

The Effect of International Financial Reporting Standards (IFRS) on the Relationship Between Accounting Information and Stock Prices on the Ghana Stock Exchange

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Abstract

This study sought to find the ability of accounting information to explain stock price movement on the Ghana Stock Exchange (GSE) and the effect International Financial Reporting Standards (IFRS) in explaining stock price movements. Two multiple regression models were used to ascertain how accounting information was relevant in explaining stock prices as well as to test whether the adoption of International Financial Reporting Standards (IFRS) has an effect on value relevance. Four single regression models were used to explain how accounting variables contribute to explaining stock price. The study regressed the stock prices on accounting data as well as annual interest rate to determine their relationship. In general the study found that accounting information, specifically earnings, Price to earnings ratio and Return on Equity was relevant in explaining stock price movements in both in pre-adoption IFRS and post-adoption IFRS periods in Ghana. The study also found that the adoption of IFRS did not have any effect on the ability of accounting information to explain stock price movements.

Keywords: Accounting information, Value relevance, IFRS.

1.0 INTRODUCTION

The literature defines value relevance as the ability of accounting data to summarize and capture information that affects the market values of companies. Contemporaneous stock prices of equity are used as the proxy for the value of a company for these value relevance studies. Value relevance research measures the usefulness of accounting information from the perspective of equity investors (Beisland 2009). Empirical studies into accounting information started with the pioneering work of Ball and Brown (1968). These studies help to explain and predict the relationship between accounting numbers and stock market values. The theoretical basis for these Capital Market research studies is premised on the theory Efficient Capital Market (EMH). According to ((Ross, Westerfield & Jordan, 2010) a capital market is said to be efficient when current prices fully reflect all available information.

1.1 BACKGROUND AND MOTIVATION

The road to global accounting standards began in 1973 when the first standard setting body, the International Accounting Standards Committee (IASC) was established. Initial efforts of the IASC were geared towards harmonisation (reducing differences among accounting principles in major capital markets. In the 1990s there was a move away from harmonisation to convergence (development of high international standards that would be useful in all capital markets. In 2001 the International Accounting Standards Board (IASB) was set up to take over from IASC as an independent international Standards setter.

In Ghana financial reporting is regulated by the Securities and Exchange Commission (SEC) of Ghana. The Ghana Stock Exchange (GSE) regulates listed entities under the Stock Exchange Act (1971) and the Listing Regulations (1990). Listed companies are required to comply with SEC (Ghana) financial reporting requirements, despite its inconsistencies with the requirements of the Companies Code and the Listing Regulations. The Listings Regulations give no requirements on which standards to follow in the preparation and audit of annual financial statements, which the Listings Regulations require to be published within six months of year-end (ROSC, 2004).

Ghana's accounting standards has been largely adopted (not adapted), from the international accounting standards issue in the mid-1990s. A World Bank report issued in 2004 found that Ghana's accounting standards was largely inadequate. As at the time of the World Bank Report in 2004 there was no organization in Ghana, including Institute of Chartered Accountants Ghana (ICAG) that issues implementation guidelines on either Ghana National Accounting Standards or the International Accounting Standards. The lack of detailed knowledge about international standards and the absence of implementation guidelines often lead to misunderstandings in implementing national standards (ROSC, 2004).

Following from the World Bank report, the then minister of finance, the late Kwadwo Baah –Wiredu announced that all listed companies should comply with IFRS effective January 1, 2007. However first time IFRS reporting date for all companies was extended to 2008 due to the companies' unpreparedness to migrate from the Ghana accounting standards to the IFRS.

Several studies have been conducted across developed economies to test whether adopting IFRS improves accounting information quality and hence its ability to explain the value of a company. For example Hung & Subramanym (2004) studied into financial statement effects of adopting International Accounting standards using the case of Germany. Paananen (2004) also investigated IFRS adoption effects on accounting quality in Sweden. Armstrong and Barth (2010) investigated market reaction to IFRS in the European Union. Iatridis (2010) also looked at IFRS and quality of financial statement information in the UK.

