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## VALUE RELEVANCE OF ACCOUNTING INFORMATION OF QUOTED NIGERIAN FIRMS IN THE INDUSTRIAL GOODS SECTOR: ASSESSMENT OF THE PRE- AND POST- IFRS ERA

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### ABSTRACT

The possible impact that IFRS adoption may have on the relevance of accounting information of some selected quoted industrial goods sector firms in Nigeria. The studied periods spanned from 2003-2011 (pre-IFRS periods) and 2012-2020 (post-IFRS periods). The sample used in this article consisted of ten (10) readily chosen quoted industrial businesses. In the study, the share price served as both a regressand and a regressor, together with earnings per share and book value per share. The provided data were examined using descriptive statistics, a correlation matrix, and a variance inflation factor. The study opted for the Panel Corrected Standard Error (PSCE) due to heteroskedasticity challenges. The study finds that, on the overall, accounting information produced under the pre-IFRS periods are more value relevant than accounting information produced under the post-IFRS periods. Similarly, earnings per share during pre-IFRS periods have higher value relevance than post-IFRS periods. On the contrary, compared to the pre-IFRS periods, the post-IFRS periods have a higher value relevance for book value per share. The study concludes that the implementation of IFRS has not yet fully boosted the value relevance of accounting information for listed industrial products sector enterprises in Nigeria. As such, the recommends that management of the

industrial goods sector firms in Nigeria should continue to adhere strictly to the standards laid down by IFRS for financial reporting and not be selective of standards. This will help to improve the value relevance of what is being reported especially to the stakeholders.

**Keywords:** Accounting Information, Value Relevance, Industrial Goods Sector, Firms, Pre- and post-IFRS adoption.

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## INTRODUCTION

Issues regarding the relevance and reliability of accounting information continue to persist in present times, with consistent arguments that accounting information is deemed value relevant where it possibly influences investments and related decisions (Jeroh, 2016; Alnodel, 2018; Ogieh & Jeroh, 2022). With the increased adoption of a global sets of reporting standards (International Financial Reporting Standards - IFRS), it is believed that a marked increase in the usefulness/relevance of accounting information would be attained. Despite this belief, there appears to be some misconceptions about IFRS, especially when IFRS is viewed as sets of market-oriented accounting standards/principles that promotes fair market value standards (Tarca, 2016).

The journey towards the development of IFRS started with the founding of the International Accounting Standards Committee (IASC) in 1973. IASC issues several accounting standards (International Accounting Standards – IASs). The review of the IASC constitution in 2002 however birthed the International Accounting Standard Boards (IASB), a non-profit organization tasked with the design and development of reporting standards. IASB however took over existing standards and interpretations that were relevant and thereafter designed and issued new standards (IFRS) which are readily applicable to reporting firms globally.

Nevertheless, the design and issuance of IFRS was welcomed by several countries, Nigeria inclusive. Noteworthy, Nigeria's adoption of IFRS as the basis for financial statement preparation was anchored on the perceived widespread adoption among European countries beginning from 2005 (Ayeyemi, 2016; Jeroh, 2016; Demaki & Jeroh, 2016). It is believed that the failure of multinationals/corporate giants - Worldcom, Enron, Global Crossing, and others in early twenty-first century (Monye-Emina & Jeroh, 2014), largely contributed to the need for standards like IFRS. In this wise, Ogbonna and Enakirerhi (2017) asserted that the implementation of IFRS will increase transparency, accounting quality, and financial statements' relevance (value relevance).

Ball (2016) avers that IFRS adoption/implementation has several advantages for investors - more accurate and comprehensive information, equalization of opportunities for small investors by reducing the trading risk, and elimination of barriers to cross-border acquisition amongst others. Given these merits, several authors (Jeroh, 2016; Martinez, 2018; Ogbonna & Enakirerhi, 2017; Ogieh & Jeroh, 2022), have been contributing to the value-relevance literature, mostly in the relative association studies category.

Kwon, Na, and Park (2017) analyzed various accounting qualities including value relevance and argued that there was improvement in the share prices of companies after the adoption of IFRS. Furthermore, the outcome could be impacted not just by the implementation of new accounting standards (IFRS), but also by attempts to meet the increased demand for useful information. As a result, depending on how well it is implemented, IFRS adoption could have both a positive and negative impacts on value relevance. IFRS is principle-based accounting standard in which managements' accounting decision plays more important role than

previously adopted Generally Accepted Accounting Principles (GAAPs); which were basically rule-based. This can lead to more managers' discretionary accounting choice (Capkun, Collins & Jeanjean, 2016).

