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VALUATION RATIOS AND STOCK RETUR: SPECIAL REFERENCE TO LISTED COMPANIES IN COLOMBO STOCK EXCHANGE

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Abstract

The aim of this paper is to find the relationship between valuation ratios and stock return of listed Companies in Colombo Stock Exchange (CSE). Valuation ratios such as Dividend Yield, Dividend Payout and Earning Yield are considered to investigate the relationship. Additionally the relationship between Earning Yield and Dividend Yield were investigated. Data were collected from a sample of 25 companies at the Colombo Stock Exchange. The time frame was the period of 2006 to 2010 and Descriptive, Correlation and Regression analysis were implemented to analyze the data. According to correlation analysis, it was found that there is a negative relationship between valuation ratios and stock return in CSE. According to the results of the regression analysis, it was found that there is a small impact of the selected ratios with the stock return. However, there was always negative effect of dividend yield on the stock return. It was revealed that the dividend payout and earning yield are the most relatively important earnings ratio for the investors of the Colombo Stock Exchange. In addition, there was a strong positive relationship between earning yield and the dividend yield of the selected companies.

This type of research will be helpful for the investors to make their effective and efficient economic decisions.

Key Words: *Dividend Yield, Dividend Payout, Earning Yield, Stock Return, Colombo Stock Exchange (CSE).*

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Introduction

Around the world, there are a number of regional stock markets that deal in trading stocks in companies based or operating in their regions. One relatively small market that is making huge gains for investors that trade on it is the Colombo Stock Exchange (CSE). CSE was established in 1985 by changing the name of previous Colombo Brokers Association. The Exchange also known as CSE is a most advance stock exchange in South Asia with totally script less trading. The Colombo Stock Exchange (CSE) has 241 companies representing 20 business sectors as at 31st December 2010. The Market Capitalization of the CSE stood at Rs.2, 210.45 Billion as at 31st December 2010. Sri Lankan share market is an emerging market in the world but in the case of comparability it is a tiny market in the global view because the market capitalization is very less than even many developing regional markets.

In the present context, a country's stock market plays an important role in the economy. It provides long-term capital to industries. It gives a very good lucrative investment opportunity to investors over other options like time deposits and saving deposits treasury bills and real assets such as land, gold etc. Also, it is more liquid than the other auto motives. Further, it's an economic indicator of a country.

Financial statements are designed to assist users in identifying key relationships and trends. It is argued that these statements provide investors with essential information to evaluate their investment decisions. Assessing the usefulness of information for the investors was a major motivation for the most concerned research effort in the accounting history. The relationship of financial ratios and stock prices has been important part of the accounting research. Starting with Ball and Brown (1968), a substantial volume of research work in accounting literature explores the relation between accounting information and stock returns. The general conclusion emerging from research in this area is that accounting information explains a surprisingly low proportion of the variation in stock returns (Lehavy and Sloan, 2008). So this study was selected to investigate the impact and relationship between accounting earning and stock returns, are discussed academic circles as well as practitioners.

Some Investors may perceive higher dividend as good signal of the market return while others may not. There are so many theoretical and empirical arguments on the dividend consideration of investors in capital markets. Thus, the relative importance of earning and the dividend for the investors in CSE will be studied in the research with the objective of finding the

impact of earnings and dividends on market return of the selected companies in the Colombo Stock Exchange.

Review of Literature

Assessing the usefulness of earning to investors was a major motivation for the most concerned research effort in the accounting history. Empirical research conducted by Ball & brown (1968) has a quite aim to test the relationship between accounting earning and stock returns. Firstly, they tried to test the null hypothesis that accounting income is not "useful" to share market investors, against the specific alternative hypothesis that they are in. This did not match exactly what accounting theorist prescribed and inefficient backgrounds, which based to prepare rejecting reports under generally, accepted accounting principles. Once they rejected the null hypotheses, they want to assess what is called "usefulness" in terms of the "relevance" and "timing" of preliminary net income reports. They concluded as follows "of all information about an individual firm which becomes available during a year, one half or more is captured in that year's income number. This content is therefore considerable. However, the annual income report does not rate highly as a time medium, since most of its content (about 85% to 90%) is captured by more prompt media, which perhaps include interim reports.

