The Impact of Accounting Variables on Stock Price: Evidence from the Colombo Stock Exchange, Sri Lanka

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Abstract

A number of empirical studies have been undertaken by the different countries to identify the factors that affect stock price. Past literature reveals that movements of stock price depend on internal and external factors. Among the internal factors, firm specific factors such as dividend per share (DPS), earnings per share (EPS) and book value per share (BVPS) affect the determining of stock price. The present study examined the impact of dividend per share, earnings per share and book value per share of stock price on a sample of 100 companies listed in the Colombo Stock Exchange (CSE) from 2008 to 2012. Using a single and multiple regressions model the results reveals that EPS, DPS, BVPS were positive and had a significant impact on the stock price in the CSE.

Keywords: stock price, earnings per share, dividend per share, book value per share

1. Introduction

The main objective of a financial a report is to provide information on a company's performance to the internal and external users to take decisions. There is much empirical research on value of the financial report information. Some research examined the accounting information to predict the future financial performance while other researchers measure the effect of accounting information on share price (Abarbanell & Bushee). Amongst accounting information, financial ratios play a significant role to determine the stock price. This paper identified three financial ratios to test the impact of the share price on the Colombo Stock Exchange, Sri Lanka. The financial ratios include the Earnings per Share (EPS), Dividend Per Share (DPS) and Book Value Per Share (BVPS). We formulated three hypothesis based on the relationship between the three accounting ratios and stock price. We applied single and multiple regression models to measure the strength of these relationships.

1.1 Rational of the Study

The stock market reaction to information disclosure has been tested in many occasions in developed markets such as the USA and the UK. The evidence reported in these studies is largely consistent with the information content hypothesis and efficient market hypothesis (EMH).

It is challenging to test the market reactions to information in emerging markets because emerging markets are characterized by a relatively large number of poorly informed and unsophisticated investors, low liquidity levels, weak legal, regulatory and institutional framework and operational bottlenecks (Osei, 2002). Further it is also challenging due to excessive price volatility which is a consequence of the relatively unstable political and macroeconomic conditions. Several studies have tested the market reaction to the information in emerging stock markets.

Sri Lankan equities market dates back to 1896 but it did not attract worldwide attention until the mid 1980's. The Colombo Stock Exchange (CSE) is still a small and growing market when compared to the US and other developed markets in the world. There are 288 companies listed at the Colombo Stock Exchange as at 31st December 2012 with a Market Capitalization of Rs. 2,168.5 Bn. In 1990; after Venezuela, the CSE was however the second best performer in the world (Samarakoon, 1997). The CSE also records a run in 2009 as the World's

second best performing stock market.

Although there are a number of empirical studies to test the stock price reaction to information in the developed markets these studies are few in number on the emerging markets especially in the South Asian Region. The Colombo Stock Exchange (CSE) was reported as the best performing market in 1990 and 2009 and up to now has made minimal effort to test the market reactions to accounting information. Dissa-Bandara and Samarakoon (2002) tested the market response information contents in dividend announcement and found that the market reacted positively to the information but the response took time. Furthermore, Dissa Bandara (2001) tested the market response to the dividend announcement and found that the market responded positively to the announcement of dividend increase and negatively to dividend decrease. Other empirical research done by Ramesh and Nimalathasan (2011), Gunasekara (2004) on market reactions on bonus issue and results reveal that the market reacts both negatively and positively to the issue of bonus.

The main intention for this empirical work is to extend and expand the work of Dongwei Su (2002), Zhu (2003), Raza (2010), Perera and Thrikawala (2010), Ghayoumi, Nayeri, Ansari and Raeesi (2011) Mgbame, Ikhatua (2013) by examining emerging market data in order to identify different market responses and to emerging markets as there is a great threat of having potential biases arising from data- snooping in developed markets. On the other hand even though there is a bulk of empirical evidence that has spread in major capital markets relating to accounting variables and stock price, such published empirical works is not available on the emerging Sri Lankan Stock Market. Thus this research examines the relationship between accounting variables and stock price of the emerging stock market in Sri Lanka.

1.2 Literature Review

In carrying out the study with the aim of investigating the stock market reaction to accounting information literature unfolded since 1968 and thereonwards continuous studies have been carried out by different authors looking at diverse aspects related to the subject under discussion. In considering the relationship between accounting ratios and stock price Bhana (1996), in his study used earnings per share (EPS) to determine the market reactions at the Johannesburg Stock Exchange. This paper provides additional evidence consistent with the simple behavioral view that investors overreact to short-term earnings movements. Certainly within the framework of efficient market hypothesis, it is distinctly puzzling that a dramatic fall in share prices is predictive of a subsequent rise in company specific earnings.

