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Dividend Policy and its Impact on Stock Prices: An Empirical Study on Selected Indian Steel Companies

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Abstract: *Dividend decision is a very decisive judgment for any firm as it will impacted on several factors like stock prices, future development, debt repayments etc. in this particular paper it has been tested whether EPS and DPS has any significant effect on MPS or not. For that fifteen companies are chosen on the basis of market capitalization basis and there after correlation and regression analysis has been done to see the effect of EPS and DPS on MPS. Finally after all analysis it was found that ther was a positive correlation between EPS and DPS with MPS but not significantly and on the other side by regression analysis it was fond that approximately twenty two percent variations in MPS explained by EPS and DPS and rest due to residual term*

Keywords: Dividend decision

I. INTRODUCTION

Background and history of dividend:

Dividend policy has been among the very important topics in the financial management since the coming existence of corporation from business. Corporate dividends concept developed at least to the early sixteenth century in Holland and Great Britain when the captain of sailing ships started selling financial claims or product to investors, which entitled them to share the profits if any, of the voyages. At the end of each journey the profits and capital were distributed among the investors. By the end of sixteenth century these financial activities started to be traded on open market in Amsterdam and gradually replaced by shares of ownership. In that time many investors would buy shares from more than one captain to diversify their portfolio and distribute the risk of investment. The ownership structure of shipping firms gradually evolved into joint stock of company business. As a result these companies began trading as going concern entities and distributed only the profits rather than entire capital. The firms as a going concern initiated to decide portion of income as dividends among the shareholders or investors. Gradually the firms began to restrict the payments of dividends from profits for further development and expansion purpose. In additions to the importance placed by investors on dividend consistency. Another issue of modern corporate dividend that dividend come to be seen as an important form of information regarding firms financial performance. In short investors are often faced with inaccurate information about the performance of a firm and to measure the actual financial position and future views of management, dividend policy is one of the measures.

To summaries, development of dividend payments is linked up with corporate form itself. Corporate mangers are trying to maintain smooth dividend payments to share holders believing that dividend reduction might have unfavorable reaction on share price and therefore used dividends as device to signal information to the market.The next section considers these developments from both theoretical and an empirical point of view.

Birds in a Hand Theory:

Birds in a hand worth two in the bush- means keep old one what is in your hand which is better to get something new for taking more risk. In other words investors prefer to take less risk and demand for dividends as early as possible as opposed to a larger share on capital gain. This theory of demanding for near term dividends was first proposed by Krishnan as the bird in the hand theory. According to Gordon, uncertainty increases with passing time and this is also applicable for dividends. Therefore as uncertainty level go up with distant dividends, the risk to get a certain return as a heavier dividends gets diminished. Therefore the risk averse investor prefer to have dividends in the near future compare to get more appreciation in stock price in the market in distant future. According to Gordon, the distant

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dividends are generally not preferred by the risk averse investors. This theory says investor prefer stock dividends to potential capital gains due to the uncertainty of capital gains. The theory was developed asa counter point to the MM-theory of irrelevance of dividends which means that investors don't care where there returns come from. The Birds in a Hand thory arguments of dividends mean that the near future dividends are worth more than a distant future dividend by market appreciation by equal amount. It considers that investors are always risk averse and so they will discount distant future capital gains more heavily than the near future gains. That is if an investor is asked whether he prefers one bird in a hand or two in the bush, he will always select the first one. Capital gains are discounted more than the near future dividends due to the uncertainty factor which makes the dividends paid later less attractive for the stakeholders therefore to keep the investors content, a company must pay some added premium on incentives along with capital gains.