Do, Wook and Jee (2019); and Ball (2016), averred that IFRS adoption has several advantages for investors – more accurate and comprehensive statement information relative to national standards, equalization of opportunities for small investors as it reduces the risk of trading with a better-informed professional, standardization that eliminates the necessity of adjustments, reduction of processing costs, and elimination of barriers to cross-border acquisition. Hence, it is necessary to assess if the thrust of improved value relevance have been met over time (Olawale & Hassan, 2021).

Furthermore, extant studies evidenced that there are few studies on accounting information and value relevance in the Nigerian industrial sector. For example, Ogbonna and Enakirerhi (2017) & Alnodel, (2018) domiciled their enquiry on the manufacturing and the insurance sector respectively. Based on above unresolved issues and gaps identified, this paper assessed where a significant difference is visible on companies' earnings per share (EPS) and book value per share (BVS) in Nigeria by examining periods before and after the adoption of IFRS (pre-IFRS and post-IFRS era).

## **LITERATURE AND CONCEPTUAL REVIEW**

### **Value Relevance**

Basically, factor like changes in the accounting context (and the accuracy of financial information), corporate attributes, governance measures amongst others might alter the market value and share prices of firms (Jeroh 2016a; Jeroh, 2017; Jeroh, 2017a; Do, Wook & Jee, 2019; Jeroh, 2020; Jeroh, 2020a; Jeroh, 2020b;). Amongst them, some research found that, the adoption of IFRS has a favorable direct effect on share price (Barth, Landsman, & Lang, 2018; Daske, Hail, Leuz, & Verdi, 2018; Okafor, Anderson, & Warsame 2016; Jeroh, 2016). According to Okafor, Anderson, and Warsame (2016), enterprises in Canada that were required to use the International Financial Reporting Standards (IFRS) had greater value relevance.

More so, the value of a company's shares is determined by the value of the data provided in its financial reports. According to Eke (2018) value relevance is determined by the earnings quality and informativeness of the financial statements. Users make relevant informed decisions regarding the stock pricing or a corporation as a result of relevant accounting company performance. In principle, such data might be used to forecast or confirm accounting figures (IASB, 2015). The capability of accounting reporting to explain a stock market metric is referred to as value relevance. Further, Daske, Hail, Leuz, and Verdi (2018) emphasized that value relevance measures the extent to which information provided in the financial statements represent and describe the firm's worth. Most likely, accounting performance metrics of interest when measuring value relevance include Returns on Assets-ROA, Returns on Equity-ROE, and stock market metrics such as share prices.

Consequently, the financial data that reflect stock market returns adequately has a considerable impact on how valuable a standard is to accounting. In other words, cash flow with a higher degree of value relevance would have a larger degree of correlation with stock market value. As a result, the greater the degree of correlation between financial statement information and stock returns, the greater the value relevance of accounting data.

### **IFRS Adoption in Nigeria**

IFRSs are sets/various standards, norms, concepts, standards, and practice guidelines that preparers of financial statements for interest of the public corporations must adhere to. The IASB, and International Federation of Accountants (IFAC) technical group, issues these standards. The IFRSs apply to businesses in the private sector. More so, IFRS provides guidelines on the preparatory work of general-purpose financial statements (GPFS) (Eke, 2018).

In September of 2010, Nigeria adopted the IFRSs. Nevertheless, some progress has been made in the direction of its adoption. Nigeria agreed to implement the IFRS in order to gain from their implementation and raise their level of international competitiveness. A roadmap for the adoption of IFRS in Nigeria was created and received prior approval from the Federal Executive Council (FEC), with implementation set to begin in 2012. Before Nigeria adopted IFRS, the Federal Government's institution charged by law with developing and issuing the Accounting Standards utilized in the country's financial statement preparation was the Nigeria Accounting Standards Board (NASB). The SAS (issued by NASB) was governed by GAAP, which had many similarities to IASB guidelines. The National Assembly Act No. 22 of 2003 reinstated the 1982-founded Nigerian Accounting Standards Board (NASB) (signed into law on 10th July, 2003).

