Dividend history and determinants in selected Indian companies: a study during 1993-'94 to 2004-'05

Anupam Parua
K.D. College of Commerce & General Studies, Midnapore, India

Arindam Gupta
Vidyasagar University, Midnapore, India

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Keywords

Dividend, dividend rate, dividend payout, dividend yield

DIVIDEND HISTORY AND DETERMINANTS IN SELECTED INDIAN COMPANIES: A STUDY DURING 1993-'94 TO 2004-'05

Anupam Parua[1]

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JEL Classification: G35, G32.

1. INTRODUCTION

1.1. Introduction

Dividend may be defined as the distribution of created value to the shareholders. It may be in the form 'Cash Dividend' or through distribution of stocks of the company which is known as 'Stock Dividend'. Dividend policy may be defined as the trade-off between the magnitude of retained earnings and distributed cash or securities.

Dividend decision should not merely be taken to be a decision of appropriation of profits to the shareholders. There are several complex issues in it. As such the factors influencing the dividend decisions have always been put under scanner by the experts and researchers in the field of financial management.

Dividend payment of a company is looked upon differently by different sets of people associated with the company. For the investors, dividends are not merely means of regular earnings but also an important input for determining the worth and credential of the firm. For managers, dividend payment might well determine the level of investment in

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[1] Lecturer (Senior Scale), Department of Commerce, K. D. College of Commerce & General Studies, Midnapore, W.B, INDIA. PIN – 721101. Email: anupam_parua@rediffmail.com.

[2] Professor , Department of Commerce, Vidyasagar University, Midnapore, W.B, INDIA. PIN – 721102. Email: arindam_finance@rediffmail.com.

profitable investment projects. Lenders look at it carefully because they feel that the more the dividend payment, the less will be the amount available for servicing and redemption of their claims.

Study of dividend payments has a very illustrious history. In 1956, John Lintner has laid the foundation for the modern understanding of dividend policy. According to him, dividends are sticky, tied to long-term sustainable earnings, paid by mature companies and smoothened from year to year. Later, Miller and Modigliani (1961) demonstrate that under the condition of perfect capital market and zero taxes, dividends do not affect the value of the firm (Dividend Irrelevance theory) and as such the shareholders are indifferent as to the payment of dividend and retention of profits. Consequently, managers are not to bother too much about the incidence and quantum of dividend payments. However, Gordon (1962) and Walter (1963), during the same time period, prove dividend to be relevant for the valuation of the firm and hence the shareholders are seen to be not at all indifferent as to the payment of dividend and retention of profits.

Corporate dividend behaviour is looked upon in many ways by the experts in the area of financial literature. Several theories evolved explaining corporate dividend behaviour. One such theory is known as 'Signaling Theory'. According to this theory, a firm uses dividend policy as a mechanism to signal outsiders regarding the stability and growth prospect of the firm. Aharony and Swary (1980), Asquith and Mullins (1983) etc. are the proponents of the signaling theory of dividend decision. However, recent studies have not supported this hypothesized relationship between dividend changes and future earnings (e.g., DeAngelo, DeAngelo and Skinner (1996), Benartzi, Michaely and Thaler (1997)).

Another theory in respect of corporate dividend policy goes by the name of 'Incumbency Rent Theory'. Fudenberg and Tirole (1995) are the proponents of this theory. According to this theory if managers enjoy private benefit from being in control, they individually and rationally, smooth dividends. So, in bad times, they pay out too much dividends to lengthen their tenure and in good times, the managers are not to be worried about their tenure in office and naturally opt for lower dividend payment.

Again, there is the 'Agency Theory' of dividend payment. According to this theory, dividend policies address agency problems between corporate insiders and outside shareholders. This theory suggests that, unless profits are paid out to shareholders, they may be diverted by the insiders for personal use or committed to unprofitable projects that provide private benefits for the insiders. As a consequence, outside shareholders have a preference of dividends over retained earnings. Theories differ on how outside shareholders actually get firms to disgorge cash. The key point, however, is that failure to disgorge cash leads to its diversion or waste, which is detrimental to outside shareholders' interest. Experts like Jensen & Meckling (1976), Esterbrook (1984) and La Porta *et. al.* (1999) are the proponents of this agency theory explanation to dividend decision.

There is still another theory in the name of 'Tax Clientle Theory'. This theory is based on comparative tax treatment associated with cash received on account of current dividend and cash to be received in the future as capital gains arising out of change in share price. This theory uses the relative tax advantage of paying dividend now or

retaining the excess cash for future capital gains in explaining the dividend behaviour of firms. This theory suggests that the tax on dividend (i.e., tax on current income) is greater than or equal to the tax on capital gains (i. e., tax on future income). Again, tax on dividend is to be paid now while tax on capital gains is to be paid in future. Thus, according to this theory the optimal dividend policy is no or very low dividend payment. Brennan (1970), De Angelo (1991), etc. are the proponents of this theory of dividend decision.

Even after such a long period of time since corporate dividend behaviour emerged as one of the well-researched areas in financial management, dividend decision is still one of the thorniest puzzle in corporate finance. Least to say, factors affecting such a decision remain to be one of the areas where academicians and researchers are introspecting and have to do a lot. In this backdrop, the present study looks into the pattern of dividend payments in Indian context and analyses the factors determining such payment of dividends without going into checking the validity or otherwise of any particular model or theory explaining dividend behaviour.