A birds in a hand theory takes about the importance of having the benefits in the current times verses having the benefits in future years. Here we would review this theory with regards to dividends. As per this theory, investors are more likely to prefer stock dividends than capital gains from their stock investments. This theory based on the premises that investors would choose certain returns (dividends) over uncertain gains (capital appreciation). This theory assumes that investors always prefer dividends due to the uncertainty over capital gains. As per this theory investor would prefer safer and certain returns over uncertain capital gain investments even if the promises higher return in the future. So this theory states that investor would prefer stocks paying mere by regular dividends even at the cost of higher capital gains in future. M. Gordon and J. Linter came up with this theory. There is another theory that ignores the relevance of regular dividends along with MM theory. The name of the former theory is known as tax preference theory. This theory asserts that investors care about savings taxes and thus prefer market appreciation or rather we can say capital gains. It is because dividends generally attract higher taxes than capital gains. Also taxes on dividends need to be paid whenever it is received. But tax on capital gains came into play only when selling the stocks. So these are the reasons why this theory implies that investors prefer capital appreciation over dividends.

On the other side birds in a hand theory - that complies regarding dividend payout policy does impact the share price and investors behavior. The theory reasons that a low dividend payout increases cost of capital of firm. This is because investors expects that more retained earnings lead to higher growth and higher dividend in the future and a higher dividend payout boosted the share price. The theory is based on the old saying "a bird in a hand is worth two in the bush".

Here bird in hand – dividend pay out

Two in the bush – expectations of increases market price of share may or may not happen – capital gains.

Capital gains are subject to a massive amount of uncertainty. This is because no metric can accurately estimates the amount of capital gains of a stock. In reality amount of capital gains depends on several factors and many of these factors are unpredictable and uncontrollable. Thus capital gains are uncertain and carry a higher risk, they may offer higher return as well, but there is no guarantee. In contrast dividend pay out is relatively certain and thus are safe investments. Moreover they are easier to forecast and calculate as well. Such features of a dividend make them less risky for investors. At the same time dividend return may sometimes be less than the capital gains.

History and development of Indian steel industry:

Iron and steel industry is considered as the backbone of an emerging economy. One of the measures of development is counted by the per capita consumption of steel. India is always ahead of time in production and innovation of steel. History says in Delhi in 300AD, an Iron pillar of nearly 20 ft high and 6 tons weight was made by welding together dices of forged iron which is remarkably free from corrosion. It is mysterious like pyramid of Egypt.

The first modern steel industry was established in 1874 in Kulty by Bengal Iron Works which later on stands as Indian Iron and Steel Company. The large scale steel production started when Tata Steel Plant was established in 1907 in Jamshedpur. In 1918 IISCO was set up and in 1973 SAIL is created as a holding company to oversee the public sector steel production.

From 1 MT steel capacity in 1947, today India is 4th largest crude steel production and world's largest production of sponge iron. A sustainable growth of steel industry contributes positively to an economy exclusively. Source: *Government of India, Ministry of Steel, National Steel Policy.*

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Though the growth in the steel sector is encouraging but govt. has taken steps to make it more sustainable. The engineering sector has de-licensed and 100% FDI is allowed in the sector. Large infrastructure project in PPP (public private partnership) mode has been framed. Meanwhile ,the National Steel Policy of 2005 has been replaced by 2012 the growth rate of market value of steel production 17.7% Source*:www.jpcindiansteel.nic.i*

II. REVIEW OF RELATED LITERATURE

Frankfurter and Wood (2002), examined the various dividend policy theories with empirical tests and they found that managers are reluctant to reduce dividend payments even in periods of financial crisis also. Shareholders expect and deserve increase in dividend payments and they prefer for dividend despite the tax liability.

Al-Malkawi, Rafferty, Pillai (2010), reviewed the various dividend policy theories with empirical data and they found that dividend policy has been bound up with the development and history of corporation itself. Although various studies have examined various issues of dividend policies, they have produced mixed and inconclusive results.

Alli, Kasim. L, Qayyum Khan and Gabriel (1993) examined the determinants of corporate dividend policy by using two step procedure that involves factor analysis and multiple regression and they found residual theory of dividend and the role of dividends in mitigating agency problems. They also found for the role of managerial consideration in affecting the firms payout policy.

