



Economic Factor and Value Relevance of Accounting Information in Bangladesh

Md. Hasan Uddin

Department of Finance and Banking , Faculty of Business Administration and Management , Patuakhali Science and Technology University, Dumki, Patuakhali-8602, Bangladesh, E-mail: hasan14860@gmail.com

Abstract

The purpose of this study is to examine the impact of economic factors, namely, foreign ownership and trading volume on the value relevance of accounting information. Value-relevance is measured by the adjusted R2 derived from a regression of stock price on EPS, BVPS, and CFPS using the price model. The study sample included 71 manufacturing companies listed with Dhaka Stock Exchange (DSE) in Bangladesh within the period 2000-2017. The results of this study showed that earnings (EPS), book value (BVPS), and cash flow (CFPS) are value relevant to the share price. This paper found that the value relevance of EPS and BVPS is greater for companies having foreign ownership and the value relevance of BVPS and CFPS is greater for companies' larger trading volume. The findings suggest that market participants might be able to extract the firm value via these economic factors. This paper presents the ability of valuation theory/model to interact with other theories by including the impact of economic factors on the accounting information value relevance. This study may introduce proof that can serve the educational institutions in their courses and provide a guideline to investors, managers and financial analysts to better summarize the firm value. This research likewise makes windows for future studies toward this path for different sectors.

Key words

Value Relevance, Accounting Information, Economic Factors, Manufacturing Sector and Bangladesh

Received:	15 April 2020	© The Authors 2020
Revised:	14 May 2020	Published by Human Resource Management Academic Research Society (www.hrmars.com)
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Published Online:	09 Jun 2020	

1. Introduction

The value relevance of accounting information has been influenced by many institutional factors. Ongoing value relevance studies across the country have identified and implemented these factors (Ali & Hwang, 2000; Hung, 2001; Ball *et al.*, 2003; Anandarajan and Hasan, 2010). For the purposes of this study, the influence of economic factors namely foreign ownership and trading volume is significant and important factor affecting the value relevance of earnings (EPS), book value (BVPS), and cash flows (CFPS). The researcher attempts to look at to what degree these factors can influence the value relevance of accounting information for manufacturing companies listed in Dhaka Stock Exchange (DSE).

Investments depend on the transferring of management and capital across national boundaries, foreign investors have been considered as proprietors and not merely lenders (Staley, 1935). Investment management and capital depend on the transfer of national boundaries, treating foreign investors as owners and not just creditors (Staley, 1935). The financial efficiency of companies is shifted according to the foreign ownership (Boubakri *et al.*, 2005). In short, as the firm's financial capacity grows, so does the amount of foreign ownership of the firm (Anadarjan and Hassan, 2010). Several studies have found that a

high proportion of foreign ownership is positively associated with firm performance (Denizar, 2000; Litan *et al.*, 2001; Anandarajan & Hassan, 2010). Like other countries, Bangladesh is seeking to increase foreign investment in the local economy, which needs to use relevant information from financial statements that reflect market performance. Since the current study examines the influence of this factor on the value relevance of earnings (EPS), book value (BVPS), and cash flows (CFPS), it is clear that foreign ownership theory is relevant for adoption in this study.

Previous research demonstrates that there is still no consensus in the academic literature on the influence of trading volume on the value relevance of accounting information, when trading is a valuable source of information about the value of assets (Kim & Verrecchia, 2001). Since trading volume has negative influence (Dontoh *et al.*, 2004), significant influence (Shamki, 2013), insignificant influence (Liu & Liu, 2007) on the value relevance of accounting information, positive relationship with price change (Clark, 1973; Epps & Epps, 1976; Tauchen & Pitts, 1983) and noisy relationship with price change (Pfleiderer, 1984), this study does not expect the influence of trading volume on the value relevance of the accounting information in Bangladesh.

