeen selected companies. The OLS regression results revealed that the size of firms has a significant negative effect on share price volatility. However, environmental disclosure measures jointly exhibited significant influence on VSP. Obida et al. (2019) investigated EAP and the volatility of the stock market return (VMR) of listed companies on the NGX during the period 2002–2016. Secondary data were extracted from the annual reports and accounts of 17 selected companies. The regression analysis results revealed that firm size has insignificant effect on VMR. However, all the measures of environmental disclosure practices jointly exerted significant effect on VMR. Charles et al. (2017) studied how environmental accounting disclosures affected Nigerian businesses' financial results. The multiple regression results revealed that companies with greater environmental disclosures had higher ROE and EPS. The study concluded that for companies to improve their corporate performance, the study advised businesses to publish their EAP in their financial statements**.**

2.4 Conceptual Framework

Figure 2.1

Relationship between Environmental Accounting and share Value



Source: Authors' design (2024)

The relationship between share value and environmental accounting practices with the intervening variable (bank size) are shown in figure 2.1.

3.0 Research Method

The study used ex-post facto research design. Data were obtained from the financial statements of quoted DMBs in Nigeria from 2010 to 2019 accounting periods. The data that relates to the market price per share were obtained from NGX**.** The population of study was twenty-two (22) listed DMBs as at December 31, 2019. The purposive sampling technique was employed to select ten (10) listed DMBs**.** The data that relates to environmental accounting was obtained from the financial statements published by the selected quoted DMBs. The financial statements are reliable because they were prepared in line with regulatory institution requirements such as the Central Bank of Nigeria prudential guidelines and also subjected to audit by professional accountants in Nigeria. The study introduced Bank size as intervening variable in order to explain the link between dependent variable, share value represented by MPS and independent variable (environmental accounting practices). To measure the independent variable (environmental accounting practices), this study used the same methodology of Lyndon and Harmony (2021) whereby dummy variables 1 and 0 were employed. The financial statements of the selected DMBs were examined and (a) any DMB that reported its environmental accounting practices in its annual report was scored (one) 1; and (b) when no information about environmental accounting practices was reported (zero) 0 was scored. The use of dummy variables was also employed by Adegbie et al., 2020; Lyndon & Harmony 2021; Ching et al., 2017.

3.1 Model Specification

Model 1 (without moderating variable)

$MPS = \beta_0 + \beta_1 EAP + \mu$

Model 2 (with moderating variable)

$MPS = \beta_0 + \beta_1 EAP + \beta_2 BS + \mu$

Where:

MPS = Market share price (Predicted variable)

EAP= Environmental accounting practices (independent variable)

BS= Bank size

B_0= Intercept

β_1= coefficient of independent variable

μ_1 = Error term

4.0 Data Analysis and Results

4.1 Descriptive Analysis

The results of the descriptive statistics are presented in Table 4.1 below

Table 4.1

Descriptive Statistics

	MPS	EAP	BS
Mean	9.422800	0.840000	6.051554
Median	7.425000	1.000000	6.195114
Maximum	40.75000	1.000000	6.800101
Minimum	0.520000	0.000000	3.182850
Std. Deviation	8.323739	0.368453	0.520179
Observation	100	100	100

Source: Researcher's computation (2024)

In Table 1, the descriptive statistics indicate that the MPS average is 9.422800 with a standard deviation of 8.323739. The difference is less than 2, which means that the data are closely clustered around the average value. In addition, the mean value of environmental accounting practice (EAP) is 0.840000 and the standard deviation is 0.368453, indicating that the standard deviation's departure from the mean is within the allowable range. The average value of bank size is 6.051554 and the standard deviation is 0.520179; this implies that this variable has a greater deviation from the mean value. The median values for MPS, EAP, and BS are 7.425000, 1.000000, and 6.195114, respectively. EAP has a minimum value of zero (0) and a maximum value of one (1); this implies that some quoted DMBs in Nigeria in some years disclosed information about the practice of environmental accounting in their annual reports, while others did not disclose information about environmental accounting practices in their annual reports. MPS has minimum and maximum values of 0.520000 and 40.75000, respectively, while BS has minimum and maximum values of 3.182850 and 6.899101, respectively.

4.2 **Testing of Hypotheses**

Table 2

Regression results for Model 1 without intervening effect of the Bank size

Variable	Coefficient	Std. Error	t-stat	Prob.
C	7.326875	2.078729	3.524691	0.0000
EAP	2.495149	2.268079	1.100116	0.2740
R^2		0.012199		
Adjusted R-squared		0.002119		
F-stat.		1.210254		
Prob. (F-stat)		0.273977		

Source: Researcher's computation (2024)

Model 1

$MPS = \beta_0 + \beta_1 EAP + \mu$

$MPS = 7.326875 + 2.495149\ EAP$

Table 2 shows the regression results without the intervening variable of bank size. The R-squared of 0.01 indicates that environmental accounting practices (EAP) can only explain 1% of changes in MPS, while

99.99% can be explained by other factors outside the model. The results also revealed that environmental accounting practices (independent variable) positively affect MPS because it has a coefficient of 2.4951. This implies that a 1% increase in EAP will lead to a 2.4951% increase in MPS. However, EAP has a probability of 0.2740, which is higher than the 5% significant level, which implies that EAP has an insignificant effect on MPS. Based on this, the study thus accepted the null hypothesis, which states that without the intervening effect of bank size, EAP has no significant effect on the MPS of quoted DMBs in Nigeria.

