

# Value Relevance of Accounting Information in Emerging Stock Market: The Case of Nigeria

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*This paper investigates the value relevance of accounting data in the Nigerian Stock Market. The primary objective of the study is to determine if there is a relationship between accounting numbers and share prices in the Nigerian Stock Market. The value relevance of accounting data was measured by the correlation coefficient between stock prices and some accounting numbers. In an attempt to estimate the model, linear regression was used. While there has been a number of studies on this topic in the developed countries, at the time of this work, no extensive study in Nigeria, based on existing knowledge has explored the subject.*

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## INTRODUCTION

In the recent time, the value relevance of accounting information has been increasingly criticized by the stock market researchers in accounting. A number of literatures in the developed countries have created impression that accounting numbers have lost their value relevance (Dontoh, Radhakrishnan and Ronen, 2001; Ramesh and Thiagarajan, 1995). These criticisms were based on theory of life cycle stages, high-technology, fraud, rapidly changing business environment and increasing conservatism (Brown, Lo and Lys, 1999) among others. This belief also developed in response to claims of traditional financial statements losing relevance because of the move from an industrialized economy to a high-tech, service oriented economy (Collins, Maydew & Weiss, 1997). These notions were supported by past studies that investigated the association between accounting numbers and stock prices and showed that, in most cases, the association between accounting information and stock prices has been declining, over time (Lev and Zarowin, 1999; Francis and Schipper, 1999 and Core, Guay & Buskirk, 2003).

However, such views have met with stiff opposition with studies such as by Collins, Maydew and Weiss, (1997) asserting that the claims that accounting information has lost its value relevance are premature. Balachandran and Mohanram(2006) in a recent study of association between conservatism and the value relevance of accounting information, conclude that there is no evidence that industries with increasing conservatism see a greater decline in value relevance than industries with decreasing conservatism. Furthermore, Callao, Cuellar and Jarne (2006) perform a comparative analysis of the value relevance of reported earnings and their components. Their study provides evidence for the value relevance of net earnings figure. Gjerde, Knivsfla and Sættem(2007) find that the time trend of overall value-relevance has not declined after controlling for changes in underlying economic variables.

While there has been a number of studies on this topic in the developed countries especially United States and United Kingdom (Collins, Maydew and Weiss, (1997; Lev and Zarowin, 1999; Francis and Schipper, 1999), at the time of this work, we are not aware of any study that has explored the subject in Nigeria. It has not been comprehensively researched primarily because of problems with data availability. Therefore, the study fills gap in literature by investigating whether accounting information has the ability to capture or summarize information that affects equity value and know whether there is a relation between accounting numbers and share prices in the Nigerian Stock Market. This in turn should accelerate development of the Nigerian Stock Market.

This paper investigates the value relevance of accounting data in the Nigerian Stock Market. The main objective is to determine if there is a relationship between accounting numbers and share prices in the

Nigerian Stock Market. To realize this objective, the study focused on top 30 companies with highest earnings yield listed on Nigerian Stock Market over the year 2001 to 2004.

In the light of this, the rest of the paper is divided into four sections. The next section provides related literature on value relevance of accounting information and Nigerian stock market, while the third section presents the methodology and model specification. Thereafter we present and discuss the results and final section concludes.

## **LITERATURE REVIEW**

According to Meyer(2007) accounting plays a significant role within the concept of generating and communicating wealth of companies. Financial statements still remain the most important source of externally feasible information on companies. In spite of their widespread use and continuing advance, there is some concern that accounting practice has not kept pace with rapid economic and high-technology changes which in invariably affects the value relevance of accounting information.

The importance of Meyer's assertion is reinforced by massive accounting fraud in developed countries- especially US, rapidly changing business environment and reports by some researchers that value relevance of accounting information has declined(Lev and Zarowin, 1999and Francis and Schipper,1999). However, a number of researchers claim that accounting information has not lost its value relevance (Vieru, Perttunen and Schadewitz, 2005 and Collins, Maydew and Weiss, 1997).

