INVESTIGATION OF THE IMPACT OF FINANCIAL INFORMATION ON STOCK PRICES: THE CASE OF VIETNAM

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ABSTRACT

This research is conducted for investigating the impact of financial information on stock prices of listed firms on Vietnam Stock Exchange. Data were collected from 273 large listed firms for the period from 2006 to 2016. By using the multiple regressions, the relationship between determinants including earnings per share, book value, cash flow from operating activities, firm size and stock prices is investigated. The results show that four determinants have positive relationships with stock prices with the explanation level of 48.1%. The impact of financial information on stock prices is getting stronger and stronger in the years of 2015 and 2016 with the explanation levels above 60%.

Keywords: Relevance of Financial Information, Stock Prices, Vietnam.

INTRODUCTION

Financial statements are prepared for providing useful financial information about financial position, operational result, changes in equity, cash flows. Internationally, financial statements are formed for the sake of financial statements users including management and are basis for users to consider in making economic decisions. Under IAS 1, the qualitative characteristics of financial statements include understandability, relevance, reliability and comparability. In which, relevance is understood as relevance to the needs of the users and this may involve reporting particularly relevant information or information whose omission or misstatement could influence the economic decisions of users (IASB, 2010). Accounting information in this research is based on data from financial statements. The financial information such as borrowing rate, economic growth and inflation is out of dimension of this study.

According to Maines & Wahlen (2006), financial information is regarded as a surrogate of economic structure representing in trade deals of an entity, a transaction and an event. This means that financial information is not only for management but also for insiders and outsiders as well. Financial information is related to an accounting system and used internally and externally for satisfying diverse needs of users.

Stock price is influenced by many determinants including financial information presented in the financial statements. In developed stock exchanges, the relationship between accounting information and stock price has been investigated. Ball & Brown (1968) conducted empirical research of relationship between financial information and stock price on New York Stock Exchange and found that stock price was influenced by profits. Based on the model of Ohlson (1995), many empirical studies have been conducted for testing this relationship in different contexts. Collin, Maydew & Weiss (1997) concluded that based on the model of Ohlson (1995),

financial information impacts on stock price with explanation of 54%. King & Langli (1998) employed a regression model of income and book value of stock and results with explanation levels of 70%, 60% and 45% in contexts of United Kingdom, Norway and Germany, respectively. Substantial differences of relationship between accounting information and stock price were existed among countries and across the length of time (King & Langli, 1998).

In the context of Vietnam, some studies such as Nguyen (2010), Tran, Nguyen & Ho (2005), Nguyen (2016) have been investigated the relationship between accounting information and stock price. The results are different because independent variables are employed in different models with data of one financial year. In addition, the impact of financial information and its relevance on stock price and the explanation level of this relationship have not been clearly shown.

This study is conducted for investigating the impact levels of accounting information on stock price of listed firms on Vietnam Stock Exchange. The impact of book value of stock and earnings per share on stock price is focused in previous studies. However, some other determinants also influence stock price such as cash flow from operating activities, firm size and others. Based on review of literature, we found that financial information such as earnings per share, book value of stock, cash flow from operating activities and firm size on stock price has not investigated. That is why, four determinants affecting on stock price have been explored and based on findings, some recommendations through time series are given in the context of a developing country like Vietnam.

LITERATURE REVIEW

In an effective market, the price of stock is not projected so stock return is not also projected and in the abnormal distribution. The market is also divided into three levels of efficiency, i.e. (i) weak form market, (ii) semi-strong market, (iii) strong form market (Malkiel & Fama, 1970). In a weak form market, the present price of stock reflects full information in the past. The present price of stock reflects full information such as earnings, dividends, management representations in a semi-strong market. In a strong form market, it cannot conduct commercial rules basing on internal information because market price has already reflected that information.

The relationship between stock price and accounting information like accounting profit, earnings per share and book value of stock has been investigated in prior studies. Ball & Brown (1998) concluded that information of profit is one of useful accounting information for measuring stock price. Therefore, many empirical studies investigate and measure the relationship between financial information and stock price and its impact (Walker, 1997).

Based on the result of Ohlson (1995), financial information including items in the balance sheet and income statement and stock price is scrutinized. Ohlson (1995) concluded that there was impact of financial information on stock price. Collin, Maydew & Weiss (1997) investigated the relationship of stock price variation and profit and book value of equity in United State of America for the period of 40 years.