Table 3

Results of the regression regarding Model Two with intervening effect of the bank size.

Variable	Coefficient	Std. Error	t-stat	Prob.
C	-29.81669	9.049351	-3.294898	0.0014
EAP	1.453056	2.111618	0.688124	0.4930
BS	6.282506	1.495699	4.200380	0.0001
R^2		0.164218		
Adjusted R-squared		0.146985		
F-Stat.		9.529493		
Prob. (F-stat.)		0.000167		

Source: Researcher's computation (2024)

Model 2

$MPS = \beta_0 + \beta_1 EAP + \beta_2 BS + \mu$

MPS = -29.81669 + 1.453056 EAP + 6.282506 BS

Table 3 shows the regression results with the intervening variable of bank size. EAP has a positive influence on MPS, with a coefficient of 1.4531**.** This implies that a 1% increase in EAP will result in a 1.45% increase in MPS. However, EAP has a probability of 0.4930, which is higher than the 5% significant level, which implies that EAP has an insignificant effect on MPS**.** Bank size, which is the intervening variable, has a positive effect on MPS with a coefficient of 6.2825. This implies that a 1% increase in bank size will result in a 6.2825% increase in MPS. However, bank size has a probability of 0.0001, which is lower than the 5% significant level, which implies that bank size has a significant effect on MPS. The adjusted R-squared of 0.1470 implies that the independent variable (EAP) and the intervening variable (BS) can jointly explain 14.70% of changes in MPS, while 85.30% of changes in MPS can be explained by other factors not taken into account in model 2**.** The F-statistics of 9.5295 with a probability of 0.0002, lower than the 5% significant level, indicated that the combined effect of EAP and bank size on the dependent variable (MPS) was significant at the 5% level of significance. Thus, the study rejected the null hypothesis and accepted the alternative, which implies that EAP has a significant effect on the market price per share of DMBs in Nigeria with the intervening effect of bank size.

4.3 Discussion of Findings

The objective of this study was to investigate the effect of EAP on the share value of listed DMBs in Nigeria. The dependent variable is share value and was represented by market price per share (MPS), while the explanatory variable was EAP and the intervening variable was bank size. In model one, the results revealed that EAP has an insignificant positive effect on the MPS of quoted DMBs in Nigeria. The insignificant effect of EAP on MPS reported in this study aligned with the study of Carandang et al. (2020) which discovered that EAP has an insignificant effect on company value. However, the result negates the findings of Olagunju and Ajiboye (2022) who discovered that environmental accounting disclosures significantly influence market value.

In model two, the study determined the impact of bank size on the effect of EAP on MPS. The result revealed that bank size has a significant effect on the relationship between the EAP and MPS of listed DMBs in Nigeria. The result that bank size significantly controlled the effect of EAP on MPS reported in Model 2 of this study aligned with the findings of Adegbie et al. (2020), who discovered that. firm size and EAP jointly have a significant effect on MPS of manufacturing firms in Nigeria. However, the result that bank size has a positive influence on market price per share reported in this study negates the findings of Owolabi et al. (2019), who discovered that firm size has a negative influence on volatility of share price.

5.0 Summary, Conclusion and Recommendations

5.1 Summary

The effect of environmental accounting practices (EAP) on the share value of quoted DBMs on the NGX during the period 2010–2019 was empirically carried out. The share value (dependent variable) was represented by market price per share (MPS); the independent variable was EAP; and the intervening variable was bank size. The population of the study comprised twenty-two (22) quoted DMBs on the NGX as of December 31, 2019. Data were derived from the annual reports and accounts of selected ten banks using purposive sampling. The results of the regression analysis revealed that without the intervening influence of bank size, EAP has no significant effect on the MPS, while EAP has a significant effect on the MPS of DMBs in Nigeria with the intervening influence of bank size.

5.2 Conclusion

The main objective of this study was to investigate the effect of environmental accounting practices (EAP) on share value of quoted DBMs in Nigeria. The study concluded that EAP has a significant effect on the market price per share of DMBs in Nigeria with the intervening effect of bank size.

5.3 Recommendations

The study recommends that management of Nigeria's listed deposit money banks (DMBs) should ensure proper management of waste, efficient use of energy, and reduced use of paper in order to protect the environment from harm. Furthermore, the management of Nigeria's listed deposit money banks (DMBs) should work more to implement environmental accounting in order to increase firm value for the various stakeholders, and they should disclose information about their environmental accounting practices in their annual reports. In addition, the management of Nigeria's listed DMBs should finance projects that are environmentally friendly. The government should develop accounting standards that will guide environmental reporting for DMBs in Nigeria in order to ensure uniformity, and the government should also educate the general public on environmental issues using television, radio, and the internet

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