The Influence of Earnings Persistence on Financial Sustainability of Commercial Banks in Nigeria

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Abstract

The thought-provoking misdemeanour of some commercial banks nose-diving into a financial crisis, even after presenting seemingly good yearly performance reports, motivated this study. Thus, the study was carried out to examine the relationship between earnings persistence and the financial sustainability of commercial banks in Nigeria. This relationship was examined after controlling for leverage, interest rate and firm size of the commercial banks. The ex-post facto research design was adopted in the study. Data were obtained from the annual reports of 12 selected, listed commercial banks in Nigeria from 2012 to 2022. The multiple regression technique was used to test the hypothesis of the study. The results of the analysis revealed that there is a significant positive relationship between earnings persistence and the financial sustainability of commercial banks in Nigeria ($t = 4.318$, $p = 0.000$, $p < 0.05$). Based on this finding, it was recommended that commercial banks should strive to enhance their earnings persistence by increasing their operational efficiency.

Keywords: Earnings persistence, sustainability, financial sustainability

1. Introduction

In recent times, the quest for sustainability has attracted increasing attention in virtually all sectors in Nigeria, including the banking sub-sector. In 2012, Nigeria's apex bank, the Central Bank of Nigeria (CBN) outlined modalities which were aimed at ensuring that all commercial banks in the country complied with its “overarching nine principles”. One of those principles centred on revolutionizing banking practice to ensure sustainability (CBN, 2012; Nelson & Orioha, 2015). A decade later, the CBN is still emphasizing a more sustainable banking approach that will help balance the environmental, social, and economic impacts of financial activities (Owuamalam, 2023). This development, of course, is borne out of an understanding of the role that banks play in the promotion of sustainability in the economic and financial system (Nelson & Orioha, 2015; Orji, 2017; Komolafe, 2018).

Sustainability has several dimensions which include the financial, social and environmental dimensions. However, without financial sustainability, the social and environmental dimensions of sustainable practices expected from corporate business organizations would be a mirage (Owuamalam, 2023). The increasing need to ensure long-term economic and financial performance in the present-day volatile Nigerian business environment replete with cases of corporate failures, underscores the indispensability of pursuing financial sustainability for the perpetuation of corporate existence (Giovannoni & Fabietti, 2014).

In the financial sector, Commercial banks' financial sustainability and the maximization of corporate development impact can be attained through the management of risks and the effective usage of its capital base (International Finance Corporation (IFC), 2018). This capital base which assures a company's financial strength, is an aggregation of its earnings over time. In other words, it is a company's earnings that form the building blocks of its capital base. It is therefore reasonable to posit that the accounting reporting function has a strategic role in ensuring financial sustainability. This is because it provides an objective basis for informed economic judgments concerning corporate risks and financial resource management. However, such reported earnings may not have the required impact if it is not persistent. Earnings persistence is inferred when it is fairly probable that reported earnings would be sustainable beyond the current period (Francis, et al., 2004; Simoni et al., 2022).

Overtime, year-end earnings (profitability) and its derivatives Return on Assets (ROA) and return on Equity (ROE), among others, have been the popular measures of how well a company is doing. The use of these measures suggests that emphasis has been predominantly skewed towards short-term financial health and shareholders' interest. Thus, companies with swelling annual earnings figures were deemed as thriving companies without cognizance of their future sustainability which could have been revealed by evaluating the persistence of such reported earnings. This perhaps accounts for the high rate of corporate unsustainability in the Nigerian banking sector. The need to look beyond the short term is not only reasonable but also necessary given the far-reaching corporate implications of underestimating the future.

The motivation for this study stems from the fact that although previous studies agree on the veracity of earnings persistence as a decision-relevant measure of earnings quality; there is a paucity of studies that have specifically and succinctly examined the relationship between earnings persistence and financial sustainability of commercial banks in Nigeria, using the 2012 Altman '*Z*' score plus model as a financial sustainability measure. This therefore serves as the focus of this study.

To address this gap, the specific objective of this study is to identify and analyze the relationship between earnings persistence and the financial sustainability of commercial banks in Nigeria. In other words, the study is intended to answer a pertinent question: what is the relationship between earnings persistence and the financial sustainability of commercial banks in Nigeria? As a guide to the study, we therefore hypothesize that there is no significant relationship between earnings persistence and the financial sustainability of commercial banks in Nigeria.

