



## Evaluating the Impacts of Change in Accounting Regulation on Financial Performance: A Univariate Testing and the Implications for the Nigerian Capital Market

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**Abstract:** There is evidence that a change in accounting regulation can stimulate global access to a country's capital market, thereby increase financial performance of firms. Corresponding to the change from the Generally Accepted Accounting Principles (GAAP) to the mandatory adoption of the International Financial Reporting Standards (IFRS) in Nigeria, this paper examines available information in order to confirm whether the change has created desired improvement in the firms' performance after the adoption in 2012. Three financial performance indicators related to productivity (asset turnover, ATO) and profitability (returns on assets, ROA, and return on equity, ROE) are examined on univariate tests of significance differences in the mean, median and variance of sample for the 'prior to' IFRS adoption period (2003-2011) and the post-IFRS adoption period (2012-2020). Accordingly, the Satterthwaite-Welch t-test, Wilcoxon/Mann-Whitney t-test and ANOVA-F-test are applied for the mean, median and variance, to verify the conjectured hypotheses. The results find that slight increase was perceived after adoption for average value of the ATO and ROA, but the considered tests are unable to indicate sufficient evidence to identify the improvement as significant. Contrary, the evidence supposes undesired significant decline in the ROE. The evidence finds the change in the variability, due to the transition to IFRS, for the indicators as significant. The findings have implications for the capital market and regulation; hence, the paper suggests that regulators should monitor firms' compliance to the standards and extend the use of IFRS to other non-listed companies in Nigeria.

**Keywords:** GAAP; IFRS; Financial performance indicators; Satterthwaite-Welch test; Wilcoxon/Mann-Whitney test; ANOVA

**JEL Classification:** C21; C22; M40; M48

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## 1. Introduction

IFRS replicates high standard quality firm's financial information on organised documentation and prediction of earnings, cash-flows, investments and capital inflow. The Standards attempt to improve the effectiveness of financial reports, ensure value for the information on financial statements, and enhance the comparability and transparency of financial statements among global capital markets. The report promotes relevant flexibility of accounting reports of companies' operations to protect shareholders, achieve global financial stability and foster economic growth. Recent reports show that around 65 percent of the IFRS jurisdictions have converged or adopted the standard worldwide (IFRS, 2023a). With the IFRS fast becoming a prominent financial architecture, the standard continues to attract interests from stakeholders including investors, auditors, and regulators.

A number of investigations have been conducted concerning the adoption, convergence, implementation, compliance and consequences of IFRS on organisation (Bayerlein & Al-Farooqu, 2012; Espinosa et al., 2015; Black & Maggina, 2016; Cho, Kim et al., 2021; Shruti & Thenmozhi, 2023). Bayerlein and Al-Farooque (2012) reveal that IFRS-adoption creates harmonization of taxes and goodwill accounting among Australia, Hong-Kong and the UK. Espinosa et al. (2015) present that market reaction to IFRS in Chile does not cause financial performance incentive or deterioration, and the implementation causes a significant variation in performance. Black and Maggina (2016) note that the adoption does not improve the effectiveness of financial reports in Greece. Kehelwalatenna and Herath (2019) identify a significant change in financial performance of listed firms after the adoption of IFRS in Sri Lanka. Cho, Kim et al. (2021) find that IFRS-adoption causes decline in performance volatility, but improves market liquidity and trading volume, thereby narrows the gap between price and value. Kabir and Su (2022) reveal that IFRS did not impact sales transactions but increase deferral of revenue recognition for firms whose revenue recognition are influenced by the Standards. Shruti and Thenmozhi (2023) reveal that the active (passive) institutional investment has a positive (negative) influence on IFRS' impacts on founder shareholding.

There is no doubt that the effectiveness of an accounting regulation depends on the institutional mechanisms available to implement and enforce the frameworks. The relative state of the capital markets, regulatory bodies, and the rule of law play major impact in the response (Agyei-Boapeah et al., 2020). The impacts of IFRS adoption on firm performance vary for developed, emerging and developing countries. The adoption date, ownership structure, socio-cultural factors, as well as the political, governance and legal dynamics may affect the IFRS compliance (Black & Maggina, 2016). Industrialised countries are characterised by capital markets that allows firms to raise capital from institutional investors. These countries have the capabilities to implement regulatory infrastructure that support market-oriented frameworks

(Agyei-Boapeah & Machokoto, 2018). These characteristics explain the reach of the desired outcome following the implementation of the Standards in these countries (Agyei-Boapeah & Machokoto, 2018; Agyei-Boapeah et al., 2020; Shruti & Thenmozhi, 2023). However, such improvement in firm performance may not be the same for countries with small capital market, underdeveloped financial system amidst other structural bottlenecks.