Most of these studies were conducted in a more developed capital markets and in countries that had well developed financial accounting reporting standards. Ghana's Capital market is quite different from the developed markets where most of these research works have been carried out. An assessment made by the international organisation for securities commission found that Ghana's capital market is too closed. Their assessment implies investors and capital market players do not have access to information. Bawumia, Owusu – Danso & McIntyr (2008) observed that Ghana's capital markets was illiquid and underdeveloped, only few household participated in trading activities and that trading is concentrated on only a few securities. Again Ghana's capital market is low in capitalization, Ghana stock exchange has enjoyed tax holidays yet total capitalisation of the stock market has not met the country's expectation (2012 budget statement, Page 55, paragraph 198).

Further to the above, even though several researchers have studied into the ability of accounting information to explain stock price movements to the best of the author's knowledge no substantive study has been done on the Ghanaian capital markets, also evidence of the effect of IFRS remains anecdotal. This is the first study to look at how accounting information explain stock price movements and how IFRS adoption in Ghana affect the ability of accounting information to explain stock price movements on the Ghana stock exchange.

2.0 LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Cost and Benefits of Global Standards

Ball (2005) notices that over the last decade, the world has witnessed a slow but steady march toward convergence of international accounting standards. Dozens of countries around the globe have already shifted to the International Financial Reporting Standards. According to Tarca (2012), the expected benefits of global accounting standards are compelling. The use of one set of high quality standards by companies throughout the world has the potential to improve the comparability and transparency of financial information and reduce financial statement preparation costs. Jermakowicz and Gornik-Tomaszewski (2006) suggest that IFRS adoption might enhance investments across borders and this can provide better investment opportunities, and increase transparency and comparability of reported information. Ball (2005) indicates that uniform accounting standard increases the quantity of capital in the economy and lowers the cost of capital; uniform accounting standards are better than diverse accounting standards when firm productivity and variation between investors is large, however uniform standards force diverse firms onto the same standard, which reduces welfare and also found that uniform accounting standard is worse when the cost of investment and variation between firms is large.

Ebimobowei (2012) asserts converging these (Accounting) standards reduces the differences in financial reporting practices between nations for comparability and interpretation in international financial statements. The author however notes that convergence of accounting standards does not make financial reports more reliable. Convergence would also have the effect of replacing a local monopoly (monopolies) standard-setting with a super-monopoly, which would be likely to amplify the usual monopoly inefficiencies that result in a lack of innovation and flexibility in the standards ultimately produced. Another related concern would be that the eventual standards produced by a global standard-setter would be product of political compromise, rather than the most optimal accounting outcome.

According to Price water house coopers (2009) global standards broaden the accessibility of cross border capital thereby increasing the competitiveness of the U.S. capital markets; and generate process and cost efficiencies for multinational companies.

2.2 Accounting Information and Company Value

Empirical studies into accounting information started with the pioneering work of Ball and Brown (1968). In 1968 Ball and Brown began the tradition of empirical capital market research in accounting that continues to this day. They were the first to provide convincing scientific evidence that firms' share return respond to the information content of financial statement (Scott, 2012). Chena, Chen & Su (2001) explored whether accounting information is value-relevant to domestic investors in the A-share market; whether the value-relevance of accounting information in China varies in a predictable manner with respect to factors that are likely to affect the degree of value relevance and whether value-relevance differs between companies issuing only A-shares and those issuing both A- and B-shares. Using a sample of all listed companies in both the Shanghai and Shenzhen Stock Exchanges and using a price and return models, the authors found that accounting information

as reflected in the income statement and the balance sheet is value-relevant to domestic investors in the Chinese stock market, that accounting earnings are less important in stock valuation when firms report negative earnings. Specifically their return model indicated that earnings level is value-relevant for companies reporting positive income, as is earnings change. The authors found that although accounting information is value relevant for all investors, investors perceive value-relevance to be higher for A-share companies than for AB-share companies. Perera & Thrikawala (2010) addresses the relevance of accounting information on investor's stock market decisions in Commercial Banks registered under Colombo Stock Exchange (CSE) in Sri Lanka. Based on their regression results from a price model the authors found that there is a relationship between Accounting Information and market price per share. Further it revealed that investors still consider Accounting Information which is contained in the published financial statements of Commercial Banks registered under CSE for the stock market decisions in Sri Lanka confirming value relevance of accounting information emerging markets. Soewarno and Utami (2010) examined 'the Significance of Accounting Information in Explaining Market and Books Values' using Indonesian Banks as a Case Study. Regressing Stock Prices (as proxy for market value) against the Banks' Accounting Information (Earnings, Risk and Cost Efficiency), they concluded that Earnings (had significantly positive influence on Stock Price) and Risk (contributed to market value) had some influence whereas cost efficiency had negative influence. The conclusion supported the view that accounting information is important in explaining the gap between market and book values. Chen & Zhang (2007) examined how accounting variables explain stock price movements. They found that accounting information in Tehran's stock Exchange is value relevant. They also found that the information value stipulated in profit and loss statement for investor is more value relevant and value relevance of accounting information has decreased gradually.

