



Effect of International Financial Reporting Standards on the Financial Statements of Nigerian Banks

Yahaya, K. A., Fagbemi, T. O. and Oyeniya, K. K.

Department of Accounting, Faculty of Management Sciences, University of Ilorin

ABSTRACT

International Financial Reporting Standards (IFRS) has become the new dominant set of accounting standards; however, the transition to the new standard was fairly disruptive for users of financial statements. Comparability and trend analyses was impaired as the differences between IFRS and local Generally Accepted Accounting Principles (GAAP) impact figures presented in financial statements and lead to variances in financial ratios computed under the two regimes. This study examines the effect of IFRS adoption in Nigeria on financial statement figures and key financial ratios of Nigerian Banks that adopted IFRS. The study likewise seeks to identify the sources of differences in financial reporting experienced by Banks due to the changes in the regime. Secondary sources of data were used. Least Squares Regression analysis was used to test the hypotheses formulated. The finding revealed that there is a significant effect of the adoption of IFRS on the financial statement of banks in Nigeria. Based on these findings, It was recommended that those involved in the analysis of financial statements are advised to accord attention to the trend analysis when comparing pre-adoption data under NGAAP (Nigerian GAAP) with post-adoption data in IFRS. The comparison of financial ratios under both NGAAP and IFRS for the comparative year prior to IFRS adoption may be seen as a prudent first step prior to undertaking a trend analysis of a particular company. It may also be prudent to rely on cash flows to avoid the subjectivity inherent to accounting adjustments. Being aware of the higher volatility of accounting figures under IFRS and understanding the main categories of adjustments affecting accounting figures and ratios in IFRS may likewise be important.

Keywords- Banks, Financial Statements, IFRS, GAAP

INTRODUCTION

International Financial Reporting Standards (IFRS) is the new dominant set of accounting standards developed under a rigorous due diligence process and now used in more than 120 countries around the world, including Australia, Brazil, Canada, the European Union, South Africa, Nigeria and many others (Deloitte Touché Tohmastu, 2013).

Accounting theory argues that the purpose of financial reporting is essentially to reduce information asymmetry between corporate managers and parties contracting with their firm (Watts, 1977; Ball, 2001) and financial reporting reduces information asymmetry by disclosing relevant and timely information (e.g., Frankel and Li 2004). Because there is considerable variation in accounting quality and economic efficiency across countries, international accounting systems provide an interesting setting to examine the economic consequences of financial reporting. The comparison of pre-changeover Nigeria GAAP (NGAAP) to IFRS and the identification of differences between the two regimes is an important issue for users of financial statements. The paper is organized as follows; the introduction deals with the background to the study, objectives, research hypotheses and scope of the study; the literature review reviews the recent literature on the impact of IFRS adoption on financial statements of banks in Nigeria; it

discusses the theoretical differences between IFRS and NGAAP. The methodology of the analysis and the data sources are then described while the discussion of findings follows. The study concludes by highlighting the most salient aspects of our findings and providing practical recommendations for analysts and other users of financial statements. The main objective of the study is to examine the effect of IFRS adoption on financial statement of Banks in Nigeria. While the specific objectives are to;

- i. examine the role of IFRS for quality accounting information and;
- ii. identify the sources of differences in financial reporting experienced by companies due to the changes in the regime;

Research Hypothesis

H₀₁. IFRS plays no significant role in ensuring quality accounting information.

H₀₂. There is no significant relationship between IFRS and NGAAP

Scope of the Study.

This study focuses on the effect of IFRS adoption in Nigeria on financial statement and financial ratios. The study focused on selected Nigerian Banks financial statement for comparison of financial ratios under both NGAAP and IFRS for the comparative year prior to IFRS adoption and the restated figures after IFRS adoption. This includes 9 banks that are listed on the Nigerian Stock Exchange and the period 2012 was the basis for comparison.