Dongwei Su (2002), found that the stock price reactions to change in earning per share in the Chinese Stock Markets. The study found that domestic A-share investors on average do not correctly anticipate the EPS change and do not adjust very rapidly to the new earnings information in the markets. Abnormal return could be generated by trading on the earnings after they are released. However, international investors can predict changes in EPS better than domestic investors and there is little or no abnormal announcement day effects observed in the B share market in China. Further this study reveals that firms with disappointing EPS (group) will experience unfavorable downward pressure on their prices on days before the actual earnings announcements occur. Firms with strong EPS will enjoy upwards pressure on the prices in the days before the announcements to the market.

Zhu (2003) studied the stock market and volume of current capital stock, and found a significant positive relationship between stock price and EPS. Hadi (2004) examined the importance of accounting information to the investors in the banking sector in the Kuwaiti Stock Exchange. This study tests the information content of accounting data in Kuwaiti banks on investors in the stock market. Financial ratios are used in this research and also, regression analysis is used to solve the problems that rise in this research. The ratios are Return on Assets (ROA), Net Interest (NIM), Earning Assets Ratio (EAR), Loss Ratio (LR). The research results indicate that accounting information is very useful to investors in Kuwaiti banks, and most of the ratios are significant. On other hand, the remaining ratios that return on total assets, net interest margin, earning, are important for the investor in the security market

By considering the Indonesian studies on financial information and stock price Martani, Mulyono and Khairurizka found that probability; turnover and market ratio has a significant impact on stock return. This results also consist of previous studies by Hobart (2006), Utama and Santosa (1998) and Restraningsih (2007).

Raza Sr H (2010), in her paper investigated the Impact of Financial Performance of the Company on its Share Price at the Pakistan Stock Exchange. In this study the regression analysis was used to measure market reactions to accounting variables. Return on assets, Dividend Cover Ratio, Current Ratio, Earning per Share, and Return on Equity and Cash Flow Ratio were used as explanatory variables and stock price as the depended variable. Descriptive statics show that the fuel & energy sector is earning the maximum and lowest return are with paper

and board while the correlation matrix shows a weak to strong but positive relationship of the share price and other financial ratios ranging from -0.020 with Cash flow ratio to 0.679 with EPS. The co-efficient of determination R-square, shows that all independent variable are responsible for overall change of 22.9% in the dependent variable and with respect to the chemical industry, the textile sector has 32.5%, sugar has 22.9% and cement sector 61%. The empirical result of the regression analysis shows that all independent variable explain changes in dependent by 50.9%. Therefore it shows that the accounting variables create an impact and change in the share price in the Pakistan Stock Exchange.

Perera and Thrikawala (2010), conducted an empirical study of the Relevance of Accounting Information on Investor's Decisions based on the Colombo Stock Exchange, Sri Lanka. The relevance of accounting data was measured by correlation coefficient with Market Price per Share (MPS) and selected accounting information such as Earning per Share (EPS), Return on Equity (ROE) and Earning Yield (EY). The findings showed that there is a relationship between Accounting Information and Market Price per Share. Therefore it is also evidence of the relationship between accounting variables and stock return.

Mahmoudi, Shirkavand and Salari (2011) examined the investors' reactions to the announcement of earnings in the Tehran Stock Exchange in Iran. This study investigated the overreaction and under reaction of investors towards positive and negative earnings announcement dividing the sample into two groups. The first group contains firms which increased their EPS more than 5% rather than the previous EPS announcements. Group 2 contains firms which decreased their EPS more than 5% in comparison to the latest announcements. The results indicate that there is a statistically significant market reaction on the EPS announcement day. Earnings increases induce a significant positive stock price reaction, whereas earning decreases bring about a significant negative stock price reaction.

Ghayoumi, Nayeri, Ansari and Raeesi (2011) explained that the value relevance of accounting information to domestic investors in the Tehran Stock Exchange from 1999 to 2006. The authors used earnings per share and the annual change of earnings per share as the income statement indices, and book value of equity per share as the balance sheet index. The results indicated that income statement information has more value-relevance than balance sheet information. Furthermore, positive vs. negative earnings and firm size seems to have significant impact on value relevance of accounting information.

