Relevance of Information Asymmetry Dividend Policy Models in Indian Context

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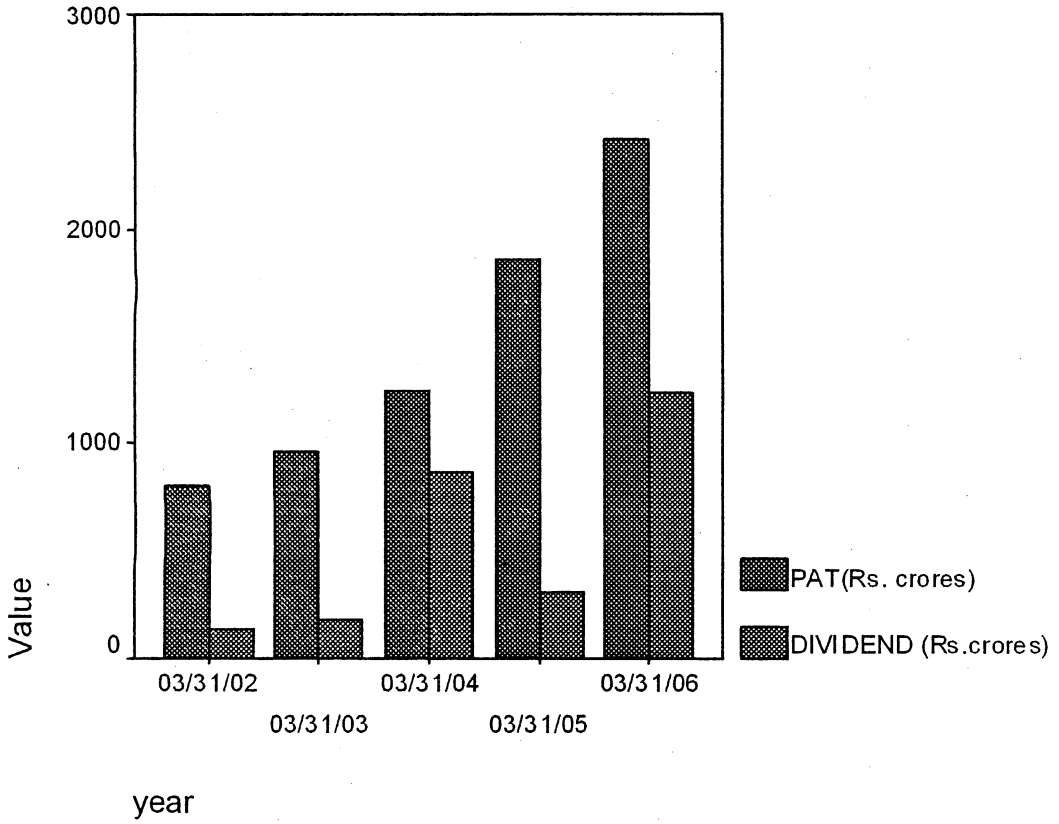
INTRODUCTION

The modern goal of financial management is wealth maximization and there has been a shift from the traditional and narrower goal of profitmaximisation. It is said shareholders' wealth maximization is reflected by share prices. It is believed that share prices are critical determinant of shareholders' wealth. Accordingly, Corporate managers dividend policy decisions affect the common stock prices and therefore the wealth of shareholders.

Dividend policy refers to management's long-term decision on how to deploy cash flows from business activities-that is, how much to invest in the business, and how much to return to shareholders. This paper focuses on the return to shareholders', and specifically on whether it takes the form of cash dividends or share repurchases.

Clearly, the dividend policy decision is a complex one involving many factors. For example, consider the case of a company that is planning to expand operations. One option is to accumulate funds internally by reducing current dividends. In this case, Dividend policy should be compared to alternative financing methods such as new borrowing or capital increases. Dividend policy may also come under review when a company enters a new growth stage. For instance, when a company shifts from a high risk, high growth stage to a mature stage with strong cash flow but limited growth options, it may choose to return cash to share holders to avoid accumulating excess funds.