Glezakos, Kafouros, & Kafouros (2012) investigated impact of Accounting Information on Stock Prices on the Athens Stock Exchange (ASE) using earnings per share and book value per share as independent variable and stock price as independent variable for sample of 38 companies listed in the ASE selected for the period 1996 to 2008, the authors show evidence which suggest the joint explanatory power of the above parameters in the formation of stock prices increases over time. However, the impact of earnings is diminishing, compared to the book value, while investors strive towards analysing the fundamental parameters of businesses. Collins, Maydew & Weiss (1997) investigated specific changes in the value-relevance of earnings and book values over the past forty years using a sample from the period 1953-1993. The authors found that contrary to claims in the professional literature, the combined value-relevance of earnings and book values has not declined over the past forty years and, in fact, appears to have increased slightly. They also found that while the incremental value-relevance of 'bottom line' earnings has declined, it has been replaced by increasing value-relevance of book values. Francis and Schipper (1999) show a decline in the relevance of earnings information, and an increase in the relevance of balance sheet and book value information over the sample period contradicting the work of Collins, Maydew & Weiss (1997). Dontoh, Radhakrishnan & Ronen (2004) examined the declining value relevance of accounting information and non-information based (NIB) trading. The authors regressed stock prices on earnings and book values to obtain R^2 's. In contrast to Collins et al (1997) the authors found that R^2 's have declined over time. They also estimated the proxy for NIB trading activity on the joint trade volume on the movement of distribution analyst forecast revision. Their estimate of NIB trading increased over time. The researchers R^2 obtained by regressing stock prices on earnings and book values is negatively associated with NIB trading proxy suggesting that NIB trading increases result in the decline in accounting information providing evidence that explains why accounting information seem to have lost relevance. The foregoing the following leads to our first research question.

RQ1 Is accounting information presented in annual financial statement (Book value of equity, Earnings, Price to earnings ratio and Return on Equity) by companies listed on the Ghana Stock Exchange relevant in explaining stock price movements?

Subsequently the following hypothesis is developed

H1: Accounting information of companies listed on the Ghana Stock Exchange is not relevant in explaining stock Price movement.

3.0 THE INTRODUCTION OF IFRS AND ITS EFFECT ON RELEVANCE OF ACCOUNTING INFORMATION

From the year 2000 the International Accounting Standards were improved and established across the world. Therefore, the information offered to investors is now more accurate and enlightening than before (Glezakos, Kafouros & Kafouros, 2012) Hung & Subramanyam (2004) studied the financial statement effects of adopting International Accounting Standard in European countries with stakeholder-oriented accounting systems using the case of Germany. The researchers however found no evidence suggesting that IAS improves the relative value relevance of the summary measures, book value of equity and net income, either separately or in combination. Jermakowicz (2004) also investigated the Effects of adoption of International Financial Reporting Standards in Belgium. Using a questionnaire focused on measuring the impact, either perceived or that the IFRS has either