The paper extends these studies by examining the influence of foreign ownership and trading volume on the value relevance of earnings (EPS), book value (BVPS), and cash flows (CFPS) simultaneously. The paper's question is: Can foreign ownership and trading volume influence the value relevance of earnings (EPS), book value (BVPS), and cash flows (CFPS) in Bangladesh? Accordingly, the paper objects to examine whether foreign ownership and trading volume can influence the value relevance of earnings (EPS), book value (BVPS), and cash flows (CFPS).

2. Literature review

As the more profound and important factors that affected the value relevance of accounting information are the economic factors. For the purpose of this paper, the influence of the economic factors is traced by the influence of foreign ownership and trading volume on the value relevance of earnings (EPS), book value (BVPS), and cash flows (CFPS).

2.1. Value Relevance and Foreign Ownership

According to Anandarajan & Hasan, (2010), excessive presence of foreign ownership leads to increased competitiveness, which improves the efficiency and performance of the local firm. This is on the grounds that foreign investment introduces sophisticated information technology (Okuda & Rungsomboon, 2004). This leads to lower operating costs and increased profitability, thus doubling the efforts of local firms to maintain competitiveness (Claessens *et al.*, 2001; Berger & Hannan, 1998; Anandarajan & Hasan, 2010). Many studies have been conducted focusing on the determinants of foreign investment in local firms (Sethi *et al.*, 2003). Significant associations of these investments have been found with technological intensity (Lall, 1980), firm size (Li & Guisinger, 1992), capital intensity (Pugel, 1981), product differentiation (Caves, 1971) and both large scale financial and firm methodology factors (Sethi *et al.*, 2003).

Likewise, foreign ownership association has positive influence on the domestic industry in improving efficiency and competitiveness. Anandarajan and Hasan, (2010) found that foreign ownership participation has a strong positive impact on the value relevance of the accounting information. Bae & Jeong (2007) and Shamki (2013) examined the effect of foreign ownership on the value of relevance of accounting information. They found that foreign ownership positively influences the value relevance of earnings in Korean companies and Jordanian companies respectively. Since the extent of foreign ownership has a strong positive influence on the value relevance of earnings (Bae & Jeong, 2007; Anandarajan & Hasan, 2010), it is expected that extending foreign ownership in Bangladesh will also have positive influence on the value relevance of earnings (EPS), book value (BVPS), and cash flows (CFPS). One of the independent variables of the current study is foreign ownership, which measures whether a firm has foreign ownership at the end of the financial year (Anandarajan & Hasan, 2010).

2.2. Value Relevance and Trade Volume

Earlier literary works found that trading volume does not play as a source of information about firm value (Admati & Pfleiderer, 1988; Varian, 1989; Kim & Verrecchia, 1991; Harris & Raviv, 1993; Kandel &

Pearson, 1995). If the disclosure of financial information is postponed in the future, trading volume will be used to draw conclusions about better information about firm value (Verrecchia, 2001; Kim & Verrecchia, 2001). Many studies have used the relationship between trading volume and earnings announcement or share price (Karpoff, 1986; Kim & Verrecchia, 1991; Bamber & Cheon, 1995). These studies have eliminated the positive relationship between stock prices and trading volume in the announcement of earnings. Beaver (1968) found that earnings announcements resulted in abnormal price changes and abnormally high trading volumes. Variation in earnings induces higher trade volume than pre-disclosure price fluctuations (Bamber & Cheon, 1995). These findings suggest that trading volume is more strongly associated with investors' uncertainty (Callahan *et al.*, 1997).

Karpoff (1986) examined the relationship between trading volume and share price and found that the share price-trading volume relation is important because it provides (1) insight into financial markets structure, (2) studies the use of a combination event and the price and volume data for their decisions, (3) it is important to discuss the dynamic allocation of pricing forecasts and (4) has important implications for future market research in which price differences affect the trading volume in future contracts.