In the domestic context, before adopting IFRS, the FRCN permits companies to follow the local GAAP (N-GAAP). In July 2010, the Nigerian government introduced the IFRS to replace the N-GAAP, and propelled guide for its usage. The guide orders quoted firms on the NGX to mandatorily set up financial reports through the IFRS framework. From 2012 onwards, Nigerian companies listed on the NGX adopted IFRS. The companies comply with the implementation of the IFRS under presumed expectations that the Standards would improve financial reporting practices, heighten them towards global opportunities and lead to improved financial performance. Because findings from extant research would not be generalised for the Nigerian case, some studies based on regression analysis have complete empirical investigation for the Nigeria to examine the impact of IFRS on firms' performance (Abata, 2015; Ironkwe & Oglekwe, 2016; Musa & Sanusi, 2017; Ofoegbu1 & Odoemelum, 2019; Nwaogwugwu, 2020).

Abata (2015) reveals that IFRS adoption offers quality information for regulators than the N-GAAP. Ofoegbu1 and Odoemelum (2019) show a negative but insignificant relationship between overall disclosure index, company age and financial leverage of listed firms. Nwaogwugwu (2020) shows that although IFRS has a positive effect but has not led to increase in earnings per share. These studies used representative ratios to capture performance indicators that examine the effect of IFRS on firm performance. Commonly employed indicators include earnings per share (Ironkwe & Oglekwe, 2016; Musa & Sanusi, 2017), financial leverage (Oluwaremi, 2014), and the return on capital employed (Ofoegbu1 & Odoemelum, 2019). None of these studies use productivity ratio such as the asset turnover.

This study contributes to literature by providing evidence to explore whether adopting IFRS affects financial performance in Nigeria. In doing this, the paper uses different univariate tests of significance differences in mean, median and variance of sample data for the 'prior to' IFRS adoption period (2003-2011) and the post-IFRS adoption period (2012-2020). Three financial performance indicators related to productivity (the asset turnover) and profitability, such as the returns on assets and return on equity, are examined on the Satterthwaite-Welch t-test, Wilcoxon/Mann-Whitney t-test and ANOVA-F-test, which apply for the mean, median and variance, respectively. The investigation focuses on recent financial information covering up to 2020 financial periods. This is important because the use of IFRS in Nigeria

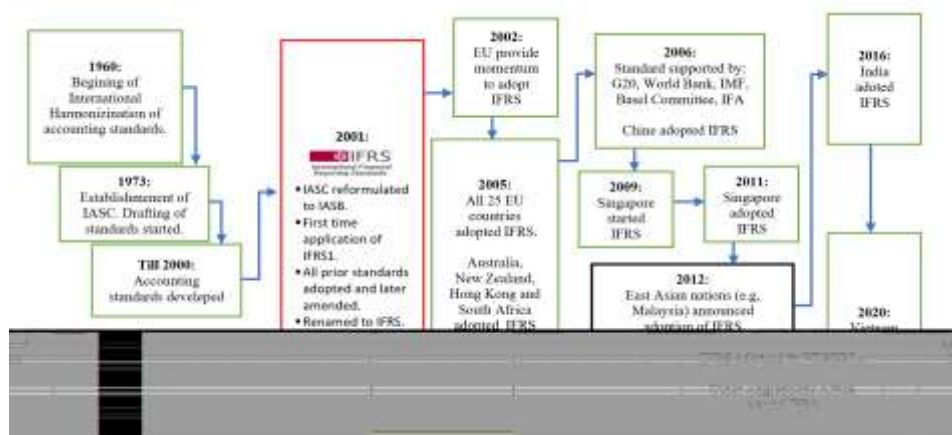
commenced in 2012, and because time-lag are allowed to elapse for impacts of a regulation to materialise, the aim becomes handy to explore at this time.