already had or will have on their company's internal organization and accounting and financial strategy for the finance officers of BEL-20 companies. The researcher found that BEL-20 companies believe that the implementation of IFRS will have a significant impact on their financial reporting as well as on internal organization and that adopting IFRS will allow for greater comparability of accounts with other listed companies since it results in a movement towards similarity in the choice between alternative accounting treatments. Jones & Higgins (2006) investigated Australia's switch to International Financial Reporting Standards from account preparer's perspective. The researchers reached the conclusion that indicates that IFRS will have their greatest reporting impact in areas where there are currently no existing Australian standards, most notably the recognition and measurement of financial instruments (IAS 39) and the financial reporting of intangible assets (IAS 38). Barth, Landsman & Lang (2007) was of the view that firms applying IAS from 21 countries generally show evidence of less earnings management, more timely loss recognition, and more value relevance of accounting amounts than do a matched sample of firms applying non-US domestic standards. Iatridis (2010) studied International Financial Reporting Standards and the quality of financial statement information in the UK. Using the binary logistic regression analysis and the OLS regression analysis and performing analysis for a year before adoption and a year after adoption the author found out that the implementation of IFRSs generally reinforces accounting quality. The findings show that the implementation of IFRSs reduces the scope for earnings management, is related to more timely loss recognition and leads to more value relevant accounting measures confirming the work of Barth, Landsman & Lang (2007). Karğın (2013) explored the impact of International Financial Reporting Standards' (IFRS) adoption on the relevance of book value and earnings for stock valuation in Istanbul Stock Exchange (ISE). Using the Ohlson model (1995), the results indicate that overall book value is value relevant in determining market value of stock prices and value relevance of accounting information has improved in the post-IFRS periods. Barth et al (2007) found an incrementally positive reaction for firms with lower quality pre-adoption information, which is more pronounced for banks, and with higher pre-adoption information asymmetry, consistent with investors expecting net information quality benefits from IFRS adoption. The authors also found incrementally negative reaction for firms domiciled in code law countries, consistent with investors' concerns over enforcement of IFRS in those countries. Finally, a positive reaction to IFRS adoption events for firms with high-quality pre-adoption information, consistent with investors expecting net convergence benefits from IFRS adoption.

The move towards global accounting standards in the early 2000 changed the research focus to the examination of how the IFRS can affect the quality of financial statement information and hence value relevance of accounting information. The researcher therefore posits the following research question and hypothesis.

RQ2: Does the adoption of IFRS in Ghana have an effect on the relevance of accounting information in explaining stock prices?

H2: The adoption of IFRS does not have any effect on ability of accounting information in explaining stock prices.

4.0 DATA AND METHODOLOGY

The study is based on secondary data. Stock prices and published accounts of companies were used. Daily closing prices of all listed companies were obtained from NDK Assets Management Research database as well as the Ghana Stock Exchange. The population of the study is all companies listed on the Ghana stock exchange. Given the number of listed companies on the Ghana stock Exchange a sample size was constructed based on the following criteria:

- i) All companies listed on the Ghana stock exchange between 2001 and 2012;
- ii) The firms that actually traded on the Ghana Stock Exchange during the period;
- iii) The relevant data are not missing;
- iv) All companies have December fiscal year ending;
- v) For the stock price data, the researcher have taken a three months lag to allow for the availability of accounting statements at the end of their accounting year (from 2001 to 2012). Therefore the stock price data used are that of first trading day of April the following year, from 2002 to 2013.

4.1 Valuation Model

To test for hypothesis one (1) a modified Ohlson (1995) model involving accounting variables and price of a stock is used as follows:

$$\ln P_{it} = \beta_1 + \beta_2 (\ln P/E_{it}) + \beta_3 (\ln ROE_{it}) + \beta_4 (\ln \text{Earn}_{it}) + \beta_5 (\ln INT_{it}) + \beta_6 (\ln BV_{it}) + \epsilon \dots (1)$$

Where

P_{it} = the price of a share of a firm i three months after the fiscal year end t;

Earn_{it} = the earnings per share of firm i during year t;

BV_{it} = book value per share of firm i in year t;

ROE_{it} = Return on Equity of firm i in year t;
 P/E_{it} = Price earnings ratio of firm i in year t;
 INT = annual interest rate;
 ln = natural log.