Vafeas et al. (1998) examine supportive evidence that the stock market of Cyprus values cash flows and accruals, since both proved to be important in explaining stock returns. Bauwhede et al. (2003) also used DAC as a measure of earnings management in the Belgian capital market. They found that both private and public Belgian companies engage in income smoothing and manage earnings in order to achieve specific benchmark targets of prior-year earnings. This suggested that the negligence of accruals in the examination of the returns-earnings relation could yield misleading results regarding the markets behavior.

Mohammed Omran, A.R. (2004) found the relationships between common financial ratios and stock returns from 1996 to 2000 using linear and non-linear forms for a sample of 46 Egyptian firms. Our empirical findings suggest that non-linear relationships exist and are more descriptive of the behavior of stock returns. William H.et al. (2003) tells the origins of financial ratio analysis can be traced back to the first decade of the twentieth century. It began with the development of a single ratio, the current ratio, for a single purpose the evaluation of credit worthiness. Today ratio analysis involves the use of several ratios

by a variety of users including credit lenders, credit rating agencies, investors and management.

Objectives

With the intention of evaluating the relationship between stock returns and selected accounting ratios and other intentions describe under objective, the researchers carry out followings.

1. Descriptive Analysis of the Relationships in the Objectives.
2. Correlation Analysis between selected valuation Ratios and Stock Return.
3. The Multiple Line Relationship between selected valuation Ratios and Stock Return. ($R_{it} = \alpha + \beta_{dy} DY_{it} + \beta_{dp} DP_{it} + \beta_{ey} EY_{it} + \varepsilon_{it}$)
4. The Simple Linear Relationship between Earning Yield (EY) and Dividend Yield(DY) ($EY_{it} = \alpha + \beta_{dy} DY_{it} + \varepsilon_{it}$)

Hypotheses

The following hypothesis have been developed for this study;

H_1: There is a relationship between R_i and DY

H_2: There is a relationship between R_i and DP

H_3: There is a relationship between R_i and EY

H_4: There is a relationship between EY and D

Research Methodology

The population consists of all firms listed from 2006 to 2010 in Colombo Stock Exchange. But the original sample contained 25 companies which are operating in 12 sectors.

The effectiveness of the research is depending on the methodology use for it. For the purpose of this study, Data for the stocks were obtained from the CSE "Data Library" CD Rom. Accounting data were found from the hand book of listed companies published by the CSE and where the information in the sample period can be believed to large extent because the data are provided being subjected to the CSE Accounting Standards.

Population of this study is the all listed firms in Colombo Stock Exchange. And the sampling size will be 25 sampling units (companies). As said above the population consists of all firms listed from 2006 to 2010 in Colombo Stock Exchange. To select the most economically active companies in the CSE, all firms listed from 2006 to 2010 were targeted. Companies were selected based on random sampling and availability of data. The sample contained 25 companies which operate in 12 sectors, of which 3 firms were working in Banks, Finance and Insurance sector, 2 firms in Beverage Food and Tobacco sector, 4 firms in Diversified Holdings

sector, 2 firms in Hotels and Travels sector, 2 firms in Manufacturing sector, 3 firms in Chemicals and Pharmaceuticals sector, 1 firm in Footwear and Textiles sector, 3 firms in Investment and Trusts sector, 1 firm in Motors sector, 1 firm in Plantations sector, 2 firms in Stores and Supplies sector and , 1 firm in Services sector. Companies or samples were selected based on market capitalization as at 8th February 2011 and 31st March year ended companies.

Results and Discussion

Descriptive analysis of the relationship in the objectives

Table 1 Descriptive statistics for each variable

	Mean	**Median**	**S D**
R	0.3675	0.2406	0.98583
DY	3.5189	2.2900	3.96564
DP	29.0469	22.6200	3.14553E1
EY	12.2604	9.4900	9.68246

Source: Survey data

Table 1 presents descriptive statistics of the variables used in the study that was collected from 25 companies from CSE. The mean value of R is 0.3675 and SD and median of R are respectively 0.98583 and 0.2406. And mean value of DY, DP and EY are respectively 3.5189, 29.0469 and 12.2604. The Standard Deviation of EY was 9.68246, which is higher than other independent variables.

