



VARIATION IN VALUE RELEVANCE OF ACCOUNTING INFORMATION OF NIGERIAN LISTED DEPOSIT MONEY BANKS

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Abstract

This paper investigates the existence of variation in value relevance of accounting information of stand-alone and common interest listed Deposit Money Banks (DMBs) in Nigeria during a period of eight years (2005 – 2012). Eight DMBs consisting of two stand-alone and six common interest banks were sampled. Data relating to accounting information were collected from the published financial statements of the sampled banks while the market value data from the Official Daily List of the Nigerian Stock Exchange (NSE). The Least Square Dummy Variable (LSDV) regression technique was adopted for data analysis. The results based on the differential intercept of 0.06 in favour of stand-alone banks and the p-value of the dummy variable of 0.798 and interactive variables of 0.497, 0.887, and 0.239 at 0.05 level of significance indicate presence of but statistically insignificant variation in the value relevance of accounting information between the two types of DMBs. The paper concludes that the variation in value relevance between these bank categories is not as a result of their characteristics but the quality of and level of compliance with accounting standards. It is therefore, recommended that the regulatory authorities (SEC and CBN) should ensure the total implementation and compliance with the requirements of IFRS which is widely argued will have a strong influence on the financial reporting quality including promoting value relevance.

Keywords: Value Relevance, Accounting Information, Variation, Deposit Money Banks, Nigeria

Introduction

Financial reporting is aimed at, among others, providing equity investors with timely information relevant for estimating the firms' value. Generally, financial accounting information disclosure of firms is expected to be value relevant. This expectation has led to the emergence of a branch of accounting research known as Capital Market Based Accounting Research (CMBAR) which focuses on determining the value relevance of accounting information. Basically, this group of research seeks to test the relevance and reliability of accounting numbers.

The concept of value relevance of accounting information has been opined in a variety of ways depending on author's chosen perspectives. Barth, Beaver and Landsman (2001), construe value

relevance of accounting information as an empirical examination of the relationship between accounting numbers as reflected in the general purpose financial report and equity market values. Notable studies that established value relevance of accounting information includes Oyerinde (2011) and Pervan and MarBartulović (2014). Contrarily, Arce and Mora (2002) and Abubakar (2011) found accounting information to lack relevance and reliability. Essentially, these studies provide evidence of the magnitude of relationship between accounting information and the firm value.

The disclosure practices of firms are influenced by their specific characteristics such as size, age, internationality, listing status, leverage, profitability, auditor type and audit firm size (Healy and Palepu, 2001; Li, Luo, Wang and Wu, 2011), regulatory and general economic factors.

Therefore, studies on value relevance have also investigated variation in the value relevance of accounting information among firms. Most previous studies on variation of value relevance of accounting information have either focussed on inter industry analysis; Brimble and Hodgson (2007) and Oyerinde (2011), or inter country analysis, Black and White (2003), Hellström (2006) and Brimble and Hodgson (2007). The only study known to us that relates to intra industry variation in value relevance of accounting information is that of Hand (2005).

The Central Bank of Nigeria (CBN) in order to strengthen and deepen the financial sector introduced reforms in the sector including the recapitalisation of banks in 2004. This exercise resulted to structural alteration in the characteristics of the banks that emerged. Okafor (2012) classified Nigerian DMBs along distinct divisions in accordance with the way and manner they raised the N25 billion market capitalisation. These include the stand-alone banks (i.e. banks that did not experience structural changes as a result of the consolidation exercise), the common ownership banks (i.e. banks that came together because of linkages existing between their owners) and the common interest banks (the banks that came together circumstantially to meet the N25b recapitalization requirement).

Following, the 2009 stress test conducted by the Sanusi Lamido Sanusi led CBN; the common ownership banks withered leaving only the stand-alone and common interest banks. According to Hand (2005), firms that engage in the same line of activities may differ in terms of size and approach adopted in raising capital. Hand (2005) opines that the direction of relationship between accounting information and equity values will be the same across the firm's classes that may emerge following mandatory regulatory recapitalisation.

Okafor (2012) argues that stand-alone banks, would not encounter the same structural and cultural pressures faced by common interest banks. In fact, Hallowell (1999) and Cuffe (2008) maintain that value can be enhanced through mergers and acquisitions as the case with the common interest banks. In other words, accounting information of common interest banks should be more value relevant than that of stand-alone banks. There is dearth of empirical evidence on whether or not variation exists in the value relevance of

accounting information of DMBs in Nigeria since the 2004 CBN recapitalization exercise.