Conceptual framework

IFRS are accounting rules (“standards”) issued by the International Accounting Standard Board (IASB), an independent organization based in London, UK. Before the inception of IASB, international standards described as International Accounting Standards (IAS) were issued by the IASB’s predecessor organization, the IASC, a body established in 1973 through an agreement made by professional accountancy bodies from Australia, Canada, France, Germany, Japan, Mexico, the Netherlands, the United Kingdom and Ireland, and the United States of America. In 1997 after nearly 25 years of achievement, IASC recognized that to continue to perform its role effectively, it must find a way to bring about convergence between national accounting standards and practices and high-quality global accounting standards. The new Standards setting body was renamed as International Accounting Standards Board (IASB) and since April 2001, it has been performing the rule-making function. Components of IASB structure contain- IASB, IASC Foundation, International Financial Reporting Interpretations Committee (IFRIC), previously Standing Interpretations Committee, SIC under IASC), Standards Advisory Council (SAC) and Working Groups. The IASB is better funded, better-staffed and more independent than its predecessor.

The Nigeria’s Federal Executive Council (FEC) gave approval for the convergence of Nigerian SAS with the IFRS from January 1, 2012. The adoption was organized such that all stakeholders use IFRS by January 2014. According to the IFRS adoption Roadmap Committee (2010), Public Listed Entities and Significant Public Interest Entities are expected to adopt the IFRS by January 2012. All Other Public Interest Entities are expected to mandatorily adopt the IFRS for statutory purposes by January 2013, and Small and Medium-sized Entities (SMEs) shall mandatorily adopt IFRS by January 2014. Nigerian listed entities were required to prepare their closing balances as at December 31, 2010 according to IFRS. The closing figures of December 31, 2010 will become the opening balances as at January 1, 2011 for IFRS based financial statements as at December 31, 2011. The opening balances for January 1, 2012 will be the first IFRS full financial statements prepared in accordance with the provision of IFRS as at December 31, 2012.

“It will be in the interest of the Nigerian economy for listed companies to adopt globally accepted, high quality accounting standards, by fully converging Nigerian National Accounting Standards with International Financial Reporting Standards (IFRS) over the earliest possible transition period, given the increasing globalization of capital markets”.IFRS Adoption Roadmap Committee, 2010: p.10

Theoretical differences between NGAAP and IFRS

The Nigerian Statement of Accounting Standards (SAS) or Nigerian GAAP, the UK GAAP and IFRS are in many ways different in terms of guidance and application of the standards, although, some of these standards are similar or comparable in certain areas. Most of the SAS under NGAAP are found to be similar to Financial Reporting Standards (FRS) and Statement of Standard Accounting Practice (SSAP) under UK-GAAP. This could be attributed to the strong inter relationships in terms of accounting education, business, finance, banking as well as the colonial relationship between the UK and Nigeria. The two sets of standards are considered as principle-based and subject to similar conceptual foundations (CICA, 2009). Most of the IASs issued by IASB have equivalent SASs issued by NASB. However certain standards issued by the NASB do not have equivalent IAS and vice versa. Certain elements of application diverge and a number of individual standards are fundamentally different. One major difference, that addresses investors’ needs, is the greater reliance of IFRS on fair value accounting (Blanchette and Desfleurs, 2011; Chua and Taylor, 2008). Another key difference lies in the conceptual framework underlying consolidation: in IFRS, non-controlling interests are considered as owners and presented inside equity, whereas in NGAAP they are reported outside of equity. Other instances where IAS where no equivalent SAS exist are framework for preparation of financial statements; IAS 14, Segment Reporting; IAS 18, Revenue; IAS 20, Accounting for Government Grants and Disclosure of Government Assistance; IAS 22, Business Combinations; IAS 23, Borrowing Costs; IAS 24, Related Party Disclosures; IAS 27, Consolidated Financial Statements and Accounting for Investment in Subsidiaries; IAS 32, IFRS 7, Financial Instruments: Disclosure And Presentation; IAS 39, Financial instruments: Recognition and Measurement, IAS 36 Impairment of Assets and IAS 41: Agriculture, despite agriculture being the second major source of income in Nigeria.

Fair Value orientation

The historical cost principle has long had a major influence on accounting measurement in Nigeria and elsewhere in the world. This principle states that the carrying value of various financial statement items does not change over time except for amortization or disposal. However, the option of measuring at fair value has been gradually introduced in accounting standards. Initially, fair value could be used instead of historical cost only when the market value of assets declined. In that case, assets are written down and losses-in-value (or impairment losses) recognized immediately in profit or loss. This accounting practice, extensively used worldwide, is based on the conservatism principle; it is applied to almost every asset of the balance sheet in NGAAP. In IFRS, the write-down of assets is also existent although with a different approach in the application and with a requirement to write-up when impairment losses are reversed.