Study results show that average dividend payment has increased continuously. Again, the number of companies not paying dividend as well as the companies paying dividend at lower rates have been increasing. It is also observed that when the companies are paying dividend they are paying it large. Real dividend growth rate is much lower than nominal dividend growth rate. Older companies, companies with higher sales volume and companies with larger asset base are found to have paid dividend on a higher scale.

In respect of factors influencing dividend payment it is observed that average dividend (for the past three years) has significant role to play in the determination of current year's dividend. Current year's earning, past year's earnings and expected future earnings taken together is also a good determining factor in the payment of dividend. Study results also show that dividend rate is more or less explained by a good number of explanatory variables used in the study. But the explanatory power of these variables comes down considerably in the matter of their relation with dividend payout or dividend yield.

1.2. Indian capital market: Recent structural transformation

In Indian economy in tune with the process of LPG (liberlisation, privatization and globalization), Indian capital market started its structural transformation since 1992. Many technological innovations on par with the developed countries of the world began to be introduced in the realm of trading operations in the stock market. Some of the significant forces/happenings that were responsible for the structural transformation were:

- Financial liberalization, adoption of market oriented approach and opening up of areas to private sector hitherto reserved for the public sector
- Computerized online trading and setting up of clearing houses and corporations by most of the stock exchanges
- Constitution of depositories to facilitate scripless trading
- Overhauling and strengthening of regulatory structure of stock exchanges with the establishment of Securities and Exchange Board of India (SEBI)

- Permission to Indian companies to raise resources abroad through the issue of GDRs or FCCBs after obtaining specific approval from the Government of India
- Disinvestments by Government of its holdings in public sector undertaking companies
- Opening up of the market for portfolio investment by foreign institutional investors and encouraging foreign participation in financial services including stock broking
- Restructuring of the corporate sector and increasing resort to mergers and takeovers
- Abolition of capital issues control along with setting up of norms for information disclosure requirements, establishment of regulations for various market intermediaries, prohibition of insider trading and fraudulent practices and modernization of stock exchanges
- Entry of new institutions like merchant banks, leasing and hire purchase companies, venture capital funds/companies, etc. and greater participation of banks and financial institution in capital market related activities
- Growth in saving of households backed by changing attitudes and investing habits towards investment in shares
- Introduction of innovative financial instruments such as warrants, cumulative convertible preference shares and host of hybrid bonds/debentures
- Taking of a host of measures by Government of India, SEBI and stock exchange authorities for protecting the interests of shareholders, i.e., setting up of investor protection fund, making merchant bankers responsible for contents of offer documents etc.

1.3. Objectives

The objective of the present study is to analyse the dividend behaviour of selected Indian companies during the ongoing process of economic liberalization. To attain this main objective, the following incidental objectives are sought to be achieved:

1) To examine dividend patterns historically in as many ways as possible,
2) To examine the determinants of dividend payments in order of their relative importance.

2. LITERATURE REVIEW

2.1. Studies on Dividend Pattern and Determinants of Dividend Policy

Out of the plethora of literatures available for the present area of study, the following literatures are reviewed having primary focus on finding out patterns in and factors influencing dividend payment.

2.1.1. Literature in Indian context

Dhameja (1978) shows that there is no statistically significant relationship between dividend payout and industry classification or size. Growth is found to be significantly and inversely related to dividend payout. As regards dividend rates controlling for bonus and rights issues, it is related directly and significantly to industry classification and growth, and mildly related to size.

Again, Bhat and Pandey (1994) show that payment of dividend depends largely upon current and expected earnings as well as on the pattern of past dividends, and liquidity is not a matter of consideration in dividend policy.

Gupta (1999) shows that regular dividend payments had been the feature in almost all the selected companies though there have been a gradual decline in the proportion of dividend payments to the available earnings for distribution. He also finds that dividend rates are much inflated in comparison to the real effective rates of dividend as represented by dividend yield. In the matter of stability in dividend payments he finds high stability in terms of dividend yields but not so much in terms of dividend rates and dividend payouts.

Oza (2005) identifies 'current year's earnings', 'patterns of past dividends', 'availability of cash' and 'expected future earnings' as major determinants of dividend policy. While, factors like 'capital expenditure requirements', 'impact on share prices', 'achieving target payouts', 'restrictions imposed by lenders', 'bonus issue by the companies' and 'industry practices' are found to have less significant role in the matter of deciding on dividend payments.

2.1.2. Literature in foreign context

Lintner (1956) has made a pioneering study to see various aspects of distribution of corporate earnings among dividends, retained earnings and taxes. He finds that firms are primarily concerned with the stability of dividends and managers appear to believe strongly that market puts a premium on firms with a stable dividend policy. He has also observed that earnings are the most important determinant of dividend decision. He has pointed out that most companies have a target payout ratio. If sudden surge in earnings occurs, firms adjust their dividends slowly. Moreover, firms have found to be more reluctant to cut dividends. He also argues that even if investment opportunities are abundant for a firm, then also the firm opts to pay dividend at a level which is more or less the same as that of the previous years. After that the firm judges the adequacy or otherwise of internal funds and accordingly it decides on resorting to outside funds to meet that investment requirement.