The formation of the Financial Reporting Council of Nigeria and the enactment of the Financial Reporting Council of Nigeria Act in 2011 marked the start of Nigeria's journey to adopting IFRS. The Nigeria Accounting Standards Board Act, 2003, was abolished by the Financial Reporting Council of Nigeria Act, 2011. The Federal Executive Council had devised a roadmap for the implementation of IFRS in Nigeria prior to the formation of the Financial Reporting Council of Nigeria. (Eke, 2018)

According to Herbert, as quoted in Eke (2018)'s publications, Nigeria stands to reap five benefits from the adoption of IFRS. The first three are related to voluntary adoption (i.e., without government intervention), while the latter two are influenced by governmental and user factors. All forms of uniform contracting are based on the first affirmative argument: uniform norms only need to be presented once. They are a form of 'public good,' seeing as how the incremental cost of adding additional user is zero, and no one suffers as a result of someone else using them. The second benefit of identical standards is that they shield auditors from managers who engage in "opinion shopping" (Ball, 2016). Administrators cannot dare to shop for an auditor who would also give an unqualified opinion on a more favorable rule if all auditors are compelled to enforce the same rules. The potential for decreasing informative externalities caused by lack of consistency is the third argument in support of consistent financial reporting. Due to a lack of comparability, corporations and/or governments might impose costs on others (in economics terms, produce negative externalities) if they utilize different accounting standards and practices, even if they are clearly disclosed to all users. It will be advantageous for enterprises to employ the same standards as others to the extent that they internalize these effects. The fourth benefit comes from multinational firms (MNCs), regulators, and users all around the world who believe that using standardization in the compilation of corporate financial statements will make international comparisons easier. Large multinational corporations with operations in several territories would be able to utilize a single accounting language across the board and publish group financial information in the

same language as their competition. The final advantage is the assumption that in a genuinely global economy, professional investors will be more movable, and businesses will be able to adapt more quickly to their growing global capital demands.

### **Theoretical Underpinning**

This paper is built on the Signaling Theory. This theory is traceable to works of Akerlof (1970), Spence (1973), and Joseph Stiglitz, all of whom were awarded the Nobel Prize in Commodities in 2001 for their contributions in information economics, as referenced in the works of (Muhammed 2017). The notion behind signaling theory is that any party (referred to as the agent) sends information about itself towards another party in a credible manner (the principal). The idea attempts to explain why some signals are dependable while others are not. However, this may be extended to circumstances where there is asymmetric information between internal and external users in a corporation; the fundamental rationale is that management wants to indicate the worth of their companies to its stakeholders.

Accordingly, signaling theory describes how a corporation can generate a specific perception by operating in a specific way (Spencer 1973). The IFRS adoption is considered as a specific activity, and the information released as a result of the adoption can be said to have a specific reputation. Although, many researchers believe that the adoption of IFRS is the best thing that has occurred to the accounting profession, it is a new standard. Proponents say that an integrated global accounting system has the potential to improve data quality across boundaries and encourage cross-border investments (Masud 2016). The conceptual model for accounting information, which states that the goal of financial reporting should be to provide useful accounting information to investors, lenders, and other creditors regarding their capital allocation decisions, is held dear by policymakers who set standards and accountants all over the world. According to Djayoon (2016), it can be ascertained by the utility of the released financial information or data and the participant's reaction to the knowledge after it has been published.

The American Accounting Association (AAA), which is responsible for the creation of A Statement of Basic Accounting Theory (ASOBAT), believes that the most important criterion in deciding on an accounting measuring system is the decision usefulness of accounting data for users, which is measured by the accounting information is available predictive capability. The stronger the users' ability to forecast market occurrences, the better the investment decision. More so, income statement is shown to have market efficiency if it was being used to forecast the firm's market share price. Value relevance studies provide empirical proof on accounting numbers' association with the predicted value of the securities market. When market share prices are announced, investors receive information signals that help them make investment decisions. Investors can also learn about the elements that influence a company's stock price and forecast price fluctuations, allowing them to make informed decisions about whether to buy or sell stock

### **Empirical Review**

Divergent results exist as to the effect of accounting information on value relevance. For example, Olawale and Hassan (2021) looked at the implementation of IFRS and the usefulness of the financial data of listed banks in Nigeria. Data were gathered from the seven listed banks under study's published annual reports for the pre- (2008 to 2011) and post- (2012 to 2015) periods. Profits per share, Book value per share, Change in earnings per share, and Share price



are among the variables used in the study. Data analysis was performed using a general least squares regression model. The study's findings show that financial information from the pre- and post-compulsory adoption of IFRS periods is valuable. However, IFRS adoption has not yet reached its full potential because financial information from the post-IFRS adoption period has no relative value relevance to financial information from the pre-IFRS period.