Bodla and Rani investigate the determinants of dividend policy with respect to mining sector unit in India by two statistical applications. First by Factor Analysis on the data to extract prominent factors from various variables and finally multiple Regression Analysis is conducted. They found various prominent factors like firm size, profitability, pecking order hypothesis, ownership structure, liquidity ratio, leverage etc. and by regression analysis on the above factors resultedfirm size, pecking order hypothesis and dividend signaling to be determinants of the dividend policy of mining industry.

Bhatia (2020) investigates dividend decision of Indian companies and he found various useful insights of dividend policy. Firstly profitability has a positive and significant effect on dividend policy. Secondly the history of dividend policy also a vital effect on dividend policy and finally investment opportunity is also positively related to the dividend policy.

Taushev (2016) examined the theoretical models of dividend policy and found that dividend policy of public companies influences the decision of shareholders. The conclusion from the discussed theories is that there is no final solution to the "dividend puzzle" nitherin theory nor in practice.

Yilmaz and Gulay (2006) found in their study that market prices of shares start to rise a few days before cash dividend payment and on the ex-dividend day the share price will fall more thanthe actual dividend received and which leads to increase the trading volumes to gather the opportunities around ex-dividend day.

Alam and Hossain (2012) investigates the effect of dividend policy on UK based companies listed in London stock Exchange and found that as per dividend irrelevance theory dividend policy has no influence on the value of the firm for the reason homemade dividend, on the other side according to dividend relevance theory value of the firm influenced by dividend policy because of certainty, clientele effect, information context, liquidity, leverage, profitability and market capitalization influence the dividend rate negatively while growth affect positively in case of Bangladeshi firms.

According to Baker, Farrelly and Edelman (1985), shareholders are highly concerned about the regularity and continuity of dividend. Share value is associated by dividend policy and the concerned persons are generally aware of signaling and clientele effects of dividend policy.

Objectives of the study:

1) To check and verify whether earnings per share will affect the market price per share of selected Indian steel companies.
2) To check and verify whether dividend per share will affect the share price of selected Indian steel companies.

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Hypothesis:

- Null Hypothesis: H_0: Earnings per Share and Dividend per Share will influence the Market Price Per Share.
- Alternative Hypothesis: H_1: Earnings per Share and Dividend per Share will not influence the Market Price per Share.

III. METHODOLOGY

The entire paper is exploratory in nature will be done on secondary data from the annual reports of the companies and money control website as required. Fifteen Indian steel companies has been chosen on the basis of market capitalization for analysis. Two major variables are identified namely earnings per share (EPS) and dividend per share (DPS) for analysis of share price. Firstly correlations of the variables are calculated from micro soft excel. There after regression is done from panel data to analyze the impact of EPS and DPS on market price per share (MPS) of the steel industry. Appropriate accounting and statistical tools are used to analyze the data collected for research and draw the inferences accordingly.

Variables:

Earnings per share (EPS) are calculated as a earnings available to equity share holders divided by the number of equity shares. The resulting number serves as an indicator of a company's profitability. The higher a company's EPS the more profitability it is considered. EPS is most valuable when compared against competitor metrics, companies of the same industry, or across a period of time.

EPS= Earnings Available to Equity Shareholders / Total number of Equity Shares

A reason for its being selected that eps is reflected as assign of determining ability of the firms to earn profit. In the light of GAAP publicly owned companies are to show earnings per share next to the income line in their respective p/l a/c. it has its own distinct position in financial ratios.

Dividend per Share (DPS) calculates the portion of company's earnings that is paid out to shareholders. A company uses this calculation to share profits with its shareholders. It indicates how profitable a company is over a fiscal period and it can tell investors about the past financial health and current financial stability.

DPS = total dividend pays out over twelve months period / Number of Equity Shares

It is an important financial ratio in understanding the financial health and long term growth prospects of a company, growing dividend payment by a company can be signal of growth, stability and sustainability. At the same time declining DPS may be due to reinvestments in a firm operation or debt reduction, but may also indicate poor earnings and be a red flag for financial hardship.