Shamki (2013) examined the impact of economic factors such as foreign ownership and trading volume on the value relevance of earnings, book value and cash flows relative to the share price for Jordanian services and industrial companies within the period 2004-2009. The study found that for firms with large trading volumes, earnings and book value were higher. Donto *et al.* (2004) examined the prediction that the value of accounting information decreases as trading volume increases and their results support the prediction. They found that the value relevance of earnings and book values is negatively correlated with the trading volume, In the Chinese stock market, Liu & Liu (2007) examined the impact of trading volume on the value relevance of earnings and book value and have found it statistically insignificant, although Chen *et al.* (2001) have found that with high trading volume, earnings and book value were more value relevant.

Since there is no clear understanding of the effect of trading volume on the value of accounting information in previous literature, this paper extends the studies of Chen *et al.* (2001), Donto *et al.* (2004), and Liu & Liu (2007) by adding cash flows from operation (CFPS) as a new variable with earnings (EPS) and book value (BVPS) to examine the influence of trading volume on the value relevance of these accounting variables in Bangladesh. Trading volume as one of the independent variables studied is now measured by the number of shares sold by the company at the end of the financial year (Cready 1988; Cready & Mynatt 1991; Bhattacharya, 2001).

2.3. Company's Size and Leverage

As referred in prior research, many variables have been found to be controlled when examining the value relevance of the accounting information. The company's size and leverage are the paper's control variables. Following previous literature (Anandarajan & Hasan, 2010; Shamki & Alulis, 2016; Jabar, 2012; Shamki, 2012 and 2013) the present study controlled firm size while looking at the value relevance of the accounting information. This is authentic, in light of the fact that large companies have large accounting variables then huge profit, book worth, and incomes. As indicated by the financial theory, financial leverage (using the debt capital) will extend the financial risk. While a positive association has been found between the financial leverage and the equity risk (Hamada, 1972; Galai & Masulis, 1976; Karma & Sander, 2006), a negative association between leverage and a firm's profitability has been found (Rajan & Zingales, 1995; De Jong *et al.*, 2008; Verwijmeren and Derwall, 2010). Leverage is similarly associated with the present study as a control variable since firms' risk level is expressed to expect a coordinating activity according to the components that impact the value relevance of accounting information (Joos & Lang, 1994).

3. Methodology of research

3.1. Hypotheses Development and Model Specification

Since this study intends to inspect whether the earnings, book value and cash flows relevance is affected by economic factors (foreign ownership and trading volume), the connections among study variables are hypothesized as per the stock price as follows:

H₀₁: Foreign ownership has a significant impact on the value relevance of accounting information.

H₀₂: Trading volume has a significant impact on the value relevance of accounting information.

As per the valuation theory, two valuation models are regularly utilized in value relevance studies namely the price and return models. Price Model estimates the capacity of accounting information to clarify market values of equity. The Ohlson (1995) Price Valuation Model has been used in the current examination to decide the value relevance of accounting information. This model expresses market price per share (P) as a component of both earnings per share (EPS) and book value per share (BVPS). An exact adjustment of Ohlson's theoretical model has been used widely in the value relevance literature (Barth, 2000; Barth *et al.*, 2001; Ota, 2003, 2010; Suwardi, 2009; Hadi, 2005; Burgstahler & Dichev, 1997; Collins *et al.*, 1997; Barth *et al.*, 1998; Collins *et al.*, 1999; Easton, 1999; and Easton & Sommers, 2000).

This paper utilizes the valuation framework developed by Ohlson (1995) to inspect the value relevance of earnings per share and book value of equity per share in addition to cash flow per share following Dechow (1994); Ortega (2006); Anandarajan & Hasan, (2010); Khanagha *et al.* (2011) and Shamki & Abdul Rahman, (2012). In like manner, standard multiple regressions are used to check the connections between dependent variable and independent variables in the wake of controlling firms' size and leverage, the price model is adopted:

$$P_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 BVPS_{it} + \beta_3 CFPS_{it} + \beta_4 SIZE + \beta_5 LEVRG + e_{it} \quad (1)$$

Where, for firm i at the end of a year t;

P = Average annual share price refers to annual rates of share price of a company for the financial year (Grabowski & Mueller, 1975; Oyerinde, 2009); EPS = EPS refer to earnings per share of a company at end of the financial year (Bae & Jeong, 2007; Anandarajan & Hasan, 2010; Al Arussi *et al.*, 2009 and Shamki & Alulis, 2016; Shamki & Abdul Rahman, 2012);