The study is significant because it provides bank managers and financial sector policymakers with clearer and holistic empirical evidence of the current financial sustainability status of Nigerian commercial banks, thus fostering proper planning for relevant mitigation measures where necessary. Gleanings from this study could also help investors and would-be investors to be better guided in their investment decisions, particularly from the perspective of financial report analysis.

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2. Literature Review

2.1 Earnings Persistence

Earnings persistence refers to the consistency, continuity and durability of current earnings. It is a measure of the firm's ability to maintain its current earnings. Earnings persistence reveals management's efficiency in utilizing sources of resources available for the business (SafaeianRezi & Sadeghi, 2009; Moienadin & Tabatabaenasab, 2014; Zhou et al., 2022). It is a defining quality of reported earnings which provides a basis for the assessment of the future earnings and cash flows of a firm. Pimentel & Aguiar (2012) explain that earnings persistence measures the effect that permanent earnings innovations have on the earnings that a firm expects in the future. In this case, annual earnings form the basis of estimating earnings persistence. When a firm's earnings possess the quality of persistence, it is more likely than not, to continue into the foreseeable future (Kordestani et al., 2016).

According to Penman & Zhang (2002) and, Lin & Yu (2015), earnings persistence is increased when a higher profit margin is matched with lower expenses but where unjustifiable abnormal operating expenses exist, the level of earnings persistence diminishes. “More persistent Earnings are more sustainable and are of high quality. Likewise, less persistent earnings are more transitory and are considered to be of lower quality (Penman & Zhang 2002; Francis et al. 2004; Lyimo, 2014). Ibrahim (2016) pointed out that in the analysis of their financial statements, entities should pay attention to the “non-persistent, unusual, non-operating or non-recurring items” reported on their income statement as it could have dire negative implications for their earnings and financial sustainability.

Kormendi & Lipe (1987) indicate that the slope coefficient estimates of earnings persistence can be estimated by using firm-level regressions of current earnings on the earnings of the preceding year. Boonlert-U-Thai (2006) in the course of a cross-country analysis also measured earnings persistence as the slope coefficient estimates from pooled firm-year regressions per country and year of current earnings on previous year earnings. A similar model with slight modifications is used in Galimberti & Cupertino (2009). The model requires a lagging of earnings such that it relates earnings from the previous period with current earnings. This study adopts the model used by Galimberti & Cupertino (2009) in measuring the earnings persistence of Commercial banks in Nigeria.

2.2 Financial Sustainability

Financial sustainability is the ability of an entity to sustain itself both operationally and financially without falling short of expectations or deviating from approved practices (Uchenna, et al., (2017). It is the financial capacity of a firm to maintain and sustain long-term financial agility (Bowman, 2011; Lisa et al., 2012). Financial sustainability is also described as the ability to maintain financial and infrastructure capital over the long term (Scenic Rim Regional Council, 2017). It has therefore been regarded as the bedrock of the overall sustainability of every financial organization (Paulin, 2018). This means that the attainability of all other shades of sustainability expectations hinges on an organization’s financial sustainability condition.

It is evident from the foregoing that financial sustainability means different things to different people in different contexts. However, in the context of this study, which centres on the long-term survival of commercial banks in Nigeria, financial sustainability refers to the capacity of a commercial bank to effectively continue its operations in the reasonably foreseeable future period without either requiring any form of ‘rescue mission’ intervention by the external financial institution(s) or facing the risk of going into extinction due to financial crisis.

In the Nigerian banking industry, financial unsustainability is partly responsible for the intermittent CBN interventions and financial distress-necessitated mergers and acquisitions which over the years keep altering the structure of financial institutions in Nigeria (Umoren & Olokoyo, 2007). In fact, as of 2011, it was observed that although the number of commercial bank branches rose from 5,799 in 2010 to 5,810 in 2011; the number of existing commercial banks which earlier plummeted from 89 in 2004 to 24 in 2010 fell further down to 20 in 2011. These were due to the mergers and acquisitions which took place. It is no longer news that even within the last five years, the CBN has had to grapple with some cases of potentially threatening bank crises in Nigeria (Ajakaiye & Tella, 2014; Jeremiah et al., 2022).

It is pertinent to state that there are different measures of financial sustainability in the literature. All of them are variants of ratios or combinations of ratios, however, among all of the measures, the Altman ‘*Z*’ score plus model is deemed to be relatively more reliable than the other ratio techniques. The premise of this assertion is that it is superior in efficiently and accurately predicting financial health because it adopts a comprehensive ratio analysis approach, which measures several risks including credit risk which is very particular for Commercial banks (Githinji, 2018). Also, the likelihood of its manipulation is relatively lower compared to the other ratio analysis-based methods (MBA Knowledge

Base, 2018; Kenton, 2019). Because of these, the Altman Z score plus model is used as a measure of financial sustainability in this study.