Moreover, a company also must decide on the form of distributions made to shareholders. Broadly speaking, the two options are cash dividends and share repurchases, and their main characteristics are compared in **Figure 1.** But to identify the decisive factors in selecting the form of payback to shareholders, we must look for more fundamental differences.



Bar chart representing dividend payout and PAT of Infosys Technologies for (2001-2006)

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Figure 1 : Comparison of cash dividend and share Repurchase

	Cash dividend	Share repurchases
Recipient	All shareholders	Sellers only
Ex-dividend price drop	Yes	No
Tax liability	Currently tax free in hands of shareholders and company distributing dividend pays dividend tax	Taxed as capital gains

SUMMARY OF THE EVOLUTION OF DIVIDENDS

The history of dividends began with the payout of liquidation dividends when sailing ventures were terminated upon completion and the profits and proceeds from asset sales were distributed to claimholders. However, due to inefficiencies induced by total liquidation, dividends began being paid from profits. Earnings were retained to finance new investments and dividend payments became only small partial, or symbolic, liquidations.[1]

Frankfurter and Wood (1997) conclude their study on the evolution of dividends with the following observation:

Our conclusion, based on this study, is that dividend –payment patterns (or what is often referred to as "dividend policy") of firms are cultural phenomenon, influenced by customs, beliefs, regulations, public opinions, perceptions and hysteria, general economic conditions and several other factors, all in perpetual change, impacting different firms differently. *Accordingly, it cannot be modeled mathematically and uniformly for all firms at all times.*

DIVIDEND PUZZLE

Fischer Black (1976) formulated dividend puzzle is yet unresolved and will apply in today's context.

"The harder we look at dividend picture, the more it seems like a puzzle, with pieces that just don't fit together."

Although Prof. Black's observations were made two decades ago, financial economists still are wrestling with the "dividend puzzle"

MILLER- MODIGLIANI DIVIDEND IRRELEVANCE PROPOSITION- (1961)

Our theoretical discussions starts with irrelevance proposition by Nobel laureates Miller and Modigliani.The proposition states that dividend policy affects only the allocation between ordinary income and capital gains, and has no effect on total gain to shareholders. The basic premise of their argument is that firm's value is determined by choosing optimal investments. The net payout is simply the residual. The proposition rests on several assumptions – capital markets are perfect, there is no asymmetry of information, no tax or transaction cost, no changes to the business composition or capital structure, and managers seek to maximize shareholders value. Under these simplified conditions, the logical conclusion is that changes in dividend policy have no implications.

We illustrate this point with the example. The company, which holds no debt and has Rs 90 billion in business assets, is going to pay out Rs. 10 billion in cash to shareholders. Since total assets are Rs. 100 billion and 100 million shares have been issued, the initial share price is Rs.1000. If the company pays out a cash dividend of Rs. 10 billion, the ex-dividend share price will drop to Rs.900. But shareholders are not worse off because they have received Rs.100 in cash. Suppose the company then makes a public offering at Rs 900 per share, raising Rs. 10 billion and restoring total assets to Rs.100 billion. Total outstanding shares have increased, but the share prices remains at Rs. 900, and current shareholders are neither better nor worse off than before. If a share repurchases is done instead of cash dividend, certain details may change, but the economic outcome for shareholders remains unchanged.

Thus under these simplified conditions, dividend policy affects only the allocation between income gains and capital gains, and has no effect on the total value received by shareholders. But in real world, shareholders traditionally seek higher dividends, while companies regard dividend policy with caution. Do their respective behaviors have meaning? If not, why have these tendencies persisted over the years?[2]. Moreover, announcements of dividend hikes and share repurchases are often favorably received by market, seemingly contracting the MM irrelevance proposition. Why do not dividend policy and actual share prices always conform to standard theory?

1. This section draws heavily from the thorough review provided by Frankfurter and Wood.
2. The lack of clear reason for dividend payouts has been referred to as "dividend puzzle".

This inconsistency may arise because the assumptions oversimplify the situation. In the real world, asymmetry of information exists between managers and investors, and the release of private information concealed in dividend policy announcement will cause the share price to respond accordingly. Moreover, managers do not necessarily seek to maximise shareholder value at all times. Should they do anything to damage shareholder value, it will quickly be reflected in the share price. To address such matters not covered by MM proposition, we discuss two hypotheses below : the signaling hypothesis and free cash flow hypothesis, and show that dividend policy can indeed affect share price. Moreover, through dividend policy, we also examine what types of communication can be established between shareholders and management.

