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FINANCIAL PARAMETERS AND DIVIDEND DECISIONS OF INDIAN COMPANIES: AN EMPIRICAL INVESTIGATION

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ABSTRACT

Purpose: Dividend has significant relevance from the perspective of managers, shareholders and potential investors. In this regard, the present paper seeks to demystify various financial factors affecting the dividend decisions of Indian companies and provides crucial implications.

Methodology: The OLS panel regression technique using two models have been applied. In this study, we have examined top 100 companies based on market capitalization during the year 2007 to 2018.

Findings: The paper documented evidence pertaining to three most imperative financial variables which positively and significantly affect the dividend policy of Indian companies. Dividend history, current earnings and investment opportunities are key parameters in shaping the firm's dividend policy.

Implications Dividend decisions are the one of the critical decisions of the financial management and have serious implications for managers, shareholder and academicians. Managers should benchmark dividend policy based on past pattern of dividend and ensure stability in dividend payments in order to maintain reputation in the capital market. From the perspective of investors looking for investment in stock with high dividend yield, they should invest in those companies having higher profitability, pattern of past dividend and opportunities of investment. These insights are useful in the predication of firm's behaviour during financial crisis caused by COVID 19.

Keywords: Pooled Regression, Financial Parameters, Dividend

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Dividend is one of the key areas in the field of finance and matters a lot for diverse stakeholders including managers, shareholders, policy makers and research scholars. Shareholder gives their capital to a company and dividend is one of the key mechanisms to pay the return on that. Therefore, managers need to take extensive decisions with respect to quantity, timing, and form of reward to the shareholders. It can be in form of cash dividend, bonus shares, share repurchases and DRIPs. But it is not as simple as it looks like. There are numerous factors which affect dividend policy of the company and there is no consensus given by earlier studies on that. Black (1976) called dividend a puzzle, which remain unsolved even after more than four decades. Most of the studies in the domain of dividend belong to advanced countries like US, Japan, South Korea and UK. Conversely, the perspective of emerging nation like India has been neglected in the domain of dividend. The present paper tries to fill this void by providing empirical evidence from the perspective of India. Further the recent changes in dividend pay-out made by companies in the light of financial crisis may be explained with the help of antecedents affecting dividend decision of a firm.

The paper is structured in systematic organised manner. Firstly, we presented the significance and objective of our study, and then we discuss review of established literature pertaining to factors affecting dividend behaviour around the world. Hence, we are able to derive several key factors affecting dividend decisions and develop our hypothesis falling in line with our objectives. Thereafter, we reported the methodology of our research to test this hypothesis. Finally, results of empirical investigation along with its robustness have been discussed and concluding remarks and its implications have been outlined

SIGNIFICANCE OF THE STUDY

The importance of dividend pay-out policy can be derived from the fact that it affects the value of the firm under imperfect conditions (Modigliani and Miller).Moreover it also affect the capital structure of the company as cash dividend affects the funds available to the company. There are so many factors which affect dividend and pay-

out policy of Indian companies. But it is important to find out which are relatively key factors in dividend policy. The insights of factors which affect pay-out either negatively or positively will help investors looking for investment in Indian companies. Moreover, the managers of a firm need to keep in mind the antecedents affecting dividend policy. This study will provide key and useful insights to investors in their decision making during the crisis caused by COVID 19. It will have significant relevance for policymakers, academicians, corporate managers and various other stakeholders

OBJECTIVE OF THE STUDY

The objectives of the study have been outlined as below**:**

- To understand what are important factors affecting dividend policy of a company which are documented by previous review of literature.
- To demystify key financial antecedents affecting dividend decision of a company in India and provide empirical evidence in support of it.
- To ensure consistency and robustness of the result with the help of two models.
- To elucidate and give interesting insights for managers, shareholders, and academicians.

LITERATURE REVIEW

This section of review of literature exhibits the contentions raised by various researchers exploring the essence and existence of dividend policy across companies. Further, we will derive important determinant of dividend policy that will help us to develop hypothesis of our study.