Market Price per Share (MPS) it is calculated by considering the market value of a company divided by the total number of equity shares. A market price per share of a company is the amount of money investors are willing to pay for each share. The prices of shares fluctuate in response to investors demand. The market price tends to mere towards an equilibrium point at which the number of sellers equals the number of buyers. If the number of buyers increases the price will tend upward. Conversely if the number of sellers increases the price tends to fall.

In this study the stock market price has been used as a dependent variable. Stock market price can be calculated through the process of considering closing market prices of shares at the last trading day of the financial year.

IV. RESULTS

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.470685							
R Square	0.221544							
Adjusted R Square	0.19992							

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Standard Error	191.1944							
Observations	75							
ANOVA								
	df	*SS*	*MS*	*F*	*Significance F*			
Regression	2	749046.6	374523.3	10.24539	0.000121			
Residual	72	2631982	36555.3					
Total	74	3381028						
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	153.0134	26.16107	5.848895	1.34E-07	100.8622	205.1645	100.8622	205.1645
X Variable 1	2.935112	0.668764	4.388859	3.83E-05	1.601955	4.26827	1.601955	4.26827
X Variable 2	-13.7597	4.896793	-2.80995	0.006376	-23.5213	-3.99817	-23.5213	-3.99817

Analysis:

Multiple R denotes the correlation coefficient between the three variables namely EPS, DPS, MPS. The value of R=0.470685 shows positive correlation between MPS with EPS and DPS.

R^2 has a value 0.221544. R^2 is called the coefficient of determination. This closer the value of R^2 to one greater is the veracity of the model. In our case R^2=0.221544. The interpretation is 22.15% of the variations in the MPS is explained by EPS and DPS only and about 77.85% is explained by the error or residual term. So the model fitted is fairly accurate.

If we look the calculated F value it is 10.24539 and is greater than the critical F (3.1239) value which implies to reject null hypothesis. At the same time significance F value (P value) is given to be 0.000121. It is less than the level of significance 0.05. Reject null hypothesis. The conclusion is that MPS is linearly related to EPS and DPS.

Coefficient- Y intercept is 153.4647 and slope of the variables EPS and DPS are 2.94 and -13.88. It implies that there is a downward negative relation with DPS and MPS. On the other side there is a positive relation of MPS with EPS.

P value- if the P value is lower than 0.05 means no effect of independent variables on dependent variables. Of our calculation EPS has more than 0.05 which means EPS has an effect on MPS and on the other side DPS P value is less than 0.05, which signifies that DPS has no effect on MPS.

The correlation coefficient is 0.368964 which signifies that EPS is positively associated with MPS but not strongly associated with MPS and the value is less than 0.5

On the other side the correlation coefficient is 0.113551 which implies that there is a merely positive correlation but not strongly associated with DPS and MPS.

Summary:

The central intention of this study is to observe the association linking dividend policy and stock prices. Research question of the study are whether dividend policy has an impact on stock prices or not? The objectives of the study are to study the relationship of the dividend policy with the share prices and accept or reject the academic explanation of the practice of paying dividend. Though simple regression analysis is used and at the same time correlation of the variables also done to get the concrete results from the analysis. Result shows that there is a positive correlation between earnings per share and dividend per share with market price per share but not strongly significant. On the other side from regression analysis shows that less near about twenty two percent changes of mps due earnings per share and dividend per share and 78% for residual term.

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V. CONCLUSION

The study is conducted to know the impact of dividend policy on stock price. Results of the correlation show that among the given variables earnings per share and dividend per share are positively correlated ….. but not strongly positive with market price per share. on the basis of regression analysis on the basis of R^2 results shows that 22.28% of changes in market price per share due to earnings per share and dividend per share and balance 77.72% is explained by error or residual term. Hence from the above analysis we can conclude that (on the basis of last five years data) earnings per share and dividend per share ofIndian steel companies has not significant impact on market price per shareat the same time finally we conclude that dividend declaration out of earnings has not a strong parameter for change in market price per share. So birds in hand theory developed by Gordon and Linter's has not applied on Indian steel companies on the basis of last five years data analysis.