Sharma, Kumar & Singh (2012) tested the relationship between stock price and financial information including book value of stock, earnings per share, dividends paid for the period from 2000 to 2008 in India. The results showed that these determinants influence strongly on stock market price and relate strongly to stock market indices.

Studies conducted by Stark & Thomas (1998); Hand & Landsman (2005); Lo & Lys (2000) showed that stock price depended actively on book value and income and this finding

also agrees with results conducted by Green, Stark & Thomas (1996); Rees (1997); Chen, Chen & Su (2001) and Alfaraih & Alanezi (2011). However, these studies did not differentiate the explanation levels under the model including book value and income and the model including book value and dividends. So it can be said that out of income and book value, dividend is one of determinants influencing stock price.

Based on the model of Ohlson (1995), many empirical studies conducted in developing countries such as researches of Sharma, Kumar & Singh (2012) in Jordan, Khanagha (2011) in UAE, Omokhudu & Ibadin (2015) in Nigeria, Khanna (2014) in India, Pirie & Smith (2008) in Asia countries. These studies found the relationship between accounting information and stock price but different explanation levels. Dimitropoulos & Asteriou (2009) collected a sample of 101 non-financial listed firms on Athens Stock Exchange with data from 1995 to 2004 and usage of OLS. The result showed that ratio of working capital per assets and ROS negatively influence stock price whereas ROA positively influence stock price.

In Vietnam, Nguyen (2010) employed the model of Ohlson with the data from 2003 to 2007, R^2 is 40%. However, Vietnam Stock Exchange is new born and has not enough regulations relating to accounting information disclosure.

Nguyen (2014) also employed the model of Ohlson (1995) for evaluating the relationship between stock prices and accounting information. Data were collected from 430 listed firms on Vietnam Stock Exchange for the financial year of 2009. The results showed R^2 is 43% and four determinants including book value, earnings per share, ROE, financial leverage impacting on the stock price but earnings per share and ROE positively influence and have significant statistics.

Nguyen (2016) also investigated the relationship between financial information and stock price of 147 listed firms on Ho Chi Minh City Stock Exchange (HOSE) and 179 firms on Hanoi Stock Exchange (HNX) for the period from 2008 to 2014. By employing the adjusted Ohlson (1995), financial information including book value and profit positively affected stock price but higher impact on the stock price belongs to the variable of profit. The prices of stock after 3 months from year end reflect more complete than that at the year end.

Based on review of literature, almost all studies investigate the impact levels of book value and profit on stock price, but rarely studies look into the aspects of accounting information such as cash flow from operating activities per stock, firm size impacting on the stock price. That is why; this research investigates financial information in the financial statements on stock price by using the data of listed firms on Vietnam Stock Exchange.

RESEARCH METHODOLOGY

For testing the relationship between financial information and stock price, we use the dependent variable of stock price and independent variables of book value of stock, earnings per share, cash flow from operating activities per stock. Based on the studies of Ohlson (1995), Aboody, Hughes & Liu (2002); Collins, Maydew & Weiss (1997); Dechow, Hutton & Sloan (1999); Hand & Landsman (2005); King & Langli (1998); Ota (2002). Some hypotheses are given as:

Earnings item is always interested from stakeholders and a critical factor influencing an economic decision from investors. Khanagha (2011) and Khanna (2014) concluded that earnings per share have a positive relationship with stock price, meaning that an increase of earnings per share would attract more investors. So we have:

H1: Earnings per share have a positive relationship with stock price.

When looking into assets of an entity such as equipment, machines, buildings, to some extent, they are evaluated by net worth assets divide by number of stocks. However, the relationship between book value of stock and market price of stock should be scrutinized. In case of evaluating operational results of the entity, net worth assets are not enough to measure stock price. According to Khanna (2014); Khanagha (2011) and Omokhudu & Ibadin (2015), book value of stock is one determinant influencing stock price. So we have:

H2: Book value of stock associates positively with stock price.

Measuring cash flows are conducted in different ways in prior studies. Cash flow from operating activities is a signal to know the ability to make money from an entity and is used for evaluating the quality of earnings in comprehensive income statement. Omokhudu & Ibadin (2015) and others showed that cash flow from operating activities has a positive relationship with stock price. So we have:

H3: Cash flow from operating activities has a positive relationship with stock price.