The above equation produces an R² which is the joint explanation power provided by all the variables together

To analyse the explanation power the variables separately a single regression equation involving the other variable will be performed as follows

$$\ln P = \alpha_1 + \alpha_2 (\ln \text{Earn}_{it}) \dots\dots\dots (2)$$

$$\ln P = \alpha_1 + \alpha_2 (\ln \text{BV}_{it}) \dots\dots\dots (3)$$

$$\ln P = \alpha_1 + \alpha_2 (\ln \text{ROE}_{it}) \dots\dots\dots (4)$$

$$\ln P = \alpha_1 + \alpha_2 (\ln \text{P/E}) \dots\dots\dots (5)$$

$$\ln P = \alpha_1 + \alpha_2 \ln(\text{INT}_{it}) \dots\dots\dots (6)$$

To analyse the effect of accounting standards a multiple regression equation with accounting standards as a dummy variable developed as follows

$$\ln P_{it} = \beta_1 + \beta_2 (\ln \text{P/E}_{it}) + \beta_3 (\ln \text{ROE}_{it}) + \beta_4 (\ln \text{Earn}_{it}) + \beta_5 (\ln \text{INT}_{it}) + \beta_6 \ln \text{BV}_{it} + \beta_7 \text{ACCSTD} + \epsilon \dots\dots (7)$$

Where ACCSTD refers to the accounting standards type Zero (0) for periods when GNAS applied and One (1) for periods when IFRS applied.

5.0 ANALYSIS AND INTERPRETATION OF DATA

5.1 Descriptive Analysis

The descriptive statistics of the variables used for the research is given below in Table I. The average Price of a share was GHS 2.20. The highest and lowest prices recorded were 52.20 and 0.001 respectively. Also, the mean Earnings and Book value are GHS 5,463,147.00 and GHS 83,486,272.00 respectively with the highest and lowest Earnings and Book value being 1.43 (8) and -1.39(9); and 9.76 (9) and GHS -158,046.10 respectively. For Return on Equity, Price-earnings ratio, Interest rates and Accounting standards 0.15, 12.61, 15.25 and 0.45 was recorded respectively as the average values of these variables.

TABLE I: DESCRIPTIVE STATISTICS WITH ACCOUNTING STANDARDS

	ROE	PRICE	PERATIO	INTRATE	EARN	BV	ACCSTD
Mean	0.150419	2.204245	12.61032	15.25382	5463147.	83486272	0.452899
Median	0.179232	0.360000	10.04700	14.32333	2480150.	13592140	0.000000
Maximum	0.635700	52.20000	159.7604	30.85417	1.43E+08	9.67E+09	1.000000
Minimum	-1.7295	0.006000	-46.22	8.885417	-1.39E+09	-158046	0.000000
Std. Dev.	0.266228	6.556012	18.27391	6.026248	86953955	5.93E+08	0.498681
Skewness	-2.38039	5.081812	2.739735	1.066843	-14.8504	15.47527	0.189247
Kurtosis	14.08874	31.63682	20.51167	3.471456	239.4227	249.9807	1.035815
Jarque-Bera	1674.689	10618.72	3871.856	54.91125	652945.2	712510.0	46.01475
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	41.51570	608.3715	3480.448	4210.054	1.51E+09	2.30E+10	125.0000
Sum Sq. Dev.	19.49127	11819.85	91832.36	9986.808	2.08E+18	9.66E+19	68.38768
Observations	276	276	276	276	276	276	276

5.2 Correlation Analysis

Due to the problem of multicollinearity among the variables used in the research, a correlation matrix of the

variables was performed. Among all the variables, Earnings and Book Value were negatively highly correlated at 91.44%. The rest of the variables were not correlated among each other. The results of the Correlation analysis can be seen in Table II below.

TABLE II: CORRELATION MATRIX

	ROE	PRICE	PERATIO	INTRATE	EARN	BV	ACCSTD
ROE	1						
PRICE	0.17529	1					
PERATIO	0.20303	0.11635	1.00000				
INTRATE	0.13936	0.03357	-0.15524	1.00000			
EPS	0.19627	-0.15057	-0.04286	0.06484	1.00000		
BVPS	-0.11949	0.27567	0.07490	-0.02745	-0.91436	1.00000	

5.3 Test Results for the Analysis of the Time-Series Properties on the variables.

From table II it can be seen that Price, Earnings, Book value and Price earnings ratio has ADF critical value which is less than t value at 1%, 5% and 10% which suggest that unit root does not exist and the data is therefore stationary. However, interest rate was insignificant at levels but was stationary at the first differential.