Using the desk survey, Obasan and Ajibade (2020) reported that the IFRS periods increase the value of accounting information in both Nigeria and Kenya than the pre-IFRS period. Similarly, Do, Wook, and Jee (2019) looked at how the adoption of IFRS affected the relevance of values in South Korea. The study covered the five years prior to IFRS and the five years following it. According to the study, accounting data generated during post-IFRS years is more valuable than data generated during pre-IFRS times.

Alnodel (2018) investigated whether accounting data was more valuable during pre-IFRS periods compared to post-IFRS periods. The study took place between 2007 and 2014. The study concentrated on 21 insurance businesses that are listed on the Saudi Stock Exchange. The results demonstrate that while book value of equity decreased in value in post-IFRS periods, earnings increased in value compared to pre-IFRS era.

Eke, (2018) explored the IFRS adoption in Nigeria. The study administered questionnaire and personal interviews. The study used both tables and percentages to summarize the obtained data. IFRS Adoption is beneficial to the Nigerian economy because it will help Nigerian firms get access to global financial markets. Also in Nigeria, Odo, (2018) examined the challenges and the solution to the challenges facing IFRS adoption. The study adopted the documentary approach. The study reported that inability of regulators and preparers of accounting information to close the knowledge gap are the major challenges which faced IFRS adoption in Nigeria. However, this issue can be solved only when appropriate resources are provided.

Ezejiofor, (2018) studied the effect of IFRS on value relevance of accounting information on 54 manufacturing companies quoted on the NSE from 2008-2015. The study was patterned after the Chow test statistical tools using SPSS version 20.0. IFRS adoption enhanced the BVS, SP, EPS, and cash flow of manufacturing companies in Nigeria from 2008-2015.

Ogbonna and Enakirerhi (2017) examined whether accounting information was more value relevant during the local GAAP than the IFRS periods. The paper focused on quoted firms in Nigeria from 2008-2011(pre-adoption era) and 2012–2015 (post adoption era). The study patterned after the Ohlson (1995) model. Variables captured include cash flow from operation, BVS and EPS. The study reported that accounting information reported under local GAAP is more valuable than information produced under IFRS.

Bello, (2016) examined the reason behind the delay in IFRS adoption in Nigeria. The study used the documentary approach. The study reported that delay in IFRS adoption in Nigeria is as a result of difficulty of amending extant tax laws, weak compliance low level of awareness of the benefits inherent in IFRS adoption among diverse stakeholders, and enforcement mechanisms, education and experience, insufficient technical capacity, inept management, and poor private sector participation.

Alabede (2016) examined whether accounting information was more value relevant during the local GAAP than the IFRS periods. The paper focused on 66 non- financial companies from 2007 to 2014. The study used the Adjusted R-Square to compare between the pre and post

IFRS periods. The study reported that accounting information is more valuable in the post IFRS periods than in the pre-IFRS periods.

### RESEARCH METHODOLOGY

Just like the studies of Jeroh (2012); Jeroh and Ekwueme (2015); Jeroh and Okoye (2015); Ezinando and Jeroh (2017); Odjaremu and Jeroh (2019); Akobundu, Oboreh and Jeroh (2021), this study adopts the *ex-post facto* research design since the sourced data exist in retrospect. The study used a sample of ten (10) conveniently selected industrial firms quoted on the NSE up till December 2020 they are: (Cadbury Nig. Plc., Champions Brewery Plc., DN Tyres & Rubbers Plc., Guinness Nig. Plc., Nascon Allied Ind. Plc., Nestle Nig. Plc., Nigerian Brewery Plc., PZ Cussons Nig. Plc., Unilever Nig. Plc., and Union Dicon Salt Plc.) from 2003 to 2011 (pre-IFRS periods) and 2012 to 2020 (post-IFRS periods). In this paper, EPS and BVS are the regressors while the regressand is value relevance measured by share price (SHP).

The study will employ the t-test to examine hypothesis 2 and 3 and regression analysis for hypotheses 1. To determine the model that is most appropriate for examining the panel data regression, the study subjected the data to both Breusch and Pagan Lagrangian multiplier (LM) and Hausman tests. The Random Effect Model (REM), the Fixed Effect Model, and both Breusch and Pagan Lagrangian multipliers' null hypotheses are employed to make this decision (REM and the Pool Ordinary Least Square models). The Hausman test was used to compare the REM and FEM estimates, while the Breusch and Pagan LM test was utilized to compare the REM and Pool Ordinary Least Square (POLS) estimates. Where the p-value linked with the chi-square value of the REM is greater than 5%, the Hausman test will suggest the acceptance of the REM. The reverse occurs where the p-value is less than 5%; in which case, the FEM will be accepted. Furthermore, based on Breusch and Pagan LM test, POLS will be employed if p-value > 5% but REM is acceptable if p-value is < 5%. Prior to running the regression results, the data were subjected to descriptive statistics, correlation matrix, variance inflation factors, heteroskedasticity test, autocorrelation/serial correlation test, and Ramsey RESET test.