BVPS = BVPS refers to book value of equity per share of a company at end of the financial year (Bae and Jeong, 2007; Shamki & Abdul Rahman, 2012; Anandarajan & Hasan, 2010; Al Arussi *et al.*, 2009 and Shamki & Alulis, 2016);

CFPS = CFPS refer to cash flows from operating activities per share of a company at end of the financial year (Shamki, 2013; Anandarajan & Hasan, 2010);

SIZE = SIZE refers to the natural logarithm of total assets of a company at end of the financial year (Hassan, 2004; and Anandarajan & Hasan, 2010) and

LEVRG = Leverage refers to the ratio of debt to total assets of a company at end of the financial year (Anandarajan & Hasan, 2010; Choi *et al.*, 2011).

In this study, EPS, BVPS, and CFPS are interacted with the selected economic factors (foreign ownership and trading volume), to capture the impact of these factors on the value relevance of accounting information. As per Hartmann & Moers (1999), this model is thought to be the reasonable one by including the interaction term of a particular variable on the connection between the dependent and independent variables. To test the impact of the economic factors (foreign ownership and trading volume) on the value relevance of accounting variables, interaction term (accounting variable * economic factors) is included in Price Model.

Therefore, the general price model is:

$$P_{it} = \alpha_0 + \beta_1 EF + \beta_2 EPS + \beta_3 EPS*EF + \beta_4 BVPS + \beta_5 BVPS*EF + \beta_6 CFPS + \beta_7 CFPS*EF + \beta_8 SIZE + \beta_9 LEVRG + e_{it}$$

Where, EF= economic factors (foreign ownership and trading volume); EF_{FORN, TRDV} = economic factors as a dummy variable with value 1 for; FORN = dummy variable with value 1 for companies having foreign ownership at the end of financial year; TRDV = dummy variable with value 1 for companies with trading volume greater than median trading volume, 0 otherwise; and other variables are defined before.

To test the hypothesis, the following models are used in this paper:

$$P_{it} = \beta_0 + \beta_1 FORN + \beta_2 EPS + \beta_3 EPS* FORN + \beta_4 BVPS + \beta_5 BVPS* FORN + \beta_6 CFPS + \beta_7 CFPS* FORN + \beta_8 SIZE + \beta_9 LEVRG + e_{it} \quad (2)$$

$$P_{it} = \beta_0 + \beta_1 TRDV + \beta_2 EPS + \beta_3 EPS* TRDV + \beta_4 BVPS + \beta_5 BVPS* TRDV + \beta_6 CFPS + \beta_7 CFPS* TRDV + \beta_8 SIZE + \beta_9 LEVRG + e_{it} \quad (3)$$

Coefficients with number 1 represent the value relevance of company characteristics in their rights. Coefficients numbered 2, 4 and 6 represent earnings, book value and cash flows relevance respectively

without the impact of economic factors. Coefficients 2 + 3, 4 + 5 and 6 + 7 summarize the response of stock price to earnings, book value and cash flows respectively with the impact of economic factors. It is assume that H_{01} and H_{02} as $H_0: \beta_3 = 0, \beta_5 = 0$ or $\beta_7 = 0$.

3.2. Sample and Data Collection

This study has concentrated on listed manufacturing companies of the Dhaka Stock Exchange. The study has chosen those manufacturing companies listed with DES in the year 2000 or before. This is on the grounds that this study has used information for 18 years from 2000 to 2017. As indicated by these criteria 71 manufacturing companies have chosen for the study.