Hejaz, Jafari and Heidarpoor (2011) pointed out the information content of the accounting variables in companies in the Tehran Stock Exchange. This study examined the relationship between stock return and accounting variables in the production companies in the Tehran Stock Exchange from 2000 to 2004. The independent variables of the study are Net Income (NI), Operating Profit (OP) and Cash Flow for Operations (CFO) and dependent variable is the annual stock return. In order to examine the effect of company size as the control variable, the results show that OP has related information content in comparison to other variables and NI and OP have incremental content beyond each other but the CFO doesn't have incremental content. In other words, Iranian investors pay attention to OP in comparison to the CFO and NI.

Kheradyar, Ibrahim and Mat Nor (2011) investigated the relationship between accounting variables and stock return in the Malaysia Stock Exchange. The study found that financial ratios can predict stock return as the Book to market ratio has higher predictive power than the dividend yield and earning yield. Further this study ravels that the financial ratios are able to enhance stock return predictability when ratios are combined in the multiple predictive regression model.

Khan et al. (2012) explained that accounting variables such as Dividend Yield (DY), Earnings Yield (EY) and Book Value per Share (BVPS) has direct and positive association with the stock return in the Karachi Stock Exchange in Pakistan for the period 2005 to 2011. Further the study found that BVPS has more explanatory power than the EY and DY.

Menaje (2012) found that strong positive correlation of EPS with share price and ROA show a weak negative correlation with share price in the Philippines Stock Market.

Mgbame, Ikhatua (2013) investigated the Accounting Information and Stock Volatility in the Nigerian Capital Market. The broad objective of the study is to ascertain whether accounting information contributes to stock volatility in the Nigerian Capital Market. Specifically, the study examines if Book value per share, Dividend per share and Earnings per share have a sign effect on stock volatility in Nigeria. The results of the study show that the release of information on book values, earnings per share and dividend per share is found to be related to stock volatility

Wang, Fu and Luo (2013) investigated the share price reactions to the accounting information in the Chinese

Stock Exchange for the period of one year in 2011. This study analyzes the relationship between accounting information and the stock price with a few accounting information indexes. The author used EPS and ROE to explain the stock price reactions to accounting information. The study reveals that a positive relationship exists between accounting information and stock price, but the significant degree varies; earnings per share and return on equity have the most significant correlation.

Emamgholipour et al. (2013) examined the effect of performance evaluation market ration on the stock return of companies listed in the Tehran Stock Exchange from 2006 to 2010. He found that earnings per share have significant and positive effect on stock return and price earnings ratio and market value to book value ration statistically have significant and negative effect on the stock return of the current year.

Elisa, Jelena, Rickard (2013) has found that value relevance from the balance sheet measured by the BVPS has increased. However accounting data from the income statement is value relevant measured by the EPS has decreased. The study also reveals that accounting data explains the high proportion of stock price.

By considering the stated literature, it is obvious that there are relationships with accounting variables and stock return. However this kind of research is very less in developing the stock exchange and the emerging market, especially in the South Asian Region. Therefore this study is going to fill this gap by a further study on the impact of accounting variables on the emerging stock market in Sri Lanka.

1.3 Objectives of the Study

The researcher expects to achieve the following objectives:

1) To examine the relationship between Earnings per Share (EPS) and the stock price.

2) To examine the relationship between Dividend per Share (DPS) and the stock price.

3) To examine the relationship between Book Value per Share (BVPS) and the stock price.

1.4 Hypothesis of the Study

Researcher developed the following hypothesis based on the literature to achieve the stated objectives of the study. The first hypothesis has been set to test the first objective.

H01: There is no significant relationship between EPS and the stock price.

H11: There is a significant relationship between EPS and the stock price.

The second hypothesis has been set to test the second objective.

H02: There is no significant relationship between DPS and the stock price.

H12: There is significant relationship between DPS and the stock price.

The third hypothesis has been set to test the third objective.

H03: There is no significant relationship between BVPS and the stock price.

H13: There is a significant relationship between BVPS and the stock price.

2. Method

For the purpose of this study, a sample of 100 companies listed throughout the study period (2008 to 2012) was randomly selected. The data have been collected from the annual reports of the company and the data based on the Colombo Stock Exchange (CSE).

To test the first to third hypothesis developed the liner and multivariate regression model based on the Ohlson's (1995) model. It expresses the stock price as a function of the earnings per share and the book value per share.

$$P_{it} = a + bE_{it} + cBV_{it} + e_{it}$$

P_{it} = Average stock price

E_{it} = Earnings per share

BV_{it} = Book value per share

However based on the Ohlson model the multivariate regression model has already been tested by the several empirical studies to test the relationship between the stock price and accounting variables (Qabajeh, Hameedat & Dahmash,2012; Perera & Thrikawala, 2010; Raza Sr, 2010; Ghayoumi el al., 2011; Hejaz, Jafari & Heidarpoor, 2011; Hadi, 2004; Glezakos, Mylonakis & Kafouros, 2012; Wang Fu & Luo,2013).