#### Model Specification:

$$Y = \alpha_0 + \beta_x + \epsilon_i \quad (i)$$

Given that all variables have been correctly entered into the respective models, the final model specification is given as follows:

$$\text{Model 1 (pre-IFRS periods): } SHP_{t+1} = \alpha_0 + \beta_1 EPS_{it} + \beta_2 BVS_{it} + \epsilon_{jt} \quad (ii)$$

$$\text{Model 2 (post-IFRS periods): } SHP_{t+1} = \alpha_0 + \beta_1 EPS_{it} + \beta_2 BVS_{it} + \epsilon_{jt} \quad (iii)$$

#### Where:

SHP: Share price of the selected industrial goods sector firms (Regressand)

BVS: Book value per share of company i in year t (Regressor 1)

EPS: Earnings per share of firm i in year t. (Regressor 2)

$\alpha_0$ : a constant

$\beta_1$  and  $\beta_2$ : coefficient of the regressors

$\epsilon_i$ : the error term

#### Hypothesis Formulation:

**H01:** Accounting information is more value relevant in the pre-IFRS era than the post-IFRS era.

**H0<sub>2</sub>:** Earnings per share (EPS) are more value relevant in the pre-IFRS era than the post-IFRS era.

**H0<sub>3</sub>:** Book value per share (BVS) is more value relevant in the pre-IFRS era than the post-IFRS era.

**Note:** Hypothesis 1 covers the overall model while hypothesis 2 and 3 covered two regressors under investigation.

## RESULTS, INTERPRETATIONS AND DISCUSSION

The sourced data were analysed using descriptive statistics, correlation matrix and variance inflation factor.

### Descriptive Statistics

The descriptive statistics that were collected from the panel data used for this investigation are summarized in Table 1. The average BVS for the chosen industrial enterprises is ₦6.73 post-IFRS and ₦3.74 pre-IFRS, according to the findings. As opposed to ₦0.23 and ₦21.10 for the pre-IFRS period, the minimum and maximum BVS in the post-IFRS period are ₦0.414 and ₦37.97. This suggests that BVS was more valuable in Post-IFRS times than in Pre-IFRS periods since its value was higher in Pre-IFRS periods than in Post-IFRS periods.

Additionally, the average EPS for the chosen manufacturing companies was ₦0.05 prior to IFRS and ₦0.49 after. In contrast to ₦0.003 and ₦0.35 for the pre-IFRS period, the lowest and maximum EPSs for the post-IFRS period are ₦0.30 and ₦0.98. This suggests that BVS was more valuable in Post-IFRS times than in Pre-IFRS periods since EPS has a larger value in Post-IFRS periods than it does in Pre-IFRS periods.

The reported average share/stock price for the Nigerian manufacturing companies that were chosen for the SHP was ₦80.72 during the pre-IFRS period and ₦116.50 during the post-IFRS period. The lowest and maximum SHPs in the post-IFRS period are ₦70.34 and ₦216.09, respectively, as opposed to ₦50.07 and ₦120.53 in the pre-IFRS period. This suggests that SHP has a larger value in Post-IFRS periods than in Pre-IFRS periods because BVS is higher in Pre-IFRS periods than in Post-IFRS era.

Table 1

### Descriptive Statistics

Study Variables	Pre-IFRS Periods			Post -IFRS Periods		
	BVS	EPS	SHP	BVS	EPS	SHP
Mean	6.7254	0.4927	116.5045	3.7363	0.0505	80.7219
Maximum	37.97070	0.9829	216.0888	21.0948	0.3455	120.5281
Minimum	0.414055	0.2951	70.3435	0.2300	0.0025	50.0715
Std. Dev.	7.2183	0.2095	31.6485	4.0101	0.0394	17.0734
Observations	90	90	90	90	90	90