In addition to earnings per share, book value of stock and cash flow from operating activities, firm size are considered as the important items for evaluating financial position of an entity. The bigger the firm size is, the higher attraction of investment is and in consequence, stock price is also influenced. The firm size is always used in investigating the correlation between accounting information and stock price and to some extent it influences stock price of the entity. We use logarit of assets as some prior studies measured in the study of Collin, Maydew & Weiss (1997). So we have:

H4: Firm size has a positive association with stock price.

Based on literature review, we use the model as:

$$P_{it}=\beta_0+\beta_{1x}\,EPS_{it}+\beta_{2x}\,BV_{it}++\beta_{3x}\,CFOPS_{it}+\beta_{4x}\,SIZE_{it}+u_{it}$$

Where:

- Dependent and independent variables are explained in Table 1.
- β_0: Intercept
- u_{it}: Random error

Dependent variable is value of stock price at two definite time of financial year end (31st December) and end of 1st quarter after year end (31st March). The reason for collecting data of stock price at the end of March is that under the regulation of Vietnam, yearly financial statements are submitted during 90 days after the year end.

According to King & Langli (1998), it took some time to prepare financial statements so at the year end the stock price might not reflect completely in financial reports. Aboody, Hughes & Liu (2002) explained that in case of effective market stock price at the year-end is employed, otherwise collecting stock price after year end.

By using multiple regressions, this research tests the impact levels of independent variables and controlled variable on stock price. Data wave collected from audited financial statements of 273 large listed firms on HOSE for the period from 2006 to 2016 with 1,910 observations.

Table 1 MEASUREMENT OF VARIABLES IN THE MODEL				
Variables	**Type**	**Code**	**Measurement**	**Orientation Impact**
Stock price	Dependence	P	P_o: Stock price at 31st December 200N P_1: Stock price at 31st March 200N+1	
Earnings per share	Independence	EPS	Earnings/Share	+
Book value of stock	Independence	BV	Liabilities/Total Assets	-
Cash flow from operating activities per stock	Independence	CFOPS	Cash flow from operating activities/No. of stocks	+
Firm size	Control	Size	Ln (net revenue)	+

RESULTS AND DISCUSSION

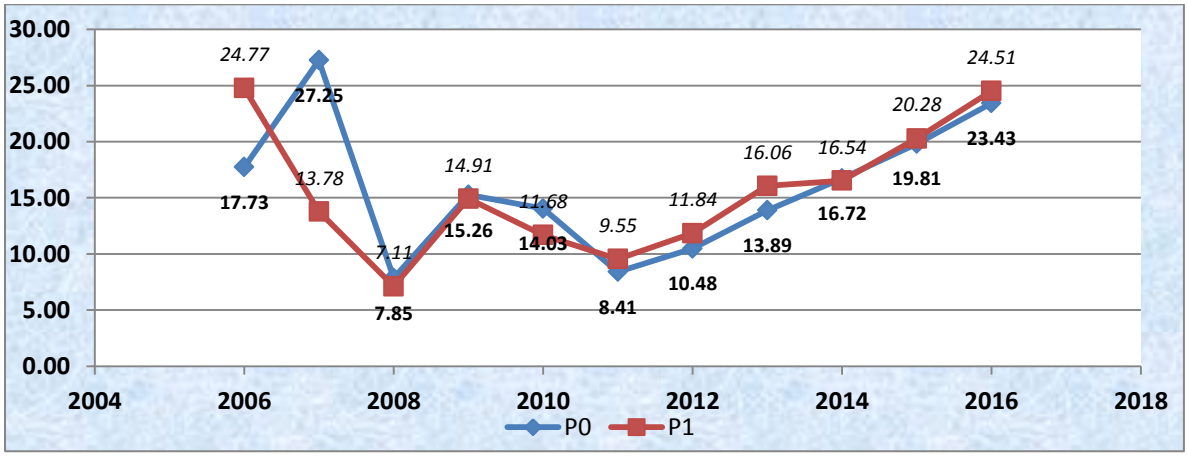
Results

For the period from 2006 to 2016, 273 listed firms with 1,910 observations in the data. The lowest number of listed firms is 55 in 2009 and the highest in 2016 is 273 (Table 2).

