



COVID-19 PANDEMIC AND VALUE RELEVANCE OF ACCOUNTING INFORMATION OF LISTED DEPOSIT MONEY BANKS IN NIGERIA.

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Abstract

The study examined the impact of COVID-19 pandemic on the value relevance of accounting information of the quoted deposit money banks in Nigeria. Given the unprecedented level of shocks the pandemic has caused in the global financial market, it is considered imperative to investigate the market reactions as a result of the pandemic. It used censures sampling of all the 14 deposit money banks quoted on the Nigerian Exchange group between 2017 and 2022. The data collected were subjected to descriptive analysis, correlation analysis and a panel multiple regression analysis to investigate possible effects of COVID-19 pandemic on the value relevance of accounting information. The results revealed that COVID-19 pandemic has impaired the usefulness of accounting information in investors' decision making. In addition, the study reported a decline in explanatory power of earnings and book value of equity in post pandemic period, thus the value relevance of accounting information declined significantly as a result of COVID-19 pandemic and related economic lockdown. The results documented that the economic lockdown as a result of COVID-19 pandemic lowered the appropriateness of accounting figure which consequently led to declining value relevance of accounting information. Therefore, the study recommended that policy makers such as the financial reporting council of Nigeria should strengthen policies that will improve the information content of the book value of equity and earnings per share in the financial statement in order to continue to make it significantly relevant to investors in their investment decision making and in addition, preventive and curtaining measures must be put in place to cushion the impact of pandemic on share prices in order to enhance investors' confidence.

Keywords: Value Relevance, Share Prices, Earnings Per Share, Book Value Per Share and Economic Lockdown,

1. INTRODUCTION

The emergence of Coronavirus diseases in which the first case was announced towards the end of December, 2019 caused an unprecedented level of shock in the global stock markets. After the outbreak in China, the Nigerian Ministry of Health through the Nigerian Centre for Disease Control confirmed the first case of COVID-19 on the 27th of February 2020 and thereafter the number of confirm cases continued to increase exponentially. Consequently, this triggered social and medical responses from both the general public as well as the government. Incidentally the combination of social and medical responses put in place by the government to curtail further spread of the Corona Virus disease has caused major disruption in the economic activities of the country.

The COVID-19 pandemic not only posed a serious danger to public health safety but has brought about an unprecedented level of financial and economic crises in the history of Nigeria. Most



containment measures put in place by the government disrupted virtually all country's business and economic activities and on the general scale it has brought global economies to a standstill. The overall negative impact of COVID-19 on global economy is unprecedented and more significant than any pandemic in the past 40 years. The responses of the government all over the world are based on set policy and measures which include social and medical response, fiscal measures, macro-prudential measures as well as monetary and market measures (Aljawaheri, Ojaf, Machi & Almagtome, 2021).

Particularly, most of the federating states in Nigeria rolled out several containment strategies (which include total lockdown of the economy) to curb the spread of the virus. This cumulatively impacted on the overall economic activities of the country. The financial market in particular responded with a sharp decline which consequently resulted to loss of investors confident on the overall financial reporting. In particular, the COVID-19 pandemic caused a significant shock to Nigerian economy with estimated loss of approximately 34.1 percent of GDP which amounted to about USD 16 billion with significant losses coming from financial services sectors (Andam, Edeh, Oboh, Paul & Thurlow, 2020). Further, COVID-19 greatly affected business and productive activities and brought about supply chain disruptions, volatility in equity and drastic decline debts market, reduction in revenue and cash flows and other severed economic implications (Anisere-Hameed, 2021).

The COVID-19 pandemic has wreaked havoc in an already-fragile Nigeria economy. With respect to financial services sector in general and the Nigerian deposit money banks in particular, the market responded with a significant decline in the share prices. Thus it is expected that the pandemic has greatly affected the perceptions as well as investors decision relating to relevance of accounting figure during the period (Aljawaheri, *et al.*, 2021). Usually equity investors pay more attention to the share prices which is one of the critical measures of firm's financial performance. More clearly the extent to which the accounting information contained in the financial reports of reporting firms are used by equity investors in equity valuation signifies the value relevance of accounting information. Consequently, accounting information is value relevant if it has significant association with market value of equity (Ibiamike & Abanyam, 2013).