Source: Author's Computation using Stata

### Correlation Analysis

Table 2 revealed that coefficient values of BVS (0.0140) and EPS (0.1795) are positively correlated with SHP during the pre-IFRS periods. However, such relationship is weak since their coefficient values are within the rule of thumb bench market value of 0 to 30% for estimating weak relationship. By implication, increase in accounting information (BVS and EPS) will result to minimal increase in value relevance of the selected industrial goods firms



in Nigeria in the pre-IFRS periods and vice versa. Meanwhile, in terms of the relationship between the two regressors (BVS and EPS), the correlation matrix reported weak correlation since their coefficient values estimated at 0.0809 are within the rule of thumb benchmark value of 0 to 30% for estimating weak relationship. This suggests unlikelihood that the pre-IFRS periods will have multicollinearity challenges. However, the model was subjected to variance inflation factor (VIF) to reaffirm this assertion. The result is reflected in table 3.

On the other hand, model 2 evidenced that both BVS (-0.0064) and EPS (-0.1494) have weak negative correlation with SHP during the post-IFRS periods. By implication, increase in accounting information (BVS and EPS) will result to decrease in value relevance of the selected industrial goods firms in Nigeria in the post-IFRS periods. Meanwhile, in terms of the relationship between the two regressors (BVS and EPS), the correlation matrix reported weak negative correlation (-0.0358). This suggests unlikelihood multicollinearity challenges in post-IFRS periods. However, the model was subjected to variance inflation factor (VIF) to reaffirm this assertion. The result is reflected in table 3.

Table 2

*Correlation Matrix for Both Pre- and Post-IFRS Periods*

	Pre-IFRS Periods			Post-IFRS Periods		
	SHP	BVS	EPS	SHP	BVS	EPS
SHP	1.0000			1.0000		
BVS	0.1795	1.0000		-0.1494	1.0000	
EPS	0.0140	0.0809	1.0000	-0.0064	-0.0358	1.0000

Source: Author's Computation using Stata

Table 3 affirmed that both models 1 and 2 are devoid of multicollinearity problems since the regressors and their mean VIF estimated at 1.01 and 1.00, respectively are less than the rule of thumb value of 7. Hence, we can boldly assert that the model can be relied upon for policy formulation.

Table 3

*Variance Inflation Factor (VIF)*

	Pre-IFRS Periods		Post-IFRS Periods		
	VIF	1/VIF	VIF	1/VIF	
BVS	1.01	0.9934	BVS	1.00	0.9987
EPS	1.01	0.9934	EPS	1.00	0.9987
Mean VIF	<b>1.01</b>		Mean VIF	<b>1.00</b>	

Source: Author's Computation using Stata

**Diagnostic (Robustness) Check**

Prior to running the regression result, both models were further subjected to series of diagnostic tests. The robustness (diagnostic) tests vis-à-vis the Ramsey RESET test for omitted variables in model 1 and 2 (table 4) reported Prob > F of 0.3071 and 0.7629, respectively signaling no omitted variable challenges in both pre- and post-IFRS periods. This further implies that the models are well-specified in both the pre- and post-IFRS periods. Meanwhile, Hausman p-value for pre-IFRS = 0.5620, and for post-IFRS = 0.4839, respectively. The result indicates that the null hypothesis:  $H_0$ : REM is more appropriate cannot be rejected. Breusch and Pagan LM test p-value is pre-IFRS = 0.0000, and post-IFRS = 0.0000, respectively; It suggests that the null hypothesis:  $H_0$ : POLS is rejected while the alternate hypothesis,  $H_A$ : REM is accepted as the most appropriate model for this study in both model 1 and 2. However, Modified Wald test for groupwise heteroskedasticity revealed heteroskedasticity challenges in pre-IFRS (pre-

IFRS p-value = 0.0113) and post-IFRS (p-value = 0.000), respectively. Furthermore, Wooldridge test for autocorrelation/serial correlation revealed first Order serial correlation challenges in pre-IFRS (p-value = 0.0000) but post-IFRS (p-value = 0.0796) indicate no first order autocorrelation challenges. To address the seemingly heteroskedastic and serial correlation challenges, the paper subjected the model to Panels Corrected Standard Errors (PCSE). PCSE assumes that the disturbances are, by default, heteroskedastic. The result is discussed in the next sub-section.