Baker, et al (1985), found two most important factors which are anticipated level of firm's future earning & pattern of past dividend which is consistent with the lintner

model. Nur and karnen (2011) finds out that companies that reimburse dividends dominated by large size, having large cash funds, high profitability and low debt and growth. Lee (2001) and Ganguli (2014) also found firms are affected by dividend signalling. Brav (2005) also found that dividend decisions are still made conservatively. Bhattacharya (1979) has developed a model in which cash dividend serve as a function of expected cash flow in an imperfect information setting. Jenson (1986) states that payout to shareholder reduce the resources under managers control & force them to incur monitoring of capital market for new capital. It suggest dividend act as a mechanism of corporate governance. Braggion and Moore (2008) found strong support for asymmetric information theory of dividend policy in UK, and little support for agency model. Bodla et al (2007) finds support for lintner model in listed Indian banks. Dewenter and Warther (1998) assume Japanese dividend policy, and keiretsu firms in particular are consistent with hypothesis of fewer agency costs and less information asymmetry. Japanese companies are not reluctant to changes in their dividend policy. Wang et al (2011) examines the dividend policy for firms listed on the Taiwan Stock Exchange for time period 1992-2007 and indicate that dividend payers (cash dividends, stock dividends, or both) are associated with higher profitability, higher asset growth rate, and higher market-to-book ratio than non-payers (none dividends). Jeong (2013) finds that in South Korea, the institutional factors of the financial market, such as the interest rate level and tax rate which are the main reasons for dividend. Denis and Osobov (2007) investigate dividend policies in six advanced financial markets – the United States, United Kingdom, Canada, Germany, France, and Japan – and discover that firm size, profitability, and firm maturity are related with the propensity to pay dividends in these six countries. DeAngelo, DeAngelo and Skinner (2007) report that aggregate dividends are mostly paid by largest, most profitable firms in the U.S.

Factors affecting dividend and pay-out policy of a firm

1. Earnings

In his classic study, Lintner (1956) found that a firm's net earnings are the critical

determinant of dividend changes. Reddy (2006) show that the dividends paying firms are more profitable. Hence we can say current year earnings are critical determinant of dividend. There seems to be positive relationship between current earnings and dividend payout

2. Leverage

There have been numerous literatures which have found that the financial leverage (use of high debt) inversely affects dividend policy (Al-Malkawi, 2005) because financial leverage increases financial obligations and transaction costs, which forces a company to pay fewer dividends. Debt holder will try to force company to pay fewer dividends

3. Liquidity

La Porta et al. (2000) suggested that at times when free cash flow is abundant, managers of the company will utilize these cash to invest in wasteful investment i.e investment giving negative NPV. Therfore it can be said that there is high agency cost of cash flow. Dividend can play a role in reducing agency cost of the cash flow (La Porta et al., 2000). It reduces the resources under the control of the management. On the basis of previous researches, we can expect that there will be positive relationship between the cash flow and the dividend payout ratio.

4. Size

Size of the firm is expected to have positive correlation with the dividend payout. But extreme growth in sales could demand capital expenditure and that could basically lower the payout. La porta et al (2000) suggested that firm with better legal protection to pay lower dividend in case of high growth companies. In general, large companies' pays more dividend than smaller companies does because large companies have become more mature with respect to its growth.

5. Age

The relationship between age and payout is complex since reputation increases with age. This in turn will allow firms to reach out to the finance more cheaply and that will allow companies to increases the payout of the firm. Further higher age firm will reach out to the maturity and paying out more dividends. Therefore, we expect a positive relationship between age and payout of dividend

6. Investment opportunities

Generally dividend payout and investment opportunity tend to be negatively related. The explanation of such relationship is obvious since investment opportunities are financed by retained earnings. Higher the retained earnings, lower will be the payout of dividend. But stability and reputation of dividend paying firms can make it insignificant

7. Dividend history

Many empirical studies have found that management considers dividend history for deciding current year dividend. Dividend history is expected to have positive relationship with current year pay-out. In other word, lagged dividend positively affects dividend payout.

Hypothesis development

Keeping in consideration the objectives of the study and based on available studies in the domain of dividend, the study attempt to test the following hypothesis

H_{01}: Profitability/Earnings have no effect on dividend policy

H_{02}: Dividend pay-out is not affecting by previous year dividend

H_{03}: Leverage does not have any bearing on dividend policy of company

H_{04}: Investment Opportunities is not related to dividend policy

H_{04}: Size does not play crucial role in dividend policy

METHODOLOGY OF THE STUDY

The study tries to unfold whether dividend pay-out is affected by earnings, dividend history, leverage, investment opportunities and size. In this study, we have taken dividend as dependent variable and earnings, dividend history, leverage, investment opportunities and size as independent variable. The variable has been selected for the time period from 2008 to 2018 for BSE 100 Companies. Sector wise information of the selected companies has been mentioned in the table 1 in the appendices.

