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Value Relevance of Financial Accounting Information of Quoted Companies in Nigeria: A Trend Analysis

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Abstract
This research paper examines the value relevance of accounting information of quoted companies in Nigeria using a trend analysis. Secondary data were sourced from the Nigerian Stock Exchange Fact Book, Annual Financial Reports of Sixty six (66) quoted companies consisting of financial and non-financial firms in Nigeria and the Nigerian Stock Market annual data. The Ordinary Least Square (OLS) regression method was employed in the analysis. The study reveals that accounting information on quoted companies in Nigeria is value relevant. However, the study reveals further that the value relevance of accounting information does not follow a particular trend within the period under study. While the value relevance was weak in the periods of political crisis caused by military dictatorship (1992-1998) and global economic crisis (2005-2009), it was high in the other periods. Based on the finding that accounting information directly influences the value of securities in the capital market, it is therefore recommended that Accounting Standards should be complied with by Nigerian companies and that more standards that can curtail information overload should be introduced. As a result of the trend experienced between 1992 and 1998, the study also advocates stable political atmosphere in Nigeria.

Keywords: Value Relevance; Accounting Information; Book Value; Cash Flow; Financial Statement

1. Introduction

The major objective of this paper is to examine trends in the value relevance of financial accounting information of quoted companies in Nigeria. It is pertinent to mention that financial statements will only be used by investors when evaluating corporate stock if they provide useful information to them. Accounting information must possess two qualitative features: relevance and reliability; to be acceptable and useful to investors. Thus, accounting information, derivable from the financial statements, will not be useful if either of the two prominent characteristics totally fades out. Barth, Beaver and Landsman (2001) stated that studying the relevance and reliability of accounting information separately is difficult because these criteria are conflicting parameters and the amount of them are not determined in theoretical concepts of financial reporting. Given the nature and sign of components of accounting information, there is an increasing interest in the usefulness of accounting information by researchers and analysts.

A review of international reports published since 1970 examining the purpose of accounting information and content, indicates that the focus is on the needs of external users and the decision usefulness of accounting information. In the last decade, accounting literature has focused increasingly on examining the value relevance of accounting information. Collins, Maydew and Weiss (1997) asserted that the common belief that traditional financial statements have lost their relevance is adduced to the transition from industrialized economy to high-tech/service oriented economy. However, there are contradicting inferences on the direction of change in relevance and its source. Collins etal (1997) as well as Francis and Schipper (1999) demonstrated an increasing trend in value relevance. Lev and Zarowin (1999) and Core, Guay and Buskirk (2003) found evidence of declining value relevance of accounting information. This leaves the question of declining value relevance an empirical matter; demanding new empirical evidences from a setting different from previous studies such as an emerging market like Nigeria.

2. Literature Review

2.1 Investors and Accounting Information

Mainstream accounting research and standard setters agree that the investors are the primary reason for preparation of financial statements. Accounting reports are presented to enable investors make equity valuation for investment purposes (Akinoye, 2008). This work investigates the relations between market value and accounting numbers in the Nigerian Stock Exchange. That is identifying accounting numbers that capture the events impacting upon the firm as reflected by share prices.

There are a large number of models describing the relation between accounting numbers and market values, these models are referred to association models or association studies. The regression analysis in association models, use realized market information and realized accounting information for the purpose of evaluation accounting numbers Holthausen and Watts (2001) classify value relevance adopting association approach into three categories:

- Relative association studies which compare the association between stock market values (or change in values) and the alternative bottom-line measures. For example a study might examine if the association between an earnings number calculated under proposed standard and stock market values or returns (over long window) is stronger than that calculated under existing GAAP (Dhaliwal, Subramanyan and Trezevant, 1999). These studies usually test for differences in the R^2 or regressions using difference bottom line accounting numbers. The accounting number with the greater R^2 is judged as being more value relevant.

- Incremental association studies investigate whether the accounting number of interest is helpful in explaining values or returns (over long window) given other specified variables. The accounting number is typically evaluated to be valuable if its estimated coefficient is significantly different from zero. Venkatachalan (1996) examined the incremental association of fair values on a variety of an off balance sheet items.