Based on the Ohlson model and other empirical studies, the researcher developed the following model to test the

relationship between accounting variables and the stock price. Here the researcher developed the semi-log model for testing the relation between stock price and the accounting variables assuming that the stock price was not normal distribution. Therefore the researcher used the log value for the share price.

Model Specification:

$$P_{it} = \alpha + \beta_1 EPS_{it} + \beta_2 DPS_{it} + \beta_3 BVPS_{it} + e_{it} \tag{1}$$

P = Average Stock price.

EPS = Earnings per Share.

DPS = Dividend per share.

BVPS = Book value per share.

e_{it} = is the part of the price which is not interpreted by the model.

For each company, the logarithms (Glezakos, Mylonakis, & Kafouros, 2012) of the yearly stock prices, and annual earnings per share, annual dividend per share, annual book value per share have been used throughout the examined period.

Further the explanatory power of EPS, DPS, BVPS, is analyzed by using the equations 2, 3, 4 correspondingly.

The relationship between Share price and EPS:

$$P_{it} = \alpha + \beta_1 EPS_{it} \tag{2}$$

The relationship between Share price and dividend per Share:

$$P_{it} = \alpha + \beta_1 DPS_{it} \tag{3}$$

The relationship between Share price and book value per share:

$$P_{it} = \alpha + \beta_1 BVPS_{it} \tag{4}$$

The relationship between Share price and Earnings Per Share, Dividend per share, Book value per share:

$$P_{it} = \alpha + \beta_1 EPS_{it} + \beta_2 DPS_{it} + \beta_3 BVPS_{it} + e_{it} \tag{5}$$

3. Results

3.1 Regression Analysis

Before use the OLS method, to test the stationary of the variables is new topic in econometrics and various methods have been developed to test the stationary. Hence this study applied the Augmented Dickey Fuller test for each variable and results presented the following tables.

Table 1. Unit root results for EPS, null hypothesis: EPS is not stationary

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-21.01152	0.0000
Test critical values:	1% level	-3.443228	
	5% level	-2.867112	
	10% level	-2.569800	

Table 2. Unit root results for DPS, null hypothesis: DPS is not stationary

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-23.31901	0.0000
Test critical values:	1% level	-3.443228	
	5% level	-2.867112	
	10% level	-2.569800	

Table 3. Unit root results for BVPS, null hypothesis: BVP is not stationary

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-11.59578	0.0000
Test critical values:	1% level	-3.443254	
	5% level	-2.867124	
	10% level	-2.569806	

The above results show that the all null hypothesis reject and accept the alternative hypothesis as the p value is less than the 1% significant at 1st level of the unit root test. That's mean all the variables are stationary and therefore the researcher can adopt the OLS method for data analysis.

3.2 Relationship between EPS and Stock Price

To achieve the first to third objectives and test the first to third hypothesis researcher run the single and multiple regression models. Table 1 reveals relationship between EPS and the stock price.

$$P_{it} = \alpha + \beta_1 EPS_{it}$$

H_{0-1}: $\beta_1 = 0$

Table 4. Relationship between EPS and stock price

Model: $P_{it} = \alpha + \beta_1 EPS_{it}$						
Dependent Variable: Stock Price						
Period	2008	2009	2010	2011	2012	2008-2012
Observation Number	100	100	100	100	100	500
Constant	1.385	1.5	1.7	1.762	1.5	1.604
Co-efficient	0.027	0.010	0.015	0.013	0.015	0.014
t-value	5.433	3.391	3.688	4.914	6.628	10.420
Significant	0.000*	0.001*	0.000*	0.000*	0.000*	0.000*
R^2	0.233	0.20	0.21	0.21	0.30	0.31
F-statistics	29.516	11.5	13.602	24.145	43.925	108.53
Significant	.000*	.001*	.000*	.000*	.000*	.000*
D.W	2.07	2.0	1.986	1.772	1.737	1.8

Note. *significant at 1% level.