Table 2 LISTED FIRMS IN THE RESEARCH SAMPLE											
Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
No. of firms	73	103	124	55	77	248	220	214	261	262	273

Source: Data were collected from HOSE

As shown in Figure 1, in the period from 2006 to 2016 the lowest stock prices are in 2008 because of financial crisis, followed in the year 2011. However, stock prices increase again in the period from 2012 to 2016. The stock prices at the year-end (P_0), basically, are nearly the same at 3 months after year end (P_1), the specific time to inform audited yearly financial statements, except 2017.



Source: Average prices of stocks were calculated from stock prices on HOSE through years

FIGURE 1
AVERAGE PRICES OF STOCKS OF LISTED FIRMS (VND), 2006 TO 2016

Data in Table 3 show that average stock price at the year-end is 15.87 Vietnamese thousand dong and at 31st March 200N+1 is 16.0 thousand dong (*dong is Vietnamese currency*). However, there is a big difference between average stock price and stock median. Specifically, median of stock price and average stock pace at the year-end are 10.52 thousand dong and 10.40 thousand dong, respectively. Average earnings per share are 2,669.77 dong (VND) and average book value of stock is 19,170 VND. Table 3 shows that stock price of listed firm is lower than book value of stock in the period from 2006 to 2016. Average cash flow from operating activities is 1,630 VND and mean ln (firm size) is 13,450 VND.

Table 3
DESCRIPTIVE STATISTICS OF VARIABLES

Variables	Observations	Mean	Standard Deviation	Min	Max	Median
P_0	1,910	15.87	17.07	0.30	182.50	10.52
P_1	1,910	16.00	17.97	0.30	210.00	10.40
EPS	1,910	2,669.77	3,244.18	-31,627.00	27,281.00	2,002.50
BV	1,910	19.17	9.85	-28.50	107.92	16.75
CFOPS	1,910	1.63	8.50	-140.47	146.21	0.98
SIZE	1,910	13.45	1.38	8.23	18.11	13.40

Source: Data were calculated from financial statements and stock prices on HOSE

Correlation coefficient (r) reflects the relationship among variables and range from –1 to +1. If r>0.8, multicollinearity in the repression model is existed. Data in Table 4 show that there is no multicollinearity existed in the model because r<0.8. The relationship between variable dependent (P_0, P_1) with independent variables has statically significance and in a positive manner.

Table 4
MATRIX OF CORRELATION COEFFICIENT

	P_0	P_1	EPS	BV	CFOPS	SIZE
P_0	1					
P_1	0.9326*	1				
EPS	0.5316*	0.5361*	1			
BV	0.4869*	0.5000*	0.5754*	1		
CFOPS	0.1582*	0.1555*	0.1295*	0.0736*	1	
SIZE	0.2661*	0.2723*	0.2329*	0.2077*	0.0540*	1
t-statistics in brackets * p<0.05						

Source: Data were calculated from audited financial statements, stock prices and STATA 13.0

The next step is to select the suitability of OLS, FEM or REM in this research. For evaluating the suitability of the models, we test F and Hausman. By testing F, Prob>F=0.000<α=5% with statistically significance of 5%. It means that FEM is viewed to be suitable and OLS is unsuitable because of existence of fixed effect in each firm through time series.

The next procedure is to run FEM and REM and then Hausman testing is conducted for choosing the models of FEM or REM. Table 5 shows the results of regression model with the dependent variable of Po. Prob>chi^2=0.000 meaning that P-value=0.0000<α=5%, meaning that the model of FEM is more suitable than the model of REM.