Collins, Saxena and Wansley (1996) have studied the role of insiders in determination of dividend policy of a firm. Study results indicate that payout ratio is negatively related to firm's past and future expected growth rate of earnings, its level of systematic risk and its insider holdings. They also find that regulatory status plays more important role in the determination of strength of association between insider holding and payout ratio in the case of utilities than in the case of financial firms.

La Porta, Lopez-de-Silanes, Shliefer and Vishny (2000) hold that firms in countries with better investor protection make higher dividend payouts than do the firms in countries with lower investor protection. Moreover, in countries with more legal protection, high growth firms have lower payout ratios. This finding supports the outcome agency model where investors use their legal power to force dividends when growth prospects are low. Thus, their findings indicate that without enforcement of management there is not a strong incentive to 'convey its quality' through payout policy. There is also no evidence that in countries with low investor protection, management will voluntarily

commit itself to payout higher dividends and to be monitored more frequently by the market.

Again, Gugler (2003) observes that state-controlled firms are characterized by dividend smoothening, very high payout and strong reluctance to cut dividends while family-controlled firms are not subject to dividend smoothening, have a low payout and are least reluctant to cut dividends. According to him, this finding applies more to firms having good growth prospects (positive R&D spending). But, in case of firms with low investment opportunities (no R&D spending), target payout ratio tends to be much higher irrespective of who controls the corporation (state control or family control).

In another study, Bathala and Rao (2004) infer that firms with high dividend yields have lower costs of capital. They find that large firms are associated with higher dividend yields. Again, dividend yields of financial and public utility companies are found to be larger than that of other types of companies. The factors like current ratio, geometric mean of annual changes in Economic Value Added, insiders' total shareholding as a percentage of total shares outstanding are found not to play any significant role in determining dividend yield of a firm.

De Angelo, De Angelo and Skinner (2004) observe that during the period of their study (1978-2000) nominal dividends paid by the companies in US increased manifold, even real dividends doubled during this period. This aggregate dividend increase is even in the face of radical decline in the number of dividend-payers. They find that both dividend and earnings concentration have increased substantially from the already high level.

Jahur and Nazneen (2005) identify, in the context of companies operating in Bangladesh, some broad groups of factors affecting dividend decisions. These are: 1) Factor of dividends, yield and payout ratio, 2) Factor of profitability and capital structure, 3) Factor of dividends and earnings volatility, 4) Factor of returns, profitability ratios and behaviour of share prices and 5) Factor of firm's profitability, changes in size and composition of firm's share capital size. Thus, they find enough empirical evidence in respect of the fact that corporate financial decision makers impart required considerations pertaining to capital structure decision, expansion and growth of the firms, profitability and earnings volatility and even behaviour of share prices.

Brav, Graham, Harvey and Michaely (2005) observe that dividend level is a priority at par with the investment decisions, and increase in dividend is considered only after investment and liquidity needs are met. They opine that managers express strong desire to avoid dividend cuts except in extraordinary circumstances. They also point out that sustainable increase in earnings and demand by institutional investors are the two root causes for the non-payers to initiate dividend payment. They find little support for signalling theories. They also find no evidence that managers use payout policy to attract particular investment clientele. Their survey also suggests that taxes are not the first-order important factor in the determination of payout policy but they are important at the margin of some firms (a very small proportion of dividend initiating firms).

Baker, Mukherjee and Paskelian (2005) find that dividend policy of a firm, operating in Norway, is basically determined actively by senior managerial positions like Financial Officer, CEO, Investor Relations and Finance Director. They also find that firms in general re-examine dividend policy annually and the firms mostly do not have explicit target payout ratio. They have further found that where level of earnings is the highest ranked dividend policy determinant, three of the most highly ranked determinants of dividend policy involve earnings – apart from the level of current earnings, the stability of earnings and the level of expected future earnings. Degree of financial leverage and availability of cash are also found to be strong determinants of dividend policy.

2.2. Research Gap

While reviewing the earlier studies, it has been seen that these studies are fraught with some limitations. These are ascribed to limited study period, limited sample size, limitations in respect of sample characteristics and methodology used. As for example, in the study conducted by Jazur and Nazneen (2005) only two years have been used as the study period. Meaningful inferences can not be made from these studies with such limited study period. Study based on a very limited period may lead to erroneous generalization. During the course of survey of literature it is found that some studies, like that of Jahur & Nazneen, 2005 or of Gupta, 1999, are using very limited sample size (28 and 32 companies, respectively). Statistical inference on such small sample is prone to error. Again, in the matter of taking sample, it is found that some studies are considering sample from a few specific industries. As, for example, in one study, (Jahur & Nazneen, 2005) sample is drawn from only four industries. Beauty of cross-sectional observations is missing in these studies. Again, conclusion depending upon such sample is very likely to be vitiated by the structural peculiarities of these particular industries. In some studies financial, banking and insurance companies are treated at par with the non-financial and non-banking companies (Collins, Saxena & Wansley, 1996). Because of absence of public shareholding or having public shareholding on a selective basis, financial, banking or insurance companies should not have been inter-mingled with other types of companies. Barring a few instances, the studies are searching for the determinants of dividend payment (mostly, dividend payout). Only a few studies (like, DeAngelo, DeAngelo & Skinner, 2004) traced the trend in dividend payment.