The following models have been built to analyze some of the factors mentioned above:

Model 1

DPSt = a + b1 EPS + b2 PDPS + b3 DE + b4 PB + b5 SALES

Where DPS stands for dividend per share, EPS stands for earning per share, DE stands for debt equity ratio, PDPS stands for previous year dividend (dividend history), PB stands for price book value ratio(represents investment opportunities), SALES stands for natural log of sales represents(Size)

Model 2

DPSBt = a + b1 EPSB + b2 PDPSB+ b3 DE + b4 PB + b5 SALES

The second model is used to eliminate the effect of the diverse book value of various companies in BSE 100 and resolve the problem of heteroscedasticity. Where DPSB stands for dividend per share scaled down by book value, EPSB stands for earning per share scaled down by book value. DE stands for debt equity ratio; PDPSB stands

for previous year dividend scaled down by book value. PB stands for price book value ratio (represents investment opportunities), SALES stands for natural log of sales represents(Size)

EMPIRICAL RESULTS

Result of model 1 (as given in table 2 of appendix)

In this model, Adjusted R square is reasonably good at 0.65, which suggest that 65 % variability in the dependent variable is explained by independent variable. Significant F is 0.0, which suggest all explanatory coefficients taken in the model are affecting dividend per share. Lagged DPS, Leverage and Size have significant effect. Lagged dividend is positively related as expected. Size and leverage is negatively related to the dividend pay-out which is as per our expectation given earlier. Lagged dividend and current year earning is positively related as expected. Surprisingly investment opportunity given by coefficient of P/B ratio is positively and significantly related to dividend payout. Durbin Watson of 1.887 suggests that there may be no autocorrelation. It indicates that dividend history, profitability and investment opportunities are positively related to dividend payout

We have presented pooled results for model 1 since LM statistics was insignificant for model 1. The pooled results shows that coefficient of EPS is 0.095 and significant at 5 % percent level. It indicates that if dividend per share is positively and significantly related with earning per share and if EPS increases by 1 unit, DPS will increase by 0.095. Similarly, the coefficient of lagged dividend per share is 0.636 which is also significant. The coefficient of debt equity and log of sales are insignificant. The coefficient of P/B is positive and significant with value of 0.322 indicating positive relationship with investment opportunities and dividend payout, which is against our expectation. It suggests that even with good investment opportunities, companies continue to increase dividend. It may be due to keep reputation in the capital market to get finance for investment opportunities because dividend signal future prospects of the company.

Result for model 2 (as given in table no 2 in the appendix)

The table two depict the result of model 2 in order to arrive at more consistent picture.

The adjusted R Square of 0.855 and significant f of 0.0 suggest model is good. . EPS per book value and lagged DPS per book value both affect positively and significantly to current DPS per book value. The P/B affects positively and significantly but result for ln sales and debt equity is insignificant. The results are quite similar to model 1. Significance F is 0 indicating all values are not zero. EPS per book value and lagged DPS per book value both affect positively and significantly to current DPS per book value. The P/B affects positively and significantly but result for ln sales and debt equity are insignificant.

If results of both models are taken together, we are able to observe that there are three explanatory variables which are dividend history (lagged dividend), current earnings (EPS) and investment opportunities (P/B ratio) which affect dividend pay-out. While other variables like ln sales and debt equity ratio have ambiguous and insignificant relationship with current dividend per share. However in some year, leverage is negatively related with dividend payout, but the results are insignificant.

ROBUSTNESS OF RESULTS

LM statistics comes out be insignificant in both the model making pooled OLS model as appropriate one. Robust standard errors have been used in our study which will provide reliable and consistent results free from heteroscedasticity. Durbin Watson Statistics shows that there is no problem of autocorrelation. Large data along balanced panel methodology eliminates various other problems like unobserved variables, and non-normality. It will give more degree of freedom and enhances the efficiency of information. The use of two models and cross checking the consistency of results establishes make our result rigorous and reliable.

CONCLUSION

The three most important variables which positively and significantly affect dividend policy of Indian companies are dividend history, current earnings and investment opportunities. Surprisingly, the relationship between investment opportunities and dividend payout is positive which is against our expectation. The reason for such relationship is that dividends are quite stable. If there are investments opportunities, then in spite of paying lower dividend, companies are interested in paying stable dividend in order to keep up with the reputation in the capital market. Leverage is negatively related to dividend pay-out in model 1 for few years only which is otherwise insignificant in general. The relationship between firm size and dividend pay-out policy is insignificant. Since, our database consist of large companies only, it may results in insignificance of firm size as a predictor of dividend policy. Size factors need to be analysed in terms of its magnitude, whether it extreme or small so that significant results can arise. Overall, we can say that investors looking for dividend stock in Indian companies needs to invest in companies having high EPS, dividend history and high investment opportunities. It also suggests that signalling model is applicable in case of Indian companies, wherein dividend changes are viewed as a signal of future performance of companies.