According to Beaver (2002), value relevance research investigates the association between a security price dependent variable and a set of independent accounting variables. There are several approaches to this definitional explanation. Francis and Schipper (1999) and Nilsson(2003) define it from four perspectives: (a) *the predictive view of value relevance*-the accounting number is relevant if it can be used to predict future earnings, dividends, or future cash flows (b) *the information view of value relevance* – the value relevance is measured in terms of market reactions to new information (c) *fundamental analysis view of value relevance*-the accounting information is relevant in valuation if portfolios formed on the basis of accounting information are associated with abnormal returns and (d) *the measurement view of value relevance* –the financial statement is measured by its ability to capture or summarize information that affects equity value.

The studies on value relevance are broad and diverse. It is important to define the stricture of concept of value relevance for this study. Some researchers may regard ability of accounting information to summarize business transactions and other events(the measurement view of value relevance) as sufficient proof of value relevance of accounting data, others may place greater emphasis on earnings prediction (the prediction view of value relevance) or information content of accounting data(the information view of value relevance), and so on. Therefore, the approach developed by Ramesh and Thiagarajan, 1995 is used for this study to determine the value relevance of accounting data in Nigeria. This is ability of financial statement to capture or summarize information that affects equity value.

Germon and Meek (2001) believe that accounting exists because it satisfies a need - primarily a need for information. In order to be relevant accounting data must among others, be quick to respond to users' (particularly the investors) needs. Generally, investors are not in a situation to directly assess the performance of companies in which they intend to invest. They usually depend on financial reports prepared by the management of such organizations. Financial report is one of the best sources of accounting information about a company. Financial reporting is an essential part of disclosure and helps investor to discover investment opportunities. The primary purpose of financial statements is to provide information concerning the financial situation of the company, its operational results, any changes of control in the company and cash flow.

Hendricks, (1976) also asserts that the main reason for which accounting information is generated is to facilitate decision making. However, for financial reporting to be effective, among other requirements, it be relevant, complete and reliable. These qualitative characteristics require that the information must not be unfair nor has predisposition of favouring one party over the others. Accounting information should give a decision maker the capacity to predict future actions. It should also increase the knowledge of the users to identify similarities and differences in two type of information.

Therefore, reliable accounting information can be described as an essential pre-requisite for stock market growth. Based on the “engine of economic growth” potential of the stock market, developed nations do not toy with their Stock Markets and relevance of financial reporting. The reason US capital markets are very successful is simply because people are willing to invest more capital there since they receive higher quality financial information than is available in any other place in the world (Tuner, 2001). Germon and Meek (2001) state that those who have funds to invest or lend may decide where to place their resources based on the financial accounting information reports. They state further that importance of stock markets as a source of external finance is growing around the world and stock market development has become a top priority of many countries.

Several recent studies on value of accounting information for equity valuation, share price and earnings prediction have queried current financial reporting model in the developed world (Lev and Zarowin, 1999; Collins, Maydew and Weiss, 1997). The same issue can be raised in Nigeria about the value relevance of accounting numbers to investors. This assists the researcher to determine whether the result agrees or digresses from the previous studies.

## METHODOLOGY

### Model Specification

In order to give empirical support to this work an observation of the investors’ reactions to accounting information was carried out to establish correlation between accounting information and Stock market growth. Established on ideas of Hellstron (2005), Ohlson, (1995) and Edwards and Bell (1961), a model was adopted which used average price per share as the dependent variable.

$$P_t = a + b_7E_t + b_8Y_t + b_9R_t + e$$

Where  $P_t$  = average price per share,  $E_t$  = Earnings per Share,  $Y_t$  = Earnings Yield,  $R_t$  = Return on Equity,  $t$  = time dimension and  $e$  = error term

The simple to general modeling technique was adopted and 5 equations have been developed.