This paper, therefore, determines if significant variation exists in value relevance of accounting information between the stand-alone and common interest DMBs in Nigeria. This study has implications for stakeholders interested in the factors that influence firm's disclosure quality and specifically what regulatory measures are necessary to better ensure value relevance of accounting information disclosure by firms.

The remainder of the paper proceeds as follows. The next section dwells on literature review and hypotheses development. This is succeeded by the methodology which focusses on research design, sample size, variables and their measurement as well as method of data analysis. The section four presents and discusses the results and Section 5 is conclusion and recommendations.

Literature Review and Hypothesis Development

Value relevance research is situated within the Capital Market Based Accounting Research (CMBAR). The term value relevance connotes the degree of statistical association between accounting information as reflected in published financial statements and market value of equity or returns (Barth, Beaver and Landsman, 2001 and Beisland, 2008). It involves the determination of the extent of association between accounting information items (earnings, dividend, book value or other accounting information) and a financial measure of value, such as the market value of equity, share returns or future earnings. Previous studies have largely tested the existence and degree of relationship between the stock market value of a firm and its accounting information using regression analysis. The higher the coefficient of determination (R^2), the higher the accounting information is interpreted to be value relevant.

Several studies have been conducted into the variation of value relevance of accounting information including but not limited to those by Black and White (2003), Hand (2005), Hellström (2006), Che (2007), Brimble and Hodgson (2007), Kwon (2009), Oyerinde (2011) and Pervan and MarBartulović (2014). Essentially, these studies can be categorized into; intra industry, inter industry and cross country value relevance studies. A review of the findings of these studies along these categorizes is provided.

In an intra-industry value relevance study, Hand (2005) examined the value relevance of financial and nonfinancial information within and across the pre-IPO venture capital and post-IPO public equity markets for a sample of U.S. biotechnology firms. The study sampled 204 firms and deployed log linear regression model for analysis. It was established that financial statement data are less value-relevant in the venture capital market than post-IPO public equity firms.

Che (2007), Brimble and Hodgson (2007), Kwon (2009) and Oyerinde (2011) were inter industry based. Che (2007) used 3,520 firm year observations that cut across all sectors of Chinese economy during the period 1994-2001 to ascertain value relevance of accounting numbers. The study found that accounting information is highly value relevant to investors in the Chinese equity market. The finding of the study suggests that market valuation theory can be applied not only to developed stock markets, but also to the evolving ones such as China and Nigeria. Kwon (2009) investigated whether accounting earnings and book value have a nonlinear relationship to equity value of profitable and non-profitable firms in the Korean stock market. The study used option-style model of equity and covered the period 1982 to 2001. The result show that the value relevance of accounting information differs between loss firms and profit firms. It also revealed that accounting earnings is the most significant variable affecting the equity values of profit firms while book value affects the equity value of loss firms.

In a similar study to Kwon (2009), Brimble and Hodgson (2007) split their samples into small and large firm subsets based on the median value of opening market capitalisation. This approach was argued as superior to the use of dummy variable because it provides two independent series of R^2 statistics so that a time trend regression can be estimated. The result of the study suggests that there exists significant variation in value relevance between the small firms and large firms. Also, Oyerinde (2011) investigated the difference in value relevance of accounting information across industries in Nigeria. The samples were classified into manufacturing and service industry. The study adopted the dummy variable approach and explained the preference of the approach to running separate annual regressions is because of too few firms per cross-section. Impliedly, were the firms in the sample groups is small, the dummy

variable approach should be adopted. The study found significant differences between the two industrial sectors in terms of the measure of value relevance of accounting information which is the R^2 .

Black and White (2003), Hellström (2006) and Pervan and MarBartulović (2014) studies on value relevance were cross country in nature. Hellström (2006) hypothesised that the Czech firms accounting information is less or more value relevant than the Swedish firms accounting information. The study sampled 72 Czech companies listed on the Prague Stock Exchange and 581 Swedish companies listed on the Stockholm Stock Exchange in the period 1994-2001 and utilized price regression and returns regression models for analysis of the data. The results indicated that value relevance of accounting information is lower in the Czech Republic than in Sweden. It could be inferred from the finding that variation in value relevance of accounting information is not only influenced by firm's characteristics but also country characteristics. Black and White (2003) compared the value relevance of book value and earnings in Germany, Japan and the US. The results show that the value relevance of book value is higher than the value relevance of earnings in Germany while the results are less robust for Japanese companies. More precisely; for Japan, the sample book value is more value relevant than earnings only in the case of companies that reported negative earnings.