- The third category is marginal information content studies which examine whether an accounting number adds to the information at the disposal of an investor. Event study methodology is the approach adopted by these studies to determine if the release of accounting information is associated with changes in value of security. Reactions of prices to such information are considered to be evidence of value relevance.

Association models employ a long return measurement period. This study employs association models instead of event study approach, which assesses the amount of news conveyed to the investors by the announcement of an event. A typical event study uses enumerated abnormal stock returns generated during, at most a few surrounding an event the number of days surrounding an event window. The strength of an event study is positively related to number of cross-sectional observations and negatively on the length of the event window. It is advisable in an event study to choose the shortest possible event window. Association studies differ in their treatment of and the use of types of accounting and market information. Some association studies specify relations between prices and accounting variables others between returns and accounting variables as earnings and book values. Employing association models necessitates answering two questions- which information should be included in the association model? And how should one treat the information?

The evaluation of strength of an association model depends upon the extent of association in the regression and their compactness. That is, the R^2 which is the proportion of variables in one variable that is explained by another variable and coefficient of accounting variables in the model. Association models are used for various purposes. One obvious use of it is for firm's valuation. When employed for valuation, they compete with models that also use information in financial statement but not accounting variables. In accounting research, association models are used for valuation purposes usually on an aggregate level. The use of accounting information in the context of valuation enables the assessment of relevance of accounting numbers for economic decision making.

The term value relevance is often used to evaluate accounting numbers; an accounting variables if it manifest high degree of association with a measure of market value (Dumontier and Ruffornier, 2002).

The value relevance of a particular accounting standard can also be evaluated, because we can assume that accounting standard do affect the quantum and presentation of accounting numbers (Amir, Harris and Venuti, 1993; Ayers 1998; and Cheng, Liu and Schaeffer 1996). In context of a specific accounting standard, the higher the association between accounting number deriving from it and a measure of market value, the higher the value relevance of that standard. This is of interest to policy makers and standard setters, in assessing the effect of changes in accounting standard, under local conditions.

The concept of value relevance refers to the strength of relationship between accounting variables and market value of equity of a firm. This is indicated by R^2 from regression analysis and the earnings response coefficient of each accounting variable in the equation. The regression result can be used to measure another important concept of financial information, its timeliness. Timeliness means having information available to decision makers before it loses its capacity to influence decisions the value relevance of financial information can also be affected by how timely that information is (Kothari and Sloan, 1992; Alford Jone, Leftwich and Zmijewiski, 1993; Colins et al 1997; Lev, 1999). The coefficient of regression of market value on accounting numbers, also indicates the timeliness of that accounting number.

Timeliness is also analogous to the concept of conservatism in accounting. Conservation implies that in financial reporting, it is preferable to be pessimistic (understate) than to be optimistic (overstate), since there is less chance of user being hurt by relying on prepared financial statements. It is defined by mainstream accounting research as the extent to which book values of equity are lower than market value of equity are lower than market value of equity (Amir et al, 1993; Pope, 1993; Pope, Walker and Sentiono 1996 and Feltham and Ohlson, 1999). There is a relationship between the concept of timeliness and that of conservation. The higher the timeliness of accounting information, the higher the association between market values and accounting numbers, hence decreased conservatism. Higher conservation is associated with low relevance and decreased timeliness of accounting information.

2.2 Review of Empirical Literature on Value Relevance

The relevance of accounting information is one of the most addressed issues in financial accounting research. It is motivated primarily by the need to provide empirical evidence as to whether users find accounting information relevance in equity valuation.

Chen et al (1999) provide empirical evidence as to perception of usefulness by domestic investors in the Chinese stock market of accounting information produced under Chinese GAAP using a sample of all firms listed in Shanghai and Shenzhen Stock Exchanges from 1991 to 1997. They obtained evidence of value relevance of accounting information in China based on a return and price model. They documented that accounting information is value relevant in the Chinese Market from either the pooled cross-section and time series regressions or the year by year regressions. They showed that the factors of positive versus negative earnings, firms size, earnings persistence and percentage of public holding impact on value relevance of accounting information.