Table III: Summary of ADF Unit Root tests on Variables

Variables	ADF-Statistics	Critical Values at 1%	Critical Values at 5%	Critical Values at 10%	P-Value	Test Conclusion
LNPRICE	-13.06978	-3.453737	-2.871731	-2.572273	0	I(0)
LNEARN	-16.20838	-3.454263	-2.871961	-2.572396	0	I(0)
LNBV	-16.70516	-3.453737	-2.871731	-2.572273	0	I(0)
LNPERATIO	-16.90872	-3.453737	-2.871731	-2.572273	0	I(0)
LNINTRATE	-2.414216	-3.453737	-2.871731	-2.572273	0.1387	I(0)
LNROE	-16.14085	-3.453737	-2.871731	-2.572273	0	I(0)
D(LNINTRATE)	-16.59443	-3.453823	-2.871768	-2.572293	0	I(1)

5.4 Regression Analysis on the Relevance of Accounting Information in Explaining Stock Prices

$$\ln price = -3.71 + 0.43 \ln peratio + 0.32 roe + 0.54 \ln earn + 3.11 d(\ln intrate) - 0.04 \ln bv$$

$$R^2 = 0.4930 \quad \text{adjusted } R^2 = 0.4820$$

The regression results for equation 1, is summarized above. From the appendix I, it is seen that Earnings has a positive significant relation to share price with a p-value of 0.0000. The coefficients of 0.5414 suggest that; a unit increase in Earnings will lead to a 0.5414 increase in the share price of the company. It can also be seen that P/E ratio is also statistically significant positively with a p-value of 0.0000. Thus, for a unit increase in P/E ratio, the share price of the company increases by 0.4290. Return on Equity (ROE) is also found to be statistically significant positively with a p-value of 0.0009. Also, a percentage increase in ROE will cause the share price of the company to increase by 0.3260.

Furthermore, both Book Value of Equity and Annual Interest Rate were not significant at 5% significance level with p-values of 0.4187 and 0.0718 respectively. However, Book Value of Equity and Annual Interest Rate were found to be negatively and positively related to the share price of a company. The F-statistic value (0.0000) of the regression model implies that, the model correctly specifies the relationship between the share price of a company and the independent variables chosen.

The coefficient of determination () is 49.30% and this implies that about 49.30% of changes in the share price of a company (dependent variable) are explained by the independent variables (Return on Equity, P/E ratio, Interest rate, Earnings and Book value).

5.5 Regression Analysis on the Individual Accounting Variables

A single regression analysis for the individual accounting variables was conducted. The results are presented in table IV. From the table, it can be seen that Earnings is relevant in explaining stock price movements of

companies on the Ghana Stock Exchange. The coefficient of determination is 41.90%, implying that about 41.90% of the changes in the share prices of companies is explained by Earnings.

The P/E ratio (p-value of 0.0025) is also positively significant at 5% significance level. A unit change in the price-to-earnings ratio will cause an increase of 0.3576 in the price of shares of companies. Price-to-earnings ratio explains about 32.92% of the changes in stock prices.

Book value of equity and Return on Equity were also found to be positively significant at 5% significance levels. Book value of equity (p-value of 0.000) and Return on Equity (p-value of 0.000) account for about 18.31% and 15.15% of the changes in the stock prices.

Accounting standards is statistically significant (p-value of 0.0198) to the price of shares of companies whereas annual Interest rate (p-value of 0.2123) is not. However, Accounting standards and annual Interest rate explain about 1.59% and 0.20% of the variations in the price of shares of companies.

Given the estimates of the regression coefficient explained above, the researcher cannot reject the first alternate hypothesis and thus, can be concluded that accounting data (specifically Earnings, Return on Equity and P/E ratio) provide investors with some predictions about movements in stock prices.

