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## DETERMINANTS OF SHARE PRICES: EVIDENCE FROM LISTED MANUFACTURING FIRMS IN SRI LANKA

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### ABSTRACT

*The focus of this study is to identify the determinants of share prices in Sri Lanka. The present study provides the important evidence on the determinants of share prices using a sample of 25 listed manufacturing firms in Colombo Stock Exchange (CSE) over the period of 2012 to 2016. The regression analysis method was employed as a statistical technique for analyzing the data and testing the hypotheses. Our result reveals that earnings per share and dividend per share have significant positive association with share price. Based on the results of this study we find that earnings per share and dividend per share are the major determinants of share price. Therefore investors and fund managers must to consider these determinants while taking investment decisions. In addition manufacturing firms also need to ensure improvement in earnings per share and dividend per share in order to enhance the value of share price*

**KEYWORDS:** earnings per share, market price of share, dividend per share, determinants

### 1. INTRODUCTION

Stock market plays a significant and substantial role in the economic development of country by promoting capital formation and raising economic growth. But stock market is subjected to fluctuation. That is why investors and fund managers are facing difficulties of accurately predicting the share prices to make decent yields.

A number of researchers has identified vital internal factors that determine the share prices such as earnings per share, return on equity, return on asset, dividend per share, debt to asset ratio. Understanding the impact of these variables on share

price to a great extent will be helpful to investors and fund managers while taking profitable investment decisions

This study attempts to extend the knowledge of determinants of share price in listed firms in Sri Lanka. The objective of our study is to determine factors that influence the share prices of manufacturing firms in Sri Lanka and identify the relationship of these factors with the Share prices.

Our study will help the investors and fund managers while making the investment decision. The present study will also express to investors which

determinants highly affect the share prices of manufacturing firms in Sri Lanka and due to this the procedure of analyzing the securities will become easier.

The remainder of the paper proceeds as follows. The section two will describe the literature review and develops hypotheses. The data collection procedure and the methodology discussion will be followed in the section three. Section four includes the empirical results in addition to the discussion of the findings. Lastly, the final segment of the research will explain the conclusions of the study.

## **2. EMPIRICAL REVIEW AND HYPOTHESES DEVELOPMENT**

### **2.1 Empirical review**

There are great amount empirical studies that have been conducted to find out the determinants of stock prices in different countries. Some recent studies related to the determinants of stock prices have been reviewed here.

Alumumani (2014) used data of listed banks in Amman Stock Exchange over the period of 2005-2011 and showed that there was a positive association between dividend per share, earning per share, size, price earnings ratio and book value and market price of share. Further regression results showed that earning per share, book value, price earnings ratio have significant and positive relationship with market price of share.

Malhotra and Tandon (2013) Using the sample of 95 companies listed in the New York Stock Exchange between the period of 2007- 2012 and find that firms' book value, earning per share, and price earnings ratio are having a significant positive association with firms' stock price however dividend yield is having a significant inverse relationship with the market price of the share.

Kabajeh et al. (2012) examined the relationship between the ROA, ROE and ROI ratios together and separately with Jordanian insurance public companies share prices during the period 2002-2007. The results showed a positive relationship between the ROA, ROE and ROI ratios together with Jordanian insurance public companies share prices. The results also showed a positive but low relationship between each of ROA ratio separately and ROI ratio separately with Jordanian insurance public companies share prices. However, the results showed no relationship between the ROE ratio separately with market share prices.

According to the study conducted by Khan et al. (2011) who used the data of 55 companies listed at KSE 100 Index for the period of 2001-2010 revealed that dividend yield, earnings per share, return on equity and profit after tax are positively related to stock prices while retention ratio has

negative relation with stock prices and significantly explains the variations in the stock market prices.

Sharma (2011) examined the relationship between share prices and explanatory variables such as book value per share, dividend per share, earning per share, price earnings ratio, dividend yield, dividend payout, firm size in terms of sale and his results revealed that earning per share, dividend per share, and book value per share has significant impact on the market price of share. Furthermore, the results of the study indicated that dividend per share and earnings per share being the strongest determinants of market price.

Based on the sample 77 non-financial firms of Bangladesh during period of 1999-2003, Chowdhury et al. (2010) concluded that long-term debt to total asset has positive but insignificant impact on the share price.

Using the sample of top 10% performers listed in the Shanghai Stock Exchange from 1996 to 2000 in terms of annual stock returns, Jin Dehuan and Zhenhu Jin (2008) investigated the correlation between firm performance (Return on Equity, earnings per share, profit margin, return on asset, changes in sales, and total asset turnover) and stock price. He concludes that all the variables are significantly correlated with stock price

Focusing on general engineering and cotton textile industries in India Balakrishnan (1984) analyzed the impact of dividend per share, earning per share, book value and yield on share price and found book value per share and dividend per share are the most significant determinants of market price in both the industries.