The findings show that marginal increase was perceived for assets turnover and return on assets after adoption, but the corresponding tests are unable to offer sufficient evidence to identify the improvement as significant. The results suppose significant decline in the return on equity of firms. More so, the change in the variability of the financial indicators is significant due to IFRS-adoption. The findings have serious implications for the regulatory bodies and capital market in Nigeria. The result can serve as reference to investors seeking opportunities for guaranteed profitability of their capital and investment, due to the implementation and compliance with IFRS adoption in Nigeria. Regulators should monitor and ensure adequate compliance to the Standards as well as to encourage the use of IFRS to other non-listed companies in Nigeria. The rest of the study is structured such that, after the introduction, Section 2 reviews the IFRS global timeliness and adoption in Nigeria. Section 3 presents the methodology, Section 4 reports the results and discusses the implications of the findings, and lastly, Section 5 is the conclusions.

## **2. IFRS: Global Timeliness and Adoption in Nigeria**

The beginning of International harmonization of accounting standards dates back to the 1960s. By 1973 about 16 professional accountancy bodies from Australia, Canada, France, Germany, Japan, Mexico, Netherlands, United Kingdom, and United States established the IASC with the purpose of issuing a globally accepted standard which was referred to as IAS. In 2001, the IASC was reformulated to form the IASB, which holds the responsibility of issuing the IFRS/Standards. The same period marks the first-time application of IFRS [IFRS 1] to serve as the Primary Basis of Accounting. By June 2003, the IASB restructured the content of IFRS 1 to accommodate first-time adoption requirements, following which the adoption of IFRS was endorsed to replace the SIC-8. The amendments involve change in some terminology contained throughout Standards (IFRS, 2023b). Since then, several introduced Standards have made amendments to IFRS 1.

By 2005, IFRS gain much popularity when the EU requires that all listed companies in its member countries to adopt IFRS in reporting their consolidated accounts with effect from January 1, 2005. The continuous improvement and development of IFRS has led to increasing interests from countries and multinational companies. This was fastened by increase globalization and the continuous demand for comparable, reliable and transparency of financial information due to experience of notable corporate scandals perpetuated in the U.S., which partly triggered the global financial crisis in 2008 (Adedokun et al., 2022). Figure 1 presents a Timeline on the development and adoption of the standard.



**Figure 1. Timeliness Towards the Development of IFRS and Global Adoption**

Source: Author (2023)

In Nigeria the adoption process for IFRS started in 2009 when the National Assembly push for the creation of the FRCN bill. By July 28 2010, the Federal Government appended the bill into law to support the adoption of IFRS to replace local standards. The Standards were phased based on the schedule (IFRS, 2023c) (a) January 2012 - for listed companies and other entities with substantial public interest in the adoption of IFRS Standards; (b) January 2013 - for other public enterprises, and (c) January 2014 - for SMEs, based on the adoption of IFRS for SMEs.

Before the adoption of IFRS, the regulatory framework in Nigeria was mainly the SEC Act, Companies and Allied Matters Act of 1990, BOFI Act of 2003 and Insurance Act of 2003. The local GAAP (N-GAAP) approved for the preparation of financial statement by the NASB is based on the SAS. The NASB was established and guided by the ASB Act of 2003 to enforce complain of firms to reporting standards stipulated in SAS. The quests for the adoption of IFRS becomes inevitable at that time because the SAS was at variance with IFRS, and incompatible with accounting regulations applicable in major international financial markets. The standard was not comprehensive enough to form benchmark for high-quality financial reports that can enhance the relevance of financial reports to attract huge institutional investment from global capital market (Impey, 2017). The quality of disclosure under N-GAAP was inadequate, and there the need for a framework that will boost investors' confidence by tightening regulations (Adedokun et al., 2022).

