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**The Relationship between Dividend Payout  
and Firm Performance:**

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**A study of Automobile Companies  
Operating in India**

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**Abstract**

Dividend policy is basically concerned with deciding to pay dividend in cash now, or to pay increased dividends at a later stage or distribution of profit in the form of bonus shares. Dividend payment is an important consideration used by present as well as prospective shareholders in valuing the worth of the share. This paper gives an insight of various dividend models like WALTER'S MODEL, GORDON'S MODEL & MODIGLIANI AND MILLER APPROACH. This research paper is an effort to find out the impact of firm performance that is net income or profit on dividend payout policy of the selected automobile companies by using multiple regression technique. The results of the regression analysis showed that up to 46 % (R-Square) of the Dividend Payout Ratio was affected by Return on Capital employed (ROCE) and Return on net worth (RONW).

**KEY WORDS: Dividend policy, Dividend models, Dividend Payout Ratio, Return on Capital Employed and Return on Net Worth.**

**INTRODUCTION**

The term dividend refers to that portion of profit which is distributed among the shareholders of the firm. The profit which is not distributed is known as retained earnings.

A company may have preference share capital as well as equity share capital and dividends may be paid on both types of capital.

According to the Institute of Chartered Accountant of India,

**“A dividend is a distribution to shareholders out of profit or reserves available for this purpose.”**

Dividend policy is basically concerned with deciding to pay dividend is cash now, or to pay increased dividends at a later stage or distribution of profit in the form of bonus shares. Dividend payment is an important consideration used by present as well as prospective shareholders in valuing the worth of the share. A dividend policy may be defined as a guiding principle in determining what portion of earnings is paid out to shareholders as dividends. Lintner (1956) argues that firms of developed markets target their dividend payout ratio with the help of current earnings and past dividends. In order to reach such target, various adjustments are made in the dividend policy of a firm and therefore firms should have stable dividend policies. The firm must decide on the amount or proportion of earnings to be paid out as dividends and the amount to be retained for internal financing.

According to Brigham,  
***“Dividend policy determines the division of earnings between payments to shareholders and retained earnings.”***

A firm's dividend policy includes two basic dimensions:

- i. The dividend payout ratio, which indicate the amount of dividends distributed in relation to the earnings.
- ii. The stability of dividends which may be as important to any investor as the amount of dividend.

### MODELS OF DIVIDEND POLICIES

#### WALTER'S MODEL:

The relevance proposition of Walter's model is the relationship between the return on a firm's investment or its internal rate of return (r) and its cost of capital or the required rate of return (Ke). The firm would have an optimum dividend policy, which by the relationship of r and k. The rationale is that if r greater than ke, the firm is able to earn more than what the shareholders could by reinvesting, if the earnings are paid to them.

The implication of r less than ke is that shareholders can earn a higher return by investing elsewhere. In contrast, if a firm does not have profitable investment opportunities r greater than k. The shareholder will be better off if earnings are paid out to them so as to enable them to earn a higher return by using the funds elsewhere. Finally, when r=Ke it is a matter of indifference whether earnings are retained or distributed. This is so because for all dividend payout ratios (ranging between zero and 100) the market price of share will remain constant.

Walter's model, thus, relates the distribution of dividends to available investment opportunities. Walter has suggested a mathematical model.

$$P = \frac{D}{K_e} + \frac{(r/K_e)(E-D)}{K_e}$$

- P= Market price of Equity share
- D= Dividend per share paid by the firm
- r= Rate of return on investment of the firm.
- Ke= Cost of Equity share capital
- E= Earnings per share of the firm.

#### GORDON'S MODEL:

Myron Gordon has also proposed a model suggesting that the dividend policy is relevant and can affect the value of the share and that of the firm. This model is also based on the assumptions similar to that made in Walter's model. According to Gordon, the market value of a share is equal to the present value of future streams of dividends. Thus Gordon's model is a share valuation model (like that of Walter's) Under this model, the market price of share can be calculated as follows:

$$P = \frac{E(1-b)}{K_e - Br}$$

- ❖ P= Market price of equity share.
- ❖ E= Earnings per share of the firm.
- ❖ B= Retention Ratio (1-Payout ratio)
- ❖ r= Rate of return on investment of the firm.
- ❖ Ke= Cost of equity share capital.
- ❖ Br= Growth rate of return.