INFORMATION ASYMMETRY MODELS

Research consistently has shown that dividend changes convey significant information to the market. One of the most compelling pieces of empirical evidence regarding dividends is the announcement effect of dividend changes on share prices. Several empirical studies have documented significant increase in share prices when firms initiate payment of dividends for first time or after a hiatus of at least five years. Several studies also have documented share-price increases on announcement of dividend increases versus dramatic share price decreases when firms reduce dividends. It includes following two approaches.

a) SIGNALING HYPOTHESIS

Let us first consider cash dividend. Since investors cannot be as informed or knowledgeable of the company as management (due to information asymmetries), they assume that management can better predict future earnings. In addition, investors tend to applaud dividend increases and frown on dividend cuts. On the other hand, managers tend to appease shareholders by maintaining dividends even when performance declines. Under these conditions, a dividend increase implies two commitments from management-first, that the higher dividend will be maintained over the long term. And second those earnings will grow to sustain the dividend.

Thus investors perceive a dividend increase as a signal that management confidently predicts earnings will grow, which causes the share prices to rise. Conversely, when a dividend is cut for no apparent reason, it signals to investors that management predicts earnings will deteriorate to the point that dividends cannot be sustained, sending the share price downward. In this way, dividend changes serve as a signal of predicted earnings, thereby impacting share prices. Investors also respond share repurchase announcement as signals. Due to information asymmetries, investors predict that a share repurchase generally means that shares are currently undervalued, while the issuance of new shares means that shares are overvalued. Thus, when a share repurchase is announced, it signals to investors that the share is currently valued below fair value, causing the share price to rise.[3]

b) SMOOTHING APPROACH

It includes model developed by Linter in 1956.He said shareholders prefer smoothened dividend income. Firms are primarily concerned with stability of dividends. Managers appear to believe that market puts a premium on firms with stable dividend policy. Linter observed that earnings were most important determinants of any change in dividends. Most companies appear to have a target payout ratio. Based on interview of 28 management teams, Linter reported a target payout ratio of 50%. In addition, most of firms had a standard with respect to speed at which they would move toward their payout targets; these adjustments ranged from one-sixth to one-half. For example, lets assume that target payout was 50 % and that the speed of adjustment factor was 25%. Using these parameters, if EPS increased from $ 2 to$ 3, the first year dividend increase would be ($1)(0.50)(.25) or $0.1250.This calculation represents the earnings increase times the target payout ratio times the adjustment factor. The full $.50 dividend increase (EPS change times target payout ratio) might take several years to achieve assuming the new EPS level remains same. If there was any sudden unexpected increase in earnings firms adjusted their dividends slowly. Firms were reluctant to cut dividend. The firms set dividend policy first and other policies were then set, taking dividend policy as given. Linter developed a model that captured most important elements of firms' dividend policies. This model was able to explain 85% of dividend changes in his sample of companies.

$$D^*_{it} = \alpha_i E_{it}$$

$$D_t - D_{(t-1)} = a_i + C_i\{D^*_{it} - D_{i(t-1)}\} + u_{it}$$

3. This is known as the under valuation hypothesis or market timing hypothesis.

Where,

D^*_{it} = desired dividend payment during period 't'

D_{it} = Actual dividend payment during period 't'

α_i = Target payout ratio

E_{it} = Earnings of firm during period 't'

a_i = a constant related to dividend growth

C_i = partial adjustment factor

u_{it} = error term

Where,

Linter model gave three important results-

- Stabilize dividends with gradual, sustainable increase whenever possible
- Establish an appropriate target payout ratio
- Avoid dividend cuts, if at all possible.

This model remains the best description of dividend setting process available. Thus, even after 5 decades, Linter's research remains the definitive study of management behavior – finance "Classic".

As we have discussed, the signaling hypothesis is based on information asymmetries between managers and investors. Investors interpret changes in dividend policy as signals regarding information not yet made public, causing share prices to react.