Ahmed and Akeel (2021) argued that the value relevance of accounting information significantly declined during the pandemic period and as such the credibility and usefulness of accounting information may have been impaired since the pandemic is an unprecedented event in human history. Again, the fall in investment opportunities and decline in the performance of businesses caused investors to lose money in capital market because the pandemic had a significant negative impact on capital market (Choedhury, 2021).

Empirical studies on the impact of COVID-19 pandemic on the value relevance of accounting information had been widely discussed in the literature particularly in the light of developed countries. However, only very few studies have been conducted with respect to developing countries such as Nigeria and no investigation on how the pandemic impacted accounting information relevance in Nigeria. Therefore, this study attempts to fill research gap by investigating effect of COVID-19 pandemic on the value relevance of accounting information. The broad objective of this study is to ascertain the effect of COVID-19 pandemic on the value relevance of accounting information in Nigeria.



In investigating the effect of COVID-19 pandemic on the value relevance of accounting information, the book value of equity per share and earnings per share of all firms listed on the Nigerian Stock Exchange (NSE) were critically examined. The study focused on evaluating the effect of COVID-19 Pandemic on the value relevance of these accounting numbers (book value of equity per share and earnings per share) taking into the consideration the period before and during the pandemic period. The study covered a period of six years from 2017 to 2022 divided into two periods of 2017-2019 (pre-pandemic period) and 2020-2022 (pandemic period). The choice of period is due to the availability of data particularly for the pandemic period.

The study provides guidance to investors, financial analysts and policy makers in better appraisal of the effect of COVID-19 pandemic on the value relevance of accounting information and its effects on their decision-making process. In addition, the study may be used as a benchmark to issue a policy or standard for reporting any kind of adverse event in the financial reporting practices.

2. LITERATURE REVIEW AND THEORY

Value relevance of accounting information has been widely defined in the prior literature in so many ways. For instance, Barth, Beaver and Landsman (2001), defined value relevance of accounting information as a measure of how well figures reflect a firm's underlying economies regardless of potential sources of differences in accounting quality as reflected in other quality metrics. Similarly, Kargin (2013) argued that accounting figures as contained in the financial statement are value relevant to its users only if they faithfully represent what they purport to represent.

In the framework of accounting standard setting, a value relevance study is usually regarded as an operationalized test of the fundamental qualitative characteristics of useful accounting information, that is, relevance and faithfully represents the phenomenal it purports to represent. A value relevance study examines whether particular accounting amounts reflect information that is used by investors in valuing firms' equity (Barth, Beaver, and Landsman, 2001). Consequently, the value relevance of fair value and determinants for such value relevance are of great interest to accounting standard setters, as well as users and suppliers of accounting information.

COVID-19 pandemic has a significant impact on the financial health of countries. The effect of COVID-19 pandemic on the value relevance of accounting information has been widely discussed in the literature, particularly in the light of developed countries. Several attempts have been made to provide empirical evidence regarding the economic and social impact of the pandemic on value relevance of accounting information. For example, Aljawaheri, *et al.* (2021) carried out empirical study on COVID-19 lockdown, earnings manipulation and stock market sensitivity to earnings announcement. Exploring the effect of earnings manipulation after the COVID-19 outbreak, the study reveals a decrease in value relevance of financial reports as a result of Covid-19 outbreak and related economic lockdown. In a similar study, Liu and Sun (2021) examined the impact of COVID-19 pandemic on accounting information in the US by comparing the discretionary accruals and the explanatory power of earnings between 2019 and 2020. The study shows a significant increase in discretionary accrual during the pandemic period, implying that firms managed earnings upwards to mitigate the declining in the value of earnings during the period.



The study is in line with the argument that COVID-19 pandemic impair the value relevance of earnings.

Sultana, Gosh, and Sen (2021) investigated the impact of COVID-19 pandemic on financial reporting and disclosure practices of selected companies in Bangladesh. Using the structural equation modeling (SEM), the study revealed that financial factors, business contracts and stakeholders have significant relationship with the financial reporting and disclosure practices during the COVID-19 pandemic period. However, business operation and business value have no significant relationship with financial reporting and disclosure practices.