2.3 Theoretical Review

The signalling theory provides the theoretical basis for this study. The theory was proposed by Spence in 1973. The theory posits that the most profitable companies tend to signal the market with more and better financial information disclosure (Bini et al., 2011). According to George (2018), an important feature in signalling is that one party (the sender) decides whether and how to communicate (or signal) information to the other party (the receiver), who also chooses how to interpret the signal received.

The relevance of the signalling theory borders around the idea of asymmetric information (a deviation from perfect information) and its implications among the various users of business information. Information asymmetry describes a circumstance where either of the parties does not have access to some part of the information that could be of material value in shaping decisions (Spence, 2002). In business, signalling implies an information inequality situation where one party has access to relevant information which is not made available to the other party or parties. The lack of access to perfect information about the subject matter makes the inadequately informed or misinformed party make decisions which in an atmosphere of perfect information would not have been taken.

The theory is relevant to this study because, in corporations and business organizations, management who have perfect information about the true financial performance and prospects of the organization might be induced to withhold, distort or manipulate the perfect information to communicate a desirable image of the organization to the other users of accounting information. Isidro & Macques (2016) indicate that this tendency arises because it is believed that reported earnings can be used to signal good corporate performance and long-term financial sustainability.

2.4 Empirical Review

Zhou et al., (2022) conducted a study on earnings persistence and abnormal audit fees. The study was focused on listed firms in Shanghai and Shenzhen from 2011 to 2019. The secondary data collected were processed using Stata and Excel. The findings indicated that earnings persistence has a significant impact on positive abnormal audit fees. The result showed that the stronger the earnings persistence is, the lower the abnormal audit fees will be.

Nudiniah et al. (2021) examined the impact of leverage and firm size on earnings persistence. Managerial ownership was introduced as a moderating variable in the study. The study focused on companies listed on the Indonesian Stock Exchange between 2016 and 2019. Multiple regression analysis and t-test results indicated that leverage has a positive effect on earnings persistence whereas firm size does not.

Ahn & Kwon (2010) investigated earnings persistence and market reaction in Korea. Secondary data were obtained from financial statements and stock databases for the study. The study spanned a period of 10 years, that is, from 1999 to 2008. The regression analysis technique was used to analyze the data collected. The findings revealed that the current earnings have a positive function on future earnings performance. In other words, the level of earnings persistence in the Korean stock market was very high and this high persistence was largely attributable to the cash flow component of earnings rather than the accruals.

Laily & Ahmar (2014) examined the effect of earnings persistence on the performance of sampled listed manufacturing companies in Indonesia. The study covered a period of 7 years which spanned from 2004 to 2010. Secondary data were used for the study. The study data collected were subsequently analyzed using multiple regression techniques. The result of the analysis indicated that earnings persistence has a positive effect on company performance which was measured using the Tobin Q.

Moienadin & Tabatabaenasab (2014) undertook a comparative examination of the persistence of earnings and other net income components in explaining future profitability. 114 firms listed on the Tehran Stock Exchange were sampled for the study. The study period was from 2006 to 2011. The data were analyzed using univariate and multivariate regression techniques. The findings indicated that net income, which was de-componentized into current and non-current operating accruals, played a role in predicting future profitability. It also confirmed higher persistency of the distributed income.

Lin & Yu (2015) investigated the association between internal control quality and earnings persistence. 5059 observations were collected from A-share corporations listed on the Shanghai Stock Exchange. The data covered a period of 4 years, from 2008 to 2011 and it was analyzed using multivariate regression analysis. The findings suggested that firms with better internal control quality exhibited greater earnings persistence.

Kordestani et al., (2016) investigated the effect of the timely recognition of bad news on earnings persistence and the ability of earnings to predict future cash flows. 78 firms listed in the Tehran Stock Exchange constituted the sample of the study. The period of the study was from 2003 to 2010. The findings of the study revealed that the timely recognition of loss does not affect earnings persistence and its power to predict earnings' future cash flows.

Most of the robust studies on earnings persistence were conducted in European, Latin American and Asian countries. Also, none of the studies reviewed considered the effect of earnings persistence on the financial sustainability of Commercial banks in Nigeria. Given the observed financial sustainability crises that have rocked Nigerian Commercial banks in recent years, it is reasonable to extend the literature by robustly examining the earnings persistence of Commercial banks in Nigeria, as well as how they affect their financial sustainability status.