In lieu of the government proposal to migrate to from SAS (N-GAAP) to the IFRS, a new Act to replace the NASB Act of 2003 was established and the legislation changed the name of NASB to FRCN. FRCN maintains statutory authority to create financial reporting guidelines for all 'public interest entities', in Nigeria including quoted and unquoted companies own by private individuals, institutions, governments, and not-for-profit organizations that are mandated by the Nigerian law

to report returns with the constituted regulatory bodies. The FRCN Act, 2011 requires that the body monitors firm's compliance with any adopted standards issued by the IFAs and IASB. The migration to IFRS is accompanied with lots of challenges for the Nigerian companies, especially the domestic ones listed on the NGX. Because IFRS requires compliance to a unified framework that ensure comparability, reliable and transparent financial statement, convergence process requires funds for training, software and technological upgrades. The successful application of the standard's framework is expected to increase disclosure in the financial statements and allows firms greater access to foreign capital.

### **3. Methodology**

#### **3.1. Sample Design and Data**

Because the IFRS-based financial report was declared mandatory for listed companies in Nigeria in 2012, the study uses financial information from 2003 to 2020 to capture equal financial periods involving nine years of the prior-IFRS (2003-2011) and post-IFRS (2012-2020). The data are gathered from the NGX and annual published audited reports. Table 2 reports the breakdown of sample. The initial sample for the periods covered is 2,934, involving 163 companies that maintained their listing status through the coverage periods. A total of 38 firms, with 684 incomplete firm-year information for the considered indicators are eliminated, reducing the assembled sample to 125 firms for 2,250 firm-year.

To evaluate the hypotheses, two indicators of financial performance – productivity and profitability – are examined for each firm  $i$  in year  $t$ . The asset turnover (ATO) ratio is used as a proxy for productivity (Pal & Soriya, 2012), and it is computed as revenue divides total assets. To capture profitability of the firms, according to Kehelwalatenna and Herath (2019), the paper uses both the return on assets (ROA) and the return on equity (ROE). ROA, computed as the ratio of earnings before interests and tax scaled by the average assets, indicates the efficiency of using the firm assets to generate value. ROE, computed as net income scaled by average equity, identifies the percentage of value addition on firm investments. Because ATO is expressed in ratio, the paper uses ROA and ROE in ratio forms (Kehelwalatenna & Herath, 2019).

Table 2. Breakdown of Sample

<b>Panel A: Sample construction</b>	<b>#Firm</b>	<b>#Sample</b>	<b>%Distr.</b>
Initial sample	163	2,934	100.00%
Missing observations	38	684	23.31%
Included sample	125	2,250	76.69%
<b>Panel B: Reporting standard</b>	<b>#Firm</b>	<b>#Sample</b>	<b>%Distr.</b>
Prior-IFRS firm-year (2003 – 2011)	125	1,125	50.00%
Post-IFRS firm-year (2012 – 2020)	125	1,125	50.00%
Total	125	2,250	100.0%
<b>Panel C: Year-wise</b>	<b>#Nobs</b>	<b>#Listed</b>	<b>%Firms</b>
2003	125	200	62.50%
2004	125	207	60.39%
2005	125	216	57.87%
2006	125	202	61.88%
2007	125	213	58.69%
2008	125	215	58.14%
2009	125	214	58.41%
2010	125	216	57.87%
2011	125	196	63.78%
2012	125	190	65.79%
2013	125	188	66.49%
2014	125	188	66.49%
2015	125	183	68.31%
2016	125	169	73.96%
2017	125	163	76.69%
2018	125	164	76.22%
2019	125	180	69.44%
2020	125	177	70.62%

**Note:** #Firms – No. of firms in the sector; #Sample – No. of firm-year; %Distr. – percent of the associated group; %Firms –percent of firms used relative to number of listed firms on the NGX in the corresponding year.

Source: Author (2023)

### 3.2. Methods

The study extends procedure in prior studies (Kehelwalatenna & Herath, 2019) by employing univariate approach to test the hypotheses on the existence of significant differences in the mean, median and variance of the financial performance indicators (ATO, ROA and ROE) of prior-IFRS and post-IFRS sub samples. Kehelwalatenna and Herath (2019) use the analysis of variance (ANOVA) to test for significant deviations in mean of selected indicators. For the aim, this paper improves on Kehelwalatenna and Herath by using different tests in order to ensure robustness of the empirical results to guide policy formulations, regulations and the markets. The considered tests include the Satterthwaite-Welch t-test for the mean, Wilcoxon/Mann-Whitney for the median and single factor ANOVA-F-test for the

spread. For the robustness tests, the study repletes the test using the Welch F-test, Kruskal-Wallis and Siegel-Tukey, respectively, for the mean, median and variance of the specific indicators. In testing the means, the Welch t-test provides robust results than the student's t-test because it confirms type I error rates close to the nominal value for unequal variances under normality assumption. The test conjecture to verify the financial performance indicators under the hypotheses:

$H_0$ : The difference in the financial indicators (i.e., means, median or variance) between the two sub-samples equals to 0.