Table IV: Regression Results on Individual Accounting Variables

	constant	co-efficient	t-Statistic	prob.	R ²	Adjusted R ²
LNPERATIO	-0.688900	0.357600	-3.050618	0.0025	0.036885	0.032921
LNROE	0.189936	0.675734	6.675265	0	0.154956	0.151479
D(LNINRATE)	-0.413513	2.206185	1.250287	0.2123	0.005632	0.002029
LNEARN	-4.014759	0.567530	13.18459	0	0.419044	0.416633
LNBV	-2.807451	0.343073	7.942939	0	0.186057	0.183108
ACCSTD	-0.516091	0.214571	2.344284	0.0198	0.01945	0.015914

5.6 Regression results on the Effect of International Financial Reporting Standards on Relevance of Accounting Information

$$lnprice = -3.76 + 0.43lnperatio + 0.33roe + 0.55lnearn + 3.18d(lninrate) - 0.04lnbv - 0.04accstd$$

$$R^2 = 0.4936 \quad \text{adjusted } R^2 = 0.4804$$

From the above equation (also appendix III) it can be seen that Earnings is statistically significant at 5% level of significance with a p-value of 0.000. Earnings with a coefficient of 0.5472 suggest that a cedi increase in earnings will lead to a 0.5475 unit increase in the price of stocks on the Ghana Stock Exchange.

Price-to-earnings ratio and Return on equity was also significant with a p-value of 0.000 and 0.0010 respectively. The coefficient of 0.3259 suggests that a percentage increase in Return on Equity will lead to 0.3259 unit increase in the price of the company's stock. Also, a unit change in the Price-to-earnings ratio will cause the share prices of a company to increase by 0.4280.

From appendix III it can be concluded that Book value of equity and annual Interest rate were found not to be statistically significant at 5% significance level with p-values of 0.0673 and 0.4699 respectively. A unit increase in the Book value of equity will cause a decrease of 0.0385 in the stock prices of companies, while a unit increase in annual interest rate will cause the share prices to increase by 3.1756.

The accounting standard that is applied by companies was not statistically significant (p-value of 0.5834) and thus, suggesting that the introduction of IFRS in Ghana did not affect the relevance of accounting information in explaining stock price movements.

The F-value of 0.000 means that all the independent variables collectively is statistically significant in the determination of share prices of companies listed on the Ghana Stock Exchange. The correlation coefficient of 49.36% suggest that about 49.36% of the variation in the share prices can be explained by Earnings, P/E ratio, annual Interest rate, Book value to equity, Return on Equity and Accounting standard.

Based on the analysis of the data above the researcher cannot accept the second alternative hypothesis and it can be concluded that the adoption of International Financial Reporting Standards in Ghana did not affect the relevance of accounting information in explaining stock prices.

5.7 Diagnosis of the Error Term

Specific diagnostic tests such as the Jarque-Bera normality test, Breusch-Pagan-Godfrey White heteroscedasticity test and Breusch-Godfrey serial correlation LM test were carried out to validate the multiple regression with and without the account standard (ACCSTD) variable respectively.

Table V below represents a summary of the results that were obtained after conducting the tests. From

Equation 1, the Jarque Bera test confirmed the presence of normality since the probability 0.2403 gives us enough evidence not to reject the null hypothesis at 5% level of significance. The Breusch-Pagan-Godfrey Heteroscedasticity also failed to reject the null hypothesis and thus confirmed the absence of heteroscedasticity. Furthermore, the results of the serial correlation LM test suggest that no autocorrelation exists in the model.

From Equation 7 the Jarque Bera test confirmed the presence of normality since the probability 0.2191 gives us enough evidence not to reject the null hypothesis at 5% level of significance. The Breusch-Pagan-Godfrey Heteroscedasticity also failed to reject the null hypothesis and thus confirmed the absence of heteroscedasticity. The result of the serial correlation LM test also gives us enough evidence not to reject the null hypothesis; hence conclude that no autocorrelation exists in the model.

