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### COMPARING THE VALUE RELEVANCE OF SELECTED ACCOUNTING INFORMATION IN CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS: THE CASE OF NIGERIAN LISTED FINANCIAL SERVICE FIRMS

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#### ABSTRACT

In a company with a group structure, financial information is presented in two folds via consolidated and separate financial statements. The reporting of the similarly classified elements of financial statements arranged side by side in two columns carrying two different figures may be puzzling. Consequently, investors and other financial information users having two different figures available to them need to be guided as to which set(s) of information they need to make predictions and decisions. This study provides evidence about the comparative value relevance of accounting information for consolidated and separate financial statement of listed financial service firms in Nigeria. The study population is the entire listed financial services firms throughout the period of 2014-2018. Accounting information was represented by earnings per share, book value per share, dividend per share, and cash flow per share. These proxies were regressed against the market price per share. Data for accounting information were sourced from the annual reports of sampled firms and market prices from the Nigerian stock exchange factbook. A census sampling was used after a three-point filter was applied to the original population. The results show generally that both consolidated and separate accounting information is value relevant. However, consolidated accounting information is found to be more value relevant than separate accounting information. The study thus recommends the strengthening of firms' operations, re-evaluation of the dividend policy, and enhanced implementation of IFRS standards to enhance value relevant accounting information that will be useful to the shareholders in making informed decision and taking adequate actions.

**Keywords:** Accounting information, Value Relevance, Comparative Analysis, Consolidated Financial Statement, Separate Financial Statement.

## INTRODUCTION

Accounting involves the measurement, processing, and communication of financial information about entities. For accounting information to be useful, it must possess certain qualities: relevance, reliability, comparability, and consistency. Accounting makes more meaning if it is relevant to decision making and/or predictions. The relevance of financial information implies that it includes all information that is, or might very likely be, relevant to users' decisions. Value relevance examines the usefulness of accounting variables in valuing a company by comparing the variable(s) to market value or price (Soderlund, 2012). By this, investors are guided on the pricing of shares to make investment decisions (Vishnani & Shah, 2008). Value relevance is traditionally viewed in relation to accounting data as a synonym for high correlation with market data. In line with this, Holthausen and Watts (2001) view value relevance as an empirical relation between market value and accounting variables. According to Anandarajan and Hassan (2010), value relevance is the influence of specific financial statement information, such as reported earnings, to explain changes in equity values. It analyzes if an accounting variable reflects information used by investors when valuing the equity of a company, and it depicts the operation of relevance and reliability quality of financial report (Barth et al., 2001). In this paper, value relevance is viewed as the degree of responsiveness of change(s) in stock price to change(s) in accounting information available to the users of such information as presented in the financial statement of companies.

Accounting numbers related to decision making of investors include earnings per share (EPS), book value per share (BVPS), dividend per share (DPS), cash flow, and so on, as used in various research (Jabbari et al., 2013; Vijitha & Nimalathasan, 2014; Prihatni et al., 2018). EPS is arguably the most important single measure of an entity's performance that is essentially disclosed in published financial statements (Ijeoma, 2015). It assesses a company's current and previous performance at a glance. Book value of equity represents past performance and current earnings as an analytic of future performance. It is the total assets minus the total liabilities of a company, and it is used by investors to determine whether a stock price is undervalued or otherwise. If a business increases its BVPS, investors may view the stock as more valuable and thereby increase the share prices. Although the BVPS is usually different from the market price, it is an indication of what the shareholders will receive had the company been wound up on the date the accounts were published. DPS is the dividend paid during a period per share. The payment of dividend signal different things to different stakeholders and are paid for varying reasons: reward investors as return on investment (ROI), attract new investors – investing in the company at higher share prices and signal the confidence of the market in the firm's future profitability. The management of cash flow is essential to the success of every enterprise. To be more specific, cash flow must be considered to achieve survival, profitability, growth, creation of shareholder value, and the efficient use of corporate resources.

All the above-stated accounting information is presented in the financial statements (either consolidated or separate financial statements). According to IFRS 10 (2015), consolidated financial statements are the financial statements of a group in which the assets, liabilities, equity, income, expenses and cash flows of the parent and its subsidiaries are presented as those of a single economic entity. Consolidated financial statements (CFS) are the financial statements of a group (parent company and one or more legally distinct subsidiaries) presented as those of a single economic entity. CFS shall include all subsidiaries of the parent. Intra-group balances, transaction, income, and expenses shall be eliminated in full. CFS shall be prepared using uniform accounting policies for like transactions.

Also, according to IAS 27 (2011), separate financial statements (SFS) contain accounting and disclosure requirements for investments in subsidiaries, joint ventures, and associates when an entity prepares separate financial statements. SFSs are those presented by a parent (i.e., an investor with control of a subsidiary) or an investor with joint control of, or significant influence over, an investee, in which the investments are accounted for at cost or in accordance with IFRS 9 (Financial Instruments). SFSs are those presented in addition to CFS or in addition to financial statements in which investments in associates or joint ventures are accounted for using the equity method, other than exemptions where SFSs need not be appended to, or accompany, those statements.