Table 4

*Diagnostic (Robustness) Check*

<b>Pre-IFRS Periods</b>		
<b>Robustness Check</b>	<b>F-value</b>	<b>Prob.Chi</b>
Ramsey-RESET test	F(3, 84) = 1.22	Prob > F = 0.3071
Hausman-Test	chi2(2) = 1.15	Prob>chi2 = 0.562
Breusch-Pagan-LM test	chibar2(01) = 108.82	Prob > chi-bar2 = 0.0000
Heteroskedasticity Test	chi2 (10) = 22.86	Prob>chi2 = 0.0113
Wooldridge-test for auto-correlation	F( 1, 9) = 273.148	Prob > F = 0.0000
<b>Post-IFRS Periods</b>		
<b>Robustness Check</b>	<b>F-value</b>	<b>Prb.Chi</b>
Ramsey-RESET test	F(3, 84) = 0.39	Prob > F = 0.7629
Hausman Test	chi2(2) = 1.45	Prob>chi2 = 0.4839
Breusch-Pagan LM test	Chi-bar2(01) = 35.66	Prob > chi-bar2 = 0.0000
Heteroskedasticity-Test	chi2 (10) = 2.9e+05	Prob>chi2 = 0.000
Wooldridge-test for autocorrelation	F( 1, 9) = 3.904	Prob > F = 0.0796

Source: Author's Computation using Stata

**Results of Hypotheses' Tests**

The independent sample t-test result in table 5 based on pre-IFRS minus post-IFRS SHP clearly indicates negative differences, and they are statistically significant [ $t = -9.44$ ,  $\text{pr}(|T| > |t|) = 0.0000$  and Welch's d.f = 137.831]. It suggests that post-IFRS SHP is more value relevance than pre-IFRS represented by SHP. The t-test result for BVS is -2.989 and it is statistically significant ( $t = -3.4341$ ,  $\text{pr}(|T| > |t|) = 0.0008$ , and Welch's d.f = 140.286). It suggests that post-IFRS BVS supports value relevance than in pre-IFRS. Lastly, estimated t-test for EPS is -0.4421 which is also statistically significant ( $t = -0.4421$ ,  $\text{pr}(|T| > |t|) = 0.0000$ , and Welch's d.f = 95.4066). Perhaps, it also suggests that post-IFRS EPS supports value relevance than pre-IFRS.

Table 5

*Two Sample T-Test*

<b>Two-sample t-test with unequal variances-SHP</b>						
<b>Group</b>	<b>Obs</b>	<b>Mean</b>	<b>Std. Err.</b>	<b>Std. Dev.</b>	<b>[95% Conf. Interval]</b>	<b>Interval]</b>
Pre-IFRS	90	80.7219	1.7997	17.0734	77.1459	84.2978
Post IFRS	90	116.5045	3.3360	31.6485	109.8759	123.1332
combined	180	98.6132	2.3152	31.0619	94.0446	103.1818
diff		-35.7826	3.790525		-43.2777	-28.2875
diff = mean(0) - mean(1)					t =	-9.4400
Ho: diff = 0		Welch's df =				137.8310
Ha: diff < 0		Ha: diff != 0			Ha: diff > 0	
Pr(T < t) = 0.000		Pr( T  >  t ) = 0.000				
					Pr(T > t) = 1.000	
<b>Two-sample t-test with unequal variances-BVS</b>						
<b>Group</b>	<b>Obs</b>	<b>Mean</b>	<b>Std. Err.</b>	<b>Std. Dev.</b>	<b>[95% Conf. Interval]</b>	<b>Interval]</b>
Pre-IFRS	90	3.7364	0.4227	4.0101	2.8965	4.5763
Post IFRS	90	6.7254	0.7609	7.2183	5.2136	8.2373
combined	180	5.2309	0.4481	6.0123	4.3466	6.1152

diff	2.9890	0.8704	-4.7098	-1.2682	
diff = mean(0) - mean(1)			t =	-3.4341	
Ho: diff = 0	Welch's df =			140.2860	
Ha: diff < 0	Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.0004	Pr( T  >  t ) = 0.001		Pr(T > t) = 0.9996		
<b>Two-sample t-test with unequal variances-EPS</b>					
Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]
Pre-IFRS	90	0.0505	0.0041	0.0393	0.0423 0.0587
Post IFRS	90	0.4926	0.0221	0.2095	0.4488 0.5365
combined	180	0.2716	0.0200	0.2678	0.2322 0.3110
diff		-0.4421	0.0225		-0.4867 -0.3975
diff = mean(0) - mean(1)				t =	-19.6783
Ho: diff = 0	Welch's df =				95.4066
Ha: diff < 0	Ha: diff != 0			Ha: diff > 0	
Pr(T < t) = 0.000	Pr( T  >  t ) = 0.000			Pr(T > t) = 1.000	