AGENCY COST THEORY

The agency model assumes that dividend payment arises as an attempt to overcome the principle/agent problem that results when there is divorce between ownership and control. One of the important developments in this area is discussed as follows.

FREE CASH HYPOTHESIS

This hypothesis is widely known as Jensen & Meckling free cash flow hypothesis.

When companies generate cash flow from business activities in each period, they either invest it in business or build up cash holdings. In latter case, managers enjoy considerable discretion and may not necessarily try to maximize shareholders value. It may use cash to serve other stakeholders particularly itself. The large financial slack may induce managers to neglect their duties or invest in unproductive projects.

This problem of free cash flow is part of the larger agency problem that arises from the conflict of interests between management and investors. The problem is particularly, serious at companies with large cash flow, excess funds, and limited growth options. If the market suspects that the financial slack is being squandered, it will discount the share price accordingly. The excess cash available is known as 'free cash flow'. To remove the discount on its share prices the company must convince the market that financial slack is being deployed effectively. The best way to do this is by returning the dividend or repurchasing shares. High payout will result in reduction of free cash flow available to managers and this restricts the empire building effort of managers.

INDIAN SCENARIO

In the Indian context, a few studies have analyzed the dividend behavior of corporate firms. Mahapatra and Sahu (1993) find cash flow as a major determinant of dividend followed by net earnings. Bhat and Pandey (1994) undertook a survey of managers' perceptions of dividend decision and found that managers perceive current earnings as the most significant factor. Narasimhan and Asha (1997) observed that the uniform tax rate of 10 percent on dividend as proposed by the Indian union budget 1997-98, altered the demand of investors in favor of high payouts. Mohanty *(1999)* found that firms, which issued bonus shares, have either maintained the pre-bonus level or only decreased it marginally there by increasing the payout to shareholders. Narasimhan and Vijayalakshmi (2002) analyzed the influence of ownership structure on dividend payout and find no influence of insider ownership on dividend behavior of firms.

IMPLICATIONS TO SHARE HOLDERS

The two hypotheses described above offer some implications for shareholders regarding dividend policy. Both hypothesis suggest that dividend hikes and share repurchases tend to boost share prices, which explains why shareholders have traditionally welcomed dividend hikes and spurned dividend cuts. But the two hypotheses differ in the meaning they give to dividends and repurchase. **(Figure2)**

Under the signaling hypothesis, a cash dividend contains private information from management regarding predicted earnings, while a share repurchase contains private information regarding current valuations. As a result, investors can glean new information from dividend policy changes, and the share price responds accordingly.

On the other hand, under the cash flow hypothesis, both a dividend increase and share repurchase help to alleviate the agency problem. Here as well, management is signaling its commitment to deploy the financial slack prudently. The effect of reducing cash holdings is particularly pronounced at companies with large financial slack and limited growth opportunities.

Thus the form that management chooses to return cash to shareholders may depend on what information it seeks to convey to market. If management confidently predicts earnings growth but believes this information is not fully reflected in share prices, the likely action is a dividend increase .On the other hand, if management believes that the current share prices is fundamentally undervalued and takeover concerns are mounting, the likely action is share repurchase.

Figure 2

	SIGNALING HYPOTHESIS	FREE CASH FLOW HYPOTHESIS
CASH DIVIDEND	Increase conveys private information that earnings will rise – positive effect on share price	Increase alleviates agency problem- positive effect on share price
	Decrease conveys private information that earnings will fall- negative effect on share price	Decrease aggravated agency problem –negative effect on share price (Effect depends on extent of excess funds and growth limitations)
SHARE REPURCHASE	Repurchase implies shares are undervalued –positive effect on share price	Like dividend increase, alleviates agency problem – positive effect on share price

IMPROVING SHAREHOLDER VALUE

Dividend policy can provide shareholders insight on management views on earnings trends and current share prices, as well as its stance on financial slack. This information is vital in valuing the company and assessing the management. Our discussion also offers several implications regarding shareholder demands for dividends.

First, shareholders must act in a way that does not diminish the information value of dividend policy. A dividend increase is management's way of demonstrating confidence in future earnings growth, and at the same time recognizing that shareholders will not tolerate a dividend cut. Shareholders can enhance the information value of dividend policy by reacting predictably that is, applauding a dividend increase and condemning a decrease.