While CFSs constitute the primary source of financial information regarding corporate affiliations, they should not be viewed as the only source of such information. Some parties, such as “minority/non-controlling” shareholders in a subsidiary and the outside creditors of a subsidiary, are primarily concerned with the separate financial reports of the subsidiary company. Thus, the need for separate financial statements of each individual subsidiary company is not necessarily be eliminated by the preparation of consolidated statements. Additionally, financial statement users whose primary interest is in the overall economic entity have found that consolidated statements do not always provide sufficient information for detailed analyses of operations. Consequently, CFSs may be supplemented by information on defined segments of the consolidated entity.

It is the practice and requirement of companies with group structure to prepare and present their financial statements as consolidated and separate financial statements to provide accounting information to investors and other stakeholders. In this type of company, information is available in two folds – from the consolidated financial statements (group accounts) and separate financial statements (parent or holding company accounts). The presentation of similarly classified elements of accounting information in the two statements carrying two different figures may be confusing - financial analysts and other investment advisors use financial statements to assess the prospects for companies that they consider for investment. They use various financial ratios and other techniques, together with other information, to make investment decisions.

The financial statements of an organization provide a snapshot of its performance, operations, and flow of funds, thereby giving insight into its financial strength. One essential feature of financial statements is its relevance for the purpose for which it is prepared which normally should reduce confusion and improve understandability, especially for the shareholders. But the group and separate financial statements present two different snapshots of the results of events from the group and company perspectives which may affect the view the analysts, advisors, and ultimately the investors have of a company’s image. There is a possibility that say, the group profits after tax are showing a positive value while its subsidiary is running at a great loss. The investors, therefore, will require information as to the value relevance of each set of these accounting numbers to make better-informed decisions.

Based on the above, this study examines the comparative value relevance of accounting information for consolidated and separate financial statement. To achieve this objective, the study makes an effort to test the following hypotheses:

- H<sub>01</sub>: There is no significant difference in value relevance of earnings per share for consolidated and separate financial statements of the financial sector of Nigeria.
- H<sub>02</sub>: There is no significant difference in value relevance of book per share for consolidated and separate financial statements of the financial sector of Nigeria.
- H<sub>03</sub>: There is no significant difference in value relevance of dividend per share for consolidated and separate financial statements of the financial sector of Nigeria.

H<sub>04</sub>: There is no significant difference in value relevance of cash flow per share for consolidated and separate financial statements of the financial sector of Nigeria.

## **THEORETICAL FRAMEWORK AND LITERATURE REVIEW**

### **Theoretical Framework**

The agency theory describes the relationship between an agent and his principal. In a public company, the shareholders are “the principal” while the managers (or the board of management) are “the agents”. The reward of the shareholdings (earnings/dividends) depends on managerial competence, strategic decisions, and dealings. Generally, shareholders of publicly traded companies have one important goal: maximization of profit, which is achievable by keeping all costs as low as possible. However, agency costs may affect the level at which this goal is achievable. After all, the augmentation of firms’ market value, earnings, and dividends depends on the talent of the managers to do their job effectively, which are influenced by optimal pay structures. However, because of the asymmetry in information between managers and shareholders, it is difficult for shareholders to effectively and efficiently confirm whether the decisions and actions taken by managers are devoid of sub-optimal behaviours to ensure the optimal benefit of both parties. Therefore, the only source of obtaining such information is the financial statements.

While the cases based on the agency theory focus on the existence of financial reports, the decision usefulness theory describes the advancement of a systematic and objective technique to assist standard setters in their selection of the best option of the measurements, presentations, and disclosures of accounting information. Thus, the best accounting standards are those providing the most useful information to users in their decision process. Decision usefulness is evaluated by the predictive ability of the accounting information. The more accurate users can predict economic and financial events using accounting information, the more useful this information is for them. This criterion should give standard-setters a handy tool in the choice of the best accounting measurements.

To decide in which firm they want to invest (or disinvest) their money, (prospective) capital providers should be able to rely on the published accounting information – published financial statement being a way of sending out signals to the outside world. The signalling theory can explain the relationship between information asymmetry and dividend and other accounting policies. Dividend payment or announcement serves as a signal for investors as it illustrates the company’s future prospects; changes in dividend payments affect the stock price response in the market. The company’s annual reports contain information that serves as signals required by investors as considerations in making decisions.

However, the degree of the responsiveness of changes in stock prices to changes in accounting information is dependent on the efficiency of the market. The market is efficient if security prices at any time fully reflect all available information to the level in which the profit made based on the information does not exceed the cost of acting on such information. The cost includes the price of acquiring the information and transaction fees. An efficient market reacts to financial statements in a sophisticated manner. It is not fooled when two companies use different accounting methods. Instead, it looks beyond the reported numbers and recognizes that the numbers are generated by different methods. A high degree of market efficiency implies that the market is strongly influenced by the decision of people who have considerable knowledge of accounting and business. In other words, an efficient market tends to be dominated by sophisticated rather than naïve users of financial statements.