IMPLICATIONS

The paper provides three useful insights in the field of dividend policy. Firstly, profitability has positive and significant effect on the dividend policy of a firm. This finding is very common and consistent with most of the studies. Secondly, the history of dividend is positively and significantly affecting the dividend policy. It indicates that the managers are conservative in changing their dividend policy according to any changes in the earnings. Thirdly, investment opportunity is also positively related to the dividend policy contradicts the premises of MM hypothesis which stated that if there are growth opportunities then company will retain earning and pay lesser amount of dividend. But, in the context of India we have observed that if

investment opportunities are higher, then companies are keep on paying dividend rather than decreasing it. It may be due to the fact that companies want to ensure reputation in the minds of outside shareholder in an environment of asymmetric information. Large Indian companies have the prevalence of family ownership which creates the problem of agency information and asymmetric information between the dispersed share holder and the controlling power of managers. That is the reason why dividends are sticky in nature in India. From the perspective of investors looking for investment in stock with dividend yield should invest in those companies having higher profitability, pattern of past dividend and opportunities of investment. The financial crisis of COVID 19 diminishes corporate earnings, will surely tend to reduce dividend pay-out by most of the prominent companies. It is going to create more fluctuations in dividend behaviour in contemporary time. Growth opportunities for a company tend to decline, which will open up Pandora box especially for those investors looking for high dividend stocks. But still, if a company maintains dividend despite the financial crisis will be a good stock to buy, because dividend changes signals sustainability in the future earnings

Managers of Indian companies should consider these important factors while framing their dividend policy. Investors looking to invest in high dividend yield companies can invest in those companies in which there is abundance of these key variables. Academician should try to bring in more consensuses as far as the research in the field of dividend is concerned. Further, we can accommodate share buyback as a moderating variable in dividend decisions.

REFERENCE

Al-Malkawi, H. (2007), Determinants of Corporate Dividend Policy in Jordan: An Application of the Tobit Mode , *Journal of Economic & Administrative Sciences,* Vol. 23, No. 2, pp. 44-70.

Amihud, Y. and Murgia, M., (1997) "Dividends, Taxes, and Signaling: Evidence from Germany". *The Journal of Finance*, Vol. 52 (1), pp. 397-408.

Afza, T. and Mirza, H., (2010)"Ownership structure and cash flows as determinants of corporate dividend policy in Pakistan",*International Business Research*, Vol. 3 No. 3, pp. 210-21.

Badu, E.A. et al (2013), Determinants of Dividend Payout Policy of listed Financial Institutions in Ghana , Research Journal of Finance and Accounting, Vol. 4, pp. 185-190

Baker, et al (1985), 'A survey of management views on dividend policy'.*Financial Management* **14**,78–84.

Banerjee, S. et al. (2007) Stock Market Liquidity and Firm Dividend Policy.*The Journal of Financial and Quantitative Analysis*, 42 (2), p.369-397

Black, F. (1976). The dividend puzzle. The Journal of Portfolio Management, 2(2), 5-8.

Bhattacharya, S. (1979), "Imperfect information, dividend policy, and the 'bird in the hand' fallacy", *Bell Journal of Economics and Management Science,* **10**, 259–270.

Bhattacharya, S. (1979), "Imperfect information, dividend policy, and the 'bird in the hand' fallacy", *Bell Journal of Economics and Management Science,* **10**, 259–270

Bodla et al (2007), "Examining application of lintner's dividend model in Indian banking industry",,*ICFAI Journal of Bank Management*, Vol. 6, No. 4, , pp 40-59

Braggion, F. and L. Moore (2008), "Dividend policies in an unregulated market: The London Stock Exchange 1895–1905", *Working paper, Univerist´*e de Montr´eal and Tilburg University.

Brav, A. et al. (2005), "Payout policy in the 21st century". *Journal of Financial Economics* **77**,483–528

Brearly, R. and Myers, S. (2003),"*Principal of corporate finances"*. 2nd ed. Tata McGraw Hill, p.431-462

Dickens, R. et al. (2002) Bank Dividend Policy: Explanatory Factors. *Quarterly Journal of Business and Economics*, 41 (1), p.3-12

Dewenter, L. and Warther, A.,(1998), "Dividends, Asymmetric Information, and Agency Conflicts: Evidence from a Comparison of the Dividend Policies of Japanese and U.S. Firms". Journal of Finance, June 1998. Available at SSRN: http://ssrn.com/abstract=100314

Deangelo, et al. (2007), "Corporate PayoutPolicy".*Foundations and Trends® in Finance,* 3 (2), pp. 95-287.

Denis, David J. and Igor Osobov. 2007. "Why Do Firms Pay Dividends? International Evidence on the Determinants of Dividend Policy." Journal of Financial Economics, forthcoming.