Correlation Analysis between selected valuation Ratios and Stock Return

Table 2 Correlation analysis between Return and DY

		R	**DY**	**DP**	**EY**
R	Pearson Correlation	1	- 0.220	- 0.057	- 0.101
	Sig. (2-tailed)		0.014	0.529	0.263
	N	125	125	125	125
DY	Pearson Correlation	- 0.220	1	0.614	0.426
	Sig. (2-tailed)	.014		.000	.000
	N	125	125	125	125
DP	Pearson Correlation	- 0.057	.614	1	- 0.014

	Sig. (2-tailed)	.529	.000		.877
	N	125	125	125	125
EY	Pearson Correlation	- 0.101	0.426	- 0.014	1
	Sig. (2-tailed)	0.263	.000	.877	
	N	125	125	125	125

Pearson correlation of Return (r) of DY is – 0.220, where (p = 0.014) which is significant at 0.05 levels. It indicates that there is a weak negative relationship between Return and Dividend Yield. According to above table it can be said that, there a weak negative relationship between Return and Dividend Payout, (r = − 0.057) Where p value is 0.529. Pearson correlation of Return (r) of EY is – 0.101, where p value is 0.263. It indicates there is a negative relationship between Stock Return and Earning Yield. There is a positive relationship between Dy and EY, (r = 0.426) Where p value is 0.000.

The Multiple linear relationships between selected valuation ratios and stock return

Table 3: Coefficient table between stock return and DY,DP and EY

		Un standardized Coefficients		**Standardized Coefficients**		
Model		**B**	**Std. Error**	**Beta**	**T**	**Sig.**
1	(Constant)	0.472	0.165		2.857	0.005
	DY	-0.081	0.033	− 0.324	− 2.420	0.017
	DP	0.004	0.004	0.143	1.178	0.241
	EY	0.004	0.011	0.039	0.372	0.710

a. *Dependent Variable: R*

The table represents standardized coefficients estimates of Dividend Yield, Dividend Payout and Earning Yield with Stock Return. Based on the above table model fit derived as follows:

$$R_{it} = \alpha + \beta_{dy}\ DY_{it} + \beta_{dp}\ DP_{it} + \beta_{ey}\ EY_{it} + \varepsilon_{it}$$

$$R_{it} = 0.472 - 0.081\text{DY} + 0.004\text{DP} + 0.004\text{EY}$$

According to the constant value of the regression line is 0.472 which is significant value is 0.005 and coefficient of DY is – 0.081 which is significant value is 0.017 < 0.05. That says the stock return decrease by 0.081 when Dividend Yield (*DY*) increase by 1 degree and the other independent variables are constant or do not change. Hence these results indicated there is a significantly negative relationship between DY and Stock Return. For this hypothesis 1 has been accepted.

Coefficient of DP is 0.004 which p value is 0.241 > 0.005. That says the stock return increases by 0.004 when Dividend Payout (*DP*) increase by 1 degree and the other independent variables are do not change or constant. Hence there is not significantly positive relationship between DP and Stock Return. But the researchers can't reject the null hypothesis which means can't accept hypothesis 2.

Coefficient of EY is 0.004 which p value is 0.004 which p value is 0.710 > 0.005.It says stock return increases by 0.004 when Earning Yield (*EY*) increase by 1 degree and the other independent variables do not change. In this also the researchers can't reject null hypothesis it means can't accept hypothesis 3

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.243	.159	.036	.96803

a. Predictors: (Constant), EY1, DP1, DY1

According to above table, When consider all independent variables together, there is a low level of positive correlation coefficient (*R)* of 0. 243 obtained in the dependent variable is stock return and the independent variables are DY, DP and EY was identified.

Coefficient of determination (R^2) of 0.159 was found to be normal, which shows that only 16% of the variation in stock return can be explained by the independent variables DY, DP and EY.

Simple regressions of the linear relationship between earning yield and dividend yield.