3.3. Technique of Data Analysis

The multiple regression models are broadly utilized in earlier research to analyze the value relevance of the accounting information (Harris *et al.*, 1994; Collins *et al.*, 1997; Pirie & Smith, 2008 and among others). This paper has likewise used pooled regression following the methodology of Pirie & Smith (2008) with a basic empirical model that connect share price. As per Cavana *et al.* (2001) as study models incorporate numerous independent variables, balanced R^2 which is one of multiple regression outputs helps with evaluating the connection quality among the study variables. To assess study models it needs to consider F statistics significance. Following previous studies on the value relevance (Shamki, 2012, 2013; Shamki & Rahman, 2013), this paper relies upon the measurable estimations of the related coefficients of the pooled test in assessing its hypotheses.

4. Research results and discussions

This part contains the study results which mean to look at whether listed manufacturing company's company characteristics (stockholders number and company's age) influence its accounting information relevance and display the study results according to the study hypothesis. To confirm the hypothesis genuineness, multiple linear regression analysis tests were used to identify the relationship between economic factors (foreign ownership and trading volume) and value relevance of accounting information.

4.1. Descriptive Statistics

The descriptive statistics provide data's distribution profile to ensure that the sample is distributed normally. The entirety of the skewness and kurtosis values except share price are within ± 2 which ensures the normal distribution of the sample. To wipe out the non-normal distribution of share price, transformation process has to be done by natural logarithm transformation method, following Pallant & Manual (2007). Using SPSS, descriptive statistics for stock price measures, accounting information, and control variables are determined in Table-1. The descriptive statistics table shows that the annual share price has a mean and standard deviation of Tk. 3.83 and Tk. 1.4074 respectively. Among the accounting variables, book value per share shows the highest standard deviation while the least is appeared by income per share. The table indicates that 22% of foreign ownership and 50% of trade volume in the sample are larger than their median numbers in study companies' sample.

Table 1. Descriptive Statistics of the Panel Data Series

	PRICE	EPS	BVPS	CFPS	SIZE	LEVRG	FORN	TRDV
N	1278	1278	1278	1278	1278	1278	1278	1278
Mean	3.83	6.315	43.88	9.13	20.45	0.78	0.22	0.50
Std. Deviation	1.41	14.25	60.46	27.42	1.501	2.27	0.41	0.50
Skewness	0.32	0.00	0.00	0.00	0.082	22.65	1.35	-0.006
Kurtosis	-0.48	-0.08	-0.08	-0.08	0.43	611.87	2.81	1.00
Minimum	0.33	-38.9	-148.2	-77.8	14.77	0.00	0.0	0.0
Maximum	8.15	51.59	235.96	96.22	25.71	67.41	1.0	1.0

Source: Annual Reports (2000-2017)

Notes: i) Date are derived from output on SPSS 23.0; ii) Data have been compiled by researcher.

4.2. Value Relevance of Accounting Information

Table-2 shows that the overall *R*-square is 0.536678. This demonstrates the model has accounted for a 53.67% variation in share price by the independent variables. 'F' value is significant at 1% level. This implies that independent variables (EPS, BVPS, CFPS, SIZE, and LEVRG) have a significant impact on the market price of the security.

For the combined EPS, BVPS and CFPS in the price model all variables individually are value relevant relating to the share price. This is demonstrated by the significant positive coefficients on these variables (β_1 , β_2 , and β_3), demonstrating an increase in the value relevance of these accounting variables. This result is consistent with the previous studies (Lev, 1989; Ou *et al.*, 1989; Barth, 1991; Easton & Harris, 1991; Penman, 1991; Easton *et al.*, 1992; Dechow, 1994; Ohlson, 1995; Feltham & Ohlson, 1995; Barth & Kallapur, 1996; Collins *et al.*, 1997; Cheng *et al.*, 1997; Ely & Waymire, 1999; Easton, 1999; Alsalman, 2003; Bao, 2004; Anandarajan & Hasan, 2006; Verwijmeren & Derwall, 2007; Vishnani & Shah, 2008).