Contrarily to the results in Germany, the value relevance of earnings was found to be higher than value relevance of book value for the sample of American companies. Pervan and MarBartulović (2014) examined variation in value relevance of accounting information of countries within the South East Europe (SEE). Firms were drawn across the Sarajevo Stock Exchange, Ljubljana Stock Exchange, Zagreb Stock Exchange, Belgrade Stock Exchange and Banja Luka Stock Exchange. The study covered a period of 6 years (2005-2010). The results reveal that accounting information is value relevant on all the sampled capital markets. However, variations were observed in the value relevance of accounting information among countries.

The literatures on variation in value relevance of accounting information as indicated above do not only show that research can be conducted either

within a sector of the stock market or among the sectors but that the findings from variation studies are mixed. Accordingly, this paper takes an intra-industry approach and hypothesises that:

Ho: Accounting information is equally value relevant in stand-alone and common interest Deposit Money Banks in Nigeria.

Methodology

This paper examines variation in value relevance of accounting information of Nigerian DMBs over the period 2005 to 2012. The population of the study included all the fifteen (15) listed DMBs operating in the Nigerian banking industry as at December 31, 2012. Using two point filters whereby a DMB must be listed on the NSE for a period not later than 2004 and must not have been involved in takeover, purchase and assumption, eight (8) banks were sampled. These banks were classified into stand-alone banks and common interest banks consistent with Okafor (2012). The stand-alone banks include Guaranty Trust Bank Plc and Zenith Bank Plc while the common interest banks comprise Access Bank Plc, First City Monument Bank Plc, First Bank of Nigeria Plc, United Bank for Africa Plc, Union Bank Plc and Wema Bank Plc (NSE, 2013).

The study use two sets of data; accounting information and market value data. The data on accounting information was extracted from the financial statements of the sampled DMBs while market value from the Daily Official List of the NSE. Secondary data were used because of its ability to generate findings in situations where it is impracticable to apply the full procedure of experimental design (Lammers and Badia, 2005). DMBs market value is taken as the dependent variable and expressed as a function of earnings, dividend and book value (independent variables). Based on the efficacy of Ohlson (1995) model, this paper modifies the model by using multiple regressions. With this approach, the coefficient of determination of a model (adjusted R^2) is primarily the measure of value relevance.

To test for existence of difference, a dummy variable SC was assigned value of 1 for standalone and 0 for common interest banks essentially to avoid dummy-variable trap (Gujarati, 2009). Subsequently, the differences in value relevance of accounting information between the two variants of DMBs were arrived at by deducting the

common interest banks equation from the stand-alone banks equation. To determine whether the obtained differential equation is significant or not, the level of significance of the dummy variable and interaction variables were considered. A p-value above 0.05 signifies that the difference is insignificant, otherwise, is significant (Gujarati, 2009 and Pathirawasam, 2013).

The study model is specified thus:

$$MV_{jt} = \alpha_0 + \beta_1 E_{jt} + \beta_2 C_{jt} + \beta_3 D_{jt} + \beta_4 SC_{jt} + \beta_5 SCE_{jt} + \beta_6 SCC_{jt} + \beta_7 SCD_{jt} + \varepsilon_{jt} \quad (1)$$

Where:

MV_{jt} = current average monthly market value of equity deflated by the opening book value of equity;

E_{jt} = current earnings of the bank deflated by the opening book value of equity;

C_{jt} = change in book value of equity from period $t-1$ to period t ,

D_{jt} = the current dividend declared by the bank deflated by the opening book value of equity per share;

$SC = 1$, if the DMB is a stand alone

$SC = 0$, otherwise

β_n = coefficient of the variables

ε_{jt} = error term

α_0 = intercept

The variables are the deflated versions of the basic variables as used in previous studies (Che, 2007). The advantage of deflated variables over the basic variables is to cater for the scale problem associated with the basic variables and ensure homoscedasticity which is one of the assumptions of linear regression. Therefore, to mitigate the scale effect on the variables they were divided by the preceding year book value of equity.

Results and Discussions

Model fitness

Model validation is not limited to ensuring that data are free of regression errors, it also entails assessing how the regression model fits the data itself. Thus, Analysis of Variance and model summary are used to assess the overall fitness of

the regression model in relation to the research data. Analysis of Variance is a regression tool that dichotomises the observed variance in a model into those explained by the regression and those unexplained by the regression. Table 1 presents the ANOVA results for the research model.