In the context of Sri Lanka, using the sample of 20 hotels listed in Colombo Stock Exchange Dissanayake and Biyiri (2017) found that there is a significant impact between Share price with Earning per Share, Dividend per Share and Return on Equity respectively, further strong positive relationship between earning per share and share price as well as Dividend per Share has strong positive relationship between Share Price.

### **2.2 Hypotheses Development**

**H1:** There is a positive significant relationship between Earnings per share and share price.

**H2:** There is a positive significant relationship between return on assets and share price.

**H3:** There is a positive significant relationship between return on equity and share price.

**H4:** There is a positive significant relationship between dividend per share and share price.

**H5:** There is a positive significant relationship between debt to asset ratio and share price.

### 3. RESEARCH METHODOLOGY AND BASELINE SPECIFICATIONS

#### 3.1 Research methodology

The data used in this study are obtained from annual reports of individual companies listed on the Colombo Stock exchange (CSE) for the period of 2012-2016. The sample composed of 25 publically listed manufacturing firms from manufacturing sector. Data is collected through convenience sampling method. To identify the determinants which affect the firm share price there were different methods of statistical processing that have been applied. SPSS (version 20.0) software programmed exclusively applicable to statistical processing is used for processing the data. Here, Descriptive & Inferential statistics, OLS regression analysis and correlation analysis are used to analyze the data drawn from the population.

#### 3.2 Baseline Specification

Our baseline model links firms share price with its determinants as follows:

$$MPS_{it} = \beta_0 + \beta_1 EPS_{it} + \beta_2 ROA_{it} + \beta_3 ROE_{it} + \beta_4 DPS_{it} + \beta_5 DA_{it} + \epsilon_{it}$$

Where  $i$  indexes firms,  $t$  years.  $MPS_{it}$  is the market share price, and  $EPS_{it}$  stands for earnings per share,  $ROA_{it}$  stand for return on assets,  $ROE_{it}$  stands for return on equity,  $DPS_{it}$  stands for dividend per share and  $DA_{it}$  debt to asset ratio. Table 1 provides definitions and expected signs for all variables used in this paper.

##### 3.1.1 Dependent Variable

In this study we tend to identify the factors that determine the share price. In our study the closing price of shares at the end of the financial year of the firms has been taken to represent market share price. The market price is used as dependent variable in the present study.

##### 3.1.2 Independent Variable

The following independent variables are taken for our study to identify whether those are determinants of share price. These are our independent variables of our study; earnings per share, return on assets, return on equity, dividend per share, and debt asset ratio.

**Table 1: Variable's names, definitions and expected signs**

Variables	Measures	Symbol	Expected Sign
<b>Dependent Variable</b>			
Market share price	Closing share price at the end of the financial year	MPS	
<b>Independent Variables</b>			
Earnings per share	Net income/Number of equity shares outstanding	EPS	+(H1)
Return on assets	Net income/Total assets	ROA	+(H2)
Return on equity	Net income/Total equity	ROE	+(H3)
Dividend per share	Dividend paid to equity shareholders/Number of equity shares outstanding	DPS	+(H4)
Debt to assets ratio	Total debt/Total Assets	DA	+(H5)

### 4. RESULTS AND DISCUSSION

#### 4.1 Summary Statistics

**Table 2: Summary Statistics**

Variables	N	Minimum	Maximum	Mean	Std.Deviation
MPS	125	1.000	399.600	71.955	64.013
EPS	125	-1.890	49.650	7.830	8.291
ROA	125	-0.280	0.490	0.079	0.114
ROE	125	-0.398	0.901	0.130	0.165
DPS	125	0.000	20.626	2.930	3.560
DA	125	0.057	0.935	0.386	0.147

Table 2 presents descriptive statistics for the variables used in the analysis for our pooled sample.

It is observed that the pooled mean of market price of share (MPS) is Rs. 71.95. However, share price shows a huge volatility of 64.013 % with a range of 1to 399.60. On the other hand; earnings

per share (EPS), return on assets (ROA), return on equity (ROE), dividend per share and debt to assets ratio (DA)) maintains an averaged mean distribution value of about 7.830, 0.079,0.130,2.930 and 0.386 respectively for the listed manufacturing firms in the Colombo Stock Exchange market.