Subsequently, the measurement of financial instruments at fair value in both directions (write-down and write-up) was introduced in accounting standards of several jurisdictions including Nigeria. This treatment (called “fair value accounting” or “mark-to-market”) entails the recognition of unrealized gains/losses. To avoid volatility of profit or loss in the income statement and to classify distinctly some unrealized gains/losses not deemed representative of regular business, a new concept of financial reporting was created: comprehensive income. According to this concept, a number of gains and losses, which are recognized after applying fair value accounting, bypass the income statement in a new category of accounting information called other comprehensive income (OCI). These unrealized gains and losses generally remain in OCI until they are realized. Meanwhile, the annual comprehensive income

incorporates two components: profit or loss from the income statement and the annual variation of OCI. In addition to financial instruments, IFRS allows several other items to be measured at fair value, some of which are optional whereas others are compulsory.

Non-controlling Interest

Non-controlling interest represents the share of consolidated subsidiaries that is not owned by or attributed to the parent company. In NGAAP, non-controlling interest is presented outside shareholders' equity in the consolidated balance sheet. Accordingly, it is treated similar to creditors and presented in liabilities, or alternatively presented in-between liabilities and equity. Under IFRS, non-controlling interest is treated differently – based on the entity theory. According to this theory, owners have a participating right or residual interest in a portion of the consolidated entity, and therefore non-controlling interest is presented within the shareholders' equity in the consolidated balance sheet. Furthermore, in NGAAP, the share of profit/loss attributable to non-controlling interest is treated as an expense/revenue within the consolidated income statement (as the interest expense on debts) while under IFRS, the share of profit/loss attributable to non-controlling interest is a capital attribution.

The difference between the treatment of non-controlling interest under NGAAP and IFRS has two major implications. First, the difference has a direct impact on the financial structure reported on the Statement of Financial Position, in particular on leverage ratios such as the debt-to-worth ratio. Second, the difference affects the bottom line reported in the income statement and several profitability ratios such as the return on assets and the net profit margin.

Other differences

Many other differences exist between NGAAP and IFRS apart from fair value orientation and non-controlling interest. Those include differences related to revenues, property, plant and equipment, intangibles, financial instruments, hedges, asset retirement obligations, employee future benefits, share-based compensation, leases, income tax, foreign currency translation, and strategic investments (CICA, 2009).

This study is based on a positive/inductive approach: differences in the application of standards are inferred through the examination of differences that transpire in actual financial statements of reporting Nigerian Banks. Variations in the application are possible due to the principle-based approach underlying both IFRS and NGAAP, as professional judgment plays a major role in the process of interpreting and applying principles. For example, the theoretical rationale for impairment write-down (i.e. conservatism) is similar in IFRS and NGAAP, however the criteria used for identifying situations that require such a write-down differ. Since the amount of impairment losses may be material in practice, the recognition versus non-recognition of impairment losses has the potential to significantly affect profit/loss reported in the income statement. This is why empirical evidence in the application of standards is necessary to assess the real impact of differences between IFRS and NGAAP. This holds true not only for differences considered to be fundamental (such as those related to fair value accounting and non-controlling interest), but also for those considered as accessory or minor from a theoretical point of view.

Empirical evidence

Few studies provide preliminary empirical evidence of differences between IFRS and NGAAP as they transpire in company's financial reporting. Blanchette, Racicot and Girard (2011) report a significantly higher variance of several ratios in IFRS compared to the same ratios in Canadian GAAP for a sample of companies that adopted IFRS before 2010 (i.e. early adopters). Interestingly, the report also finds that a

ratio based on cash flow figures does not show a significant difference, consistent with the idea that cash flows are generally not affected by variations in the application of accounting standards.

A study based on information published by Canadian real estate companies in 2011 confirms that IFRS adoption has created volatility in earnings and variability in key metrics (Salman and Shah, 2011). This study reports that real estate assets increase in IFRS with the use of current market values; and debt balances are likewise higher in IFRS. But since assets have generally increased more than liabilities under the new reporting regime, the impact of IFRS adoption manifests through a reduced level of the average debt-to-worth ratio. Furthermore, net earnings of real estate companies are higher on average in IFRS while no significant impact on cash flows is found.