## Review of Empirical Studies

Several studies have been carried out to determine the value relevance of accounting information, but the results are divergent. Some of these studies showed that accounting information is relevant for making investment decisions based on the share prices of companies studied (Adeyemo et al., 2017; Irsath et al., 2015), while others found irrelevance of accounting information (Shamki & Abdulrahman, 2011). The divergent results may be due to several issues in the research due to the differences in the economic conditions, the structure of the capital markets in various countries, sample size, and variable selection, among other things. Although some of these studies used data from the consolidated against the separate financial statements, Abad et al. (2000), Larran and Rees (1999), and Muller (2011) found consolidated statements to be more value relevant than unconsolidated financial statements. Other studies were on value relevance of IFRS based accounting information and found mixed results (Alkali & Lode, 2016; Bagudo, 2016; Bolibok, 2014; Kargin, 2013; Okafor et al., 2016); value relevance of interim and annual financial statements (Zulu et al., 2017) and also on comparative value relevance between listed Indonesian manufacturing industry and financial service firms (Prihatni et al., 2018).

In Nigeria, several studies have been carried out on value relevance of accounting information (Adetoso, 2016; Ijeoma, 2015), but to the best of our knowledge, there is no existing study in Nigeria that compares the value relevance of accounting information for consolidated and separate financial statements and by extension in the banking sector. Therefore, users of accounting information (especially investors) that have two different information through the consolidated financial statements and the separate financial statements require guidance on which statement of financial information to base decisions on in terms of relevance.

In addition, the banking sector, due to its size and contribution to the capital market and the economy at large, requires vitality, and its efficiency and effectiveness depend on the robustness of financial reporting useful for decision making. There is a need for the sector's existing and potential investors to be well aware of what is relevant to their (or intended) investments to be able to have an expectation from these companies based on the published accounting numbers. The financial service firms that present their financial information in both consolidated and separate financial statements (for a group) and have a large number of investors, therefore, have a greater necessity to understand all information needed adequately and reliably.

In view of the above, the paper examines the comparative value relevance of accounting information from consolidated and separate financial statements in listed financial service firms in Nigeria. This is done by evaluating the comparative value relevance of EPS, BVPS, DPS, and net cash flow from operating activities between consolidated and separate financial statements of these firms.

## METHODOLOGY

In testing the hypotheses, the modified Ohlson's (1995) price valuation model was used to capture dividend per share, and net cash flows from operations that affect value relevance of accounting information further. This research was based on the positivism paradigm. In this view, multiple regression and correlation research design are used. Furthermore, the study was based on panel data over a five-year period (2014-2018) for 25 firms – 125 firm-year observations. The relevant accounting numbers were obtained from annual reports and accounts and the market prices from the Nigerian Stock Exchange fact sheet.

Model 1: Group Financial Statement Data

$$MPPS_{it} = \beta_0 + \beta_1 BVPS_{(g)it} + \beta_2 EPS_{(g)it} + \beta_3 DPS_{(g)it} + \beta_4 CSFL_{(g)it} + \varepsilon_{(g)it} \quad (1)$$

Model 2: Separate Financial Statement Data

$$MPPS_{it} = \beta_0 + \beta_1 BVPS_{(s)it} + \beta_2 EPS_{(s)it} + \beta_3 DPS_{(s)it} + \beta_4 CSFL_{(s)it} + \varepsilon_{(s)it} \quad (2)$$

Table 1

*Definitions and Measurements of the Variables*

Variables	Measurement
MPPS	Market price per share measured as the price per share in the stock exchange
EPS	Earnings per share measured as profit after tax (PAT) divided by the number of ordinary shares outstanding.
BVPS	Book value of equity per share measured as total shareholders' equity divided by the number of ordinary shares outstanding.
DPS	Total dividend divided by the weighted average number of ordinary shares outstanding.
CSFL	Cash flow from operating activities measured as net cash flow from operating activities (excess of cash revenue over cash outlays from operating activities) divided by the number of outstanding shares.

## RESULTS AND DISCUSSION

This section focuses on the presentation, analysis, and interpretation of the STATA 13 results done on data collected over 2014 – 2018 for the sampled listed financial service firms in Nigeria. The overall aim is to examine the comparative value relevance of accounting information for consolidated and separate financial statement. The section begins with the preliminary analysis of the descriptive statistics and the Shapiro-Wilk test for normality. This is followed by the presentation and analysis of the correlation matrix, robustness test, fixed and random effect for both group and separate data, the test of hypotheses, discussion of findings and policy implications.

### Descriptive Statistics

This section focuses on the presentation and reporting of the results of the analysis of the descriptive statistics. Descriptive statistics are measures of central tendencies and measures of dispersions for sample data at a point or over a period of time.