Moreover, in India, since 1991, in the name of liberalization the regulator of economy (the government and its different wings) has presented a different economic environment under which the companies are to perform now. Now, the foreign players are allowed, though subject to certain conditions, to operate in Indian domestic market. That, on the one hand, increases the level of competition in Indian corporate sector and on the other hand, ensures more choice to investors. So, on the one hand, to survive in the face of this increasing competition, the companies are to be defensive in the area of dividend payment so as to retain more money that can act as a buffer against any exigent condition. On the other hand, the companies are to be aggressive in this area of dividend payment so as to attract the investors who now have more companies to choose amongst than that was in the pre-liberalization era. Thus the managers of Indian companies are in the domain of making tougher decisions. It is now a matter of study how the mangers in Indian companies read into the changed environment in the face of liberalization. It is also to be seen what are they thinking about an appropriate dividend policy, how are they attaching

importance in respect of different factors for the determination of dividend, etc. These are very pertinent questions now-a-days.

In this backdrop the present study tries to contribute to the existing literature through finding out the pattern of dividend payment in India. The study also focuses on finding out the factors that might influence the determination of dividend payment in Indian context.

3. RESEARCH METHODOLOGY

3.1. Sample Design and Sample Companies

A cross-sectional study like the present one needs a large data set. For the present study, the BSE-listed companies of Indian private sector are considered. The sample is exclusive of companies in banking and insurance sectors, the private limited companies and the companies the age of which is below 5 years at the commencement of the study period. Banking & insurance companies, and private limited companies are excluded on the ground of having public shareholding very selectively and not having public shareholding at all, respectively. Finally to have the complete availability of data in respect of both the sets of dependent and independent variables for the entire study period, certain companies are to be left out. Fulfilling the above conditions of characteristics of companies and availability of data, 607 companies are finally selected.

3.2. Study Period

The study period is selected from year end 31st March, 1994 to the year end 31st March 2005. i.e., a span of 12 years. This period is considered in the study so as to grab the impact of recent changes surrounding the Indian economy in general and Indian corporate sector in particular.

3.3. Data Sources

Now-a-days fundamental and technical security analysis database packages are available in the form of various softwares manufactured and marketed by different agencies. 'Capitaline Plus' and 'Capitalstocks.ole', manufactured, maintained and marketed by Capital Market, Mumbai, or 'Prowess', manufactured, maintained and marketed by Centre for Monitoring Indian Economy (CMIE), Mumbai are notable amongst these. These two sources form the primary source of data required for the study. In case of any observed discrepancy, a company's annual report has been consulted.

3. 4. Selection and Description of Dependent Variables

In the present study three dependent variables have been used alternatively. These are:

3.4.1. Dividend payout

It is calculated by dividing the total equity dividend of one accounting year by the total earnings of that particular year. This ratio does not always indicate the proportion of current earnings paid out only as dividend since dividend is allowed to be paid out of past-accumulated profits. A very high dividend payout probably indicates that and a dividend

payout of over 100 definitely suggests payment of dividend out of past profits. This ratio is depicted as DP_t.

3.4.2. Dividend rate

It is computed by dividing the total of equity dividend of one accounting year by the face value of all the equity shares outstanding at the close of that year. A relatively high dividend rate indicates the perceived compulsion on the part of a company to make a relatively high dividend payment for attracting much needed capital to finance its operations. This ratio is depicted as DR_t.

3.4.3. Dividend yield

It is computed by dividing total equity dividend by the market price of shares of the respective companies. The market prices of the shares are taken at the close of the year in respect of which the dividends are paid. Through this ratio the real payoff to an investor is expressed. But this all-important ratio is not as accurate as the previous two. Such inaccuracy is generated because of time factor associated with the numerator and denominator of this ratio. In the numerator the associated time factor is the dividend date i.e. the date on which dividend is declared by the company in its AGM. But this is different from the date when the market price is taken (at the close of the related financial year). Thus through this ratio relationship it is tried to be established between two data corresponding to two different dates. As such this ratio expresses merely an approximation of what the real picture is. This approximation is very hard to dispense with. The reason is that dividend is paid generally out of profits of a year. It becomes a legal claim of investors on the date when it is declared. This is basically the date of AGM of the company. But then there is a permitted time lag of 30 days within which dividend is to be paid actually to the entitled shareholders. So it is not possible to match the date of availability of dividend to a particular shareholder against the market price of the shares held by that shareholder on that particular date. Such matching is necessary if by this ratio the yield to the investor is to be properly manifested. So as a matter of compulsion we proceed with this approximation. This ratio is depicted as DY_t.

3.5. Selection and Description of Independent Variables

3.5.1. Current year's earnings after tax

This variable is calculated by subtracting all the cash and non-cash expenses including depreciation, interest on debentures and loans and taxes from the revenues earned during the year. Dividend is generally paid out the profits or earnings of the current period and as such it is considered to be an important variable on which dividend decision depends. Earnings are taken after tax as up to and inclusive the payment of tax the payments are contractual in nature. These payments are to be made irrespective of the condition of profitability of the concern. Only after meeting those contractual obligations, a company is entitled to appropriate earnings to its esteemed shareholders. Thus, only after tax profitability, that is, the profitability net of all contractual obligations is important in the matter of taking dividend decision. This variable is depicted as E_t.