Table 5
RESULTS OF REGRESSION MODEL WITH P_0

	VIF	OLS	FEM	REM	GLS	QR(50)
EPS	1.72	0.00153***	0.00130***	0.00153***	0.00180***	0.00142***
		(12.58)	(10.02)	(12.58)	(15.02)	(14.78)
BV	1.61	0.321***	0.192***	0.321***	0.445***	0.314***
		(7.04)	(3.55)	(7.04)	(11.37)	(10.02)
CFOPS	1.03	0.129***	0.0979***	0.129***	0.177***	0.100***
		(3.81)	(2.85)	(3.81)	(4.75)	(3.36)
SIZE	1.09	2.625***	4.098***	2.625***	1.583***	0.820***
		(8.22)	(9.23)	(8.22)	(6.75)	(4.36)
_cons		-29.60***	-46.58***	-29.60***	-19.05***	-8.397***
		(-6.98)	(-7.92)	(-6.98)	(-6.11)	(-3.36)
N		1910	1910	1910	1910	1910
R-sq within		0.1491	0.1583	0.1491		
R-sq between		0.481	0.381	0.481		0.1758
R-sq overall		0.3424	0.2863	0.3424		
F testing			F(4,1631)=76.67			
			Prob>F=0.0000			
LM testing		Wald chi^2 (4)=555.03		Wald chi^2 (4)=555.03	Wald chi^2 (4)=1361.78	
		Prob>F=0.0000		Prob>chi^2=0.0000	Prob>chi^2=0.0000	
Hausman testing			chi^2 (4)=85.79			
			Prob>chi^2=0.0000			
Modified Wald test			chi^2 (275)=2.5e+30			
			Prob>chi^2=0.0000			
Wooldridge test			F (1, 260)=12.846			
			Prob>F=0.0004			
t statistics in brackets * p<0.1, ** p<0.05, *** p<0.01						

Source: Data were calculated from audited financial statements, stock prices and STATA 13.0

Table 6
RESULTS OF REGRESSION MODEL WITH P_1

	VIF	OLS	FEM	REM	GLS	QR (50)
EPS	1.72	0.00152***	0.00132***	0.00152***	0.00187***	0.00149***
		(12.56)	(10.45)	(12.56)	(14.94)	(16.50)
BV	1.62	0.341***	0.223***	0.341***	0.496***	0.311***
		(7.39)	(4.21)	(7.39)	(12.15)	(10.56)
CFOPS	1.03	0.119***	0.0916***	0.119***	0.179***	0.0590**
		(3.57)	(2.73)	(3.57)	(4.60)	(2.10)
SIZE	1.09	3.100***	4.517***	3.100***	1.723***	0.674***
		(9.35)	(10.43)	(9.35)	(7.05)	(3.82)
_cons		-36.07***	-52.72***	-36.07***	-21.97***	-6.435***
		(-8.18)	(-9.19)	(-8.18)	(-6.76)	(-2.74)
N		1910	1910	1910	1910	1910
R-sq within		0.1738	0.1825	0.1738		
R-sq between		0.4466	0.3582	0.4466		0.184
R-sq overall		0.3461	0.2914	0.3461		
F testing			F (4, 1631)=91.01			

Table 6 RESULTS OF REGRESSION MODEL WITH P_1						
			Prob>F=0.0000			
LM testing		Wald chi^2 (4)=580.83		Wald chi^2 (4)=580.83	Wald chi^2 (4)=1103.90	
		Prob>F=0.0000		Prob>chi^2=0.0000	Prob>chi^2=0.0000	
Hausman testing			chi^2 (4)=112.39			
			Prob>chi^2=0.0000			
Modified Wald test			chi^2 (275)=2.5e+30			
			Prob>chi^2=0.0000			
Wooldridge test			F (1, 260)=15.523			
			Prob>F=0.0001			

t statistics in brackets * p<0.1, ** p<0.05, *** p<0.01

Source: Data were calculated from financial statements, stock prices and STATA 13.0

The next step is to test multicollinearity, heteroskedasticity, autocorrelation and GLS for reducing the weaknesses of the model.

1. Multicollinearity testing: in order to detect multicollinearity, we use varian inflation factor (VIF). If VIF>2, multicollinearity is existed. Based in the Tables 5 and 6, VIF<2, meaning that there is no existence of multicollinearity.
2. Heteroskedasticity testing: in order to detect heteroskedasticity, we employ Modified Wald test. Ho: There is no heteroskedasticity and H1: There is existence of heteroskedasticity. Based on the Tables 5 and 6, P-value<α=0.05 so Ho is rejected.
3. Autocorrelation testing: in this model, we test Wooldridge technique for checking the existence of autocorrelation. Ho: there is no autocorrelation and H1: there is existence of autocorrelation. The results in the Tables 5 and 6 show that P-value=0.0004<α=0.05 so Ho is rejected meaning that there is no existence of autocorrelation in the model.
4. Generalized least squares: we use GLS for reducing the weaknesses of the model. Based on the data in Tables 5 and 6, the model has been checked.