Table 1: The ANOVA Table for the Research Model

Source	Sum of Squares	d.f	Mean square	F	p
Regression	2.643	7	0.3775	8.16	0
Residual	2.593	56	0.0463		
Total	5.236	63	0.0831		

Source: Generated from financial statements of DMBs and NSE Daily Listing using Stata 12.0

Table 1 uses F test to show the overall fit of the regression. From the table, the computed F statistics value is 8.16. The degrees of freedom are 7 (for the numerator) and 56 (for the denominator). With an alpha of 0.05, the critical value of $F_{(7,56)}$ is 3.29. Since the F statistics (8.16) is greater than F critical (3.29), the research concludes that there is an overall model fitness at 5% level of significance.

Similarly, the regressions p-value is 0.0000 which is lower than the pre-selected 5% level of significance which means at least one of the regression coefficients (i.e. earnings, dividend and book value) are not zero. Thus, one can argue that the independent variables to some extent determine variation in the dependent variable (share price).

The ability of the independent variables of the research to fully account for variation in the dependent variable is additional proof of overall model fitness.

With the Regression Sum of Squares (2.643) and the Residual Sum of Squares (2.593), there is substantial evidence that the independent variables jointly explain approximately 51% of variation in market value of Nigerian DMBs in the period under review (2005-2012), while other variables excluded in the model are capable of explaining 49% of variation in share price of Nigerian DMBs.

Regression results

To examine the existence of variation in value relevance requires as it were determining whether or not the accounting information of the sampled banks is value relevant. The p value of the research model (0.0000) and the adjusted R^2 in appendix 1 is instructive that accounting information of Nigerian DMBs is value relevant. However, the adjusted R^2 of 44% shows that there is remarkable room for improvement as other variables omitted in the study are responsible for approximately 56% of movement in share price on Nigerian listed DMBs. An analysis of the coefficients of 0.2588, 14.6516, -0.6591 and corresponding p values of 0.0000, 0.0000, 0.134 for book value, dividend and earnings respectively (the independent variables) further show that book value and dividend are value relevant while earnings is not. The summary regression model that summarises the outcome of this research work is presented in Table 2 and the equations that follow.

Table 2: Regression Result of the Research Model with Dummy and Interaction Variables

$$MV_{jt} = \beta_0 + \beta_1 E_{jt} + \beta_2 C_{jt} + \beta_3 D_{jt} + \beta_4 SC_{jt} + \beta_5 SCE_{jt} + \beta_6 SCC_{jt} + \beta_7 D + \varepsilon_{jt}$$

$$MV_{jt} = \beta_0 + \beta_1 E_{jt} + \beta_2 SC_{jt} + \beta_3 SCE_{jt} + \varepsilon_{jt}$$

$$MV_{jt} = \beta_0 + \beta_2 C_{jt} + \beta_2 SC_{jt} + \beta_3 SCC_{jt} + \varepsilon_{jt}$$

$$MV_{jt} = \beta_0 + \beta_2 D_{jt} + \beta_2 SC_{jt} + \beta_3 SCD_{jt} + \varepsilon_{jt}$$

Variable	Model (1)	Interaction Model E	Interaction Model C	Interaction Model D
<i>E</i>	-.66 (-1.52)	.45 (0.83)		
<i>C</i>	.26 (3.92)*		.36 (5.58)*	
<i>D</i>	14.65 (4.05)*			18.77 (5.48)*
<i>SC</i>	.05 (0.26)	-.16 (-0.88)	-.07 (0.26)	-.03 (-0.19)
<i>SCE</i>	5.05 (0.68)	3.62 (0.70)		
<i>SCC</i>	.04 (0.14)		-.08 (-0.34)	
<i>SCD</i>	-21.97 (-1.19)			-10.36 (-1.09)

* statistically significant at 5%

Source: Generated from financial statements of DMBs and NSE Daily Listing using Stata 12.0.