,T. et al, (2010), "Is Dividend Smoothing Universal? New Insights from a Comparative Study of Dividend Policies in Hong Kong and the U.S", *Presented at European Finance Association (EFA) and the Financial Management Association (FMA*)

Fama, E. and French, K. (2001)."Disappearing dividends: changing firm characteristics or lower propensity to pay?"*Journal of Financial Economics*, 60(1), pp.3-43.

Bhattacharyya, N. (2007). Dividend policy: a review. *Managerial Finance,* 33(1), pp.4-13.

Ganguli. K (2014), "Dividend, Minority Shareholders, Legal Protection, and Firm Value: Evidence from Singapore" available at ssrn abstract 2442035

Gugler, K (2003), "Corporate Governance, Dividend Payout Policy, and the Interrelation between Dividends,

R&D, and Capital Investment", Journal of Banking & Finance, Vol. 27, No. 7, pp.1297-1321.

Hul, F. and Chent, X. (2012), "Dividend Smoothing and Firm Value: Evidence from Chinese firms", *International Conference on Information Management, Innovation Management and Industrial Engineering*, pp 98 -101

Jensen, M. (1986), "Agency costs of free cash flow, corporate finance, and takeovers". *American Economic Review* **76**, 323–329.

Jeong, J. 2013. "Determinants of dividend smoothing in emerging market: The case of Korea", Emerging markets review, Vol. 17, pp. 76-88

Kapoor, S and Kanwal, A (2007), Relevance of information asymmetry models: a study of Indian Information Technology sector, *International Journal of Business Research*, Vol 7 ,Issue:

Saibal, G. (2011) *The dividend strategy of Indian companies: An empirical assessment*. [online] Available at: http://ideas.repec.org/p/pra/mprapa/29567.html [Accessed: 29 Jan 2013].

Shivesh, S. (2004) Capital Structure and Dividend Policy.*Economic and Political Weekly*, 39 (50), 529

La Porta, R., Lopez-de Silanes, F., Shleifer A. and Vishny, R. (2000), "Agency problems and dividend policies around the world", Journal of Finance, vol. 55, pp. 1–33

Lee. K, (2010), "An Empirical Study of Dividend Payout and Future Earnings in Singapore", *Munich Personal Repec Archive*, pp 1 -27

Lin, C, (2003), "Dividend Policies, Legal Regimes and Market Systems in the Asia Pacific Region", International Graduate School of Management, University of South Australia

Mancinelli, L and Ozkan, A. (2006), "Ownership structure and dividend policy: Evidence from Italian firms",The European Journal of Finance, Volume 12, Number 3, April 2006, pp. 265-282(18)

Miller, M. and K. Rock (1985), "Dividend policy under asymmetric information". *Journal of Finance,* 40, 1031–1051.

Nur, T and karnen , K. (2011) , "Searching for Determinants of Pay or Not to Pay Cash Dividend in Indonesia", *Indonesian Capital Market Review*, p 19 -37

Parasuraman, N.R. (2012), "Does lintner model of dividend policy hold good ? An Empirical Evidence from BSE Sensex firms". *SDMIMD Journal of Management* p.63-76

Reddy, Y. and Rath, S. (2005) Disappearing Dividends in Emerging Markets? Evidence from India.*Emerging Markets Finance & Trade,*, 41 (6), p.58-82

Tripathy, N. (1999), "Stock Market Efficiency-Testing of Lintner's Model of Dividend behavior in Sensex Firms of India," *Vision,* July-December 1999, pp. 47-50

Wang, M et al (2011), "Dividend policy and the life cycle hypothesis: evidence from taiwan", *The International Journal of Business and Finance Research, Vol 5 (1),* pp 33-52

APPENDIX

Table 1: List of companies sector-wise

Sector	No of Companies
Communication Services	5
Consumer Discretionary	20
Consumer Staples	15
Energy	7
Healthcare	14
Industrial	12
Information Technology	8
Materials	19

Table 2: Empirical Results of model 1 and model 2

Variables	**Model 1**		**Model 2**	
	Coefficients	T- Value	Coefficients	T- Value
Constant	0.419		4.75	
Earnings	0.095**	6.33	0.137*	3.934
Dividend history	0.636***	15.58	0.612***	8.016
Leverage	-0.006	-0.88	-0.007	0.75
Investment opportunities	0.322**	4.30	0.61**	3.05
Size	-0.09	-0.43	0.18	0.67
Standard Error	7.27		5.93	
Significance F	0.00		0.00	
Adjusted R square	0.65		0.855	
DW Statistics	1.887		1.853	