Table 2. Accounting Information Value Relevance

$P_{it} = \beta_0 + \beta_1 \text{EPS}_{it} + \beta_2 \text{BVPS}_{it} + \beta_3 \text{CFPS}_{it} + \beta_4 \text{SIZE} + \beta_5 \text{LEVRG} + e_{it}$				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.369737	0.422629	3.240992	0.0012
EPS	0.044187*	0.002400	18.41385	0.000
BVPS	0.003897*	0.000641	6.076999	0.000
CFPS	0.011420*	0.001121	10.19173	0.000
SIZE	0.092320*	0.021195	4.355802	0.000
LEVRG	0.017029	0.012932	1.316812	0.188
R-squared	0.536678			
Adjusted R-squared	0.534850			
F-statistic	293.5199*			
Prob(F-statistic)	0.000			

Source: Annual Reports (2000-2017)

Notes: i) Date are derived from output on E-Views 10.0

ii) *, **, *** Significant at 1%; 5% and 10% levels respectively.

iii) Data have been compiled by researcher.

4.3. Value Relevance and Foreign Ownership

Table-3 shows that the overall *R*-square is 0.552. The value implies that about 55.2% of the variation in share price is explained by the independent variables. From the perusal of results in Table 3, it has been found that 'F' value is significant at 1% level. This implies that independent variables have a significant impact on the market price of the security. The result shows that including the interaction of shareholder numbers in the regression model adjusted R^2 (0.549) is the same as that of adjusted R^2 (0.534) in Table-2. This increase in adjusted R^2 values is largely attributable to an increase in the effect of foreign ownership.

The coefficients on EPS, BVPS, and CFPS ($\beta_2 = 0.040$, $\beta_4 = 0.003$, $\beta_6 = 0.013$ respectively) are significant at 0.01 level and demonstrate the value relevance of EPS, BVPS, and CFPS in the absence of the impact of the foreign ownership. However, the results show that the coefficient on foreign ownership ($\beta_1 = -0.207$) is significant at 0.05 level. This demonstrates that foreign ownership is value relevant in its right. Foreign ownership shows significant influence on the value relevance of earnings and book value as demonstrated by the significant coefficients on EPS interaction variable ($\beta_3 = 0.022$ significant at 0.01 level or better) and CFPS interaction variable ($\beta_7 = -0.009$ significant at 0.01 level) for share price respectively. Foreign ownership also shows significant influence on the value relevance of BVPS as it is reflected by the significant coefficient on the interaction term ($\beta_5 = 0.003$) according to the share price.

The sign of the coefficients on the interaction terms is consistent with Hypothesis 1. Coefficients β_3 , β_5 (and β_7 although it is negative) are positive, indicating an increase in the value relevance of the accounting information when foreign ownership is included.

The results show that for companies with foreign ownership, the share price response to EPS is increased, as reflected in the positive coefficient on the earnings interaction term (β_3).

Table 3. Foreign Ownership and Accounting Information Relevance

$P = \beta_0 + \beta_1 \text{ FORN} + \beta_2 \text{ EPS} + \beta_3 \text{ EPS*FORN} + \beta_4 \text{ BVPS} + \beta_5 \text{ BVPS*FORN} + \beta_6 \text{ CFPS} + \beta_7 \text{ CFPS*FORN} + \beta_8 \text{ SIZE} + \beta_9 \text{ LEVRG} + e_{it}$				
Variables	Coef.	Std. Error	t-Statistic	Prob.
Constant	1.328*	0.419	3.172	0.002
FORN	-0.207**	0.096	-2.165	0.031
EPS	0.040*	0.003	15.547	0.000
EPS*FORN	0.022*	0.005	4.685	0.000
BVPS	0.003*	0.001	4.646	0.000
BVPS*FORN	0.003**	0.001	2.339	0.020
CFPS	0.013*	0.001	10.953	0.000
CFPS*FORN	-0.009*	0.002	-4.391	0.000
SIZE	0.095*	0.021	4.528	0.000
LEVRG	0.011	0.013	0.878	0.380
R ²	0.552			
Adj.R ²	0.549			
F-statistics	172.982*			
P- Value	0.000			

Source: Annual Reports (2000-2017)

Notes: i) Data are derived from output on E-Views 10.0

ii) *, **, *** Significant at 1%; 5% and 10% levels respectively

iii) Data have been compiled by researcher.

