The Impact of Dividend Policy on Share Price Volatility: A Study of Materials Industry in Colombo Stock Exchange.

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Abstract : *The main objective of the study is to analyse the impact of dividend Policy on shareprice volatility in the colombo stock exchange. Dividend policy making for financial performance is one of the imperative concern in financial performance of every organizations. Economic condition of Sri Lanka is badly impacted during the period of 2019 to 2021 what has been selected for this research purpose to identify the impact of dividend policy on share price volatility: A Study of Materials industry in Colombo Stock Exchange.23 companies have been selected from materials industry of GICS Classification from stock market, Sri Lanka for the remarkable period in Sri Lankan history. Cluster sampling techniques was used find out the result. According to the result there is an impact of Dividend policy on Share price Volatility in materials industry in Sri Lanka which has been accepted at 95% confidence level.*

Keywords- *Dividend Policy, Dividend yield,Dividend Pay-out,Share Price Volatility*

I. Introduction

The stability of the financial market of the country plays an important role to direct the investors towards profitable combination of investments. Also, it largely determines the growth and development of the nation. Thus, the financial market plays a crucial role in a country (Gautam,2017). Capital market, is a key player in the financial sector allows investors to transact financial resources (Menike et al., 2015).

Gautam (2017) stock return is the main expectation of the investors. It mainly consist of capital gain through the appreciation of the investments and dividend yield. Investments can be traded in the secondary market by buying at the lower price and selling at the higher price. Thus, the investors can enjoy the benefit of capital appreciation (Idris and Bala, 2015). Consequently, it can be concluded that return from an investment is highly sensitive to the price of the investment which in turn depend on many firm specific factor such as size of the firm, book to market equity and earning per share (Shafana, 2013).

In corporate businesses, it is essential to regulate appropriate dividend policy to determine the portion of income to be retained and distributed to shareholders. But, today dividend policy covers more aspects rather the determination of the dividend. In the turbulent environment, the dividend policy must be enacted by considering possible avenues to attract new investments, growth of the wealth of the company and possibilities to the share repurchase Hashemijoo, Mahdavi-Ardekani, and Younesi (2012). As stated by Lintner (1956), dividend policy of the firm need to comply with different queries namely is it good to amend the dividend policy or keep it as it is? , whether shareholder wants fixed dividend or changing dividend with earnings and the nature of the shareholder the dividend policy need to attract youngsters or elders (Hashemijoo, Mahdavi-Ardekani, and

Younesi, 2012). Volatility in the common stock is an indicator to measure the risk of the investment. Higher the stock price volatility higher the risk. It means over a time period, frequency of the fluctuation in theshare price is higher. Thus, it may difficult to predict future prices. If the investors are risk averse, they may consider less risker investment will be better than the high-riskinvestments (Kinder, 2002).

Stock price volatility is an indicator of the systematic risk that will attract the investor towards the investment option Guo (2002). Thus, higher the share price volatility means greater the risk shareholders may expect Nel and Krugler (2001), will have the less chance of investing in the particular investment.

Researching about the impact of dividend policy on share price is 50 years old area. But still there are no agreement about the results. As the nature of the industry and time period changes it, the results also subjected to change as per the previous studies.

II. Literature review

Bird-in-hand theory postulated that dividends are better than the capital gains due to the asymmetrical information and uncertainty in future cash flows (Lintner 1956; Gordon and Shapiro 1956; Al-Malkawi 2007; Husam-Aldin, 2007;Hooi, Albaity and Ibrahimy 2015). But in Miller and Modigliani (1961) stated that dividend policy is not relevant to stock price and cost of capital thus, it will not determine the stock price volatility.Therefore, it assumed that there is a perfect capital market where the stock price will not be influenced by a buyer or seller, information is symmetric with zero transaction cost and the there is no agency cost.

According to the signaling theory, the imperfectly available information makes investors to heavily depend on the announcements of the firm and frequent announcement of the dividend will signal the positive growth of the future earrings of the company(Miller& Modigliani, 1961; Pettit, 1972; Al-Malkawi, 2007). Clientele effect theory says investors who are high tax payers will expect zero or very small portion of dividend from the investment and expect to earn through capital gains (Al-Malkawi, 2007). Also, investor who pay small amount of tax will expect more dividend.

Baskin, 1989 examined 2344 sample companies in the United States during 1967-1986. He found that there is a relationship between dividend yield and share price volatility. He introduced control variables such as re earning volatility, firm's size, debt and growth. Further, he found that dividend policy can be used to explain the price volatility. Also, the study reported that 1 percentage increase in dividend yield will decrease the share price by 2.5 percentage.
Suleman et al (2011) analyzed relationship between dividend policy and share price changes in the Karachi Stock Exchange Pakistan. It has found that share price volatility and dividend yield was positively connected.(Hussainey et al., 2011) emphasized a negative relationship between dividend policy and share price movement. Santhi and Sim (2011) found a positive relationship between the share price volatility and dividend policy food industrial companies listed in Bursa Malaysia. Hashemijoo, Mahdavi-Ardekani, and Younesi (2012)studied a sample of 84 consumer products companies listed in Bursa Malaysia. The results revealed a negative impact of dividend payouts and yield on share price movement.