But as we noted earlier, there is a growing demand investors today for a fixed dividend payout ratio. Fixing the ratio means that investors must consent to dividend cut when earnings drop as such, dividend policy would no longer represent management's commitment to an earnings baseline for long-term, and thus would lose some of its information value. Secondly, Managers vigorously seek to keep dividends at a minimal level because they know that dividend increases will commit them to expanding baseline earnings. Thus, unless shareholders strongly insist on higher dividends, managers are likely to set the payout ratio target considerably below the achievable long-term level.

The low payout ratio causes the financial slack to grow, exacerbating the cash flow problem.[4] Moreover, should the company respond by increasing dividends, the action loses some information value because we cannot tell whether management has upgraded the earnings outlook or is simply remedying a low return to shareholders.

4. Asymmetry of information between investors and management makes external financing more difficult to obtain. Thus management prepares for future financial risks and business opportunities by accumulating internal funds whose use is not restricted.

Third, the desirable dividend policy will vary by company seeking a uniform dividend policy for all companies would over burden some and under burden others, and also risks being in compatible with maximizing shareholder value at most companies. For example, companies that enjoy a large stable cash flow, or have a large financial slack but conceal its uses, are likely to have serious free cash flow problems and heavily discounted share prices. These companies should consider a dividend increase or share repurchase on massive scale. On the other hand, companies with good growth prospects rarely have free cash flow problems, and should be left to decide their own dividend policy, while shareholders should concentrate on analyzing the signals.

STATUS OF RETURN TO SHAREHOLDERS IN INDIA

India Inc was lavish in dividend dole out for '05-06 on strong results. Riding on a strong performance in 2005-06, India Inc seems to be in a generous mood over dividend payouts. Forty companies that had skipped dividends in the last few years had decided to open their purse strings for shareholders, announcing dividends between 1 and 50 percent for 2005-06.Forty companies had reported net profit growth of more than 100 percent in 2005-2006.Their aggregate net profit more than doubled from Rs. 928.66 crore in 2004-05 to Rs 1907.80 crore in 2005-06.The list includes Allsec Techno (50 % dividend), India Infoline and II&FS investmarts (30 percent each), TTK Healthcare, Kojam Investments, Sherton , Seil and Vardhman Holdings (20 percent each) , among others. Overall, the dividend payout ratio of corporate India has remained unchanged at 24 percent. So far, 302 companies had announced a dividend payout of Rs 18,216 crore for 2005-06, against Rs 16,342 crore in 2004-2005.The rises in quantum of payout is on account of high net profit. Collectively, their net profit stands at Rs 75,762 crore in 2005-06, up from Rs. 66,989 crore in 2004-05.A business Standard Research Bureau Study shows that out of 302 companies, 140 firms have increased their 2005-06 dividend payout, while another 68 have proposed to maintain the level of payout at previous year's level and 54 have reduced it. Thirty-six firms including Infosys Technologies, Wipro, Suzlon Energy, NDMC, Parry agro, Finolex Industries, Dabur Pharma, Gabriel, Hindustan Oil Explorations and Rallis have doubled their dividend payouts. On the other hand, Public sector companies like HPCL, IBP and SAIL have reduced their dividend payout rates for 2005-06.Infosys Technologies declared 900 percent dividend (Rs 30 per share). In absolute terms, Indian Oil Corporation paid the largest dividend of Rs 1460 crore for 2005-06.In private sector, Reliance Industries is the largest payer at 1394 crores, against Rs 1045.13 crores last year. Infosys Technologies is the second biggest payer in private sector, with a payout of Rs 1238 crores, against Rs 309.80 crores in the previous year. Among newly listed firms, Emkay share, Nitco Tiles, Sunil Hitech Engineering and PVR have each declared 10 percent dividend, while the figure is 20 percent each for Ramsarup Industries and Bannari Aman Spinning. The list also includes Everest Kanto cylinder (35 percent), ABG shipyard (12 percent) and Sasken Communication technologies (30percent).