From the regression results displayed in Table 2, we arrive at the average share price for the DMBs, by expressing it in form of equation 2 thus:

$$MV = -.04 - .66E + .26C + 14.65D + .06SC + 5.05SCE + .04SCC - 21.97SCD \quad (2)$$

Substituting 1 with SC in equation 2, we arrive at the following equation for the stand alone banks

$$MV = -.04 - .66E + .26C + 14.65D + .06 + 5.05E + .04C - 21.97D$$

$$MV = (-.04 + .06) + (-.66 + 5.05)E + (.26 + .04)C + (14.65 - 21.97)D$$

Therefore, the equation for share price equation for the stand alone banks is

$$MV = .02 + 4.39E + .3C - 7.32D \quad (3)$$

Relatively, substituting 0 with SC, we arrive at the following equation for the common interest banks

$$MVBV = -.04 - .66EBV + .26CBV + 14.65DIVBV \quad (4)$$

To arrive at the difference between the two DMBs classifications we subtract equation (4) from equation (3) to arrive at the differential equation presented in equation (5).

$$MV = .06 + 5.05E + .04C - 21.97D \quad (5)$$

Equation (5) shows a positive differential intercept of 0.06. This indicates that the accounting information of stand-alone banks in terms of earnings, book value and dividend are higher than

for the common interest banks. However, the p values of the dummy variable of 0.798 and the interaction variables of 0.497, 0.887 and 0.239 as presented in Appendix 1 show that they are not statistically significant. Therefore, it could be concluded that there is no significant variation in the value relevance of accounting information between the stand-alone and common interest DMBs in Nigeria.

This result concurs with the argument of Okafor (2012) that the direction of relationship between accounting information and equity values will be the same across the classifications (stand alone and common interest DMBs). On the contrary, it disagrees with the findings of Hallowell (1999) and Cuffe (2008) who found separately that value can be enhanced through mergers and acquisitions as the case with the common interest banks.

Though, the result of this study may be partially influenced by the low number of observations and relative stability experienced in the Nigerian banking industry in the period under review, it has a number of implications. Firstly, it is an indication that individual firm (bank) characteristics do not significantly explain value relevance of accounting information hence variation among the two categories of banks but other factors such as the quality and level of compliance with accounting standards do. This submission is inferred from the results because the common interest banks as a result of merger and acquisition ordinary should be bigger in terms of size, operate more profitably because of synergy etc, therefore, elicit greater public confidence hence the accounting information of this category of bank should be more value relevant than that of stand-alone banks. But the differential intercept of 0.06 in favour of the stand-alone banks proves otherwise. The insignificant variation in value relevance of accounting information rather suggests that factors like quality of accounting standards and level of compliance to accounting standards play a greater role in shaping value relevance of accounting information in the industry as documented by (Kwon, 2009). Specifically, the result implies that at least in the Nigerian banking industry during the period covered, firm characteristics do not significantly explain value relevance. It is suggestive that both the stand-alone and common interest banks apply and comply with accounting standards to the same degree thus the public confidence in the banks is the same. This further

implies that the regulatory authorities may promote value relevance of accounting information in the industry based on the quality of accounting standards issued and by ensuring compliance with the standards.

Conclusion and Recommendations

The debate on whether accounting information is value relevant or not has witness increase academic interest. Further research has tend to estimate variation in the value relevance of accounting information at cross-country, inter or intra industrial level. This paper contributes to the literature on variation in value relevance of accounting information at the intra industrial level with a focus on DMBs in Nigeria. The DMBs were classified into stand-alone and common interest banks. A dummy variable SC and the interaction variables were included in the model to capture the variation in value relevance of accounting information among DMBs in Nigeria. The differential intercept of 0.06 shows that controlling for every other variable in the equation, the earnings, book value and dividend of stand-alone banks are of higher value than those of the common interest banks. However, the p -values of the dummy variable in the multiplicative mode and additive mode show that the observed variation is not significant. To this end, the paper concludes that there is no significant variation in the value relevance of accounting information between stand-alone and common interest banks in Nigeria. In other words, DMBs (stand-alone and common interest banks) in Nigeria are not materially different from one another in terms of relationship between their accounting numbers and stock market value. In fact, any observed difference cannot be attributed to the banks characteristics but the quality of accounting standards in the industry and level of compliance with these standards by banks.

Based on the findings and conclusion, it is recommended that to ensure value relevance of accounting information in the industry, the regulatory authorities (SEC and CBN) should strive to evolve high quality accounting standards and ensure total compliance with the standards. With the convergence to IFRS which is argued to promote high quality financial reporting, compliance monitoring by the regulators of the industry is paramount to value relevance of accounting information.