Table 4 depicts regression results in the relationship between stock price and EPS. According to the results, the regression line can be written as follows.

$$P_{it} = 1.604 + .014 EPS_{it}$$

Table 4 reveals that the significant relationship between two variables for five year. The co-efficient of the EPS is positive value throughout the study period. The co-efficient of year 2008 reported positive value of .027 which is the highest value of the study period which means that change of one unit of the EPS impacts changing the 2.7% of the dependent variable. The co-efficient of 2009 is .010 which significant at 1% level and .015 in 2010 which also significant 1%. The co-efficient EPS in the year 2011 is .013 and .015 in 2012. In considering portfolio level for five year the co-efficient reported .014. This indicates that change of one rupee of the EPS impact .014 change of stock price. For all the years investigated the EPS is highly significant and this shows that accounting data is of high value relevance. However the model explains 30% of the change of stock price in the year 2012, 21% for both 2010 and 2011 and 23% in 2008 and 20% in 2009. The drop in 2009 could be due to the financial crises.

In considering the above situation it is clearly evident that EPS causes a significant impact on the change of the stock price. Therefore we can reject the null hypothesis and accept the alternative hypothesis as there is a relationship between EPS and stock price of the CSE.

3.3 Relationship between DPS and Stock Price

Table 2 reveals the results of the relationship between dividend per share and stock price.

$$P_{it} = \alpha + \beta_1 DPS_{it}$$

H_{0-2}: $\beta_1 = 0$.

Table 5. Relationship between DPS and the stock price

| Model: $P_{it} = \alpha + \beta_1 DPSit$ | | | | | | |
| Dependent Variable: Stock Price | | | | | | |
Period	2008	2009	2010	2011	2012	2008-2012
Observation Number	100	100	100	100	100	500
Constant	1.396	1.40	1.66	1.7	1.6	1.589
Co-efficient	0.105	0.130	0.128	0.088	0.046	0.074
t-value	5.609	5.424	5.167	6.184	4.674	10.420
Significant	0.000*	.000*	.000*	0.000*	.000*	0.000*
R^2	0.245	0.231	.214	.281	.182	.32
F-statistics	31.458	29.418	26.70	38.246	21.844	39.246
significant	.000*	.000*	.000*	.000*	.000*	.000*
D.W	1.900	1.749	1.736	1.655	1.727	1.6

Note. * significant at 1% level.

Table 5 reveals a significant relationship between the two variables during a five year period.

The regression line can be written as:

$$P_{it} = 1.589 + .074DPS_{it}$$

The co-efficient of DPS is positive throughout the period and significant at 1% level. Therefore we can reject the null hypothesis that the accepted the alternative hypothesis in which there is a relationship between stock price and DPS. In considering the explanatory power of the model explains 32% of the variation in the price. But considering the F- statistics all the values are significant which means that this model at 99 percent of significant. When compare the EPS this model (DPS&SP) has more power to explain the change of the stock price.

3.4 Relationship between BVPS and Stock Price

$$P_{it} = \alpha + \beta_1 BVPS_{it}$$

H_{0-3}: $\beta_1 = 0$.

Table 6. Relationships between BVPS and the stock price

| Model: $P_{it} = \alpha + \beta_1 BVPS_{it}$ | | | | | | |
| Dependent Variable: Stock Price | | | | | | |
Period	2008	2009	2010	2011	2012	2008-2012
Observation Number	100	100	100	100	100	500
Constant	1.469	1.473	1.68	1.751	1.54	1.582
Co-efficient	0.002	.002	.003	.002	.002	.02
Significant	0.013**	.010*	.000*	.002**	.000*	.000*
R^2	0.062	0.066	0.151	.094	.0.121	0.179
R^2 Adjusted	0.053	0.057	0.143	0.085	0.209	.22
F-statistics	6.446	6.941	17.492	10.227	27.79	108.585
significant	0.013**	0.010**	.000*	.002*	.000*	.000*
D.W	1.904	1.823	1.685	1.733	1.812	1.821

Note. * significant at 1% level.

Table 6 reveals the regression results of the BVPS and SP. Accordingly the regression line can be written as

$$P_{it} = 1.582 + .02BVPS_{it}$$

The results reveals that the positive and significant relationship throughout the study period. Therefore we can reject the null hypothesis and accept the alternative hypothesis which means that there is a positive relationship between stock price and BVPS. In considering the explanatory power of the model reveals that highest value is 22%. It means the BVPS explain the 22% of changing the stock price. This value is lower than the explanatory power of the EPS and DPS of the Colombo Stock exchange.

3.5 Relationship Accounting Variable and the Stock Price

$P_{it} = \alpha + \beta_1 EPS_{it} + \beta_2 DPS_{it} + \beta_3 BVPS_{it} + e_{it}$

$H_{0-4}: \beta_1, \beta_2, \beta_3 = 0$.