$H_1$ : The difference in the financial indicators (i.e., means, median or variance) between the two sub-samples do not equal 0.

Assume that  $x_{11}, x_{21}, \dots, x_{n1}$  and  $x_{12}, x_{22}, \dots, x_{n2}$  are two independent samples of financial indicators for the prior- and post- IFRS periods, which are drawn from two populations with expected values ( $\mu_q = E(x_q)$ ) and variance ( $\sigma_q^2 = Var(x_q)$ ). The sample counterparts of  $\mu_q$  and  $\sigma_q^2$  are computed as:

$$\bar{x}_q = n^{-1} \sum_{i=1}^{n_q} x_{q,i} \quad (1)$$

$$s_i^2 = (n_q - 1)^{-1} \sum_{i=1}^{n_q} (x_{q,i} - \bar{x})^2; \text{ for } q = 1,2 \quad (2)$$

Where  $\bar{x}_q [\bar{x}_1, \bar{x}_2]$  is mean vector. The test-statistic is computed as:

$$t_w = \bar{x}_1 - \bar{x}_2 / \sqrt{s_1^2/n_1 + s_2^2/n_2} \quad (3)$$

The test confirms the hypothesis that the sample means is equal for the prior and post-IFRS. The two-tail test is used to the Welch test corresponds with the null.

#### 4. Results

Before completing the considered statistical tests on the data to obtain empirical evidence verify the nulls, the paper summarises the basic statistical information as pre-test estimation to preview the snapshot of the samples. Table 3 displays the related statistics and correlation coefficients for prior-IFRS and post-IFRS periods. The computation is completed using the 1,125 observations for the prior-IFRS (2003–2011) and post-IFRS (2012–2020).

As per the basic statistics, Panel A (Table 3) reports that except for the return on equity, the average value of the other financial performance indicators of the considered firms increased after adoption IFRS. For instance, the return o assets, increase from average of 16% to 18%, an approximately of 12.5% due to the adoption. For all the indicators, the median level of the performance measures of firms increased following IFRS. This is an indication that most of the firms listed for Nigeria have consistently succeeded in yielding high productivity level. The standard



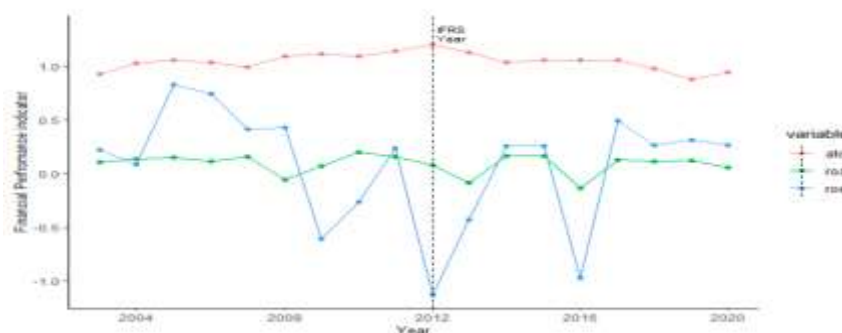
deviation level of performance indicates greater spread for the profitability measures (returns on assets and returns on equity) after the standard adoption, but less spread for the productivity measures after adopting IFRS.

Except for the mild decrease in the kurtosis value for the return on equity and decrease in the skewness for the return on assets, there is drastic increase in these indicators in the post- adoption period, supposing that the considered indicators are clustering around the mean value. The increase in the standard deviation of indicators values and the observed change in skewness coefficients related to the financial indicators in post-IFRS adoption are not surprising consistent with the mean change. Overall, some degrees of correlations are identified among performance indicators for the different reporting regime. Figure 1 depicts the movement in the performance indicators across time to support Table 3. Table 4 reports the hypotheses test results.