The study adopted signaling theory to underpin the study. Signaling theory explained the responsiveness of investors to market information. The theory became prominent following the work of Spence (1973) on examination of signaling in job market and that of Ross (1977) study of managerial incentives (Brian, Trevis, Duane & Christopher, 2011). Specifically, Spence (1973) assents that; the theory is basically focus on bridging the information asymmetry which exists between the sender and the receiver of the information. This is achievable by having one party send the signal that will reveal relevant information which will be interpreted and utilized by the receiver in relevant decision making. (Brian, Trevis, Duane & Christopher, 2011).

3. METHODOLOGY

This study employed correlation research design. This is concerned with the collection of data for the purpose of describing and analyzing the impact of COVID-19 pandemic on the value relevance of accounting information of quoted deposit money banks in Nigeria. The data for this study were obtained mainly from secondary sources which were extracted from the audited annual reports and accounts of quoted DMBs in Nigeria from 2017 to 2022. The study population consist of all the 14 Deposit Money Banks listed on the Nigerian Stock Exchange as at 31st December, 2017 and remain listed up till 2022. Using census approach, all the fourteen listed Deposit Money Banks in Nigeria as at 31st December, 2022 were used for the analysis due to availability of their annual reports and accounts needed for the extraction of the data. In analyzing the data for this study, a multiple regression technique and descriptive statistics were used.

To test the impact of COVID-19 pandemic on the value relevance of accounting information and in line with extant studies (Ohlson, 1995; Clarkson, 2011), the study examined the value relevance of book value and earnings using the following regression model:

Pre- COVID-19 pandemic:

$$SP = \beta + \beta_1 BVPS_{it} + \beta_2 EPS_{it} + e_{it} \dots \dots \dots \text{mode 1}$$

Post-Covid-19 pandemic:

$$SP = \beta + \beta_1 BVPS_{it} + \beta_2 EPS_{it} + e_{it} \dots \dots \dots \text{model 2}$$

Where:

SP = Market Share price

BVPS = Book value per share

EPS = Earnings per share

β_1 and β_2 = Coefficient of book value per share and earnings per share respectively.

Consistent with extant study (Colins, Maydew & Weiss, 1997) as stated in the study conducted by Liu *et al* (2021), the study conducted a benchmark model to determine the explanatory power of book value and earnings, the incremental explanatory power of book value and earnings is measured by adjusted R^2 of equation (1 and 2) which is the coefficient of determination. To compare the value relevance of book value and earnings between pre and during the pandemic period, firstly, the study estimates both model 1 and 2 for the two separate periods, that is 2017 – 2019 and 2020-2022 separately, and thereafter compare ΔR^2 between the two periods. It is expected there would be a substantial decline in incremental explanatory power of earnings (ΔR^2) from pre-pandemic to post-pandemic period if book value and earnings were less value relevance during the pandemic period.

Variable Measurements

Variables	Proxy	Variable Measurement	Source
Market price per share	MPS	Share prices - 3 months after the publication of the audited annual accounts	Oyerinde (2011)
Book Value Per Share	BVPS	Total value of shareholders' equity at financial year end divided by the total outstanding number of shares at financial year end.	(Tsalavoutas, Andre & Evans 2012).
Earnings Per Share	EPS	Profit for the year divided by the number of outstanding shares	Song, Thomas & Yi (2010)

Source: Author's Survey

4. RESULTS AND DISCUSSIONS

In this section, the study results are presented and discussed. The descriptive statistics are first presented in Table 1, followed by the correlation analyses and then the regression result.

Table 1: Descriptive Statistics.

Pre-Covid					
Variables	Observations	Min	Max	Mean	Std. Dev
MPPS	141	0.5	40.25	8.015	6.173
BVS	141	0.3	35.66	0.013	0.357
EPS	141	-3.62	30.91	3.267	6.036
Post-Covid					
MPPS	141	0.5	29.44	6.368	7.945
BVS	141	0.001	0.802	0.250	0.214
EPS	141	-23.11	31.70	2.515	6.666

Source: Output of summary statistics obtained from Stata 13

The results in Table 1. above provide some insight into the nature of quoted financial services firms in Nigeria for both pre and post COVID-19 pandemic period. The descriptive statistics of data collected for the Pre- COVID-19 period indicates the mean share price to be approximately ₦8 while the standard deviation is 6.17, with the minimum and maximum being ₦0.5 and ₦40

respectively. Book value of equity per share has a mean value of ₦0.013 and a standard deviation of 0.36 with a minimum of ₦0.3 and a maximum of ₦35.66. Earnings per share also has a mean value of ₦3.27, a standard deviation of ₦6.04, a minimum of ₦3.62 and a maximum of ₦30.91.