Mingyi, (2000) compared the value relevance of book value and dividends versus book value and earnings. They justified the modelling price in terms of book value and dividends, using the Modigliani and Miller (1959) argument and they derived a model of price in terms of book value and dividends from basic analytical relationships. They reported three sets of findings. First is that book values and dividends have about the same explanatory power as book value and reported earnings. Dividends have greater explanatory power than earnings for firms with transitory earnings. When earning are transitory, book value is a poor indicator of value.

Babalyan (2001) focused on the relative explanatory power and earnings responses coefficient in regressions of reported accounting numbers on market returns of firms listed in the Swiss Stock Exchange, but preparing financial statements under different accounting regimes. He showed that earning numbers from International Accounting Standards (IAS) compliant firms are not more value relevant than earnings from firms reporting under Swiss standards, after controlling for firm size, foreign market listing, audit quality and sensitivity to some variable specifications. He also provided evidence that firms reporting under US GAAP provide more informative earnings numbers, though this result must be put in the context of the small sample of firms and high presence of US GAAP firms on foreign stock markets.

Gaston, Fernadez, Harne and Gadea (2003) employing a sample of 50 local firms listed on national stock markets during the period 1995-1999 in 36 countries, undertook a comparative study of relevance of earnings and their components. Their results showed that disaggregation of earnings into components parts of income statement provides the investors with incremental information regarding market value of companies. Their results are consistent with earlier studies providing evidence of value relevance of earnings for valuation purposes irrespective of the market analysed, though the potency of this differ between counties.

Wulandri and Rahman (2004) addressed the effect of three accounting institutional environment parameters, accounting standard quality, acceptability of accounting standards and enforceability of accounting standards on value relevance of accounting earnings. Using a sample from 35 countries, they found a positive association between value relevance of earnings and quality of accounting standards acceptability of standards and punitive enforcement of the standards. They also find that accounting institutional environment has a stronger positive association with value relevance of accounting earnings than legal environment. They also found that for code law and emerging market countries, the association between accounting institutional environment and value relevance is positive and stronger than that of common law developed countries.

Ndubizu and Sanchez (2004) examined the valuation properties of US GAAP and IAS in Chile and Peru. They used the accounting regimes to formulate contracts and to represents the contracts in the financial statement to minimize the likelihood of assessment noise. They found that US GAAP and IAS earnings and book value are value relevant in both countries. However, US GAAP as applied in Chile is more value relevant than IAS in Peru. They provide evidence of the superior value relevance of US GAAP over IAS in emerging countries.

Ragab and Omran (2006) examined empirically whether national and international investors in the Egyptian stock market perceive accounting information based on Egyptian Accounting standards to be useful in stock valuation. Using a sample all available listed firms in the emerging market data based from 1998 to 2002, evidence of value relevance of accounting information in Egypt was obtained based on both return and price models. They found that stock prices in Egypt are less information about the future value of the firm than accounting information. They suggested that competing information sources such as earnings forecast, firm research by financial analyst, management conference calls are far less relevant in Egypt than accounting information.

Mao (2006) demonstrated that measurement error bias is a major factor driving the results of previous studies of value relevance of earnings information decline over time. Using the variance of measure error in earnings change as proxy for unexpected earnings, and after controlling for impact of measurement error, trends of Earnings Responses Coefficient (ERC) and R^2 estimated using the latent variable model are not significantly different from zero. Mao provided explanation for the low magnitude of OLS ERC observed in previous studies by showing substantial measurement error in using either earnings change or analyst forecast to calculate unexpected earnings.

Ortega (2006) reinvestigated the changes in value relevance of earnings book values and cash flows in security prices over time. Employing data from 1961 to 2005 extracted from Compustat primary, secondary and tertiary full coverage and research annual industrial files. Firstly, he found that cash flow provides incremental information content beyond earnings and book values in security prices. Secondly, that combined value relevance of earnings, book value and cash flow has not declined over time. Thirdly, when firms have negative earnings and one time items, the value relevance of earnings shift to book values and cash flows.