Because of a big difference of mean and median of stock price, we run regression model of median. The result of this testing is fairy the same with results of other testing.

Table 7 REGRESSION RESULTS BY B		
Variables	**P_0**	**P_1**
EPS	0.3427249***	0.337897***
BV	0.2565817***	0.2717727***
CFOPS	0.088013***	0.0845561***
SIZE	0.1282125***	0.1325683***

t statistics in brackets * p<0.1, ** p<0.05, *** p<0.01

Source: Data were calculated from audited financial statements, stock prices and STATA 13.0

Based on the results in Table 7, the most impact on stock price is earnings per share (EPS), followed by book value of stock (BV), firm size (size) and cash from operating activities per stock (CFOPS).

Table 8, the stock price at the year-end (Po) is influenced positively by all four determinants at both in a big firm and small one. Firm size is classified basing on the logarit of assets; in case logarit of assets of higher than 13.45 is considered as big and vice versa. The stock price at 3 months after year end (P_1) is influenced positively by all four factors in a big firm; but

only two factors of earnings per share (EPS) and book value of stock (BV) affect stock price whereas cash flow from operating activities per stock (CFOPS) and firm size has no impact on stock price.

Table 8
REGRESSION RESULTS BY FIRM SIZE

	GLS-P_0		GLS-P_1	
	Small firm	**Large firm**	**Small firm**	**Large firm**
EPS	0.00138***	0.00207***	0.00153***	0.00207***
	(10.16)	(11.38)	(11.99)	(10.64)
BV	0.180***	0.661***	0.194***	0.734***
	(4.14)	(10.94)	(4.75)	(11.32)
CFOPS	0.0906**	0.267***	0.0232	0.369***
	(2.57)	(3.94)	(0.70)	(5.06)
SIZE	0.766*	3.026***	0.606	3.580***
	(1.84)	(5.41)	(1.55)	(5.96)
_cons	-3.065	-45.66***	-1.642	-55.06***
	(-0.60)	(-5.61)	(-0.34)	(-6.31)
N	959	951	959	951
t statistics in brackets * p<0.1, ** p<0.05, *** p<0.01				

Source: Data were calculated from audited financial statements, stock prices and STATA 13.0

The impact levels of financial information on stock price in different years are shown in Appendices 1 and 2. Based on these data, there is a difference in the time series but the explanation level increases in the time series, especially in 2015, 2016, there is above 60% information relevance impacting on stock price.

Discussion

Based on the results in this study, some discussions are presented as:

1. Earnings per share (EPS): this variable has a positive relationship with stock price with statistically significance of 1%. It is suitable with the H1 and agrees with results conducted by Kanagha (2011); Khanna (2014); Nguyen (2010); Nguyen (2014) and Nguyen (2016).
2. Book value of stock (BV): this determinant has a positive association with stock priced with statistically significant of 1%, so H2 is accepted. This result agrees with results conducted by Kanagha (2011); Omokhudu & Ibadin (2015) and Khanna (2014) but disagrees with the result of Nguyen (2010) and Nguyen (2014).
3. Cash flow from operating activities per stock (CFOPS): this factor associates positively with stock price with statistically significance of 1% and agrees with the result conducted by Omokhudu & Ibadin (2015).
4. Firm size (SIZE): this variable has a positive correlation with stock price with statistically significance of 1%, so H4 is accepted.

CONCLUSION AND RECOMMENDATIONS

Based on the empirical research, we used 1,910 observations from 273 listed firms on Vietnam Stock Exchange from 2006 to 2016 (imbalance data) by analysing multi-regression testing. The results show that earnings per share (EPS), book value of stock (BV), cash flow from operating activities per stock (CFOPS), firm size (SIZE) have positive relationships and statistically significance with stock price. Based on the testing, there is a different result with the

variable of P_1 by firm size and cash flow from operating activities per stock (CFOPS) and firm size (SIZE) have no impact on stock price in the context of Vietnam.

Some recommendations have been given basing on the findings as:

1. First, for investors: When making decision for buying stocks, investor should focus on accounting information in the audited financial statements. The reason is that accounting information such as earnings per share, book value of stock, cash flow from operating activities, firm size influence stock prices of listed firms on stock exchange. So the changes of those independent variables in this paper make changes of stock prices in stock market in the context of Vietnam.