3. Methodology

The ex post facto research design was adopted for this study. The population of the study comprised all the 15 Commercial banks listed on the Nigerian Exchange Group as of 31st December 2022. The sample size was selected using the conditional sampling technique. This technique restricts sample selection to those population elements that meet the specified condition(s). The conditions in this study are that first: Commercial banks to be considered for sampling are those that had been in operation as of January 2012. Second, such commercial banks must have still been in operation as of December 2018.

Based on these conditions and the subsequent elimination of two banks for which the researchers could not access their annual reports for the relevant years of study, 12 listed Commercial banks were finally sampled for the study.

Quantitative secondary data were used for this study. These data are specifically sourced from the Statement of Comprehensive Income, Statement of Cash flows and Statement of Financial Position. These are contained in the annual reports of the sampled Commercial banks for the relevant years. To examine the relationship between earnings persistence and the financial sustainability of Commercial banks in Nigeria, a multiple regression model was used to examine the linear relationship between the dependent and independent variables. The model for the study is expressed in its functional form as follows:

FST = f (EPERS) + *e*………………………………………………. (Equation 3.1)

Where:

FST = Financial Sustainability, EPERS = Earnings Persistence, *e* = error term

To enhance the reliability of the model, Leverage (LEV), Interest rate (INTR) and firm size (FSIZE) are introduced into the model as control variables. The model becomes:

FST = f (EPERS, LEV, INTR, FSIZE) + *e*…………..…………… (Equation 3.2)

Thus, the econometric representation of the model is ultimately expressed as:

FST = α + β1 EPERS+ β2 LEV + β3 INTR + β4 FSIZE+ *e*……...(Equation 3.3)

Where:

FST = Financial sustainability status

α = Constant

β1 = Coefficient of the independent variable

β2 –β4 = Coefficients of the control variables

EPERS = Earnings Persistence

LEV = Leverage

INTR = Interest rate

FSIZE = Firm size

e = error term

Multiple regression analysis techniques are employed in the analyses of the collected data. All statistical analyses are done using SPSS version 25.0.

The variables for this study are financial sustainability and earnings persistence. Financial sustainability which is the dependent variable is measured using the Altman '*Z*' score plus model while the independent variable, earnings persistence is measured using the Galimberti and Cupertino (2009) model. To enhance clarity and comprehension, the mathematical representations of these models are described and summarized in Table 3.1

Table 3.1: Description and Measurement of Variables

Variables	Measurement model source	Model expression	Model definition	Assessment criteria	*apriori* expectation
Dependent					
Financial Sustainability (FS)	Altman Z score plus model (2012)	Z= 6.56WC + 3.25RE + 6.72EBIT + 1.05BVTL	WC: working capital divided by total assets RE: retained earnings divided by total assets EBIT: Earnings before interest and taxes divided by total assets BVTL: Book value of equity Divided by total liabilities	If Z < 1.1: insolvency is very likely; financial sustainability is threatened. If Z is between 1.1 and 2.6: insolvency cannot be predicted; financial sustainability status is unpredictable If Z > 2.6: insolvency is not likely; financial sustainability is assured.	
Independent					
Earnings Persistence (EPERS)	Galimberti & Cupertino (2009) persistence model	Earn j, t = α_0 + α1 Earn j, t-1 + e t-1	Earn j, t =Bank j's profit for the year t Earn j, t = Bank j's profit for the year t-1 α 0 = the intercept of the model α1 = earnings persistence (EPERS) of Bank j in year t	The higher the value of EPERS (α1) , the higher the earnings predictability and the quality of reported earnings, and vice versa	Positive relationship
Control					
Leverage (LEV)	Annual reports	TD j, t / TA j, t	$TD_{j,t}$ = Total Debt of Bank j in year t	The higher the ratio, the higher the gearing of Bank j	Negative relationship

Interest Rate (INTR	World Bank Data		Interest rate adjusted for inflation	relatively higher natural log implies a relatively larger Bank	Negative relationship
Firm Size (FSIZE)	Annual Report	Log N ($TA_{j,t}$)	The natural log of Bank j's total asset in year	relatively higher natural log implies a relatively larger Bank	Negative relationship

Source: Researcher's Compilation (2023)

4. Results and Discussion of Findings

According to Table 4.1, the tolerance value for the independent variable (FST) is 0.929 for EPERS. The control variables – LEV, INTR and FSIZE have tolerance values of 0.959, 0.770 and 0.705 respectively. This means that the independent and control variable has a tolerance range of between 70.5% and 95.9%. This result does not reveal any multi-collinearity concerns since all the tolerance values are greater than the minimum threshold of 0.10 (10%).