**Table 3. Statistics and Correlations for Performance Indicators**

Stat.	Panel A: Basic Statistics						Panel B: Correlations			
	AT O	RO A	RO E	RO E	RO E	RO E	AT O	RO A	RO E	RO E
$x_i$	Prior	Pos t	Prior	Post	Prior	Post	Post			
$med$	0.81	0.8	0.09	0.12	0.29	0.51				
$\mu$	1.06	1.2	0.16	0.18	0.23	0.14	1	<b>0.24</b>	<b>0.13</b>	AT
$\sigma$	1.01	0.9	0.85	1.23	3.69	6.85	Prio r	-	1	<b>0.04</b>
$\tilde{\mu}_3$	1.55	1.5	-	-	-	-	0.38	0.02	1	RO
$\tilde{\mu}_4$	5.87	6.5	5.05	18.53	7.97	5.19				A
		147.								RO
		0	8	391.1	42.6	40.7				E

**Note:**  $\mu \equiv$  mean  $z_{i,t}$ ;  $med \equiv$  Median for each of  $x_i$ ;  $\sigma \equiv$  Standard deviation,  $\tilde{\mu}_3 \equiv$  Skewness;  $\tilde{\mu}_4 \equiv$  Kurtosis. The values above the diagonal in Panel B are correlation coefficients for the post-IFRS, whereas those below is correlation for the prior-IFRS.



**Figure 1. Plots of Annual Mean Value for ATO, ROA and ROE**

Note: Consistent with Table 3, the plots show more spread in ROE relative to others which appear stable.

Source: Author (2023)

**Table 4. Hypotheses Tests**

	ATO	ROA	ROE
Mean ( $\mu$ )			
SW-t	0.408 (0.684)	1.430 (0.153)	2.889** (0.014)
Median ( $med$ )			
Wilcoxon	0.867 (0.386)	0.186 (0.852)	0.230 (0.818)
<sup>a</sup> Variance ( $\sigma^2$ )			
F-test	1.226* (0.001)	10.492* (0.000)	3.452* (0.000)

Note: *\*\** indicates significant difference in financial performance indicator between prior-IFRS and post-IFRS at the 1% (5%) level (two-sided). The figures in parathesis ‘( )’ are p-values. SW-t is Satterthwaite-Welch t-test for  $\mu$ , Wilcoxon/Mann-Whitney test for  $med$  and ANOVA-F-test for variance ( $\sigma^2$ ). <sup>a</sup> Test based on the square of standard deviation ( $\sigma$ ) for the indicators in Table 3.

Table 4 shows that the tests do not find sufficient group to identify statistical significance difference in mean values of the productivity measure (ATO), and the profitability measure (ROA) but establish significance at 5% level for the mean value of ROE. The finding is inconsistent with some previous studies (Silva & Couto, 2007; Latridis & Rouvolis, 2010; Shruti & Thenmozhi, 2023). Silva and Couto (2007) reveal existence of significant change in performance indicators of firm’s financial information before and after adopting IFRS. Latridis and Rouvolis (2010) show that amongst the Greek companies, financial performance improved after IFRS adoption. Shruti and Thenmozhi (2023) show that the active (passive) institutional investment has positive (negative) IFRS impacts on founder shareholding.

Based on the median, a significant difference in median values of all financial (ATO, ROA and ROE) do not holds, leaving us strong evidence to refute the null for the

median statistics for the three series. This supposes that the performance prior to and after the adoption of IFRS for the considered financial ratios is not generally evident. This is not surprising as the nulls for the variance or spread for all three financial (ATO, ROA and ROE) is significant similar to findings by Espinosa *et al.* (2015) and Cho, Kim *et al.* (2021). Espinosa *et al.* (2015) find that IFRS-adoption does not cause financial incentive or performance deterioration in Chile, but result in significant variations in performance. Cho, Kim *et al.* (2021) find that IFRS causes decline in performance variability, but improve market liquidity.

The test identifies that as per Table 2, the mean value for ATO and ROA performance indicators have not increased in the post-IFRS period, the perceived increase in ATO of 12.5% from the pre to post IFRS may be attributed to chance and passage of time and not due to the adoption. However, the 57% decrease in the average ROE between the two periods is significant, and cannot be not attributed to mere chance. Similar outcome has been reported in literature by Khaled and Khelif (2016), who reveal that market reactions due to the IFRS adoption cause a negative impact on financial performance in some developing countries. Overall, based on the mean,  $H_0$  is established in relation only for ATO and ROA, whilst  $H_1$  holds for ROA, for the listed firms in the NGX.