3.5.2. Past year's earnings after tax

This variable is obtained by subtracting all the cash and non-cash expenses including depreciation, interest on debentures, and loans and taxes relating to the previous year from

the revenues earned during that year. This variable is also important in the sense that consistency in profitability is an indication of good and stable financial health of a company. Such a condition is generally essential for a company to distribute dividend on a stable basis. This variable is depicted as E_{t-1}.

3.5.3. Cash position of the company

This variable is obtained by adding cash in hand to cash at bank and the value of marketable securities at the close of the financial year. This variable is important in the sense that dividend is to be paid ultimately in the form of cash. As such cash position of the company to accommodate cash requirement for the purpose of dividend payments is an important consideration. In the consideration of this variable it is to be remembered that there is a time lag in the consideration of cash position of a company and the cash requirement for dividend payment. Actually, the payment of dividend is recommended in the board meeting on particular date, the dividend payment is finalized on another date which is the date of AGM. Ultimately, the amount required for dividend payment will be earmarked on a date which is within five days from the date of declaration of dividend by the company or the date of AGM [Section 205(1A)]. In the study, cash position at the end of the financial year in respect which the dividend payment is considered, is taken as proxy for the cash position of the company to accommodate its cash requirement for dividend payment. Thus, cash position is taken on the last date of the corresponding financial year though such consideration contains with it some sort of approximation bias. This variable is depicted as CP_t.

3.5.4. Cash flow during the year

This variable is computed by adding depreciation for a particular year to the after tax earnings of that year. Cash flows into the company generally by means of sales in the normal course of trade. In addition to that cash inflows occur in the form of sale of an asset, interest or dividend income on different forms of investment, etc. On the other hand, cash flows out of the business generally in the form of immediate or deferred payment for the goods purchased in the normal course of trade. In addition to that cash outflows occur in the form of purchase of assets, payment to different other stakeholders in the form of interest, dividend, taxes, compensation etc. The pattern of cash flow during a particular period has an impact on the cash position of the company and hence, it has a relation with the cash requirement for dividend payment. This variable is depicted as CF_t.

3.5.5. Current year's tax ratio

This variable is calculated by dividing the absolute tax figure of the company for a particular year by the earnings before tax of the company for that year. This variable is worth consideration in the sense that from the surplus income over the expenditure, first of all, the contractual payments in the form of interest is to be made. From that net earnings, the governmental claim in the form of tax is to be paid. After the payment of tax the dividend can be paid. Higher tax payment means lower amount available for dividend payment. But at the same time higher tax payment means higher earnings. Higher earnings normally means higher capacity to pay dividend given the liquidity position of the company. In this way it is interesting to study the relationship between the current tax ratio and current dividend payment. This variable is depicted as TR_t.

3.5.6. Capital expenditure for the current year

This variable is calculated by taking the difference between the net fixed assets of the two consecutive years. Capital expenditure requirement for the purpose of addition to the productive capacity of the company or for upgrading the operations has an impact on the cash flows during a particular period and also on the cash position at the end of a particular period. As such capital expenditure planning and dividend payment decision are two closely-knit things. This variable is depicted as CEX_t.

3.5.7. Expected future earnings

This variable is obtained by applying average growth rate for the past three years on the current year's earnings after tax. Studies on signaling model of dividend payment suggest that dividend in one year indicates the future prospect of the concerned company. As such a high or moderate dividend signals better future prospect of the company. In this way, current year's dividend is related to future years' earnings. This variable is depicted as E_{t+1}.

3.5.8. Pattern of past dividends

This variable is computed by taking the average of dividends for three years immediately preceding the current year. In this case, if the dependent variable is taken as dividend payout of the current year then pattern of past dividends means the average dividend payout for three years immediately preceding the current year. Likewise, three years' average of dividend rate and dividend yield are to be computed if dividend rate and dividend yield is taken as the dependent variable. Studies show that companies aim at stability in the matter of dividend payment. As such the dividend of a year is influenced by the recent history of dividend payments. In this way current year's dividend is related to pattern of past dividends. This variable is depicted as $AVGDIV_{t-1}$.

3.5.9. Interest expenses of the current year

This variable will be computed by taking together the interest on debentures and long-term and short-term loans. As per the requirement, interest on such instruments is to be paid before payment of dividend. Such payments are contractual in nature and hence are to be paid irrespective of the condition regarding the earnings of a financial year. So, the magnitude of interest payments has an impact on the earnings available for dividend payment, cash position of the company at the end of a financial period as well as the condition of cash flows during a particular financial period. In this way, this variable may related to dividend payment. This variable is depicted as I_t.

3.5.10. Share price behaviour

This variable is computed by taking the ratio of share price in period 't' to average price of periods 't-1' and 't-2'. Share price behaviour is important in the dividend payment decision in the sense that if the share price behaviour is showing declining trend then in order to stabilize the price in the market the company has to signal for a better future. In order to do that it has to pay more dividends. In this way, the share price behaviour is related to dividend payment. This variable is depicted as SP_t.