The reaction of the average annual share price to EPS increased from 0.04 (β_2) to 0.062 ($\beta_2 + \beta_3$), in the presence of foreign ownership. The effect on EPS is in line with previous studies (Bae & Jeong, 2007 in Korea; Anandarajan & Hasan, 2010; and Shamki, 2012 in Jordan) that have finished up a noteworthy and positive effect for foreign ownership on the value relevance of earnings. This result could be explained by foreign investment theory, which states that foreign ownership has a material effect on firm value by improving its performance. Hypothetically, it is discovered that higher proportion of foreign ownership has a positive association with the company's performance because it imports advanced information technology and leads to greater economic efficiency (Claessens *et al.*, 2001; Litan *et al.*, 2001; Denizer, 2000; Okuda & Rungsomboon, 2004; Anandarajan & Hasan, 2010).

The share price response to BVPS is also increased, as reflected in the positive coefficient on the book value interaction term (β_5). The reaction of those share price to BVPS increased from 0.003 (β_4) to 0.006 ($\beta_4 + \beta_5$) in the presence of foreign ownership. The result on EPS is consistent with Shamki, (2012). The results also show that foreign ownership has negative influence on the value relevance of cash flows as it is demonstrated by the coefficients on the interaction term (β_7). This result is unexpected, which may explain why cash flow capacity is less than earnings and book value (Wilson, 1986; Dechow, 1994; Barth, 2000; Thi & Schultze, 2009), and thus, market participants rely more on earnings and book value than on cash flows. Another clarification is that cash flow does not necessarily depend on accounting principles (Hadi, 2005; Velez-Parega, 2005), which can affect its value. Finally, results show that the value relevance of EPS and BVPS relating to the share price is relevant ($\beta_3 \neq 0$, $\beta_5 \neq 0$) for companies having foreign ownership in Bangladesh, while this factor has a negative impact on the value relevance of cash flows.

4.4. Value Relevance and Trading Volume

Hypothesis (2) states that the value relevance of earnings, book value, and cash flows is greater for companies having larger trading volume. The influence of trading volume has been tested by the Equations 3. Table-4 presents the regression results for the pooled sample with the impact of the company's trade volume relative to the share price. Table 4 shows that the overall R-square is 0.559. The value infers that about 55.9% of the variation in share price is explained by the independent variables. The result shows that including interaction of trade volume in the regression model adjusted R² (0.556) leads to stronger than

that of adjusted R^2 (0.534) in Table 2. This increase in adjusted R^2 values is largely attributable to an increase in the effect of trade volume. The significant F statistic indicates that the model as a whole is significant.

The coefficients on EPS ($\beta_2 = 0.041$), on BVPS ($\beta_4 = 0.003$), and on CFPS ($\beta_6 = 0.015$) are significant at 0.01 level and demonstrate the value relevance of EPS, BVPS, and CFPS in the absence of the impact of the trading volume. However, the results show that the coefficients on trading volume ($\beta_1 = 0.361$) is significant at 0.01 level. This demonstrates that trading volume is relevant in its right. Trading volume shows significant impact on the value relevance of BVPS and CFPS. This is demonstrated by the significant coefficients on BVPS interaction terms ($\beta_5 = 0.002$ significant at 0.05 level or better) and CFPS interaction terms ($\beta_7 = -0.006$ significant at 0.01 level or better) for share price respectively. Trading volume has insignificant impact on the value relevance of EPS as it is reflected by the insignificant coefficient on the interaction term ($\beta_3 = 0.007$). This result is consistent with the results of Dontoh *et al.* (2004) and Liu & Liu (2007) and inconsistent with the result of Shamki (2013).