Aleksanyan (2007) using data obtained from Excel Financial Company Analysis over the period 1988 to 2005, covering firms listed in the London stock Exchange found that firms that trade at a premium to book value relevance of two fundamental financial statement value driver- earnings and book value is negatively related to the level of sophistication of the firm's information environment, which is proxied by capitalized value of the firm. But for firms trading at a discount to book value, value relevance of the financial statement drivers is not affected by the level of sophistication of the information environment

3. Material and Method

First, the relationship between earnings and share prices will be analyzed. In its testable form, this relationship is written thus:

$$P_{jt} = \beta_o + \beta_1 E_{jt} + £_{jt} \quad (3.1)$$

Secondly, the relationship between book values and share prices will be analyzed:

$$P_{jt} = \beta_o + \beta_2 BV_{jt} + £_{jt} \quad (3.2)$$

Also, the relationship between dividends and share prices will be analyzed:

$$P_{jt} = \beta_o + \beta_3 DIV_{jt} + £_{jt} \quad (3.3)$$

Furthermore, the relationship between cash flow from operations and share prices is analyzed:

$$P_{jt} = \beta o + \beta_4 CFOPS_{jt} + £_{jt} \quad (3.4)$$

Finally, the relationship between combined earnings, book values, dividends, cash flow from operations and share prices is analyzed. The model is stated thus:

$$P_{jt} = \beta o + \beta_1 E_{jt} + \beta_2 BV_{jt} + \beta_3 DIV_{jt} + \beta_4 CF_{jt} + £_{jt} \quad (3.5)$$

Where:

P_{jt} = share price for firm j at the end of the third month of the year

E_{jt} = earnings before ordinary items per share for firm j at the end of year t

BV_{jt} = book value of equity per share for firm j at the end of year t

DIV_{jt} = dividends per share for firm j at the end of year t

CF_{jt} = cash flow from operations per share for firm j at the end of year t

β_o = the intercept

£ = error term (part of the share price which is not interpreted by the model)

4. Analysis and Results

The third objective of this research work is to examine the trend analysis of the value relevance of financial accounting information over the twenty year period of the study. This was achieved by estimating the cross-sectional linear regression analyses of models 3.1 to 5.5 to compute yearly R^2. This helped to depict whether value relevance has declined over time. Descriptive statistics of line graphs and bar diagrams were employed to show the trends. The results are as shown below:

Table 4.1: Trend Analysis of the Value Relevance

Year	R^2	Year	R^2
1990	0.82	2000	NA
1991	0.62	2001	0.43
1992	0.22	2002	0.53
1993	0.28	2003	0.42
1994	0.32	2004	0.26
1995	0.42	2005	0.50
1996	0.45	2006	0.36
1997	0.25	2007	0.33
1998	0.36	2008	0.38
1999	0.71	2009	0.28

Source: Authors' Computation Using E-Views Statistical Package.

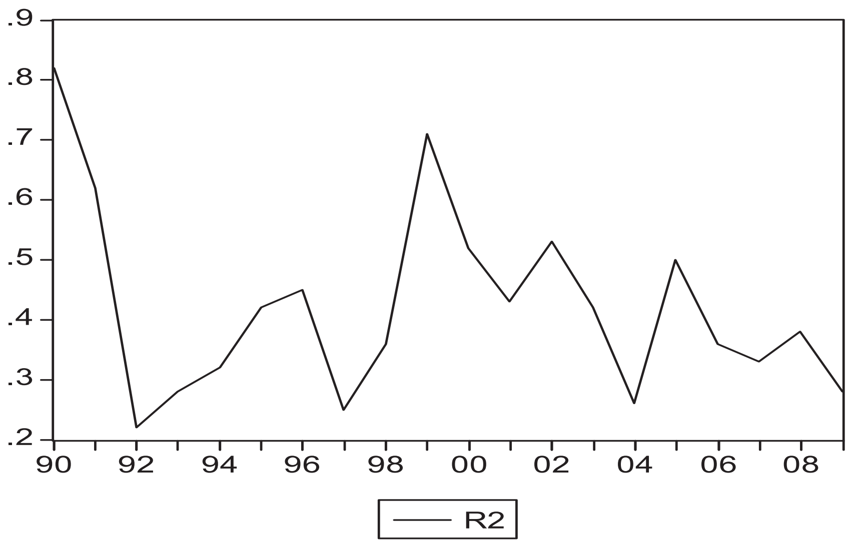

Fig. 4.2: A Line Graph showing the Trend Analysis of the Value Relevance
Source: Authors' Computation Using E-Views Statistical Package.