Table 7. Relationship accounting variables and stock price-year wise

Model: $P_{it} = \alpha + \beta_1 EPS_{it} + \beta_2 DPS_{it} + \beta_3 BVPS_{it} + e_{it}$

Dependent Variable- Stock Price

Multiple Regression:

β_1-Co-efficient of EPS,. β_2-Co-efficient of DPS, β_3-Co-efficient of BVPS

Year	β_1 t-value P-value	β_2 t-value P-value	β_3 t-value P-value	Constant	F	Significant	D.W.	R^2
2008	.016 3.176 .002	.079 4.144 .000	.001 1.798 .075	1.291	18.1	.000	1.758	36.4%
2009	.004 1.142 .256	.112 4.333 .000	.001 2.219 .029	1.350	12.47	.000	1.58	30.1%
2010	.005 1.280 .204	.101 3.920 .000	.002 3.693 .000	1.563	16.041	.000	1.55	33.4%
2011	.003 .718 .475	.071 3.680 .000	.001 1.516 .133	1.677	14.381	.000	1.62	31%
2012	.009 2.044 .044	.018 1.482 .142	.001 1.140 .257	1.527	15.67	.000	1.68	32.9%

The model was tested by ordinary least-squares (OLS) estimators. According to the table 4 the regression line (2008) can be written as follows.

$$P_{it} = 1.291 + 0.016 EPS_{it} + .079 DPS_{it} + .001 BVPS_{it} + e_{it}$$

The year wise results of the multiple regression that appeared in Table 7. In considering the year 2008 it was found that liner function model accepted the 1st to 3rd alternative hypothesis. It contains the R^2 value .364 says that the model explained about 36.4% of the variability in the share price of firms. This means that the model explains about 36.4% of the systematic variation in the dependent variable. F-ratio is found significant at 1% that means the regression model is highly significant at 99% level of significant. Also the independent variables namely EPS, DPS, and BVPS is positive significant at t-test 3.167, 4.144 and 1.798 respectively at 1% and 10%. Therefore we can reject the 1st 2nd and 3rd null hypothesis that there is no significant relationship between accounting variables and SP in 2008.

According to the results of the regression the model related to 2009 can be written as follows.

$$P_{it} = 1.350 + 0.004 EPS_{it} + 0.112 DPS_{it} + .001 BVPS_{it} + e_{it}$$

The results for the year 2009 reveal that R^2 value is 30.1%. It says that model explained about 30% of the variability in the share price of the firms. F ratio is found significant at 1% that means the regression model is highly significant at 99% level of significance. The independent variables DPS is significant at t-test 4.333 at 1% level. BVPS is significant at t-test 2.219 at 10% level. Finally EPS is positive value but not significant. Therefore, we can accept the 1st null hypothesis and reject the 2nd and 3rd null hypothesis which is no significant relationship with the share price and independent variables.

According to the results of the regression the model related to the 2010 can be written as follows.

$$P_{it} = 1.563 + 0.005 EPS_{it} + .101 DPS_{it} + .002 BVPS_{it}$$

The table7 reveals that the R^2 value is 33% in 2010 says that the model explained 33% of the variability in the

share price of the firms. F ratio found significant at 1% and that means the regression model is highly significant at 99% level of significance. In considering the coefficient of independent variables namely DPS, BVPS are positive and significant at 1% level. In considering the EPS is also positive value but not significant at any level. Therefore it reveals that the accounting variables such as DPS, BVPS, have significant impact to change the share price of the companies in the CSE. Hence we can reject the 2nd to 3rd null hypothesis that is not relationship between the variables and stock return. In considering the EPS we can accept the null hypothesis that there is no relationship between stock price and the EPS in the year 2010.

According to the results of the regression the model related to the 2011 can be written as follows.

$$P_{it}=1.67 +0.003\ EPS_{it}+ .071DPS_{it} + .001BVPS_{it\ +}e_{it}$$

According to table 6 the highest R^2 value is 31% that the model explains 31% of the variation in the dependent variable. F ratio is found significant at F-value at 14.38 at 1% that means the regression model is significant at 99% level. The co-efficient of the independent variable of EPS, DPS, BVPS, are .003, .071, .001, and .001, respectively. In considering the t value only DPS, is significant 1%. The variable of EPS and BVPS is also positive value but not significant at any level which means that there is no relationship between BVPS and stock price for the year 2011.