Figure 3 : Dividend payment pattern of Indian firms for the years 2004-05 and 2005-06

Company Name	Dividend rate [5](2004-05)	PAT (in Rs. crores)	Dividend distributed (in Rs. crores)	Dividend rate (2005-06)	PAT (Rs. crores)	Dividend distributed (in Rs. crores)
IOC	145%	4891	1694	125%	4915	1460
SATYAM COMPUTERS	150%	2230.23	96	250%	3221.16	163.87
RELIANCE INDUSTRIES	75%	7572	1045.13	100%	9069	1394
INFOSYS TECHNOLOGIES	230%	1859.19	309.8	900%	2421	1238
NTPC	24%	58286	19789	28%	58202	2309

CONCLUSION

After observing the dividend payout pattern of Indian firms for the year 2005-06, it can be concluded that Information asymmetry models are most relevant. Since to signal increase in profits the firms have enhanced their payout ratios considerably. This proves that firms use dividends to signal their prosperity to shareholders. Most firms tend to smoothen dividends and try to approach the target payout ratio decided by them. Thus evidence suggests that managers

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5. The dividend percentage throughout this article is calculated as a percentage "of the capital upon which they were declared".

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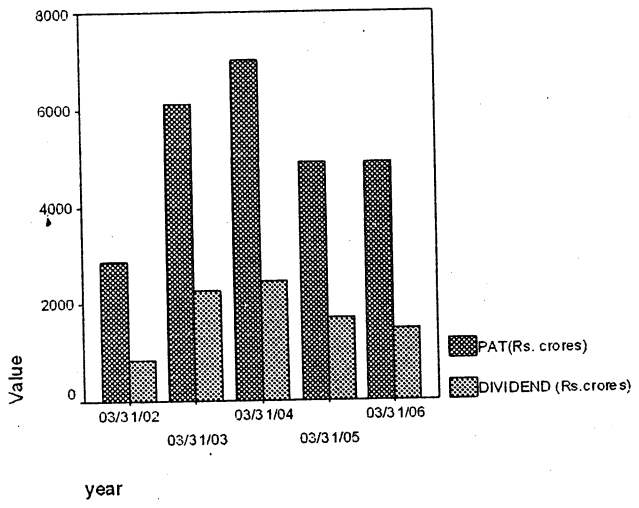
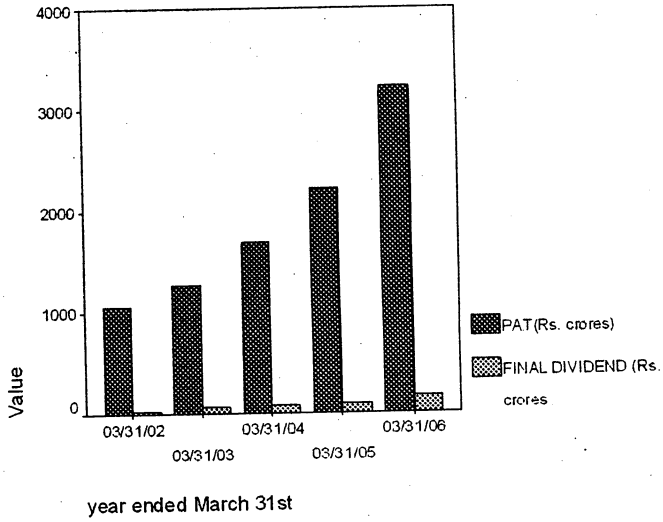


Bar chart showing dividend payment pattern of IOC (2001-2006)



Bar chart showing dividend payment pattern of Satyam computers (2001 to 2006)

tend to maintain smooth dividend payout patterns, they pay out stable amounts of dividends and avoid sudden changes especially cuts in dividends. Therefore the conclusion that we draw from this analysis is that Linter model remains the best description of dividend setting process of Indian firms. That is, the level of current and expected future earnings and a pattern of continuity are the most important determinants of dividend policy.

In this paper, we have also discussed how shareholders might approach dividend as an interactive game with management. But much remains unknown about how dividend policy can maximize shareholder value. The discussion on dividend policy needs to be pursued further so that both investors and management better understand its significance, impact, and optimization methods.

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