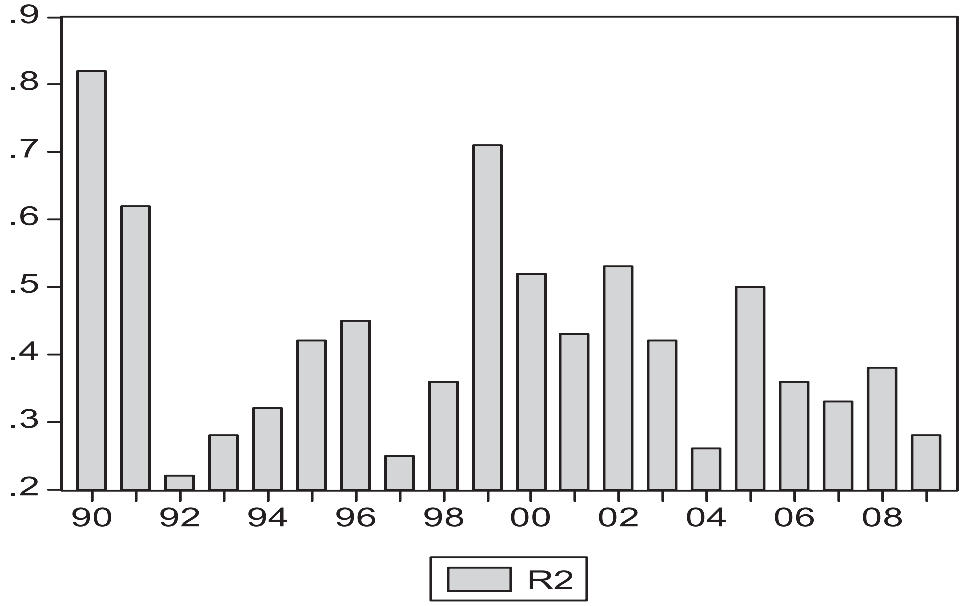

Fig. 4.3: A Bar Graph showing the Trend Analysis of the Value Relevance
Source: Authors' Computation Using E-Views Statistical Package.

From the above results it appears that value relevance of accounting information did not follow a particular trend within the period under study. However, value relevance of financial accounting information (R^2) was considerably low within the period between 1992 and 1998; and between 2004 and 2009. Between 1992 and 1998, there was political instability in the country. It was the period of military dictatorship that witnessed the annulment of June 12, 1993 presidential election. The economic sanctions from developed countries of the world would definitely affected the Nigerian stock market which in turn affected the value relevance of financial accounting information. 2004 to 2009 was a period just before and during the global economic melt down. There was a general and global stock market crash. The Nigerian stock market was not an exemption. The value relevance of financial accounting information during this period was also very low.

5. Conclusion

Based on the results from the analyses of this study, there is a significant positive relationship between each of the explanatory variables and share prices of companies listed on the Nigerian Stock Exchange. This implies that movement in accounting information on earnings, book value, dividends and cash flow from operation can be used to predict share price movement. However, findings reveal that value relevance of accounting information did not follow a particular trend within the period under study in Nigeria.

6. Recommendations

Considering the empirical findings of this research work vis-à-vis the objective of the exercise, it becomes obvious that despite the fact that financial accounting information in Nigeria does not follow a particular trend, it is highly value relevant to market values of quoted companies. It is therefore recommended that all quoted companies on the Nigerian Stock Exchange must as a matter of urgency comply with the preparation of Simplified Investor's Summary Accounts (SISA) with emphasis on accounting information on earnings, book value, dividends and cash flows aside the mandatory detailed financial statements. This will remove information over-load particularly for non-accountants and non-financial analysts. As a result of the trend experienced between 1992 and 1998, the study also advocates stable political atmosphere in Nigeria.

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