In the post COVID-19 period, the mean value of share price is ₦6 while the standard deviation is ₦7.9, with the minimum and maximum being ₦0.5 and ₦29.4 respectively. This shows that the share price of the listed firms used in the study are relatively distributed around the mean. The highest share price during the period is ₦40 and the lowest is 50k. If the two periods are compared the maximum share price in the post- COVID-19 period is lower than the maximum share price in the pre-covid period while the minimum share price of ₦0.5 is same in both periods. If the mean share prices of the two periods are also compared, the mean share price in the post- COVID-19 pandemic period which is ₦6 is lower than the mean share price of ₦8 in the pre- COVID-19 period. This reflects a reduction in share price after COVID-19 pandemic. This is not surprising because COVID-19 pandemic triggered the largest global economic crisis and disrupt business activities which result to a downward market reaction.

Table 2: Correlation Matrix Table - Pre- COVID-19

VARIABLES	MPPS	BVS	EPS
MPPS	1		
BVS	0.452**	1	
EPS	0.442	0.506	1

Source: Output of correlation matrix obtained from Stata 13

Table 3: Correlation Matrix Table - Post-Covid-19

VARIABLES	MPPS	BVS	EPS
MPPS	1		
BVS	0.332**	1	
EPS	0.371	0.2119	1

Source: Output of correlation matrix obtained from Stata 13

From Table 4.2, positive and significant correlations exist among the variables in the two periods. In the pre-covid period, the correlation between share price and book value per share is positive (50%) and significant at 1%. This is expected, because an increase in the book value of equity is supposed to increase the market price. Share price and earnings per share also have a positive correlation of 44%. This is not also surprising because a firm with high earnings is expected to record increase in its market share price. Book value of equity per share and earnings per share are 50% percent positively correlated.

In the post-covid period, a correlation of 33.2% is found between share price and book value of equity per share, 37.1% between share price and earnings per share. If the correlation matrixes for the two periods are compared, the correlation coefficient of book value of equity per share (50%) with share price in the pre- COVID-19 pandemic period is greater than the correlation coefficient of 33.2% in the post-covid period. Similarly, a greater correlation is found between earnings per share and share price in the correlation coefficient of 44% in the pre- COVID-19 period and 37% in the post- COVID-19 period. These decrease in the correlations indicate a possible decrease in the value relevance of book value of equity per share and earnings per share. The correlation



between the dependent and independent variable is higher in the pre- COVID-19 period than the post- COVID-19 period. This implies that accounting information could be less value relevant before the Covid 19 pandemic than the post- COVID-19 pandemic period.

4.1 Regression Results:

Table 3: Pre- COVID-19 Pandemic (Robust OLS)

Pre- Covid-19 Pandemic (Robust OLS)			
Variables	Coefficients	t-values	P values
Constant	0.599150	12.50	0.000
BVPS	0.569289	4.90	0.000
EPS	0.455051	4.00	0.000
R square	26.55		
F statistics	30.38		
F-Sig.	0.000		

Source: Extracted from STATA Output

Table 4: Post- COVID-19 Pandemic (Robust OLS)

Post-Covid-19 Pandemic (Robust OLS)			
Variables	Coefficients	t-values	P values
Constant	0.260705	3.66	0.000
BVPS	0.298482	3.46	0.000
EPS	0.228312	4.36	0.000
R square	20.47		
F statistics	23.73		
F-Sig.	0.000		

Source: Extracted from STATA Output

From the result in Table 3 and 4 it can be observed that the R-squared, which is the multiple coefficient of determination, were 26.5 and 20.5 for model 1 and 2 respectively. This means that BVPS and EPS jointly explained the systematic variations in share prices among the sampled banks in Nigeria to the tune of 26.5 and 20.5 respectively, while the remaining percentage were caused by factors not captured in the model. The F-Statistics value of 30.30 and 23.73 for model 1 and 2 respectively and their p-values of 0.000 show that the model overall was statistical significant at 1%. This shows that the model is fit and the explanatory variables were carefully selected.