METHODOLOGY

To capture the effects of IFRS adoption on financial statements, accounting figures are computed under IFRS and are compared, with accounting figures computed under NGAAP at the same date or period. IFRS 1 specifies the requirements for an entity that adopts and applies IFRS for the first time. This includes the requirement that an entity's first financial statements in IFRS include at least one year of comparative information restated to IFRS. This rule allows for the comparison of accounting figures in IFRS and NGAAP for the year prior to the transition to IFRS. As a result, the comparison between IFRS and NGAAP can be done using the original 2011 financial statements in NGAAP and the 2011 statements retrospectively adjusted to IFRS which are presented as part of financial statements published in 2012 (in cases when the shift to IFRS occurred in 2012).

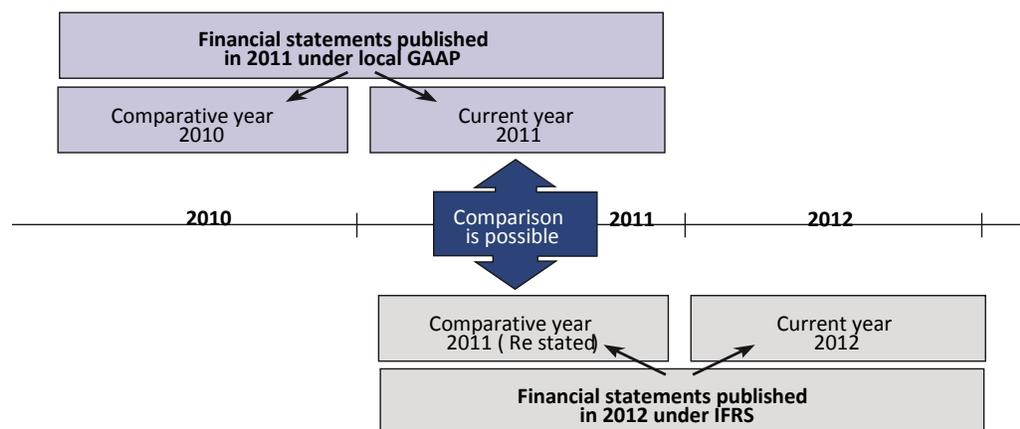


Figure 1: Comparability of Financial Statements in IFRS and Nigeria GAAP around Transition (assuming transition occurred in 2012).

IFRS 1 also requires an entity to explain how the transition from GAAP to IFRS affected the reported financial position, financial performance and cash flows. In practice, this is done in a transition note attached to financial statements which contains reconciliations and explanations. The present study uses these transition notes to identify differences between financial statements figures derived under NGAAP and IFRS.

Sample selection

The sample used in the analysis consists of 9 Banks that are listed on the Nigeria Stock Exchange and mandatorily adopted IFRS in 2012. To form the sample, Nigeria Banks listed on the Exchange are ranked based on their market capitalisation as of December 31, 2012. Within which 9 Banks were selected.

Table 2 provides details on the composition of the final sample. The other category of the banking sectors is excluded from the sample as they are not listed on the Nigeria Stock Exchange (NSE) Market.

Table 2: Sample Composition

Banking Sector	Number of Banks Operating in Nigeria	Weight of the Sector in Total Number of Banks	Number of Banks Included in the Sample
Commercial Banks:	14		
Banks Listed on the NSE	07	58.3%	9
Others	21	29.2%	
Merchant Banks	2	8.33%	0
Non-Interest Banks	1	4.17%	0
Total	24	100%	9

Source: CBN NIGERIA (2015)

The 9 largest Banks are identified using the following criteria:

1. The Bank mandatorily adopted IFRS in 2012.
2. 2012 financial statements in IFRS and 2011 financial statements in NGAAP were available on the Banks Website.
3. The Bank fiscal year-end is December 31st (or the closest to that date if unable to satisfactorily collect 9 Banks with a December 31st year-end).

Data collection

Annual audited financial statements were retrieved from Websites of each company in the sample: the financial statements in IFRS were retrieved for the year of transition to IFRS while those in NGAAP were retrieved for the prior year. The data collection followed a three-step process: first, IFRS figures which correspond to comparative figures presented for the year prior to the shift were collected from IFRS financial statements (i.e. Statement of financial position, income statement, statement of comprehensive income/loss, and statement of cash flows). Second, NGAAP figures were collected from original NGAAP statements (published in the year prior to the shift) for the same date and period. Third, the reconciliations and explanations provided in the transition notes to IFRS statements were used to further detail differences observed in the values collected through steps 1 and 2.