#### 4.2 Correlation Analysis

**Table 3: Correlation matrix**

	MPS	EPS	ROA	ROE	DPS	DA
MPS	1					
EPS	.625** (0.000)	1				
ROA	.580** (0.000)	.528** (0.000)	1			
ROE	.564** (0.000)	.536* (0.000)*	.976** (0.000)	1		
DPS	.730** (0.000)	.530** (0.000)	.480** (0.000)	.457** (0.000)	1	
DA	-.065 (0.000)	-.022 (0.806)	-.078 (0.384)	.029 (0.746)	-.195* (0.036)	1

Table 3 shows the Pearson correlation coefficient between variables. Market share price shows positive and statistically significant correlation with all the variables with the exception of debt to asset ratio. This result is consistent with the findings of previous studies, for example Alumumani (2014). Our results suggest that, all the variables are expected to move in the same direction with the exception of debt to asset

ratio with market share price. It's observed from the table 3 that DPS has highest significant positive correlation with market price that is 0.730 at 1% level and likewise, EPS,ROA, ROE having statistically significant positive correlation with MPS at 1% level . On the other hand DA is the only Variable having insignificant and negative correlation with MPS that is -0.065

#### 4.3 Regression Analysis

**Table 4: Relationship between determinants and market share price**

Variable	Coefficient	Std.Error	t-statistic	Sig
EPS	1.891	0.567	3.335	0.001
ROA	269.796	206.533	1.306	0.194
ROE	-100.753	134.883	-0.747	0.457
DPS	9.207	1.313	7.011	0.000
DA	18.291	36.412	0.502	0.616
<b>R-Squared</b>	0.629			
<b>Adjusted R-Square</b>	0.612			
<b>F-Statistic</b>	36.909			
<b>Probability F-Statistics</b>	0.000			



Table 4 presents estimation results our baseline model. We estimate statistic model in which market share price regressed on EPS, ROA, ROE, DPS and DA. Initially, the coefficient on EPS is positive and statistically significant at the 1% level. This is in line with our hypotheses and **H1 is accepted**. These results are consistent with empirical findings of various researches, for example Alumumani (2014); Malhotra and Tandon (2013); Khan et al. (2011). Based on the results we can observed that EPS is a major determinant of share prices. So we can suggest by increasing EPS firms can increase the market share price.

Next, the coefficients on ROA and ROE is positive but statistically insignificant at conventional level. **Therefore our H2 and H3 are not accepted**. Noticeably, the results of the present study is in line with the findings of Kabajeh et al. (2012), where their results showed no relationship between the ROE separately with MPS. But, these results are marked contrast to the findings of Khan et al. (2011); Dissanayake and Biyiri (2017).

When considering the DPS, we observe that coefficient on DPS is positively and significantly associated with MPS at 1% level. This is in line with our hypotheses. **Therefore H4 is accepted**. This outcome nevertheless corroborates the findings provided in Alumumani (2014), Sharma (2011) and Balakrishnan (1984). From that we can observed that DPS is a major determinant of share prices.

Finally, we observe that leverage proxied by debt to asset ratio (DA), have insignificant association with MPS. This results inconsistent with our H5. **Therefore H5 is not accepted**. Though the coefficient is not statistically significant, the positive impact of debt to asset ratio on market price of share has major implications. These results are in line with the findings of Chowdhury et al. (2010).

The F-Statistics which is a proof of the validity of the estimated model. The value of F is 36.909 which show that model is good fit. The value of 0.000 also indicates that our variables are significant. Those are EPS, ROE, ROA, DPS and DA that strongly determines the behavior of the MPS. The adjusted R<sup>2</sup> suggests that 0.612. That means that 61.2% of the variation in market price is explained by the variables included in the study.

## 5. CONCLUSION

In this paper, we use a dataset made up of 25 publically listed manufacturing firms over the period 2012–2016 to identify the determinants of share price. Regression model was used to test the hypotheses of the study. Based on the results of the study we find that earnings per share and dividend per share are the major determinants of share price. The previous literature support our

findings like the studies of Almumani (2014) and Malhotra & Tandon (2013).

According to correlation analysis we observed earnings per share, return on equity, return on asset and dividend per share are having a significant positive association with share price while debt to asset ratio is having an insignificant inverse association with the share price. Together these five variables determine 61.2 % changes on the dependent variable share price.

The results of our study disclosed new evidence in Sri Lanka perspective, which are considered to be valuable to the market participants. Thus, findings of this study seems to be particularly useful for investors and financial managers as they can watch out for these significant factors while predicting share prices.

Our study provides recommendations to the listed manufacturing companies in Sri Lanka to take necessary steps to improve the figures related to the significant variables involved in this study, affecting the market price of shares.

Our study suffers from a number of limitations. Firstly, we only use manufacturing firms for our study and secondly limited number of variables are used. In the future, we aim at complementing our study in different sectors and different variables such as macro-economic factors like GDP, inflation, interest rates, business cycles et. This provides better insights on the determinants of share price.

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