Table 2  
*Descriptive Statistics for Group and Separate Data*

Variable		Obs.	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
MPPS	Overall	125	4.38	6.82	0.50	31.61	0.0000	0.0000
	Between	25		6.37	0.50	22.15		
	Within	5		2.69	-3.97	17.42		
BVPS <sub>g</sub>	Overall	125	4.91	5.86	0.00	22.44	0.0000	0.3117
	Between	25		5.83	0.002	17.99		
	Within	5		1.21	1.57	9.40		
BVPS <sub>s</sub>	Overall	125	4.35	5.18	0.00	19.63	0.0000	0.7776
	Between	25		5.17	0.002	16.48		
	Within	5		1.02	1.44	8.91		
EPS <sub>g</sub>	Overall	125	0.92	2.29	-0.30	23.19	0.0000	0.0000
	Between	25		1.45	-0.03	5.75		
	Within	5		1.80	-0.44	18.36		
EPS <sub>s</sub>	Overall	125	0.58	0.998	-0.31	4.31	0.0000	0.0007
	Between	25		0.93	-0.04	3.30		
	Within	5		0.39	-0.62	2.48		
DPS <sub>g</sub>	Overall	125	0.25	4.49	0.00	2.00	0.0000	0.0000
	Between	25		0.46	0.00	1.62		
	Within	5		0.17	-0.52	0.87		
DPS <sub>s</sub>	Overall	125	0.24	0.48	0.00	2.00	0.0000	0.0000
	Between	25		0.45	0.00	1.62		
	Within	5		0.18	-0.43	0.91		
CSFL <sub>g</sub>	Overall	125	161.3	1799.69	-14.36	20121.5	0.0000	0.0000
	Between	25	5	805.47	-4.94	4027.58		
	Within	5		1615.87	-3864.73	16255.26		
CSFL <sub>s</sub>	Overall	125	1.64	19.20	-15.53	210.50	0.0000	0.000
	Between	25		8.72	-5.73	42.75		
	Within	5		17.17	-41.01	169.38		

Table 2 shows the descriptive statistics for the dependent (MPPS [market price per share]) and independent (BVPS<sub>g</sub> [book value of equity per share for the group], EPS<sub>g</sub> [earnings per share for the group], DPS<sub>g</sub> [dividend per share for the group], and CSFL<sub>g</sub> [cash flow per share for the group]) and (BVPS<sub>s</sub> [book value of equity per share for the company], EPS<sub>s</sub> [earnings per share for the company], DPS<sub>s</sub> [dividend per share for the company], and CSFL<sub>s</sub> [cash flow per share for the company]) variables of listed financial service firms in Nigeria. A total of 125 observations were made for each of the study over five years of 2014-2018. The overall statistics were ordinary statistics based on 125 observations. The between statistics (cross-sectional specific) were calculated based on summary statistics of 25 entities regardless of time, while the within statistics (time-specific) were summary statistics of five years regardless of entities.

Based on 125 observations, MPPS has a mean ~~N~~4.38k with an overall standard deviation of ~~N~~6.82k, a minimum price of N0.50k, and a maximum of ~~N~~31.61k. This implies that, on average, a listed financial service firm has a unit of its shares valued at ~~N~~4.38k, and the deviation of share prices from the mean is by ~~N~~6.82k, suggesting a wide dispersion or variability of the prices from the average price of the sector since the standard deviation is higher than the mean. In addition, the wide dispersion can be seen from the range of ~~N~~31.11k between the minimum and maximum price of shares. The minimum prices of shares are generally from the insurance companies; this may be due to the low patronage of investors in these firms as compared to the investment in the banks – apparently by the number of outstanding shares and ultimately market capitalization. This is an indication that the prices of such companies have not been affected by relevant accounting information over time irrespective of the market forces and has since been on the minimum allowable price to trade for any stock (at its nominal value). Again, the maximum price indicates the highest price for which any listed financial service firm's share is traded in the stock market –

which probably is from the banking sector in addition to the fact that some firms have been in existence for a while now; gaining goodwill over time and also some firms were listed earlier than others thereby contributing to their market prices over time. Furthermore, the variability is made clearer by the significance of the skewness and kurtosis normality tests which showed that the market price data are not normally distributed at all levels.

BVPS<sub>g</sub> has a mean of ₦4.91k, and an overall standard deviation of ₦5.86k. The minimum BVPS is ₦0.00k and a maximum of ₦22.44k. This implies that, on average, a listed financial firm has a book value of equity per share of ₦4.91k, which is a measure of the safety level of each individual share after all debts are paid accordingly. Other things being equal, if a group decides to dissolve, the book value per share is the amount in naira the shareholders will get per share owned.

BVPS<sub>s</sub> has a mean of ₦4.35k, and an overall standard deviation of ₦5.18k. The minimum BVPS is ₦0.00k and a maximum of ₦19.63k. This implies that, on average, a listed financial firm has a book value of equity per share of ₦4.35k, which signifies the safety level of each individual share for the company after all debts are paid accordingly.

EPS for companies on average is 58k, a standard deviation is ₦1.00k, and a minimum loss on overall is 31k per share with maximum earnings of ₦4.31k. The overall average EPS<sub>s</sub> of 58k is about 13% of the average book value, meaning that earnings contributed to not more than 13% yearly on book values.

For the group DPS, the overall mean is ₦0.25k, indicating that, on average, a firm pays 25 kobo per share as a dividend to its shareholders yearly. A standard deviation of ₦4.49k shows high dispersion from the mean based on the dividend policy of all 25 firms for the period of study as some firms made no payments of dividends throughout the study period while the maximum paid is ₦2.00k.