Research design

For systematic analysis of the data collected, the study made use of both descriptive and least-square regression. The descriptive study which is meant to afford the researchers the opportunity of systematic collection, presentation and analysis of data as well as information for the study; The least-square regression is also used to study the extent to which figures computed under IFRS are statistically explained by the corresponding figures derived under NGAAP.

Analysis of Differences

The distribution of differences between IFRS and NGAAP values is analysed for each financial statement figure by looking at the range of values (i.e. minimum and maximum differences) and the number of

observations within that range where differences are below and above zero. This analysis is done for each figure from financial statements.

To analyse the impact of IFRS adoption on financial statements, we first compare means, medians, and variances of selected accounting figures and financial ratios computed under IFRS and NGAAP. Equality of means, medians and variances are tested using t-tests, Wilcoxon/Mann-Whitney tests (tie-adjusted), and F-tests respectively. The study tests the following; Mean of IFRS values is equal to mean of NGAAP values

Median of IFRS values is equal to median of NGAAP values

Variance of IFRS values is equal to variance of NGAAP values

Regressions

The least-square regression is used to study the extent to which figures computed under IFRS are statistically explained by the corresponding figures derived under NGAAP.

The basic regression model is as follows:

$$\text{IFRS}_i = \text{intercept} + g \text{ NGAAP}_i + \varepsilon$$

Where:

- IFRS_i is the IFRS value for company “i” (as transpired in figures and ratios)
- NGAAP_i is the NGAAP value for company “i”
- “i” refers to ith company in the sample of 150 companies
- “g” is the coefficient of the variable NGAAP_i
- ε is the error term

This basic model reflects the correlation between IFRS and NGAAP values. If there were no differences between the two, then the intercept would be zero and the coefficient of the independent variable NGAAP would be 1, with a R² of 100%.

RESULTS AND DISCUSSION

Descriptive statistics

The general characteristics of financial statement figures and ratios tested are presented in Table 3. The size of companies in the sample varies considerably: total assets range from ₦737.9 Billion to ₦2.9 Trillion in IFRS (₦742.6 billion to ₦2.8 trillion in NGAAP) while net operating income range from ₦38 billion to ₦231 billion in IFRS and ₦48.2 billion to 259.2 billion in NGAAP. Total liabilities range from ₦591.8 billion to ₦2.5 trillion in IFRS (₦603 billion to ₦2.5 trillion in NGAAP) whereas the level of shareholders’ equity extends from ₦145.6 billion to ₦367.6 billion in IFRS (₦93 billion to ₦364 billion in NGAAP). Other company characteristics likewise present considerable range in values. Net profit/loss for the year varies from negative ₦13.7 billion to positive ₦18.6 billion in IFRS (negative ₦11 billion to positive ₦44.8 billion in NGAAP) while the figures for comprehensive income/loss extend from negative ₦16.94 billion to positive ₦18.6 billion in IFRS (negative ₦11.2 billion to positive ₦44.7 billion in NGAAP). Finally, net operating cash flow ranges from ₦11.4 billion to ₦120.5 billion in IFRS (₦92.8 billion to ₦660 billion in NGAAP). Overall, the range of values is larger in IFRS compared to that in NGAAP.

Table 3: Descriptive Statistics of Financial Statement Figures and Ratio

Panel A		IFRS							
	N	Mean	Median	Min	Max	SD	Skew	Kurt	Sum
FINANCIAL STATEMENT FIGURES		(₦'000)	(₦'000)	(₦'000)	(₦'000)	(₦'000)			
Total assets	9	1243539543	914265000	221157042	2860169000	829899454.4	0.819235178	0.278539579	11191855888
Total liabilities	9	1096710278	814159000	214888911	2491590000	729440149.6	0.799607205	0.036055933	9870392503
Non-controlling interest	7	4737998.571	2001217	224932	23054841	8169342.744	2.523146121	6.499335574	33165990
Shareholders' equity	9	124383944	97302000	169009	367615000	116995633.4	1.135643794	1.291846506	1119455496
Net operating income	9	90945450.67	93915895	13509644	230853000	66093379	1.132872697	1.585644224	818509056
Profit/Loss for the year	9	7977203	2584000	-13723787	51741620	19354722.11	1.545387706	3.023374522	71794827
Comprehensive income/loss	9	7996862	1848000	-16908737	51741620	19370004.38	1.471578266	3.217800562	71971758
Net operating cash flow	9	39401977.44	11442000	-45851000	124284288	66914831.73	0.169177391	-1.931258151	354617797
Financial ratios									
Debt ratio	9	0.993333333	0.99	0.98	1	0.007071068	-0.606091527	-0.285714286	8.94
ROA	9	0.000935556	0.00142	-0.0191	0.032	0.015902276	0.695090611	0.613094649	0.00842
Comprehensive ROA	9	0.002792222	0.0025	-0.02	0.032	0.015980394	0.159619013	0.557729313	0.02513
Net profit margin	9	0.039	0.069	-0.313	0.392	0.200282925	-0.088243556	0.847359493	0.351
Asset turnover	9	0.0731	0.0619	0.049	0.117	0.022414058	0.947031001	0.295976792	0.6579
Operating cash flow ratio	9	0.023111111	0.024	-0.144	0.13	0.089666667	-0.677363792	-0.043732762	0.208