References

- Abubakar, S. (2011). Value relevance of accounting information of listed new economy firms in Nigeria: An empirical investigation using Ohlson model. *Paper presented at the International Conference on Accounting and Finance in Africa organised by the Department of Accounting and Finance, University of Ghana in collaboration with the Department of Accounting and Finance, University of Brinmingham, UK.*
- Arce, M., and Mora, A. (2002). Empirical evidence of the effect of European accounting differences on the stock market valuation of earnings and book value. *The European Accounting Review*, 11(3), 573-599.
- Barth, M. E., Beaver, W. H., and Landsman, W. R. (2001). The relevance of the value relevance literature for financial accounting standard setting: Another view. 1-41.
- Beisland, L. A. (2008). *Essays on the value relevance of accounting information*. (Ph. D dissertation). Norwegian School of Economics and Business Administration, Bergen, Norway.
- Black, E. L., and White, J. J. (2003). An international comparison of income statement and balance sheet information: Germany, Japan and the US. *European Accounting Review*, 12, 29-46.
- Brimble, M., and Hodgson, A. (2007). On the intertemporal value relevance of conventional financial accounting in Australia. *Accounting and Finance*, 47, 599-622.
- Che, B. (2007). *Value relevance of accounting information and shareholding structure in emerging capital markets: Evidence from Chinese listed companies*. (Ph.D's Thesis), Newcastle University, UK.
- Cuffe, A. (2008, May). *Nigerian Banks*. Retrieved March 12, 2014, from JP Morgan African Equity Research: <https://www.jpmorgan.com/pages/jpmorgan/emea/loc/>
- Gujarati, D. N. (2009). *Basic Econometrics* (5th ed.). New York: The McGraw-Hill Companies.
- Hallowell, R. (1999). Exploratory research: consolidation and economies of scale. *International Journal of Service Industry Management*, 10(4), 359-368.
- Hand, J. R. (2005). The value relevance of financial statements in the venture capital market. *The Accounting Review*, 80(2), 613-648.
- Healy, P.M., and Palepu, K.G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31, 405-440.
- Hellström, K. (2006). The value relevance of financial accounting information in a transition economy: The Case of the Czech Republic. *European Accounting Review*, 15(3), 325-349.
- Kwon, G. J. (2009). The value relevance of earnings and book value using an option-style equity valuation model: Evidence from Korea. *International Journal of Business Management*, 4(12), 19-41.
- Lammers, W. J., and Badia, P. (2005). *Fundamental of behavioral research design*. California: Thomson and Wadsworth.
- Li, Q., Luo, W., Wang, Y., and Wu, L. (2011). Firm performance, corporate ownership, and corporate social responsibility disclosure in China. Paper presented at *American Accounting Association Annual Meeting* 6-10, Dever, Colorado.
- NSE. (2013). *Nigerian Stock Exchange Factbook 2012/13*.
- Ohlson, J. A. (1995). Earnings, book values and dividends in equity valuation. *Contemporary Accounting Research*, 11, 661-87.
- Okafor, C. (2012). *Change and consolidation in the Nigerian banking industry: An exploration of two key Central Bank of Nigeria objectives*. (DBA's Thesis), Aberdeen Business School, Robert Gordon University.
- Oyerinde, D. T. (2011). *Value- relevance of accounting information in the Nigerian stock market*. (Ph.D's Thesis), Covenant University, Nigeria.

Pathirawasam, C. (2013). The value relevance of earnings and book value: The importance of ownership concentration and firm size. *Journal of Competitiveness*, 5(2), 98-107.

Pervan, I., and Bartulović, M. (2014). Value relevance of accounting information: evidence from South Eastern European countries. *Economic Research-Ekonomska Istraživanja*, 27(1), 181-190.

APPENDIX 1: Full Regression Results

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. regress MV E C D SC SCE SCC SCD
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Source	SS	df	MS	Number of obs = 64		
Model	2.64283185	7	.377547407	F(7, 56) =	8.16	
Residual	2.59251192	56	.046294856	Prob > F =	0.0000	
				R-squared =	0.5048	
				Adj R-squared =	0.4429	
Total	5.23534377	63	.083100695	Root MSE =	.21516	

MV	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
E	-.659165	.4333173	-1.52	0.134	-1.527204	.2088739
C	.2587589	.065962	3.92	0.000	.1266211	.3908967
D	14.65164	3.617409	4.05	0.000	7.4051	21.89818
SC	.0589306	.2289454	0.26	0.798	-.3997021	.5175633
SCE	5.046733	7.375387	0.68	0.497	-9.727942	19.82141
SCC	.0385459	.2696675	0.14	0.887	-.5016631	.5787549
SCD	-21.97207	18.45445	-1.19	0.239	-58.94077	14.99664
_cons	-.040747	.0739129	-0.55	0.584	-.1888123	.1073182

Figure 1: LSDV regression result using Stata 12.0