**MODIGLIANI AND MILLER APPROACH:**

The irrelevance of dividend policy for valuation of the firm has been most comprehensively presented by Modigliani and Miller (MM). They have argued that the market price of a share is affected by the earnings of the firm and is not influenced by the pattern of income distribution. The dividend policy is immaterial and is of no consequence to the value of the firm.

Assumptions of the MM Approach:

- All information's are freely available to all the investors.
- There is no transaction cost and no time lag.
- There are no taxes and no flotation cost.

MM have presented the following valuation model:

$$P_0 = \frac{1}{1+K_e} * (D_1 + P_1)$$

- ❖ P<sub>0</sub>=Present market price of the share
- ❖ K<sub>e</sub>=Cost of equity share capital
- ❖ D<sub>1</sub>=Expected dividend at the end of year 1
- ❖ P<sub>1</sub>=Expected market price of the share at the end of year 1

**LITERATURE REVIEW:**

- Stulz, 2000; Pandey, 2003; DeAngelo et al., 2006, have explained the relevance of dividend policy and whether it affects firm value, but there has not been a universal agreement.
- Researchers Amidu (2007), Lie (2005), Zhou & Ruland (2006), Howatt et al. (2009), continue to come up with different findings about the relationship between dividend payout and firm performance.
- A number of studies by Arnott & Asness 2003; Farsio et al 2004 and Nissim & Ziv 2001 have been done with regard to dividend policy

and firm performance, especially in developed economies.

- Arnott & Asness (2003) suggested that the positive relationship between current dividend payout and future earnings growth is based on the free cash flow theory.
- A study by Zhou & Ruland (2006) revealed that high dividend payout firms tend to experience strong future earnings but relatively low past earnings growth despite market observers having a contradicting view
- The findings of another study done by Arnott & Asness (2003) also revealed that future earnings growth is associated with high rather than low dividend payout.
- A substantial theoretical literature, including Bhattacharya (1979; 1980), Linter (1956), Linter (1962), Miller and Rock (1985) suggest that corporate dividend policy is designed to reveal earnings prospects to investors.
- Fama (1974) argue that firms a priori set their target dividend level and try to stick to it. Furthermore, there may be interrelation between dividend payout policy and agency cost (Jensen and Meckling, 1976).
- Gordon (1959) in his seminal work proposes that even in presence of perfect capital market, the existence of uncertainty about the future cash flow, success to make the price of shares dependent upon the dividend policy.
- Miller and Modigliani (1961) in their pioneer work analyze the effect of dividend policy on the current price. They found no dividend policy is superior to any other dividend policy and that it is therefore irrelevant in firm value and/or maximizing shareholders' wealth.
- Ali, Khan and Ramirez (1993) observe that

a change in the payout policy provides information about future earnings and a further change in the value of share price. This indeed shows a strong signaling effect of the dividend decision of a firm

## RESEARCH METHODOLOGY

### OBJECTIVE OF THE STUDY

- To study the impact of firm performance on dividend payout policy of the selected automobile companies in India.

### DATA COLLECTION

The data collected was secondary in nature. It was collected from various journals, websites, books, audited financial reports of the selected automobile companies and from Prowess database of Centre for Monitoring Indian Economy (CMIE) for the years 2006-2014

### SAMPLE

For our study we have selected 5 automobile companies that are Bajaj Auto Limited, TVS Motor Company Limited, Hero MotoCorp Limited, Ashok Leyland Limited and TATA Motors Limited.

### TECHNIQUE OF ANALYSIS

A multiple regression model was used to study the impact of firm performance in terms of net income or profit on dividend payout policy. The variables chosen for the study are Dividend Payout Ratio as dependent variable and Return on Net worth and Return on Capital Employed as independent variables.