Source: Author's Computation using Stata

On individual ground, table 6 affirmed that the coefficient of EPS during the pre-IFRS period is 77.9466 (t-value = 2.37 and p-value = 0.0178) and then -9.5994 (t-value = -1.17 and p-value = 0.2401) during the post IFRS periods. The implication of this is that a unit increase in EPS will increase the value relevance of the Nigerian industrial goods sector firms by about 77.9466 during the pre-IFRS periods, where other variables are held fixed. On the other hand, a unit increase in EPS reduced the value relevance of the Nigerian industrial goods sector firms by about 9.5994% during the post-IFRS periods where other variables are held constant. This reaffirmed that accounting information reported under the pre-IFRS periods is more valuable than information produced under the post-IFRS periods stated above.

Table 6

*Panels Corrected Standard Errors (PCSE)- (Pre- and Post-IFRS Periods)*

<b>Model 1 (Pre-IFRS Periods): <math>SHP_{t+1} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BVS_{it} + \epsilon_{it}</math></b>					
Group variable: id	Obs. = 90				
Time variable: yr	Groups = 10				
Panels: correlated (balanced)	Obs. per group:				
Auto-correlation: no auto-correlation	min = 9				
	avg = 9				
	max = 9				
Estimated cov. = 55	R-squared = 0.0322				
Estimated auto-correlations = 0	Wald chi2(2) = 6.00				
Estimated coeff. = 3	Prob > chi2 = 0.0499				
<b>Panel-corrected</b>					
<b>Study Variables</b>	<b>Coef.</b>	<b>Std. Err.</b>	<b>Z</b>	<b>P&gt; z </b>	<b>[95% Conf. Interval]</b>
EPS	77.9466	32.8992	2.37	0.018	13.46534 142.4279
BVS	-0.0022	0.3274	-0.01	0.995	-0.64385 0.639392
_cons	76.7939	2.8584	26.87	0.000	71.19151 82.39631
<b>Model 2 (Post-IFRS Periods): <math>SHP_{t+1} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BVS_{it} + \epsilon_{it}</math></b>					
Group variable: id	Number of obs. = 90				
Time variable: yr	Number of groups = 10				
Panels: correlated (balanced)	Obs. per group:				
Auto-correlation: no autocorrelation	min = 9				
	avg = 9				
	max = 9				
Estimated cov. = 55	R-squared = 0.0150				

Estimated auto-correlations = 0	Wald-chi2(2) = 6.43				
Estimated coeff. = 3	Prob > chi2 = 0.0402				
<b>Panel-corrected</b>					
Study Variables	Coef.	Std. Err.	Z	P> z	[95% Conf. Interval]
EPS	-9.5994	8.1709	-1.17	0.240	-25.61396 6.415217
BVS	0.4487	0.3094	1.45	0.147	-0.1576273 1.055107
_cons	118.2156	7.5987	15.56	0.000	103.3226 133.1086

Source: Author's Computation using Stata

Lastly, the BVS coefficient in the pre-IFRS periods was -0.0022 (t-value = -0.01 and p-value = 0.995) while that of post-IFRS periods is 0.4487 (t-value = 1.45 and p-value = 0.147). Though, the results are not statistically significant to explain accounting information, absolute t-value and p-value suggests that BVS is more value relevant in the post-IFRS periods than the pre-IFRS periods. This is in line with the findings of Obasan and Ajibade (2020); Do, Wook and Jee (2019); Eke (2018); Alabede (2016) but deviated from the findings of Olawale and Hassan (2021); Alnodel, (2018); Ogbonna and Enakirerhi (2017).

### CONCLUSION AND RECOMMENDATIONS

In accordance with the results obtained in this study as well as the arguments from prior authors on the subject matter investigated, it is therefore important to state at the conclusion of this study that hence, the adoption of IFRS is yet to fully increase the value relevance of accounting information of quoted industrial goods sector firms in Nigeria. Following the findings obtained, this study therefore recommends that.

1. Management of the industrial goods sector firms in Nigeria should continue to adhere strictly to the standards laid down by IFRS for financial reporting and not be selective of standards. This will help to improve the value relevance of what is being reported especially to the stakeholders.
2. There is need for managements of the Nigerian industrial goods sector firms should re-evaluate her EPS since it was found to be more value relevant in the pre-IFRS periods than the post-IFRS periods.
3. The current BVS should be sustained since it was found to be more value relevant in the post-IFRS periods than the pre-IFRS periods.

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