For the company DPS, the overall mean is 24k, indicating that, on average, a firm pays 24 kobo per share as a dividend to its shareholders yearly. A standard deviation of ₦0.48k shows high dispersion from the mean based on the dividend policy of all 25 firms for the period of study as some firms made no payments of dividends throughout the study period while the maximum paid is ₦2.00k.

Finally, from Table 2, CSFL for the group has an overall mean of ₦161.35k, a standard deviation of ₦1,799.69k, a minimum of ₦14.36k, and a maximum of ₦20,121.50k. The net cash flow from operation per share is a measure of a company's financial strength. On average, a listed financial firm has ₦161.35k. However, the least a group may have a shortage of ₦14.36k, and the highest net cash flows from operations per share of any group is ₦20,121.50k. This large figure may be the result of high variability in size, age, the capital base of firms in the sub-sector under the financial service sector, the volume of transactions, customer base, branch network, service quality, and so on. This variability is evidenced by the deviation of ₦1,799.65k.

### **Correlation Matrix**

Table 3 presents the Spearman rank correlation matrix between the dependent (MPPS) and independent variables (BVPS, EPS, DPS, and CSFL). Its purpose is to establish whether there is any form of association between two variables when the variables are arranged in a ranked or ordered form. Correlation measures the association or inter-relations between two sets of ranked or ordered data. Correlation can vary from +1, perfect positive rank correlation, to -1, perfect negative rank correlation. A coefficient of zero or near zero generally indicates no correlation.



Table 3  
*Correlation Matrix for Group and Separate Data*

Variable	MPPS	BVPS <sub>g</sub>	EPS <sub>g</sub>	DPS <sub>g</sub>	CSFL <sub>g</sub>	BVPS <sub>s</sub>	EPS <sub>s</sub>	DPS <sub>s</sub>	CSFL <sub>s</sub>
MPPS	1.0000								
BVPS <sub>g</sub>	0.8043*	1.0000							
EPS <sub>g</sub>	0.8591*	0.7477	1.0000						
DPS <sub>g</sub>	0.6873*	0.5962*	0.6785*	1.0000					
CSFL <sub>g</sub>	0.1616	0.1711	0.2011*	0.0670	1.0000				
BVPS <sub>s</sub>	0.8059*	0.9815*	0.7503*	0.5951*	0.1461	1.0000			
EPS <sub>s</sub>	0.7568*	0.6471*	0.8991*	0.6018*	0.1246	0.6788*	1.0000		
DPS <sub>s</sub>	0.6089*	0.5379*	0.6096*	0.9415*	0.0026	0.5429*	0.5977*	1.0000	
CSFL <sub>s</sub>	0.0333	0.0055	0.0660	-0.0443	0.7268*	-0.0064	-0.0193	-0.0975	1.0000

Source: Extracted from STATA 13 output

\* Significant at 1% and \*\*Significant at 5%.

From Table 3, it can be seen that from the group data that BVPS and EPS have a positive and strong correlation with MPPS at 0.8043 and 0.8591, respectively, DPS is positive and moderately associated with MPPS at about 0.6873, and CSFL is positively but not strongly correlated with MPPS at about 0.1616. The implication of this is that all the independent variables move in the same direction as the dependent variable; as MPPS increases, all the independent variables increase and vice versa. Also, all these are significant at 5% with the exception of CSFL. This may be possible because the statement of financial position and the income statement are two main statements available to the stakeholders in the stock market that they base their decisions on. That is, the BVPS and EPS are proxies for these statements, and the DPS sends a great signal to the stakeholders, thereby affecting stock prices greatly.

Table 3 also shows the correlation between all independent variables. The association between EPS and DPS with BVPS is moderate at about 0.7477 and 0.5962, respectively, which is statistically significant at 5%. This is evident from the fact that the book value of equity per share reflects the original proceeds a company receives from issuing common shares, increased by earnings or decreased by losses, and decreased by dividends paid out.

The inter-relationship between CSFL<sub>g</sub> and BVPS<sub>g</sub> is weak and insignificant at 0.1711. This may be because BVPS<sub>g</sub> and CSFL<sub>g</sub> are not directly linked except via EPS<sub>g</sub>. Again, the association between DPS<sub>g</sub> and EPS<sub>g</sub> is moderate but significant with a correlation of 0.6785. This may be because dividends are paid out of earnings and represent a moderate portion of it. Also, CSFL<sub>g</sub> is about 20% significantly related to EPS<sub>g</sub> as operating cash flow is earnings excluding costs associated with long-term capital investments.

Lastly, CSFL<sub>g</sub> has a correlation of 0.0670 with DPS<sub>g</sub>. This may be because DPS<sub>g</sub> is paid out of cash flow for the year and will always reduce the net available cash flow.

From Table 3, it can be seen that from the company data BVPS<sub>s</sub> is positively and strongly associated with MPPS at 0.8059, EPS<sub>s</sub> and DPS<sub>s</sub> are moderately and positively correlated with MPPS at 0.7568 and 0.6059, respectively, and CSFL<sub>s</sub> is positively but very weakly correlated with MPPS at about 0.0333. The implication of this is that the paired variables move in the same directions; as one increase, the other also increases. All these are significant at 5% with the exception of CSFL<sub>s</sub>. This may be possible because the statement of financial position and the income statement are two main statements available to the stakeholders in the stock market that they base their decisions on.