Table 3: Descriptive Statistics of Financial Statement Figures and Ratios (Continued)

Panel B	N	NGAAP							
		Mean	Median	Min	Max	SD	Skew	Kurt	Sum
FINANCIAL STATEMENT FIGURES		(₦'000)	(₦'000)	(₦'000)	(₦'000)	(₦'000)			
Total assets	9	1247646586	927102000	222238550	2839373000	825993467.2	0.780555578	0.157404921	11228819271
Total liabilities	9	1096237135	815857000	215517487	2473888000	724158760.6	0.782803911	-0.012683694	9866134211
Non-controlling interest	7	1210285.571	964000	-879093	3572000	1560278.412	0.268447161	-0.985050059	8471999
Shareholders' equity	9	147807903	138970000	6721063	364521000	107138799.5	0.869611829	1.134479146	1330271127
Net operating income	9	66241678.22	74396000	-155385491	259234000	110327728.9	-0.411685107	2.364923219	596175104
Profit/Loss for the year	9	11379592.56	5182000	-11254101	52653436	23095892.57	1.034884358	-0.108327154	102416333
Comprehensive income/loss	9	11379319.44	6686473	-11254101	52115554	23201387.3	1.005343133	-0.158527908	102413875
Net operating cash flow	9	129089623	92785900	-43926000	630191000	207648684.7	2.032724561	4.803585342	1161806607
Financial ratios									
Debt ratio	9	0.992222222	0.99	0.99	1	0.004409586	1.619847741	0.734693878	8.93
ROA	9	0.002144444	0.0056	-0.034	0.033	0.018990071	-0.445833541	1.043028784	0.0193
Comprehensive ROA	9	0.003255556	0.0091	-0.037	0.032	0.019886937	-0.893113268	1.323834315	0.0293
Net profit margin	9	0.0793	0.144	-0.41	0.016978745	0.212287447	-1.681745241	3.690310346	0.7137
Asset turnover	9	0.078444444	0.08	0.053	0.104	0.016978745	0.016162954	-1.10544583	0.706
Operating cash flow ratio	9	0.104788889	0.119	-0.079	0.3612	0.154041329	0.466938788	-0.806615251	0.9431

Financial ratios likewise show a wide range of values. The debt ratio ranges from 0.98 to 1.00 in IFRS (with a mean of 0.993 and a median of 0.99), and from 0.99 to 1 in NGAAP (with a mean of 0.992 and a median of 0.99). ROA in IFRS ranges from negative 1.6% to positive 69.5% (with a mean of 0.093% and a median of 0.142%) while ROA in NGAAP ranges from negative 3.4% to positive 3.3% (with a mean of 0.21 and a median of 0.142). The operating cash flow ratio ranges from negative 0.144 to positive 0.13 in IFRS with a mean of 0.0231 and a median of 0.024; this is compared to a range of negative 0.079 to positive 0.361 in NGAAP, with a mean of 0.104 and a median of 0.119. Finally the net profit margin in IFRS and NGAAP shows somewhat similar levels ranging from negative 0.313 and 0.41 respectively to positive 0.392 and 0.017, with means hovering around 0.039 for IFRS and median around 0.069 and 0.0793 for NGAAP mean and median of 0.144. It is however clear that the mean of net profit margin is not reliable for testing as a small denominator effect amplifies the statistics (for example, losses under the numerator divided by low sales under the denominator biases the ratio downward).