3.6. Hypothesised Relationships

The hypothesized relationship between the dependent variable and independent variables is mentioned below one by one:

The Australasian Accounting Business & Finance Journal, Parua &
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1. Any company prefers to have consistency and stability in dividend payment in terms of dividend ratio (Lintner, 1956). If current year's earnings after tax of a company increase then there will be an increase in the absolute amount of dividend payment. But the rate of increase in the amount of dividend payment will be less than the rate at which earnings has increased. Because the company does not want to have a sudden spurt in the dividend rate which will be difficult to maintain in the future years when the profitability condition might not be so rosy. So, an increase in current year's earnings will be associated by a less than proportionate increase in absolute amount of dividend. So, we predict a positive relation between current year's earnings and dividend payout. Lastly, as far as the dividend yield is concerned, we predict a very low positive relationship between these two variables. Because the increase in dividend payment will be matched to an extent by the increase in the market price of shares.

2. Better past year's earnings may have the effect of increasing the profitability of the present year that in turn will affect the dividend payment positively (Healy & Palepu, 1988). So, the relationship between past year's earnings and dividend payout, and dividend rate is predicted to be positive. In case of its relationship with dividend yield, also a positive relationship is predicted. But the improvement in the dividend yield will not be as much as in the case of dividend rate because the increase in dividend payment will be matched to an extent by the increase in the market price of shares.

3. If any company has profitable investment opportunities then it invests first from internal cash. The additional cash, if required, will be collected by issuing new shares. If the company has large cash accumulation then it has to issue shares of a small amount. To support this small issue of shares the company can afford to pay lower dividend (Williams, 1988). Conversely, if the company has small amount of accumulated cash then in order to avail the profitable investment opportunities it has to go for big issue of new shares. To support the amount of big issue, the company has to pay more dividends. So, we predict a negative relationship between cash position on one hand and dividend payout or dividend rate or dividend yield on the other. But the negative relationships stated above will again be restricted by the stability factor in dividend payment.

4. Cash flow during the year (i.e. earnings after tax plus depreciation) is also an important factor to be considered at the time of dividend payments (Brittain, 1964). Cash flow during the year has the effect of strengthening cash position of the company. So, the relationship between cash flow during the year and dividend rate or dividend payout or dividend yield is expected to be on the same direction as that associated with cash position. Therefore, we predict a negative relationship between cash flow during the year on one hand and dividend payout or dividend rate or dividend yield on the other.

5. Greater the ratio of tax to current year's earnings, lower will be the balance available for distribution of dividends. But greater tax payment is also preceded by greater earnings. So, though the primary relationship between tax ratio and dividend payout or dividend rate or dividend yield seems to be negative, considering the association between tax payment and earnings we predict a positive relationship between current year's tax ratio and dividend payout or dividend rate or dividend yield.

6. If the company has to incur huge capital expenditure during the current year then it will have fewer amount in hand to pay dividend. Decrease in the absolute amount of dividend will lower the dividend payout, dividend rate and dividend yield. So, we predict a negative relationship between capital expenditure of any year and dividend payout, dividend rate, and dividend yield of that year.

7. Pattern of past dividends has a very significant role in determining the current dividend (Lintner, 1956). Companies generally strive to maintain an uninterrupted record of dividend payment and are generally reluctant to decrease dividend rate. They rather prefer a stable pattern of dividend policy. So increasing trend in past dividends leads a company to increase its dividend in the current year too. But in case of decreasing trend in past dividends, dividend in the current year may not decrease. So, though in general, we predict positive relationship between past dividends and each of dividend payout, dividend rate and dividend yield yet under certain incidents of decreasing pattern in past dividend the same may not hold true.

8. One group of experts studying the dividend behaviour of companies is of the view that dividend payment is not only to be seen as the appropriation of earnings of a company. It is hypothesized to contain certain information regarding the future earning prospect of the company (Healy & Palepu, 1988). This hypothesis is popularly known as 'information content of dividend' hypothesis. Thus according to this hypothesis, dividend signals future earnings. So, it is also known as 'signaling model' of dividend theory. If future earnings are expected to grow then the company will pay more dividends in the current year and vice-versa. So, we predict a positive relationship between future earnings and dividend payout or dividend rate or dividend yield.

9. The greater the payment of interest, the less will be the amount available for the payment of dividends. Again, more interest payment means presence of more debt capital in the capital structure of the company. More debt capital leads to greater demand of security of the debt capital by its contributors. That in turn will restrict the quantum of dividend. So, we predict a negative relationship between interest expenses of the current year and each of dividend payout, dividend rate and dividend yield.

10. If the market price of shares of a company is low then in order to correct the unfavourable condition attached to the share price of the company it has to increase the payment of dividend (Chawla & Srinivasan, 1987). Because as per the signalling hypothesis increase in dividend would signal the market better prospect of the company in the future. Thus share price behaviour is predicted to be in negative relationship with each of dividend payout, dividend rate and dividend yield.