That is, the  $BVPS_s$  and  $EPS_s$  are proxies for these statements, and the  $DPS_s$  sends a great signal to the stakeholders, thereby affecting stock prices greatly.

Table 3 also shows the correlation between all independent variables. The association between  $EPS_s$  and  $DPS_s$  with  $BVPS_s$  is moderate at about 0.6788 and 0.5429, respectively, which are statistically significant at 5%. This is evident from the fact that the book value of equity per share reflects the original proceeds a company receives from issuing common shares, increased by earnings or decreased by losses, and decreased by dividends paid out.

The inter-relationship between  $CSFL_s$  and  $BVPS_s$  is negative, weak, and insignificant at -0.0064. This may be because  $BVPS_s$  and  $CSFL_s$  are not directly linked except via  $EPS_s$ . Again, the association between  $DPS_s$  and  $EPS_s$  is moderate but significant at 0.5977. This may be because dividends are paid out of earnings and represent a moderate portion of it. Also, the significant correlation of  $CSFL_s$  is -0.0193 with  $EPS_s$ .

Lastly,  $CSFL_g$  has a correlation of -0.0975 with  $DPS_s$ . This may be because  $DPS_s$  is paid out of cash flow for the year and will always reduce the net available cash flow.

In comparison,  $BVPS_g$  is approximately 80% correlated with  $MPPS$ , while  $BVPS_s$  is higher at about 81%.  $EPS_g$  is 86% against the 76% for  $EPS_s$ ,  $DPS_g$  68% against 61% for  $DPS_s$ , and  $CSFL_g$  is about 16% against 3% for  $CSFL_s$ . This shows that for  $BVPS$ , the company figure is more correlated with  $MPPS$ , while for  $EPS$ ,  $DPS$ , and  $CSFL$  the group figure is more correlated with  $MPPS$ .

### **Robustness Tests**

This presents the results of the robustness tests conducted. The robustness tests include the multicollinearity test, heteroscedasticity test, and normality test of the error term.

#### **Multicollinearity Test**

This was conducted to check whether there is a correlation between the independent variables of the study. The Variance Inflator Factor (VIF) and the Tolerance Values estimated were used to test multicollinearity in the two regressions. The VIF and tolerance values were found to be consistently smaller than ten and one, respectively, for both models. This is made more evident by the mean VIF of 1.82 and 3.60 for both models, which is smaller than ten, indicating the absence of multicollinearity.

#### **Heteroscedasticity Test**

The results indicate chi-square values of 183.24 and 132.00 for both models. These values are significant at 1%, indicating the presence of heteroscedasticity in both regressions. This makes the interpretation of Ordinary Least Squares (OLS) not suitable because of this violation of the classical assumptions of OLS. However, to correct this, the robust standard error was estimated, and also normality test of error term was conducted.

#### **Normality of the Error Term (Kernel Density)**

Normality of the error term was conducted using the Kernel Density estimate. It was found that the residual of the error term shows some level of normality to the right for both regressions (See Appendix I).

### **Regression Analysis**

Table 4 shows the regression result of the dependent variable ( $MPPS$ ) and the independent variables of the study ( $EPS$ ,  $BVPS$ , and  $CSFL$ ). The presentation follows the analysis of the association and

impact between the independent and the dependent variable of the study and the cumulative analysis.

#### Group Financial Statement Model

$$MPPS_{it} = \beta_0 + \beta_1 BVPS_{(g)it} + \beta_2 EPS_{(g)it} + \beta_3 DPS_{(g)it} + \beta_4 CSFL_{(g)it} + \varepsilon_{(g)it} \quad (1)$$

#### Separate Financial Statement Model

$$MPPS_{it} = \beta_0 + \beta_1 BVPS_{(s)it} + \beta_2 EPS_{(s)it} + \beta_3 DPS_{(s)it} + \beta_4 CSFL_{(s)it} + \varepsilon_{(s)it} \quad (2)$$

Table 4

#### *Summary of Regression Result*

Variable	Coefficient		T-Values		p-Values	
	Group	Separate	Group	Separate	Group	Separate
Constant ( $\alpha$ )	4.7916	5.1242	5.40	5.30	0.000	0.000
BVPS	-0.6688	-0.7379	-3.53	-2.84	0.001	0.005
EPS	-0.2140	-0.0663	-1.82	-0.09	0.071	0.925
DPS	11.9436	10.4956	8.12	7.04	0.000	0.000
CSFL	0.0004	0.0148	2.73	1.06	0.007	0.291
R <sup>2</sup>					0.4252	0.3773
F-Stat.					17.75	14.54
F-Sig					0.0000	0.0000

Source: Extracted from STATA 13 output

The model is therefore stated as follows:

$$MPPS_{it} = 4.7916 - 0.6687BVPS_{git} - 0.2140EPS_{git} + 11.9436DPS_{git} + 0.0004CSFL_{git} + \varepsilon_{it}$$