### DATA ANALYSIS AND INTERPRETATION

**RETURN ON CAPITAL EMPLOYED:** Computed as ratio of profit before interest, tax and dividend by capital employed of the firm. The average for nine years of the selected companies is used

YEARS	BAJAJ AUTO LIMITED	HERO MOTOCORP LIMITED	TVS MOTOR COMPANY LIMITED	ASHOK LEYLAND LIMITED	TATA MOTORS LIMITED
2014	47.92	51.41	19.91	-1.72	2.52
2013	53.51	48.57	17.08	7.01	5.95
2012	64.24	49.83	19.81	17.76	10.26
2011	67.57	52.13	18.38	18.60	10.75
2010	59.00	75.07	9.85	12.89	10.37
2009	32.80	43.33	5.37	8.78	6.41
2008	39.71	41.57	1.08	23.12	18.96
2007	20.90	43.48	8.66	23.82	25.82
2006	23.32	60.31	14.87	21.95	26.47

**RETURN ON NET WORTH:** Computed as ratio of Net Income and shareholder's equity. It is how much profit a company generates with money shareholders have invested. The average for nine years of the selected companies is used.

YEARS	BAJAJ AUTO LIMITED	HERO MOTOCORP LIMITED	TVS MOTOR COMPANY LIMITED	ASHOK LEYLAND LIMITED	TATA MOTORS LIMITED
2014	33.75	37.66	18.48	0.66	1.74
2013	38.51	42.31	9.47	9.73	1.57
2012	49.72	55.43	21.30	19.57	6.32
2011	68.01	65.21	19.46	23.80	9.05
2010	58.14	64.41	10.53	18.27	15.15
2009	38.92	33.72	4.21	9.05	8.09
2008	47.61	32.41	4.13	22.30	25.98
2007	22.36	34.73	8.87	23.58	28.00
2006	23.09	48.34	17.39	23.57	27.81

**DIVIDEND PAYOUT RATIO:** Calculated by dividing Dividend paid by Net income. The average for nine years of the selected companies is used.

YEARS	BAJAJ AUTO LIMITED	HERO MOTOCORP LIMITED	TVS MOTOR COMPANY LIMITED	ASHOK LEYLAND LIMITED	TATA MOTORS LIMITED
2014	44.60	61.59	25.42	36.80	193.87
2013	42.78	56.56	49.14	36.80	213.77
2012	43.34	37.78	24.80	47.01	103.09
2011	34.65	108.75	26.86	42.14	70.32
2010	33.98	98.41	32.39	47.09	38.34
2009	48.48	31.15	53.50	70.01	31.12
2008	38.27	39.20	52.34	42.56	28.50
2007	32.69	39.57	30.31	45.00	30.21
2006	36.74	41.11	26.39	48.81	32.56

**REGRESSION ANALYSIS:****Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.678 <sup>a</sup>	.460	.280	12.99032

  

Coefficients <sup>a</sup>						
Model		Un Standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	27.638	28.132		.982	.364
	AVG_ROCE	4.278	2.102	1.376	2.035	.088
	AVG_RONW	-3.550	1.571	-1.529	-2.260	.065

a. Dependent Variable: AVG\_DPR

**S = 12.99032, R-Sq = 46%, R-Sq (adjusted) = 28%**

The results of the regression analysis are as shown above:

The regression equation is:

$$\text{DPR} = 27.638 + 4.278 \text{ ROCE} - 3.550 \text{ RONW}$$

Where,

DPR = Dividend Payout Ratio

ROCE = Return on Capital Employed

RONW = Return on Net worth

The R-square is 0.460 i.e. around 46 per cent of the variability in dividend payout is explained by the independent variables tested. Return on capital employed shows a positive relation (4.278) and Return on Net worth shows a negative relation (-3.550) with the Dividend payout ratio.

## CONCLUSION:

The results of the regression analysis showed that up to 46 % (R- Square) of the Dividend Payout Ratio was affected by Return on Capital employed and Return on Net worth. Return on capital employed was found to be positively related whereas return on net worth was found to be negatively related. It is inferred that the higher the profitability of the company, the less they prefer to payout dividends. It could be due to the fact that profitable firms have more opportunities for growth, so they would prefer to invest the free cash flows in the future growth projects (Rozeff, 1982). However, like any other research this paper was subject to some limitations. However, to shed more light on the topic of dividend payout policy and better understanding on these issue further studies are required.

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