The Relationship between Share Price and Earnings Per Share

$$P_t = a + b_1E_t + e \quad (1)$$

$$b_1 > 0$$

The Relationship between Share Price and Return on Equity

$$P_t = a + b_2R_t + e \quad (2)$$

$$b_2 > 0$$

The Relationship between Share Price, Earning Per Share and Return on Equity

$$P_t = a + b_3E_t + b_4R_t + e \quad (\text{Variables as previously defined}). \quad (3)$$

$$b_3 > 0; b_4 > 0$$

The Relationship between Share Price, Earnings Yield and Return on Equity

$$P_t = a + b_5Y_t + b_6R_t + e \quad (4)$$

$$b_5 < 0; b_6 > 0$$

The Relationship between Share Price, Earnings Per Share, Earnings Yield and Return on Equity

$$P_t = a + b_7E_t + b_8Y_t + b_9R_t + e \quad (5)$$

$$b_7 > 0; b_8 < 0; b_9 > 0$$

**Estimation and data**

Linear regression was used as the estimation technique in determining the value relevance of accounting data. The study covers a period of 4 years from 2001 to 2004. The choice of this period is grounded on rapid growth in Nigerian Stock Markets at the time. The study made use of secondary data gathered from annual financial reports and the Nigerian Stock Market Annual. Our sample consists of companies listed on Nigerian Stock Market. The firms were selected based on the following criteria.

- i. The firms that did not report negative book value during the sample period;
- ii. The firms that have necessary financial statement data and
- iii. The 30 firms with highest earnings yield.

The sample of top thirty listed companies on Nigeria Stock Market with highest earnings yield 2001 to 2004 was selected. This resulted in a sample of 30 companies each year, based on PEARL Awards from 2003 to 2006 by The Nigerian Stock Market Annual Board.

Table 1. *Results and Data Analysis showing Relationship between the Variables*

**P<sub>t</sub> = Dependent**

1		Constant	E <sub>t</sub>	Y <sub>t</sub>	R <sub>t</sub>	R	R <sup>2</sup>	Ad R <sup>2</sup>	F
	2001	-.29 (.45)	4.26 <sup>a</sup> (11.16)			.904	.816	.810	124.52 <sup>a</sup>
	2002	-1.46 (-2.88)	7.14 <sup>a</sup> (32.00)			.987	.973	.972	1023.81 <sup>a</sup>
	2003	-.366 (-.875)	6.022 <sup>a</sup> (21.34)			.971	.942	.940	455.13 <sup>a</sup>
	2004	-.26 (-.72)	5.92 <sup>a</sup> (19.99)			.967	.935	.932	399.72 <sup>a</sup>
2									
	2001	.918 (.40)			.157 (1.78) <sub>b</sub>	.319	.102	.070	3.18
	2002	-5.64 (-1.43)			.58 <sup>a</sup> (3.92)	.595	.354	.331	15.37 <sup>a</sup>
	2003	4.42 (1.92)			.06 (.635)	.119	.014	-.021	.40
	2004	.97 (.49)			.18 <sup>a</sup> (2.19)	.382	.146	.116	4.80 <sup>a</sup>
3									
	2001	1.52 (1.564)	4.77 <sup>a</sup> (11.51)		-.10 <sup>a</sup> (-.36)	.921	.848	.837	75.25 <sup>a</sup>
	2002	-2.16 (-2.68)	6.97 <sup>a</sup> (25.65)		.04 (1.12)	.987	.975	.973	516.97 <sup>a</sup>
	2003	.176 (.30)	6.09 <sup>a</sup> (21.47)		-.03 (-1.30)	.972	.945	.941	234.05 <sup>a</sup>
	2004	-.15 (-.26)	5.96 <sup>a</sup> (18.06)		-.01 (-.28)	.967	.935	.930	193.30 <sup>a</sup>
4									
	2001	3.14 (1.18)		-1.15 (-1.59)	.226 <sup>a</sup> (2.35)	.422	.178	.117	2.93