Table 4 shows that R<sup>2</sup> is 0.4252 for the group, which is the coefficient of determination that shows that the proportion of the total variation in the dependent variable is explained by the independent variables jointly. That is, it signifies that 43% of the total variations in MPPS of listed financial service firms in Nigeria is the result of the value relevance of accounting information (includes BVPS, EPS, DPS, and CSFL). Also, the F-stat of 17.75 is significant at all levels, indicating that the model of the study is well fitted, and the independent variables are properly selected, combined, and used.

$$MPPS_{it} = 5.1242 - 0.7379BVPS_{sit} - 0.0663EPS_{sit} + 10.4956DPS_{sit} + 0.0148CSFL_{sit} + \varepsilon_{it}$$

Table 4 shows that R<sup>2</sup> is 0.3773 for the company, which is the coefficient of determination that shows that the proportion of the total variation in the dependent variable is explained by the independent variables jointly. That is, it signifies that 38% of the total variations in MPPS of listed financial service firms in Nigeria is the result of the value relevance of accounting information (includes BVPS, EPS, DPS, and CSFL). Also, the F-stat of 14.54 is significant at all levels, indicating that the model of the study is well fitted, and the independent variables are properly selected, combined, and used.

However, the R<sup>2</sup> of 0.4252 and 0.3773 for group and company, respectively, shows that the consolidated accounting information has more information content than the separate accounting information published in the annual reports of listed financial service firms in Nigeria since the

group information explains about 5% more, i.e., the variation in MPPS. This is further explained based on individual variables as in Table 4.

#### **Value Relevance of Earnings per Share**

Table 4 shows that  $EPS_g$  has a t-value of -1.82 and a beta value of -0.21. Both are significant at 10%. This signifies that  $EPS_g$  significantly affects the MPPS of the listed financial service firms in Nigeria. For every one naira increase in EPS, MPPS will reduce by about 21 kobo and vice versa. This is as expected because a negative EPS increase is expected to decrease MPPS.

The  $EPS_s$ , on the other hand, has a t-value of -0.09 and a beta value of -0.0663. Both are not significant at all levels. This signifies that  $EPS_s$  does not have a significant effect on the MPPS of the listed financial service firms in Nigeria. For every one naira increase in  $EPS_s$ , MPPS will reduce by about 7 kobo and vice versa. This is as expected because a negative EPS is expected to decrease MPPS. The p-value of 0.071 and 0.925 for group and company EPS provide evidence of rejecting the first null hypothesis that states that there is no significant difference in value relevance of earnings per share for consolidated and separate financial statements of the financial sector of Nigeria. However, the beta value of -0.21 and -0.07 for group and separate earnings per share show a significant difference.

#### **Value Relevance of Book Value per Share**

Table 4 shows that  $BVPS_g$  has a t-value of -3.53 and a beta value of -0.67. Both are significant at all levels. This signifies that  $BVPS_g$  significantly impacts the MPPS of the listed financial service firms in Nigeria. For every one naira increase in  $BVPS_g$ , MPPS will reduce by about 67 kobo and vice versa. This is as expected because a negative BVPS increase will decrease MPPS. The  $BVPS_s$ , on the other hand, has a t-value of -0.74 and a beta value of -2.84. Both are significant at all levels. This signifies that  $BVPS_s$  has a significant impact on the MPPS of listed financial service firms in Nigeria. For every one naira increase in  $BVPS_s$ , MPPS will reduce by about N2.84k and vice versa. This is as expected because a negative BVPS is expected to decrease MPPS. The p-value of 0.001 and 0.005 for group and company BVPS, respectively, are not significantly different as both values are significant at all levels. This provides evidence of failing to reject the second null hypothesis that states that there is no significant difference in value relevance of book value per share for consolidated and separate financial statements of listed financial service firms in Nigeria. Comparing the estimated coefficient of -0.67 (BVPS, Group) and -2.84 (BVPS, Separate), the company BVPS (i.e., separate) seems better than consolidate BVPS (i.e., Separate). However, by the level of significance (p-value), it is 0.001 (BVPS, Group) versus 0.005 (BVPS, Separate), it suggests that the consolidate BVPS is more value relevant than BVPS for the company.

#### **Value Relevance of Dividend per Share**

Table 4 shows that  $DPS_g$  has a t-value of 8.12 and a beta value of 11.94, both of which are significant at all levels. This signifies that  $DPS_g$  significantly affects the MPPS of listed financial service firms in Nigeria. For every one naira increase in DPS, MPPS will increase by about N12 and vice versa. This is as expected because with a non-zero DPS increase, MPPS is expected to increase. The  $DPS_s$ , on the other hand, has a t-value of 7.04 and a beta value of 10.50. Both are significant at all levels. This signifies that  $DPS_s$  does have a significant effect on the MPPS of listed financial service firms in Nigeria. For every one naira increase in  $DPS_s$ , MPPS will increase by about N10.50k and vice versa. This is as expected because as dividends are paid, MPPS is expected to increase. The p-value of 0.000 and 0.000 for group and company DPS provide evidence of failing to reject the third null hypothesis that states that there is no significant difference in value relevance of dividend per share for consolidated and separate financial statements of listed financial service in Nigeria. This is evident because in most groups, the amount of dividends paid in both

groups and separate cash flow statements is the same, and the dividend is based on the same shares. Although the respective coefficients of 11.93 and 10.50 are for group and separate statements, there is a slight difference in the effect of dividend on market prices where consolidated data have more information content.