According to the results of the regression the model related to the 2012 can be written as follows.

$$P_{it}=1.527 +0.009\ EPS_{it}+ .018DPS_{it} + .001BVPS_{it\ +}e_{it}$$

The results of the year 2012 revels that the highest R^2 at 32.9% says that model explained the variation of stock price. F ratio found significant at F value 15.67 at 1% means that regression model is significant at 99 level significant. The co-efficient of the independent variables such as EPS, DPS and BVPS are positive value. Only the variable EPS is significant at 10% level. According to the result we have accepted that the 2nd and 3rd null hypothesis have no relationship with stock price, DPS and BVPS. In the other case, we rejected the null hypothesis and accepted the alternative hypothesis.

The year by year regression shows that the model explained the variation of the stock price as suggested by highly significant F-statistics which states that their regression link between SP and independent variables. However year wise regression shows that in 2008 all variables are significant at a different level. In 2009 and 2010 EPS is not significant. Further in 2011 EPS and BVPS is not significant and DPS and BVPS also not significant in 2012. Hence to obtain the better results, researcher ran the regression for entire study period. The result of this period is presented in Table 6.

Table 8. Relationship accounting variable and stock price

Model: $P_{it}= \alpha + \beta_1\ EPS_{it}+ \beta_2\ DPS_{it}+ \beta_3\ BVPS_{it} + e_{it}$								
Multiple Regression:								
β_1-Co-efficient of EPS, β_2- Co-efficient of DPS, β_3- Co-efficient of BVPS								
Year	β_1	β_2	β_3	Constant	F	Significant	D.W.	R^2
	t-value	t-value	t-value					
	P-value	P-value	P-value					
2008–2012	0.006	0.050	0.001					
	3.264	6.215	4.590	1.521	59.671	.000	1.609	37%
	0.001	0.000	0.000					

The regression results of the year 2008 to 2012 are presented in the table 6. The highest R^2 value (.37) says that the model explain the 37% variation of the stock price. F ratio at 59.67 means that regression model is significant at 99% levels of significant. The independent variable namely EPS, DPS, BVPS, has positive co-efficient means that the positive relationship with the dependent variable. The regression line for the entire period is

$$P_{it}= 1.521+ .006\ EPS_{it}+ .050DPS_{it} + .001BVPS_{it\ +}e_{it}$$

It reveals that change of one rupee of the EPS leads to change the .006 of the share price. It is a low relationship. One rupee of the DPS leads to change the .05 rupee of the share price. However BVPS reveals that positive relationship and change the one rupee variable leads to change the .001 of the share price. The co-efficient of the independent variables namely EPS, DPS and BVPS is significant at 1%.

This result shows that all variables are significant at 1% level. Therefore we can reject the 1st to 3rd null hypothesis and accepted the alternative hypothesis that accounting variables have a significant impact on changing the share price of the Colombo Stock Exchange (CSE).

4. Discussion

Validity of the results discussed in the previous section cannot be verified without proper comparison and evaluation between the results of the previous study. This section builds a discussion through a detailed analysis of the current study results and the results of previous studies.

Dongwei Su (2002) found that Firms with strong EPS will enjoy upwards pressure on the prices, which is the similar finding of the positive relationship between the stock price and the EPS in the CSE. In other study, Zhu (2003) in the Chinese market found that there were positive relationship between stock price and EPS which is the similar findings of the current study.

Findings of Hadi (2004), in Kuwaiti Stock Exchange and Martani, Mulyono and Khairurizka in Indonesia also similar to current study in which accounting information is very useful and accounting ratios had a significant impact on the share price.

By using the multiple regression model Raza Sr H (2010) found that accounting variables has significant impact to the stock price in the Pakistan Stock Exchange which is consist with the results of the current study. However the coefficient of the EPS is higher value (.679) compared with the CSE. It means that in the Pakistan Stock Exchange is more sensitive to the EPS ratio than CSE.

In considering the similar study in CSE, Perera and Thrikawala (2010), found that the positive relationship between stock price and accounting variable which consist of the current study.

Mahmoudi, Shirkavand and Salari (2011) the study of the Tehran stock exchange Iran also argued that when EPS increase price also react positively and EPS decrease price also react negatively in the Iran stock exchange. This shows that the relationship between the EPS and stock price with similar finding of the CSE.

By using the accounting variable such as EPS, BVPS, Ghayoumi, Nayeri, Ansari and Raeesi (2011) in Tehran stock exchange explained that impact of EPS was more than the BVPS to the stock price which is consient with the results of the current study. Kheradyar, Ibrahim and Mat Nor (2011) and their study in Malaysia Stock Exchange recommend that financial ratios are able to enhance stock return predictability when the ratios are combined in the multiple predictive regression model. It is obvious that compared the results of the single regression and multiple regression model of this study.