Simple Linear Relationship between Earning Yield and Dividend Yield (when EY was dependent variable)

Table 5: Model Summary

Model		Un standardized Coefficients		Standardized Coefficients		
		B	**Std. Error**	**Beta**	**T**	**Sig.**
1	(Constant)	8.596	1.053		8.161	.000
	DY1	1.041	.199	.426	5.229	.000

a. Dependent Variable: EY1

The table presents standardized coefficients estimates of EY with DY when EY was dependent variable.

Based on the above table model fit derived as follows:

$EY_{it} = \alpha + \beta_{dy} DY_{it} + \varepsilon_{it}$

$EY_{it} = 8.596 + 1.041$ DY

According to the constant value of the regression line is 8.596 which is significant value is 0.000 and coefficient of DY is 1.041 which is significant value is 0.000. That says the EY increase by 1.041 when Dividend Yield (*DY*) increase by 1 degree and the other independent variables are constant or do not change. Hence these results indicated there is a significantly positive relationship between DY and EY when EY was dependent variable. For this hypothesis 4 has been accepted.

Table 6: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.426	.182	.175	3.60145

a. Predictors: (Constant), EY1

Source: Survey data

According to above table, When consider the independent variable earning yield, there is a strong positive correlation coefficient (*R)* of 0.426. It means there is a positive relationship between Dividend Yield and Earning Yield.

Coefficient of determination (R^2) of 0.182 was found to be low level, which shows that only 18% of the variation in dividend yield can be explained by the independent variables earning yield.

Simple Linear Relationship between Earning Yield and Dividend Yield (when DY was dependent variable)

Table 7: Coefficients

Model		Un standardized Coefficients		Standardized Coefficients		
		B	**Std. Error**	**Beta**	**T**	**Sig.**
1	(Constant)	1.377	.521		2.643	.009
	EY1	.175	.033	.426	5.229	.000

a. Dependent Variable: DY1

Based on the above table model fit derived as follows:

$DY_{it} = \alpha + \beta_{dy} EY_{it} + \varepsilon_{it}$

$DY_{it} = 1.377 + 0.175$ EY

According to the constant value of the regression line is 1.377 which is significant value is 0.009 and coefficient of EY is 0.175 which is significant value is 0.000. That says the DY increase by 0.175 when EY increase by 1 degree and the other independent variables are constant or do not change. Hence these results indicated there is a significantly positive relationship between DY and EY when DY was dependent variable. For this hypothesis 4 has been accepted.

Conclusions and Recommendation

This study examined the impact of earning and dividend information on stock return on the listed companies in Colombo Stock Exchange. It means, investigating the relationship between DY, DP and EY and stock return in CSE. Additionally, as indicated in objectives, the relationship between earning yield and the dividend yield also were investigated. From the correlation analysis of the data, the researcher found that there is no relationship between DY, DP, and EY with Stock Return.

Based on regression analysis researcher can say that there is a negative relationship between Stock Return and Dividend Yield. But there is no relationship between

Dividend Payout, Earning Yield with Stock Return. In this research, overall positive relationships were found between the variables of DY, DP and EY with Stock Return. Coefficient of determination (R^2) 16% was found to be low level from the analysis. Probability for the variances, there by having low probability for the variances in one variable to be not significantly differ from the other. There for findings were successfully validated to generalize on the observed relationship.

In this research there is positive relationship between EY and DY. Previous researches done in other countries have shown there was strong positive correlation between the selected variables. According to JohnY. Et al.(2001) found that, the dividend and earnings ratios have a special significance on stock returns. Being the earning yield the relative important ratio of the selected ratios has been proved other researchers done in various countries. According to Mohamed Omran (2004) shows that earnings ratios are more important for the stock market investors.

It is important to note that the quality of accounting information, quality of annual reports and promptness of disclosure and the usage for investment decision making would affect for this impact and relationship.

Finally, the study shows positive relationship between earnings and dividend yields of the listed companies Colombo Stock Exchange.

In the Sri Lanka, decision makers (especially the agents operating in the capital market) have to be very careful, because the financial reporting can be seen as the communication of financial information to decision makers. Therefore, the agents in the Colombo Stock Exchange should pay the attention on this accounting information when making investment decisions. This results further suggests that investors may concerned their intuition, market segment, experience, general economic conditions, regional forces etc. as against pay attention on annual financial statement information.

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