Other studies on whether IFRS-adoption impacts financial performance have noted different findings. The impact of IFRS adoption on firm performance vary depending on whether the country is developed, emerging and developing countries (Black & Maggina, 2016), as well as may vary across firms (Pascan & Turcus, 2012; Santos *et al.*, 2016). Pascan and Turcus (2012) confirm that the impacts of IFRS on financial performance vary from one company to another. Santos *et al.* (2016) examine how IFRS-adoption affects financial structure in emerging markets, and uncover that the impact of IFRS in firm's financial structure differ from each other.

Schipper (2005) show that the effects depend on different legal requirements, cultures, and financial systems, whereas Black and Maggina (2016) identify ownership structure, economic, socio-cultural factors as well as the governance and legal system affect the IFRS compliance (Black & Maggina, 2016). The effectiveness of an accounting framework depends on the institutional mechanisms available to implement and enforce the framework's regulations (Agyei-Boapeah *et al.*, 2020). The relative state of the capital markets, regulatory bodies, and the rule of law play major impact in the response. These countries have the capabilities to implement regulatory infrastructure that support market-oriented frameworks and influence performance (Agyei-Boapeah & Machokoto, 2018). Black and Maggina (2016) observe that IFRS does not improve the effectiveness of financial reports in Greek. Kabir and Su (2022) reveal that IFRS has not impact sales transactions but increase deferral of revenue recognition.

Because of unequal variance use for the computation of the Satterthwaite-Welch t-test for the mean as well as other known theoretical limitation for the Wilcoxon/Mann-Whitney for single factor ANOVA, which may affect the results of the mean tests based on the, the paper complies with convention in literature to complete a sensitivity check based on available alternative methodology. Table 5 reports the findings of the sensitivity checks. The initial findings of hypothesis testing for the primary analyses are maintained. No sufficient evidence to identify statistical significance in the difference in mean values for the prior- and post-IFRS samples of ATO and ROA, whilst the mean for ROE is significance at 5% level.

**Table 5. Robustness Check**

Test	ATO	ROA	ROE
Mean ( $\mu$ )			
Welch F-test	0.166 (0.684)	2.046 (0.153)	8.345 (0.014)**
Median ( <i>med</i> )			
Kruskal-Wallis	0.752 (0.386)	0.035 (0.852)	0.053 (0.818)
<sup>a</sup> Variance ( $\sigma^2$ )			
Siegel-Tukey	2.854 (0.004)*	2.823 (0.093)***	35.59 (0.000)*

Note: \* (\*\*) [\*\*\*] indicates significant difference in financial performance indicator between prior-IFRS and post-IFRS at the 1% (5%) [10%] level (two-sided). The figures in parenthesis ‘( )’ are p-values. Welch F-test for  $\mu$ , Wilcoxon/Mann-Whitney test for *med* and ANOVA-F-test for the variance ( $\sigma^2$ ).

a. Test based on the square of the standard deviation ( $\sigma$ ) for the indicators reported in Table 3.

The findings have serious implications for the capital market and regulatory bodies in Nigeria. As per the capital markets, there is no doubt that different company’s stakeholders based their decisions upon information reported on the financial statements. To provide transparent financial reports that will assist international investors to make optimal investment decision requires due diligence in accounting reporting. IFRS, therefore, offers a framework that ensures the information contained in financial statements is a true reflection of reported indicators computed to represent financial stance and performance of firms, the adequate representation and transparency can easily motivate opportunistic investors.

The framework is expected make multinational firms in the country enjoy benefit of access to inflow of funds and institutional investors from the global market. Creditors and investors require relevant, reliable and globally comparable financial information to understand the risks and returns of their impending investment (Impey, 2017). The ease of comparability of the IFRS reports make institutional investors to have confidence on the accuracy of the contents and financial

information of firms' performance publish according to the standard framework. As a result, it motivates the foreign and private in making informed financial investment decisions. Hence, the financial reporting regulations of the IFRS reflects higher performance for the in the stock market (Sato & Takeda, 2017; Kim & Ryu, 2018), as well as contributes to the advancement of stock markets in terms of easing entrance of more expertise and technology (Khaled & Khelif, 2016).