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TABLE-1:SAMPLE STEEL COMPANIES AND YEAR WITH CODE:

STEEL COMPANIES	YEARS
1) JSW STEEL	1) 2017-18
2) TATA STEEL	2)2018-19
3) JINDAL STEEL	3)2019-20
4) SAIL	4)2020-21
5) APL APPOLLO	5) 2021-22
6) KIOCL	
7) JINDAL STAINLESS	
8) JINDAL HISAR	
9) MAHARASHTRA SEAM.	
10) GODAWARI POWER	
11)TINPLATE LTD	
12) SARDA ENERGY	
13) JINDAL SAW	
14) JAISWAL NECO	
15) JAI CORP. LTD.	

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STEEL COMPANY FOR CMA JOURNAL

com code	year code	MPS	EPS	DPS
1	1	288.15	25.85	3.2
1	2	293.05	31.77	4.1
1	3	142.4	16.78	2
1	4	468.45	32.91	6.5
1	5	732.65	85.96	17.35
2	1	57.11	128.12	10
2	2	52.1	87.75	13
2	3	26.96	11.86	10
2	4	81.19	63.78	25
2	5	130.72	332.35	51
3	1	219.1	-15.38	0
3	2	179.7	-17	0
3	3	82.2	-1.8	0
3	4	343.6	35.63	0
3	5	532.85	56.4	1
4	1	70.2	-0.68	0
4	2	53.75	5.69	0.5
4	3	23.05	5.13	0
4	4	78.8	10.04	2.8
4	5	98.55	29.64	8.75
5	1	187.15	66.84	14
5	2	144.19	62.47	14
5	3	124.67	19.43	0
5	4	700.43	28.91	0
5	5	914.6	22.3	0
6	1	220.5	1.28	1.06
6	2	138.75	1.78	1.33
6	3	59.2	0.7	0.7
6	4	136.6	4.87	1.64
6	5	208.7	5.16	1.77
7	1	78.55	7.6	0
7	2	39.2	2.97	0
7	3	24.1	1.48	0
7	4	67.6	8.6	0
7	5	202.55	37.81	0
8	1	158	24.5	0
8	2	93.75	16.16	0
8	3	39.65	16.65	0
8	4	125.05	29.4	0
8	5	389.35	82.33	0

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9	1	423.5	31.45	6
9	2	480	34.96	6
9	3	193.6	12.52	2.5
9	4	275.3	14.63	3.5
9	5	551.55	56.75	5
10	1	107.76	58.92	0
10	2	57.88	71.55	0
10	3	26.16	47.33	0
10	4	179.71	181.17	18.5
10	5	386.45	111.41	11
11	1	187.05	6.99	2
11	2	154.55	5.54	2
11	3	75.85	9.08	1
11	4	160.55	9.38	2
11	5	401.3	33.72	4
12	1	422.7	56.01	5
12	2	312.7	56.36	5
12	3	117.5	35.05	5
12	4	418.6	104	7.5
12	5	1132.65	223.07	7.5
13	1	118.75	5.55	1.2
13	2	86.4	26.59	2
13	3	45.8	17.35	2
13	4	74.15	10.02	2
13	5	90.1	12.96	0
14	1	7.3	-7.69	0
14	2	5.7	-6.95	0
14	3	1.95	-23.56	0
14	4	10.6	-8.74	0
14	5	22.45	28.4	0
15	1	133.7	-0.06	0.5
15	2	115.55	-6.06	0.5
15	3	50.5	1.88	0.5
15	4	84.65	5.2	0.5
15	5	109.3	2.95	0.5