#### **Value Relevance of Net Cash Flow from Operations**

Table 4 shows that  $CSFL_g$  has a t-value of 2.73 and a beta value of 0.0004, both of which are significant at all levels. This signifies that  $CSFL_g$  significantly affects the MPPS of listed financial service firms in Nigeria. For every ten naira increase in  $CSFL_g$ , MPPS will increase by about 4 kobo and vice versa.

The  $CSFL_s$ , on the other hand, has a t-value of 0.0148 and a beta value of 1.06, both of which are not significant at all levels. This signifies that  $CSFL_s$  does not have a significant effect on the MPPS of listed financial service firms in Nigeria. For every one naira increase in  $CSFL_s$ , MPPS will increase by about N1.06k and vice versa.

The p-value of 0.007 and 0.291 for group and company CSFL provide evidence of rejecting the fourth null hypothesis that states that there is no significant difference in value relevance of cash flow per share for consolidated and separate financial statements of listed financial service firms in Nigeria.

### **CONCLUSION AND RECOMMENDATIONS**

Based on the findings, the study concludes that earnings per share has a negative impact on share price because losses made by companies ordinarily will repel more investment opportunities than companies that consistently report profits. For the group also, there exists an inverse relationship between loss per share and share prices, which might be the result of the aggregation of earnings figures for all subsidiaries of a group leading to a group loss. Therefore, investors may not be willing to commit their investments in a group or company that makes losses, other things being equal, due to fear of liquidation and subsequent loss of their investments. This is because market price reflects the forces of demand and supply of shares where investors will only be demanding shares backed up by earnings, and probable future earnings and losses will normally reduce demand, thereby bringing down the market prices of the company(s) that make those losses.

Again, book value per share is negatively associated with share price for group and company, with the group effects being more significant. As the book value per share reflects the original proceeds a company receives from issuing common equity, it can be increased by earnings and decreased by losses and dividend paid out. It is the value that backs the shares issued for financing the firms' assets. When this shareholders' fund is low, there is a greater likelihood that existing investors may decide to withdraw their investments and the prospective investors go for better performing firms for investment.

Also, dividends per share paid to shareholders of listed financial service firms in Nigeria for group and company positively and significantly affect changes in market price per share and the net cash flow from operation per share of listed financial service firms in Nigeria for group and company data is significantly different but has a positive effect on the market price per share.

Overall, the study concludes that group accounting information has a greater effect on market price per share than separate accounting information.

In line with the findings of the study, it recommends that the management of listed financial service firms should strengthen their operations to enhance earnings and profitability to improve the value relevance of EPS for the group and companies under them.

Furthermore, more effort should be made to report book value close to the market values as the book value is supposed to reflect a fair representation of accounting figures based on IFRS, while dividend policy should be made such that it affects the shareholders' value positively as a dividend paid is the share of profit with the shareholders. An increase in dividend, therefore, pushes the stock price. Many investors hunt for the highest dividend-yielding stock, but the real value is in dividend increases because if a stock owned increases dividends faster than the rate of inflation, it means that the effect of owning an asset that produces a rising income stream could provide protection against inflation. In addition, the management of listed financial service firms should enhance its operations to improve its net cash flows from operations. Because operating cash flows per share measures only the value of the company's operations without considering other sources of cash flows, it better reflects the company's long-term core operations.

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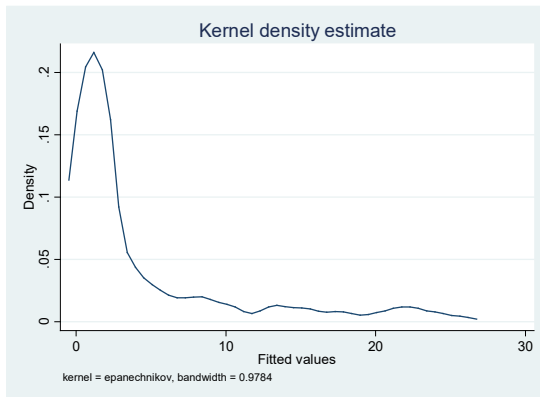
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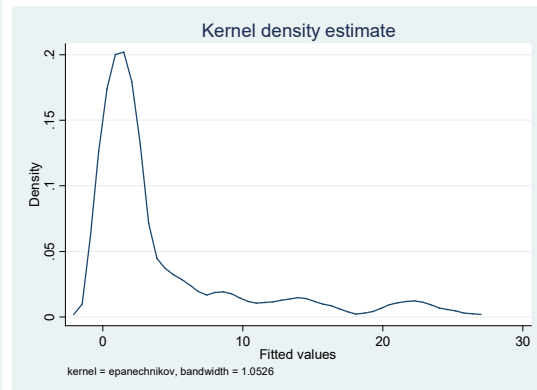
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# APPENDIX I: Normality Test for Equation 1 and 2 (Group and Separate Financial Statement Data)



Equation 1



Equation 2