Zakaria, Muhammad, and Zulkifli (2012) investigated dividend policy with share price volatility in construction and material listed firms. Study found that dividend payout ratio positively connected with share price movement. Lashgari and Ahmadi (2014) revealed that dividend payout ratio negatively connected with share price movement. Zakaria, Muhammad, and Zulkifli (2012) studied building companies listed in Bursa Malaysia positive influence of dividend yield and dividend payouts on share price changes. Al-Shawawreh (2014) found that dividend yield and share price movement was negatively related with payout ratio and dividend yield was positively connected with share price volatility.

Hashemijoo, Mahdavi-Ardekani, and Younesi (2012), Ramadan (2013), Hooi, Albaityand Ibrahimy (2015) revealed that both the dividend payout and yield negatively connected with share price volatility. Al Qudah and Yusuf (2015) studied impact of dividend policy on share price volatility with Jordanian listed companies in the Amman Stock Exchange. Study explore a significant negative impact of dividend yield and payout ratio on share price movement.

This concludes that dividend policy and share price volatility reported with the contradictory findings due to the differences in the industry, research methods, and time horizon. Thus, it is indeed necessary to investigate the impact of the dividend policy on the share price volatility in Sri Lanka during the crisis time.

III. Research Methodology

According to Sri Lanka, as of 31st May 2022, total of 294 companies representing 20 GICS industry groups have been listed on the Colombo Stock exchange (CSE). This study has used 23 companies inmaterials sector from date to date. IBM SPSS Statistics Version 25 has been used to analyses the data.For the research analysis of the CSE between the period 2019 to 2021, panel data was used with yearly basis. 23 companies were selected from materials sector because it belongs to one of the largest markets in Sri Lanka and is to the best of our knowledge relatively unexplored in analyzing the impact of dividend policy on share price volatility. The time period of 3 years was chosen because we went to analysis during recent times. Cluster sapling techniques was used to select the companies.

3.1. Hypothesis

Based on identified research gap, the following hypothesis have been identified:
H1: There is an impact of Dividend policy on Share Price Volatility in Sri Lanka during the crisis time.
H1a: There is an impact of dividend yield on share price volatility while control Firm Size.
H1b: There is an impact of payout ratio on share price volatility while control Firm Size.

3.2. Independent Variables

3.2.1. Dividend yield (DY)

DY is calculated by dividing the total cash dividends given to common stockholders by the end-of-year market value of each firm. After that, the total number of years' average is calculated.

$$DY = \frac{\sum_{i=1}^{n} (Di/MVi)}{n}$$

Where Di = Dividend yield for year I, MVi = Market value for year i, n = Number of years

3.2.2. Payout ratio (Pout)

Pout divides the total cash dividends paid to common stockholders by the year's net income after taxes. After that, the total number of years' average is calculated.

$$Pout = \sum_{i=1}^{n} \frac{(Di / Ei)}{n}$$

where Di = Cash dividend paid to common stockholders for year i, Ei= Net income after tax for year i, n = Number of years

3.3. Dependent Variable

3.3.1. Share Price Volatility

For each year, it is based on the annual range of adjusted stock price provided from Datastream. The range is then squared by dividing it by the average of the year's highest and lowest prices. This was averaged over all available years, then transformed into a square root variable that was comparable to a standard deviation (Baskin, 1989).

$$PV = \sqrt{\frac{\sum_{i=1}^{n} \left(\frac{(Hi - Li)}{(Hi + Li)/2} \right)^2}{n}}$$

where, H_i = Highest stock price for year I,L_i = = Lowest stock price for year I, n = Number of years.

3.4. Control variable

Firm Size is a control variables that affect share price volatility, according to Baskin (1989).

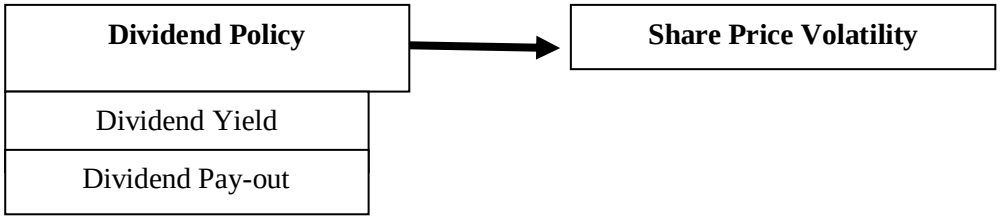
3.4.1. Firm Size (FS)

Every company's market worth at the start of each year is determined, and the average of all companies is calculated. The average market value of each company is then multiplied by a natural logarithm.