2. Second, for listed firms: Accounting information should be provided in complete and timing manners and based on the current regulations of Vietnam. The completeness disclosure of financial statements, audited financial statements, management representations, operational results and then economic decisions can be made from investors. If listed firms do so, investors have belief from listed firms and stock market of Vietnam.

Profitability is the most impact item on stock price. So reducing expenses, increasing profitability should be focused and much interested by executive management of listed firms. Using high tech equipment and caring for environmental pollutions form the side of listed firms will reduce the cost of capital and attract more investors.

There is no substantial difference of impact levels of accounting information on stock price at the end of financial year (P_0) and three months after the year end (P_1). So investors should consider the suitable time to invest. The fact is that Vietnam Stock Exchange gradually improves and to some extent the relevance of accounting information has reflected in stock price.

Besides, the result of this research shows that firm size impacts on stock price. So for a big firm, taking advantages of firm size is one way to improve profitability and increase stock price. In addition, improving financial management will enhance liquidity ratios and receivable management.

3. Third, for the regulatory bodies like State Securities Commission of Vietnam: The stock market in Vietnam is a virgin market and operation of stock market is not run smoothly, so laws enforcement from regulatory bodies is very necessary to help listed firms and securities firms, management and investors as well to comply with legal frameworks of Vietnam.

APPENDIX

Appendix 1
REGRESSION RESULTS WITH P_0, FOR PERIOD FROM 2006 TO 2016

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
EPS	0.00052	0.00204***	0.000523***	-0.000823	0.0000397	0.000715***	0.00123***	0.00236***	0.00129***	0.00289***	0.00414***
BV	0.052	0.0275	0.00334	0.0365	0.548***	0.277***	0.305***	0.311***	0.660***	0.544***	0.495***
CFOPS	0.0942	-0.111	0.09	-0.162	-0.102*	-0.0193	0.933***	0.293***	0.511***	0.371**	0.698***
SIZE	3.953***	0.997	0.477	0.573	1.212	0.208	0.51	1.257**	1.450***	0.685	0.897
_cons	-36.39**	5.799	-0.163	10.23	-12.75	-1.486	-6.612	-15.06**	-18.65***	-8.239	-8.873
N	73	103	124	55	77	248	220	214	261	262	273
R-sq	***0.153***	***0.151***	***0.11***	***0.099***	***0.266***	***0.216***	***0.369***	***0.505***	***0.488***	***0.614***	***0.673***

*t statistics in brackets * p<0.1, ** p<0.05, *** p<0.01*

Source: Data were calculated from audited financial statements, stock prices and STATA 13.0

Appendix 2 REGRESSION RESULTS WITH P_1, FOR PERIOD FROM 2006 TO 2016											
	2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
EPS	0.00151*	0.000543	0.000453***	0.000211	0.0000704	0.000926***	0.00164***	0.00250***	0.00146***	0.00279***	0.00421***
BV	0.24	0.0719	0.0257	0.174	0.459***	0.268***	0.359***	0.323***	0.697***	0.691***	0.575***
CFOPS	0.0705	-0.017	0.0751	-0.0655	-0.0491	-0.0352	1.318***	0.285**	0.527***	0.417***	0.628***
SIZE	4.206***	1.203	0.426	-1.131	1.189	0.526	0.681	1.385***	1.219**	0.614	1.236*
Appendix 2 REGRESSION RESULTS WITH P_1, FOR PERIOD FROM 2006 TO 2016											
_cons	-40.26**	-5.78	-0.481	25.55	-13.17	-4.996	-10.17	-15.14**	-16.81**	-9.416	-13.9
N	73	103	124	55	77	248	220	214	261	262	273
R-sq	***0.294***	***0.078***	***0.143***	***0.07***	***0.249***	***0.205***	***0.382***	***0.491***	***0.455***	***0.631***	***0.664***
t statistics in brackets * p<0.1, ** p<0.05, *** p<0.01											

Source: Data were calculated from audited financial statements, stock prices and STATA 13.0

REFERENCES

Aboody, D., Hughes, J. & Liu, J. (2002). Measuring value relevance in a (possibly) inefficient market. *Journal of Accounting Research, 40*(4), 965-986.

Alfaraih, M. & Alanezi, F. (2011). The usefulness of earnings and book value for equity valuation to Kuwait stock exchange participants. *The International Business & Economics Research Journal, 10*(1), 73.