Table 3. Trade Volume and Accounting Information Relevance

$P = \beta_0 + \beta_1 \text{TRDV} + \beta_2 \text{EPS} + \beta_3 \text{EPS} * \text{TRDV} + \beta_4 \text{BVPS} + \beta_5 \text{BVPS} * \text{TRDV} + \beta_6 \text{CFPS} + \beta_7 \text{CFPS} * \text{TRDV} + \beta_8 \text{SIZE} + \beta_9 \text{LEVRG} + e_{it}$				
Variables	Coef.	Std. Error	t-Statistic	Prob.
Constant	2.213*	0.428	5.174	0.000
TRDV	0.361*	0.058	6.225	0.000
EPS	0.041*	0.003	11.934	0.000
EPS* TRDV	0.007	0.005	1.431	0.153
BVPS	0.003*	0.001	3.902	0.000
BVPS* TRDV	0.002***	0.001	1.901	0.058
CFPS	0.015*	0.002	9.260	0.000
CFPS* TRDV	-0.006*	0.002	-2.756	0.006
SIZE	0.040***	0.022	1.844	0.065
LEVRG	0.026**	0.013	2.020	0.044
R^2	0.559			
Adj. R^2	0.556			
F-statistics	178.231*			
P- Value	0.000			

Source: Annual Reports (2000-2017)

Notes: i) Date are derived from output on E-Views 10.0

ii) *, **, *** Significant at 1%; 5% and 10% levels respectively..

iii) Data have been compiled by researcher.

Table 4 shows that for companies with larger trading volume, the share price response to EPS shows no response, as reflected in the insignificant coefficient on the earnings interaction term (β_3). The share price response to BVPS is increased, as reflected in the positive coefficient on the book value interaction term (β_5). The reaction to BVPS increased from 0.003 (β_4) to 0.005 ($\beta_4 + \beta_5$) in the presence of trading volume. Finally, the results show that the value relevance of BVPS and CFPS relating to the share price is value relevant for companies having larger trading volume, while this factor has no significant impact on the value relevance of earnings.

5. Conclusions

This paper explored the impact of economic factors on the value relevance of accounting information for listed manufacturing firms in the Dhaka Stock Exchange, from 2000 to 2017. In this study, foreign ownership and trading volume are used as economic factors. Value-relevance of accounting information is measured by regressing stock price on earnings per share (EPS) and book value per share (BVPS) and cash flow per share (CFPS). Utilizing the fundamental Ohlson (1995) model, this paper finds that EPS, BVPS, and CFPS are value relevant to the share price. The findings showed that foreign ownership has a significant and positive impact on the value relevance of EPS and BVPS but shows a negative impact on CFPS relative to the

share price. The findings showed that trading volume has a significant and positive on the value relevance of BVPS and CFPS but not on EPS relative to the share price. The paper offers handy commitments to market participants including investors, managers, and financial analysts in addition to its contributions to academia and regulatory bodies. The outcomes may help investors to (1) better understand the company's real financial position by controlling the asymmetric information and (2) improve the control of managers' performance results which is considered in making investment decisions.

Moreover, while many studies focus on examining the value relevance of accounting information, primarily earnings and book value, one significant ramification of the present paper is broadening the valuation model by including cash flows as limited studies investigated the value relevance of this variable together with earnings and book value. This paper likewise inspected the directing impact of the economic factors on the value relevance of the accounting information. Based on the findings of this paper, market participants might be able to conclude the firm value through the company's foreign ownership and trading volume. This paper provides empirical evidence about the indirect influence of the selected economic factors on the market. Accordingly, it will support future regulator work that has a tendency to effectively oversee management to increase the appreciation of the reporting process. This improves the ability of market participants to make the right decisions about market distribution. The findings could be relevant for the courses, such as financial statements analysis and accounting theory and practice. In financial statements analysis courses, the valuation model mainly focused on earnings. Because these variables show significant relationships with share price, the paper provides further evidence of the importance of book value and cash flow, indicating an important relationship between accounting information integrity and information usefulness for market participants.

Future research has to be extended to examine the influence of different economic factors on the value relevance of accounting information which may provide new insights into the possible factors that could influence the value relevance of accounting information. Researchers, who are interested in the area of research, are encouraged to expand the research period and sample size to determine their effects on the accounting information relevance.

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