It should be noted that most of the data does not follow a normal distribution; there are large differences between means and medians; minimum and maximum values also differ noticeably in some cases; skewness and kurtosis are high. Therefore, minimum and maximum values of data as well as their variance in addition to parametrical and non-parametrical tests on means and medians are analyzed to account for the apparent non-normality.

CONCLUSION

Adoption of IFRS in Nigeria brings good and bad news. The overall good news is that the comparability of Nigerian financial statements internationally may improve since many other countries have already adopted IFRS. There are, however, a number of pitfalls lurking for financial analysts and other users of financial statements. In the short term, the outcome of trend analysis may be distorted as current IFRS statements are compared to pre-changeover NGAAP statements. In the longer term, it will be influenced by the application of IFRS which differs (to a larger or lesser extent) from that found in NGAAP. In this study, we provide insights on actual effects of IFRS adoption on Nigerian Banks. Using information from audited financial statements, the study compares accounting figures and financial ratios computed under IFRS and pre-changeover NGAAP for the same period for a sample of 9 banks listed on the NSE. Conclusions are formed at the three distinct levels; aggregate and micro/bank.

At the aggregate level, means and medians of financial statement figures and ratios are not statistically different under the two accounting regimes. For example, the median of debt ratio is 0.99 in IFRS and 0.99 in NGAAP; for the ROA it is 0.142% and 0.56% respectively; and for asset turnover it is 0.0619 and 0.08 respectively. There is only one accounting figure – net profit/loss weighted by total assets in NGAAP – for which the equality of medians is rejected and it is merely significant at the 10% level of confidence. These results are potentially reassuring as they imply that databases built from aggregated accounting information should generally be consistent in IFRS and NGAAP. However, the distribution of data around the central values of means and medians is important in several cases. For instance, the equality of variances in IFRS and NGAAP for total assets, current liabilities and total liabilities in the balance sheet is statistically rejected. This result reflects higher volatility of financial statement figures in IFRS compared to NGAAP and is consistent with prior research in Canada (Blanchette, Racicot and Girard, 2011; Salman and Shah, 2011).

The analysis of the range and magnitude of differences between values computed under IFRS and NGAAP finds that assets and liabilities tend to be higher in IFRS than in NGAAP; however, these differences are mostly offset in shareholders' equity. Sales or operating revenues are clearly reduced

under IFRS compared to NGAAP, but profit is higher and OCI adjustments are predominantly negative (losses). This is explained by differences in categories of accounting adjustments, particularly:

- Fair value accounting for investment property is ranked as a number one category that increases assets and profit in IFRS (consistent with IAS 40 that allows fair value accounting through profit);
- Consolidation and strategic investments ranks in the top-3 categories of adjustments that affect total assets, total liabilities, profit/loss and comprehensive income/loss. This category reduces profit in IFRS and has a two-sided impact (both decreasing and increasing) on total assets and total liabilities (consistent with variations in the scope of consolidation);
- The categories associated to financial instruments including derivatives and hedges rank in the top-4 categories that increase total assets and total liabilities (consistent with IAS 32 and IAS 39 governing the measurement and presentation of financial instruments);
- Pension and other employee benefits ranks as a number one category that decreases comprehensive income and is among the top-4 categories that increase liabilities (consistent with IAS 19 which allows adjustments of liabilities through OCI);
- Foreign currency translation is the second highest ranked category that decreases comprehensive income (consistent with IAS 21 allowing the recognition of foreign exchange gains/losses through OCI).
- Impairment and capitalization of property, plant and equipment are among the top-4 categories that increase profit (consistent with IAS 16 and IAS 36 which require these adjustments to be allocated through profit).

RECOMMENDATIONS

Those involved in the analysis of financial statements are advised to accord attention to the trend analysis when comparing pre-adoption data under NGAAP with post-adoption data in IFRS.

1. At the aggregate level, the analysis of medians and means of IFRS values is generally reliable when compared to the analysis of NGAAP values.
2. Analysts should be aware that the volatility of accounting figures in IFRS is generally higher than in NGAAP, *ceteris paribus*.
3. The comparison of financial ratios under both NGAAP and IFRS for the comparative year prior to IFRS adoption may be seen as a prudent first step prior to undertaking a trend analysis of a particular company. If differences are important, analysts may wish to become aware of the underlying reasons for the differences as they transpire from the transition note that accompanies the first IFRS statements.

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