3.7. Scheme of Investigation

The scheme of investigation is as follows:

i) Descriptive statistics in the form of trimmed mean and standard deviation of dependent variables are calculated company-wise (for different years) and also year-wise (for different companies taken together). The fist objective of the study is thus addressed to with such findings on trend.

ii) After making the above calculations the companies are compartmentalized on the basis of their age, asset size and sales size. Such categorization of companies and

application of different calculations stated above in respect of each category of companies separately indicates the differences, if any, in the trend and pattern of dividend payment for that particular category of company as against the general trend and pattern in dividend payment.

iii) After completing the above process, bi-variate correlation coefficients are computed between each dependent variable separately with each independent variable. First, computations are done taking all the sample companies together. Compartmentalization is introduced later on one by one. Introduction of categorization process and resulting calculation of bi-variate correlation coefficients for the companies under different categories are done on the same line as described in the previous point. This helps us to determine the relative importance of each determinant of dividend independently of others. Additionally, the categorization and computation process gives us the added information of whether the relative importance of different determinants of dividend as observed from the earlier computation changes in respect of separate categories of companies.

iv) Multiple regression equations are operated between each dependent variable and the independent variables at a time for each year under study. Statistical test of significance (by means of t-statistics) is also computed on the results thus obtained. To deal with the problem of multicollinearity, following the methodology adopted by Jazur & Nazneen (2005), Factor Analysis technique is adopted. For such Factor Analysis, in the matter of extraction of factors, Principal Component Analysis is undertaken. Again, for the purpose of rotation to find the acceptable factors from the original variables, Varimax Rotation with Kaiser Normalisation is followed. In the matter of using the factor coming out of the original variables, all the derived factors are taken so as to accommodate the total variation of the components.

4. FINDINGS: DIVIDEND PATTERNS

4.1. Trends in Dividend Payments and PAT (Table 1)
Annual average dividend taking all the sample companies, is on the increase on a continuous basis. Never in the study period a decrease in annual average is found. But if we look at the rate of increase over the respective previous year then we cannot see any consistent pattern. But a look at the profit or earnings after tax (PAT) of the sample companies suggests that in 3 years out of the total study period of 12 years the annual average of PAT had decreased over the respective previous years. Regarding the variability of average dividend and PAT (as measured by their respective standard deviations) it is observed that both the quantum of dividend payments and PAT become more and more variable over the years, though the variability in PAT outweighs the variability of dividend payments by quite a big margin.

4.2. Distributive Pattern of Dividend Rate, Dividend Payout and Dividend Yield (Table 2)
The number of companies not paying dividend has gone up considerably. To start with it was around 14%. Then, it has gone up continuously and reached as high as over 40% of the sample companies in the years 2001-02 and 2002-03. But towards the end of the study period the proportion has come down slightly and stays at around 34%.

The distributive pattern of dividend rate shows that the proportion of companies paying dividend at a low to moderate rate has come down considerably from nearly 80% to

below 40% during the course of the study period. The companies paying dividend at a very
high rate has increased tremendously. Whereas at the start of the study period, less than
1% of companies were paying dividend at such high rate, at the close of the study period
this proportion has gone up as high as around 15%. The proportion of companies paying
dividend at a high level have also increased. It was around 6% at the start and has gone up
to around 13% at the close of the study period.

**Table 1: Trends in Dividend Payment and PAT during 1992-93 to 2004-2005
          (Total sample of 607 companies)**

Year	Average Dividend (Rs. Crore)	% change over the previous year	Std.Deviation of Dividend (Rs. Crore)	Av.PAT (Rs. Crore)	% change over the previous year	Std.Deviation of PAT (Rs. Crore)
1993-94	4.78	-------	13.83	22.23	----------	97.61
1994-95	6.77	41.71	19.86	34.39	35.35	141.01
1995-96	8.56	26.46	26.24	42.27	18.64	154.58
1996-97	9.36	9.31	32.17	40.29	(4.93)	160.16
1997-98	10.26	9.61	37.95	43.74	7.89	199.75
1998-99	12.50	21.89	56.71	42.23	(3.57)	239.32
1999-2000	14.49	15.90	65.41	46.78	9.72	281.03
2000-01	19.25	32.84	106.81	55.91	16.34	342.09
2001-02	24.08	25.11	150.77	54.61	(2.39)	377.01
2002-03	30.24	25.58	212.82	81.37	32.89	567.08
2003-04	34.75	14.90	201.57	105.89	23.16	587.53
2004-05	42.23	23.84	275.40	142.81	25.85	778.6

In case of distributive pattern of dividend payouts by the companies, we observe only
moderate variations during the course of the study. The proportion of companies having
low to moderate payouts, having high payouts and having very high payouts were around
24%, 46% and 15%, respectively at the start of our study period. These proportions were
changed to around 20%, 37% and 10%, respectively at the close of the study period.

In case of distributive pattern of dividend yield it is observed that variation during the
study period is very moderate for the entire stretch of study period though during the
intermittent period there were some serious ups and downs. On the whole the proportion of
companies having low to moderate dividend yield, having high dividend yield and having
very high dividend yield has gone down from around 63%, 8% and 2%, respectively to
around 58%, 7% and 1%, respectively.