Ball, R. & Brown, P. (1968). An empirical evaluation of accounting income numbers. *Journal of Accounting Research*, 159-178.

Collins, D.W., Maydew, E.L. & Weiss, I.S. (1997). Changes in the value-relevance of earnings and book values over the past forty years. *Journal of Accounting and Economics, 24*(1), 39-67.

Chen, C.J., Chen, S. & Su, X. (2001). Is accounting information value-relevant in the emerging Chinese stock market? *Journal of International Accounting, Auditing and Taxation, 10*(1), 1-22.

Dechow, P.M. Hutton, A.P. & Sloan, R.G. (1999). An empirical assessment of the residual income valuation model. *Journal of Accounting and Economics, 26*(1), 1-34.

Dimitropoulos, P.E. & Asteriou, D. (2009). The value relevance of financial statements and their impact on stock prices: Evidence from Greece. *Managerial Auditing Journal, 24*(3), 248-265.

Green, J.P. Stark, A.W. & Thomas, H.M. (1996). UK evidence on the market valuation of research and development expenditures. *Journal of Business Finance & Accounting, 23*(2), 191-216.

Hand, J.R. & Landsman, W.R. (2005). The pricing of dividends in equity valuation. *Journal of Business Finance & Accounting, 32*(3-4), 435-469.

King, R.D. & Langli, J.C. (1998). Accounting diversity and firm valuation. *The International Journal of Accounting, 33*(5), 529-567.

Khanagha, J.B. (2011). Value relevance of accounting information in the United Arab Emirates. *International Journal of Economics and Financial Issues, 1*(2), 33.

Khanna, M. (2014). Value relevance of accounting information: An empirical study of selected indian firms. *International Journal of Scientific and Research Publications, 4*(10), 1-6.

Lo, K. & Lys, T. (2000). The Ohlson model: contribution to valuation theory, limitations and empirical applications. *Journal of Accounting, Auditing & Finance, 15*(3), 337-367.

Maines, L.A. & Wahlen, J. M. (2006). The nature of accounting information reliability: Inferences from archival and experimental research. *Accounting Horizons, 20*(4), 399-425.

Malkiel, B.G. & Fama, E.F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance, 25*(2), 383-417.

Nguyen, V.D. (2010). Value-relevance of financial statement information: A flexible application of modern theories to the Vietnamese stock market. *Quarterly Journal of Economics, 84*, 488-500.

Nguyen, T.T.D. (2014). The impacts of accounting information and financial indicators on stock price in Vietnam Stock Exchange. *Journal of Banking Technology*, 62, 23-27.

Nguyen, T.K.P. (2016). The relationship between financial information and the price of stock of listed firms. PhD Thesis. The National Economics University.

Ohlson, J.A. (1995). Earnings, book values and dividends in equity valuation. *Contemporary Accounting Research, 11*(2), 661-687.

Omokhudu, O.O. & Ibadin, P.O. (2015). The value relevance of accounting information: Evidence from Nigeria. *Accounting and Finance Research, 4*(3), 20.

Ota, K. (2002). A test of the Ohlson (1995) model: Empirical evidence from Japan. *The International Journal of Accounting, 37*(2), 157-182.

Pirie, S. & Smith, M. (2008). Stock prices and accounting information: Evidence from Malaysia. *Asian Review of Accounting, 16*(2), 109-133.

Rees, W.P. (1997). The impact of dividends, debt and investment on valuation models. *Journal of Business Finance & Accounting, 24*(7-8), 1111-1140.

Sharma, A.K., Kumar, S. & Singh, R. (2012). Value relevance of financial reporting and its impact on stock prices: Evidence from India. *South Asian Journal of Management, 19*(2), 60.

Stark, A.W. & Thomas, H.M. (1998). On the empirical relationship between market value and residual income in the UK. *Management Accounting Research, 9*(4), 445-460.

Tran, T.T.H., Nguyen, N.D. & Ho, Q.B. (2015). The Relationship between accounting information reported in financial statements and stock returns-empirical evidence from Vietnam. *International Journal of Accounting and Financial Reporting, 5*(1), 229-238.

Walker, M. (1997). Clean surplus accounting models and market-based accounting research: A review. *Accounting and Business Research, 27*(4), 341-355.