4.2. Discussion of Findings and Policy Implications

Based on the result of the analysis in this study, a number of key findings are documented. From the table, the pre- COVID-19 book value of equity per share has an approximate coefficient of approximately 0.57 and t-value of 3.46 which is significant at 1%. This indicates that book value of equity per share is value relevant in explaining share price before the COVID-19 pandemic. The result implies that a ₦1 increase in book value results in about ₦6 increase in share price. This finding is consistent with the findings of the extant studies Terzungwe and Rabi (2015) and



Olugbenga and Atanda (2014) who also found book value of equity to be value relevant. In the post- COVID-19 pandemic period, the coefficient of book value is approximately 0.3 and t-value of 3.66 which is significant at 1%. This suggests that even after the COVID-19 pandemic, book value of equity per share remains relevant to financial information users in making share price decisions. The 0.3 coefficient of book value per share shows that a ₦1 increase in book value will cause share price to increase by ₦3. Comparing the results from the two periods, book value of equity per share is found to be value relevant in both periods. In addition, a decrease is recorded in its value relevance after the COVID-19 pandemic. Its significant positive coefficient (0.6 significant at 1%) pre-COVID-19 pandemic is higher than its significant positive coefficient (0.3 significant at 1%) after the COVID-19 pandemic. The finding is in line with the clean surplus theory that book value of equity is relevant to financial information users.

The pre- COVID-19 pandemic earnings per share as revealed in the above Table 4 has a coefficient of approximately 0.6 and t-value of 4.00 which is significant in explaining share price at 1% level of significance. This suggests that a ₦1 increase in EPS translates into an ₦6 increase in share price in the pre- COVID-19 pandemic period. The finding is in line with that of Umoren and Enang (2015) who found EPS to be value relevant in explaining share price. In the same vein, the positive coefficient of 0.23 for earnings in the post COVID-19 pandemic period which significant at 1% level, shows that earnings per share contain information value relevant in explaining share price in the post- COVID-19 pandemic period. Comparing the results from the two periods, the coefficient of earnings per share is seen to be significant in both pre and post COVID-19 pandemic period. However, its significant positive coefficient (0.4 significant at 1%) pre- COVID-19 pandemic is higher than its significant positive coefficient (0.2 significant at 1%) after the COVID-19 pandemic. This finding is also in line with the clean surplus theory that earning per share is relevant to the users of accounting information.

The study provides guidance to investors, financial analysts and policy makers in better appraisal of the effect of COVID-19 pandemic on the value relevance of accounting information and its effects on their decision-making process. The study can enhance the understanding of how the pandemic crises would influence the value relevance and usefulness of accounting information. In addition, the study may be used as a benchmark to issue a policy or standard for reporting any kind of adverse event in the financial reporting practices.

5. CONCLUSIONS AND RECOMMENDATIONS

In this study an attempt was made to examine the impact of COVID-19 pandemic on the value relevance of accounting information. The empirical research of this study is based on the census sampling of 14 deposit money banks in Nigeria that has consistently published their audited annual financial reports between 2017 and 2022. The study adopts Olson Model (1995) to explore the value relevance of book value and earnings.

Using a panel data multiple regression model, this study provides strong evidence that pandemic impaired the usefulness of accounting information in investors' decision making. Further, the study reported a decline in explanatory power of earnings and book value of equity in post pandemic period, thus the value relevance of accounting information declined significantly as a result of COVID-19 pandemic and related economic lockdown. The results revealed that the economic lockdown as a result of COVID-19 pandemic lowered the appropriateness of accounting



figures which consequently led to declining value relevance of accounting information. This study is in line with the argument that the value relevance of earnings would be lost more when earnings were negatively affected by the pandemic.

Consistent with the findings of the study, it is therefore recommended that policy makers such as the financial reporting council of Nigeria should strengthen policies that will improve the information content of the book value of equity per share in the financial statement in order to continue to make it significantly relevant to investors in their investment decision making and in addition, preventive and curtaining measures must be put in place to cushion the impact of pandemic on share prices.

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