	2002	-2.88 (-43)		-.11 (-51)	.56 <sup>a</sup> (3.63)	.600	.361	.313	7.61
	2003	8.49 (3.03)		-.26 <sup>a</sup> (2.26)	.14 (1.46)	.414	.171	.110	2.79
	2004	5.24 (1.74)		-.21 <sup>a</sup> (-1.84)	.181 <sup>a</sup> (2.31)	.491	.241	.189	4.29
5									
	2001	4.31 (7.69)	4.91 <sup>a</sup> (24.26)	-.18 <sup>a</sup> (-9.369)	-.02 (-1.06)	.982	.965	.961	240.63 <sup>a</sup>
	2002	.51 (.42)	6.96 <sup>a</sup> (28.63)	-.11 <sup>a</sup> (-2.77)	.02 (.675)	.990	.980	.978	432.22 <sup>a</sup>
	2003	1.43 (1.93)	5.88 <sup>a</sup> (21.5)	-.07 <sup>a</sup> (2.48)	.01 (.24)	.978	.956	.951	187.84 <sup>a</sup>
	2004	2.39 (3.65)	5.78 <sup>a</sup> (23.74)	-.121 <sup>a</sup> (-4.97)	-.001 (-.01)	.983	.967	.963	250.39 <sup>a</sup>

(t-statistics, provided in parentheses.) (a and b are significant at 5 and 10 percent)

Table1 Source : Results of SPSS Analysis.

## DISCUSSION OF RESULTS

Table 1 above reports the results obtained when the models were estimated.

In (1), it could be observed that the coefficients of  $E_t$  conform to the a priori expectations. Moreover, the R-squared and adjusted R- squared using the sample period of 2001 – 2004 are quite high. The R-squared (which is a coefficient of determinations) is 81.6%, 97.3%, 94.2% and 93.5% for 2001, 2002, 2003 and 2004 respectively.

This implies that the regressions have good fits. It also indicates that 81.6%, 97.3%, 94.2% and 93.5% variation in average stock prices are explained by earnings per share reported in 2001, 2002, 2003 and 2004 respectively. This agrees with the previous studies as discussed in the literature (Covill, 1998, Brow, 1994, cited in Deegan, 2004).

In (2), parameter of the estimated regression conforms to their a priori expectations but they are very weak, and even adjusted R- squared is negative in 2003. The R-squared is 10.2%, 35.4%, 1.4% and 14.6% in 2001 2002, 2003 and 2004 respectively. This may suggest that investors are not paying attention to return on equity of firms in their investment decisions. This is unlike earnings-per-share (EPS) that has become the single accounting number that is reported most often in media and receives by far the most attention by investors.

In (3), (4) and (5), R-squared and adjusted R- squared are positive. There is a significant positive relationship between stock market activities (proxied by share prices) and accounting information especially earnings for the period under review.

It should be noted that stock prices are influenced by other factors like speculation, forced sales, gambling and rumour. These factors have been held constant and do not form part of this paper.

## CONCLUSION AND RECOMMENDATION

The results show that there is relationship between accounting information has ability to capture or summarize information that affects equity value and there is relation between accounting numbers and share prices in the Nigerian Stock Market. This is demonstrated through the aggregate markets reaction to accounting numbers. Therefore, it can be inferred that sustainable development of the Nigerian stock

market can be boosted through reliable accounting information. Without confidence in accounting information, investors will not invest adequately in the Nigerian stock exchange.

The accounting preparers and standard setters should enhance the quality of earnings because it receives attention of most investors. In addition, policy makers should implement more stringent rules; backed up by legislations that will enhance value relevance of accounting information. This will compel diligence, accountability and responsibility in preparation and application of accounting standards. This in turn will increase investors' confidence in Nigerian stock market and by extension, economic growth.

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