TABLE V: Diagnostic Tests on Residual of Regreesion without ACCSTD			
Type of Test	P - Value	Hypothesis under Null	Conclusion (at 5% significance level)
Jarque-Bera Normality Test	0.2403	The error term is normally distributed	The null hypothesis is not rejected
Breusch-Pagan-Godfrey Heteroscedasticity	0.9631	The error term is homoscedastic	The null hypothesis is not rejected
Breusch-Godfrey Serial Correlation LM Test	0.8762	The error term has no autocorrelation	The null hypothesis is not rejected
Diagnostic Tests on Residual of Regreesion with ACCSTD			
Type of Test	P - Value	Hypothesis under Null	Conclusion (at 5% significance level)
Jarque-Bera Normality Test	0.2191	The error term is normally distributed	The null hypothesis is not rejected
Breusch-Pagan-Godfrey Heteroscedasticity	0.9978	The error term is homoscedastic	The null hypothesis is not rejected
Breusch-Godfrey Serial Correlation LM Test	0.9176	The error term has no autocorrelation	The null hypothesis is not rejected

6.0 Summary, Conclusions and Recommendation

This study set forth to achieve two main purposes. One objective of this research was to find out whether accounting information set out in annual financial statements are relevant in estimating stock prices which is also phrased as value relevance of accounting information. The other objective was to find out whether the adoption of IFRS in 2008 did have any effect on the ability of accounting information in explaining stock price movements

Two multiple regression models were used to ascertain how accounting information was relevant in explaining stock price as well as to test whether the adoption of IFRS has an impact on value relevance. Four single regression models were used to assess the individual accounting variables contribution in explaining stock prices. The study regressed the stock prices on accounting data as well as interest rate to determine their relationship.

In general the study found that accounting information was relevant in explaining stock price movements both pre and post IFRS adoption periods in Ghana

Specifically the study found that Earnings, Return on equity, Price to Earnings ratio were found to be relevant in explaining stock price movements on the Ghanaian stock Exchange. Book value of equity and annual interest rate were not found to be relevant in explaining stock price movements.

When the variables are considered separately then Earnings, Book value of equity, Price –earnings ratio as well as Return on Equity were all found to be relevant in stock price movement. However annual interest rates were not found to be relevant.

This confirms several studies which found that accounting information is value relevant. For instance Chena, Chen & Su (2001) , Abuzayed et al (2009) , Perera & Thrikawala (2010) who all found evidence that accounting information explains stock prices

The findings of this study however contradicts the work of other researchers who found that the value

relevance of earnings has reduced and is being replaced by increasing value relevance of Book value. For instance Glezakos, Kafouros, & Kafouros (2012) and Collins, Maydew & Weiss (1997)

On the effect of IFRS on relevance of accounting information, the researcher found that the adoption of IFRS did not have any effect on the ability of accounting information to explain stock price movements. This suggests that IFRS might not have improved information quality in annual financial statement. The results confirm the findings of other studies which found that the adoption of IFRS did not improved information quality of annual financial statements. For instance Hung & Subramanyam (2004) and Paananen (2008). The results however contradicts research work in the developed markets which suggest that adopting IFRS improved information quality for instance Glezakos, Kafouros & Kafouros (2012) Horton, Serafein & Serafein (forthcoming) and Barth, Landsman & Lang (2007).

6.1 Conclusions and Recommendations

The results of this study implies that accounting information (earnings, Return on Equity as well as Price to earnings ratio) contribute to explaining stock price movements. From this it can be recommended that The Institute of Chartered Accountants, Ghana, The Securities and Exchange Commissions and other stakeholders in the securities market should ensure that existing regulations in accounting should be enforced as way of improving accounting information presented in the annual financial statement. Also capital market participants should devise ways of improving the quality and timing of earnings reported in annual financial statements to improve its relevance on the securities market.

The study also found that the adoption of IFRS did not have an impact on the ability of accounting information to explain stock prices; this could be due to fact that the implementation of IFRS was not strictly enforced. The translation of prior year financial statements after the adoption of IFRS was made voluntary, therefore the study recommends that the application IFRS should be well enforced and Small and Medium scale Enterprises (SME's) should be made to adopt the IFRS for SME's as being pioneered by the Institute of Chartered Accountant

This work has provided evidence of the relevance of accounting information from an emerging market perspective. This work would contribute immensely to researchers who want to research into the relevance of accounting information in explaining stock prices from an emerging market.

This study did not look at how IFRS affected specific accounting ratios and this presents an opportunity for future research. The fact that IFRS did not have an impact on value relevance suggests that investors already have access to information provided by the IFRS. It will be important to find out to what extend investors engage in non - information based trading on the Ghanaian stock market. This could be an area for future research.

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