Khan et al. (2012) and the study in the Karachhi Stock Exchange explained that BVPS has more explanatory power than the EY and DY. However in considering the CSE dividend per share, EPS has more explanatory power than the BVPS which is in consist with the results of Khan et al. (2012) study. Menaje (2012) found that strong positive correlation of EPS with share price in the Philippines Stock Market which is similar to the findings of the current study. The Mgbame, Ikhatua (2013) Nigerian Capital Market found that accounting variables such as EPS, DPS, BVPS related to the volatility of the stock price was also similar to the findings of the current study.

Wang, Fu and Luo (2013) in China Emamgholipour et al. (2013) in Iran found that EPS is significant impact of the stock price which is the similar to the current study findings. However in the Emamgholipour et al. (2013) study found that BVPS is negative impact to the stock price which is in consistent with the current study. However the study of Elisa, Jelena, Rickard (2013) also found the similar results that BVPS has significant impact on the share price.

5. Conclusion and Recommendations

5.1 Conclusion

This study investigated the relationship between accounting variable and stock price by using the single and multiple regression analysis. This study selected 100 companies for the period 2008–2012. The analyses were carried out year wise. Multiple regression analysis reveals that a significant and positive impact of accounting variables on the stock price. Compared to the results of the developed market and developing market EPS shows less impact to the price in the CSE. Further DPS and BVPS show significant impact to the share price. However DPS shows the most sensitive variables with the stock price in the CSE.

5.2 Recommendations

➢ In considering the CSE, we recommended the investors to use DPS as the first variables and EPS, BVPS

after that in evaluating company's financial performance, predicting future trends in share price in the capital market and making productive investment decisions.

➢   The shareholders use different variables for buying and selling stocks and of the important variables in this regard is dividend per share, Earnings per share, book value per share. So by understanding the mutual relationship between these variables, the shareholders had better opportunity assess the price of the share after the announcement of the values predicted by the company and assessing the earnings per share and dividend per share.

➢   Investors should not only pay attention to the accounting information on EPS, DPS, BVPS but also to the income from main operations ratio, quick ratio, accounts receivable, turnover ratio, inventory turnover ratio and liquidity ratio. This can assure investors of more secure income.

➢   Given the inflationary nature of the country's economy, by merely using the variable of book value per share leads to incorrect decisions in selecting the investment portfolios and this leads to inaccurate allocations to economic fields. As a result, its recommend that the stakeholders and investors avoid simply relying on this variable for predicting the price of share and adopting investment decisions.

➢   The majority of the research studies which were carried out on the assessment of valuable notes have emphasized on the net earnings and book value as the main principle of specifying the value of shares and have paid less attention to dividend per share and also the combination of book value and dividend in determined the value. The results of the research studies emphasize and verify the recent models for the evaluation of the stocks. As a result it's recommended that the investors and shareholders take into consideration this recent variability in their decisions.

➢   If financial statements are to be used in the research, the yearly data should be used instead of quarterly or monthly data but for a longer period of time. One advantage of yearly data is that financial statement errors are very much minimized in annual financial statements because they are subject to audit. This also makes the data less volatile and more reliable.

➢   We recommend that the regulatory authorities should intensify effort to ensure compliance to insider trading laws by market participants. The authorities need to strengthen their capacity to effectively monitor activities in the market, and to effectively deal with offenders. Su (2003) explained that reduction in unequal access to information helps boost investor confidence and also helps improve the competiveness and informational efficiency of emerging stock markets.

5.3 Area for Further Research

➢   As nearly 37% of the movement in stock prices remains unexplained, other information is also affected by the movement of a firm's stock price can be studied. In a certain period the changes in stock price do not reflect the firm's financial performance. Macro economic conditions, political situation, government industrial policy, and technical aspects within firms are factor other than financial performance that can affect the changes in stock price. There is scope for further research in this area as there are factors not included in the study which can precisely explain the remaining unexplained movement of stock prices.

➢   Other factors such as exchange rate, interest rate, inflation rate can influence changes in stock return significantly. Therefore time series analysis also can be done in the market as a whole or in different industries

➢   Instead of stock price, a researcher may use stock return as the dependent variable (Elleuch, 2009) in the future research.

➢   Considering the limitation in numbers of firms and observed period, it is suggested to increase the sample in both the number of firms and observation period for the next research

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