In addition, because regulatory bodies are saddled with the responsibility to enforce implementation and compliance to the standard procedure, the findings become handy for the regulators in making future decision and implementing appropriate measures, including the Financial Reporting Council in Nigeria. The regulators can effectively disseminate the content on how IFRS has influence the performance of firm to various stakeholders in order attract foreign investors. Because of the positive influence, the regulatory bodies may wish to extend the mandatory use of the IFRS to other small and medium scale business in the country to improve their accounting standards and practices. They need to educate these businesses about the benefits of financial statements documentation according to the IFRS framework.

## 5. Conclusion

IFRS is an international reporting framework that is met to be a global unifier to improve the effectiveness of financial reports information as well as enhance the comparability and transparency of financial statements in the global capital markets. The Nigerian Government officially orders quoted firms on the NGX to mandatorily set up financial reports through the IFRS pattern in 2012. There is evidence that change in accounting reporting framework may increase trade amongst multinational firms, stimulate capital inflow from global market and result in increase in financial performance of companies. Corresponding to the change from the N-GAAP to IFRS, the research examines whether available information in order to confirm that the change in the financial performance of Nigerian firms after adopting IFRS is evident.

The evidence of the firm financial performance identifies that the average value of the assets turnover and returns on assets have increased, while that of return on equity has decrease after adoption IFRS. For the aim, the study tests the hypotheses on likely existence of significant differences in the mean, median and variance of prior-IFRS and the post-IFRS sub samples of three financial performance indicators representing productivity (ATO) and profitability (ROA and ROE). The Satterthwaite-Welch t-test, Wilcoxon/Mann-Whitney t-test and ANOVA-F-test are applied for the mean, median and variance, respectively. According to the results, it is evident from the available data that there is no sufficient reason to claim significant improvement in both the assets turnover and return on assets. Although both increase

marginally after adoption but the increment is likely due to chance or passage of time, which is expected for such financial performance series due to erratic nature of financial markets. However, the evidence identifies a significant decline in sample companies return on equity. In addition, the change in the variability of the financial indicators is significant due to the transition to the IFRS. The change is greater for the return on equity relative to the other considered indicators.

The study has extended extant literature by investigating the mandatory adoption of the IFRS changes the financial performance of quoted firms in Nigeria. Notably, the reported evidence is affected by quality of data in financial reports available and may be sensitive to any adjustment (Black & Maggina, 2016; Kehelwalatenna & Herath, 2019). In addition, the paper is constrained by some known limitations. There is difficulty in obtaining complete information for the more recent post adoption financial performance indicators, thereby restricting the post adoption year to 2020. Also, the paper consider only issue on mandatory adoption, due to unavailability of reported information, and does not examine voluntary adoption, which some firms already engaged in during the convergence and harmonisation periods. In addition, only financial performance of firms is examined. Issue related to market performance and indicators as in Kehelwalatenna and Herath (2019) are completely not investigated due to unavailability of data. In the light of these limitations, future research may wish to consider interests to improve the study. The availability of data can be used to extend the study to capture the post-COVID 19 periods, and possibly examine the influence on financial performance due to the use of IFRS.

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## Appendix

**Table 1. Full Meaning of Acronyms Used**

Acronyms	Full meaning
ASB	Accounting Standard Board
BOFI	Banks and Other Financial Institutions
FRCN	Financial Reporting Council in Nigeria
GAAP	Generally Accepted Accounting Practices
IAS	International Accounting Standard
IASB	International Accounting Standard Board
IASC	International Accounting Standards Committee
IFAs	International Federation of Accountants
IFRS	International Financial Reporting Standards
NASB	Nigerian Accounting Standards Board
N-GAAP	Nigerian GAAP
NGX	Nigerian Exchange Group
SAS	Statement of Accounting Standards
SEC	Securities and Exchange Commission
SIC	Standard Interpretations Committee
SMEs	Small and Medium Scale Enterprises

*Note: The SIC-8 is the First-Time Application of IASs as the Primary Basis of Accounting*