$$Size = \ln \frac{\sum_{i=1}^{n} Market\ Value_i}{n}$$

Where Market Value i = Market value at beginning of year i, n = number of years

3.5. Research Conceptualization



IV. Results and Discussion

TABLE 1 Descriptive Statistics

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
		Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Dividend yield	69	7.98	12.58	10.5093	1.32930	-.375	.289	-1.166	.570
Payout ratio	69	30.01	68.40	46.2377	8.04740	.187	.289	-.467	.570
Share price volatility	69	.15	.92	.5216	.23942	.021	.289	-1.124	.570
Firm size	69	3.01	5.82	4.3606	.84223	.011	.289	-1.329	.570
Valid N (listwise)	69								

TABLE 1 shows the descriptive statistics of all selected dependent, independent and control variable with columns containing the Number of observations, Minimum, Maximum, Mean, Standard Deviation, Skewness and Kurtosis. According to Allen and Rachim (1996), assuming that stock prices follow a normal distribution pattern and ignoring the effect of a firm's going ex-dividend, the standard deviation of stock market returns is equivalent to the measured volatility of this study. This can be done using the formula derived by Parkinson (1980), in line with Baskin (1989).

The above TABLE 2displays the data collected for the Colombo stock exchange from 2019 to 2021, it is a broad description of the characteristics of the variables used in this study. The first variable in the table is dividend yield, which has a mean value of 10.5093 percent for total observation 69 while minimum value and maximum value of 7.98 and 12.58 respectively. Payout ratio has a mean value of 46.2377 percentage while minimum value of 30.01 and maximum value of 68.40. based on the adjusted share price, mean value of share price volatility is more than 50 percentage for in companies belongs to material sector in listed Colombo stock exchange in Sri Lanka while 15 percentage minimum value and 92 percentage of maximum value. Control variable of this research of firm size mean value is 4.3606 percentage to express the impact of dividend policy on share price volatility in crisis situation of Sri Lanka.

TABLE 2 Correlations between dependent and independent variable

Correlations					
Control Variables			dividend yield	payout ratio	share price volatility
Firm Size	dividend yield	Correlation	1.000	-.310	.299
		Significance (2-tailed)	.	.010	.001
		df	0	66	66
	payout ratio	Correlation	-.310	1.000	-.210
		Significance (2-tailed)	.010	.	.03
		df	66	0	66
	share price volatility	Correlation	.299	-.210	1.000
		Significance (2-tailed)	.001	.03	.
		df	66	66	0

Correlations between dependent variable of share price volatility and independent variable of dividend yield and pay-out ratio has been shown in TABLE 2. Which shows there is a relationship between dividend yield and

share price volatility about 30 percentage at 95% confidence level (P < 0.05). At the same time pay-out ratio has relationships with share price volatility at 5% significant level as p value is less than 5 percentage (p = 0.03) while control the firm size. TABLE 3, shows model summary between variables of dividend policy and share price volatility.

TABLE 3 Model Summary

Model Summary									
					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.321a	.103	.76	.23013	.103	3.802	2	66	.002
a. Predictors: (Constant), payout ratio, dividend yield									

Adjusted R Square from model summary TABLE 3, explain 76% will change if one percentage change by independent variable of dividend policy. Significant F changes also less than 0.05 p value at 95% confidence level. In these selected variables model is fit between the dependent and independent variable.

TABLE 4 ANOVA

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.403	2	.201	3.802	.002b
	Residual	3.495	66	.053		
	Total	3.898	68			
a. Dependent Variable: share price volatility						
b. Predictors: (Constant), payout ratio, dividend yield						

TABLE 5 Coefficients

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.168	.317		.529	.599
	Dividend yield	.049	.022	.271	2.245	.002
	Payout ratio	-.003	.004	-.116	-.958	.003
a. Dependent Variable: share price volatility						

Above TABLE 4 and 5 shows regression result from ANOVA and Coefficients for the impact of dividend policy on share price volatility while control firm size in Sri Lanka, Specially crisis time for the period of 2019 to 2021. Table 4explains the impact of independent variable on dependent variable. Independent variable of dividend pay-out and dividend yield ratio for representing dividend policy has impact on independent variable

of share price volatility at significance level 95 percentage confident level ($P < 0.002$). Model summary can be explained as follows:

$DV = \beta_0 + \beta_1 + \beta_2 + \beta_3$
$PV = 0.317 + 0.271 – 0.116$

According to the above results and discussion hypothesis one, there is an impact of dividend policy on share price volatility has been accepted at 5% confidence level ($p < 0.002$) while dividend yield and payout ratio also has been accepted at 95% confidence level, p value for dividend yield and payout ratio is 0.002 and 0.003 respectively. So hypothesis H1a and H1b are also accepted. Finally the companies which are listed in stock exchange should take decision when they make decision on dividend policy to maintain correct volatility of share price. Then only companies can survive in market with expected profit level to attract potential as well as existing investors.

V. Conclusion

This study purely focused towards the Sri Lankan market during period of 2019 to 2021across different industry and time horizon the results may vary. Thus, future research can focus on this aspect to examine the impact of dividend policy on share price volatility. Also, future studies can put attention on the comparison of different market in several countries to investigate impact of dividend policy on price movement. Other factors such as NPV values of the future projects of the company can also have the tendency to affect the price movement. Thus, they can be considered in addition to the dividend policy.

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