Table 4.1: Coefficients of EPERS, LEV, INTR, FSIZE

Model		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Zero-order	Tolerance	VIF
	(Constant)		2.702	.008			
	EPERS	.360	4.318	.000	.306	.929	1.077
	LEV	.177	2.160	.033	.193	.959	1.043
	INTR	-.083	-.910	.365	-.176	.770	1.298
	FSIZE	-.172	-1.797	.075	-.161	.705	1.419

Source: Researcher's Computation using SPSS 25.0

This fact is also confirmed by the VIF value. The VIF obtained for the independent variable (EPERS) as well as the control variables (LEV, INTR and FSIZE) were 1.077, 1.043, 1.298 and 1.419 respectively. These VIF values are well below the cut-off of 10. Thus, these results indicate that the multi-collinearity assumption has not been violated.

Table 4.2: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
.432[a]	.186	.161	.52727	7.218	.000[b]

Source: Researcher's Computation using SPSS 25.0

The model summary in Table 4.2 depicts a 43.2% correlation between the variables. It also shows a significant fit for the explanation of the relationship between earnings persistence and financial sustainability ($F = 7.218$, $p = 0.000$, $p < 0.05$). This result indicates that when the variance explained by leverage, interest rate and firm size is controlled for, earnings persistence makes an 18.6% unique+/ contribution to explaining the financial sustainability of Commercial banks in Nigeria. In other words, a 1% increase in the persistence of reported earnings can positively enhance financial sustainability by up to 18.6%. That implies that 81.4% of the changes in the financial sustainability of Commercial banks in Nigeria are explained by other variables outside this model. However, based on the t value of EPERS and the corresponding significance level in Table 4.1 ($t = 4.318$, $p = 0.000$, $p < 0.05$), it is adjudged that there is a significant positive relationship between earnings persistence and financial sustainability of Commercial banks in Nigeria. Thus, the null hypothesis of the study is not supported.

This finding is consistent with that of Penman & Zhang (2012) and Moienadin & Tabataenasab (2014). According to Penman & Zhang (2012), persistent earnings are of high quality and are more sustainable while transitory earnings have a lower quality and are less sustainable. Also, Moienadin & Tabataenasab (2014) believed that such transitory (non-persistent) earnings are not in the best long-term interest of an entity. This implies that a bank's inability to maintain consistency, continuity and durability of current earnings, is tantamount to a decline in the quality of its reported earnings. Such circumstance poses a significant threat, not just to the short-run performance but also to the long-term continuity of such banks.

Also, in line with the findings of Paulin (2018) and Nudiniah et al., (2021), the results of this study also justify the inclusion of leverage as a control predictor of financial sustainability ($\beta = 0.177$, $p = 0.033$, $p < 0.05$). From the result, a 1% increase in leverage can increase financial sustainability by up to 17.7%. This suggests that besides earnings persistence, the financial leverage of Commercial banks is another factor that contributes significantly to the financial sustainability of Commercial banks in Nigeria.

5. Conclusion and Recommendation

The banking sub-sector in Nigeria has undergone several forms of consolidation which have been traced largely to financial sustainability-related problems. In this study, the relationship between earnings persistence and the financial sustainability of Commercial banks in Nigeria has been examined. It has been found out that there is a significant relationship between earnings persistence and the financial sustainability of Commercial banks in Nigeria. Based on this finding, it is concluded that the persistence of reported earnings has a significant positive relationship with the financial sustainability of Commercial banks in Nigeria.

Given the foregoing, it is therefore recommended that Commercial banks in Nigeria should endeavour to consistently earn higher profits by thoughtfully increasing the efficiency of their operations through customer-friendly initiatives. This is because consistent efficiency of operations and increase in earnings indicate increased earnings persistence and more ability to maintain current earnings. Besides these, it is evident from this study that other factors such as leverage relate significantly to the financial sustainability of Commercial banks. This implies the need for Commercial banks to identify and address other inherent factors that may impede the quality of their earnings persistence. This will facilitate the generating and reporting of quality earnings that can assure the financial sustainability of Commercial banks in Nigeria.

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