Table 2: Distribution of Companies in terms of Dividend Payment (DR, DP, DY)

Year	Non-payers of Dividend	Dividend Rate			Dividend Payout			Dividend Yield		
		Low to Moderate (Upto 50%)	High (50% - 100%)	Very High (Above 100%)	Low to Moderate (Upto 20%)	High (20% - 50%)	Very High (Above 50%)	Low to Moderate (Upto 5%)	High (5% - 10%)	Very High (Above 10%)
1993-94	14.00	79.41	05.76	00.82	24.05	46.46	15.16	63.43	08.24	01.98
1994-95	13.67	76.77	08.90	00.66	26.19	48.93	11.04	69.52	06.75	01.48
1995-96	15.49	72.49	11.04	00.98	28.01	43.99	12.03	59.64	15.32	04.78
1996-97	19.77	67.88	11.37	00.98	18.45	45.63	15.16	46.46	22.08	07.91
1997-98	24.71	61.78	11.20	02.31	18.45	42.01	12.52	37.73	22.57	11.37
1998-99	31.14	53.38	12.36	03.12	14.33	42.17	11.20	34.93	22.24	08.73
1999-00	32.95	51.08	11.03	04.94	16.31	38.88	10.21	36.57	18.78	09.39
2000-01	37.07	46.95	12.03	03.95	14.33	35.42	10.21	25.70	22.41	13.34
2001-02	41.19	41.01	11.70	06.10	10.71	31.63	13.67	26.52	18.45	12.36
2002-03	41.02	38.06	12.36	08.40	13.67	32.45	10.54	22.90	26.19	09.23
2003-04	37.56	37.89	12.36	12.03	16.31	35.09	10.38	42.34	17.96	01.65
2004-05	33.77	38.22	13.01	14.83	19.93	36.74	09.23	58.32	06.59	00.82

Table 3: Concentration of total rupees dividends paid in 1993-94 and 2004-05

Dividend Ranking	Percent of total Dividends (%)	
	1993-94	**2004-05**
Top 25	51.26	76.58
26-50	15.53	11.05
51-100	14.68	6.60
101-200	10.29	4.09
201-300	4.55	1.10
301-400	2.48	0.27
401-500	1.15	0.01
Remaining	0.06	0
Total No. of firms	607	607

Table 4: Company-wise Dividend History

No. of Years of Non-payment	Percentage of companies
0	44.15%
1	07.08%
2	04.49%
3	03.95%
4	05.27%
5	04.94%
6	04.49%
7	04.78%
8	03.95%
9	05.60%
10	03.46%
11	02.97%
12	04.94%

4.3. Nominal Dividend, Real Dividend and Concentration of Nominal Dividend and Company-wise Dividend History (Tables 3 & 4)

The aggregate nominal dividend in rupee terms has registered a simple growth of about 8 times (from Rs. 2899.67 crore to Rs. 26118.53 crore). If nominal dividends are adjusted for cost inflation index as per the notification of the Central Government (real dividends) then the growth is about 3.5 times during the same period (from Rs. 2650.11 crore to Rs. 12133.59 crore, taking April, 1994 as the base). Nevertheless this growth rate is substantial especially in the face of the fact that the number of companies not paying dividend has increased considerably during this period. Increasing growth rate coupled with increase in the number of non-payers hints at the increase in the mean dividend payment. This is evidenced from the growth in mean nominal dividend of all the companies. Again, mean real dividend during the study period has increased by about 5 times which suggests that when the companies are paying dividend they are paying it large.

In respect of concentration of total rupee dividend it is observed that the top 25 dividend paying companies were accounted for nearly 51% of the total rupee dividend at the end of the year 1993-94. By the end of the year 2004-05 the percentage has increased to nearly 77%. Least to say the share of other companies in the total dividend payments has fallen considerably during the period of study. Thus, Indian corporate sector is found to be characterized by high concentration in respect of payment of dividend.

From the company-wise dividend history it is observed that 44.15% of the total sample companies have paid dividend in all the 12 years of study. On the other extreme, 4.94% of the sample companies have never paid dividend during the entire study period. In between these two extremes lie 2.97% companies that have paid dividend only once, 3.46% of companies that have paid dividend twice, 5.60% of companies that have paid dividend thrice, 3.95% of companies that have paid dividend only four times, 4.78% of companies that have paid dividend five times. Again, there are 7.08% of companies that have paid dividend except for one year, 4.49% of companies that have paid dividend except for two years, 3.95% of companies that have paid dividend except for three years, and 5.27% of companies that have paid dividend except for four years during the entire study period. Finally there are 4.94% of companies that have not paid dividend for five years and there are 4.49% of companies that have not paid dividend for six years out of the entire study period of 12 years.

4.4. Year-wise Pattern of Dividend Rate (Table 5)

4.4.1. Year-wise dividend rate pattern of all the companies

Average dividend rate (5% trimmed mean) taking the entire sample companies together, has increased on an average. Though, in some intermittent periods it has gone down. The variability of dividend rates as measured by its standard deviation has gone up considerably during the study period.

4.4.2. Year-wise pattern of dividend rate of companies classified on the basis of Age

Along this general trend, companies the age of which is more 25 years have shown averages and standard deviations which are generally greater than the overall average and standard deviation. Other two classes of companies based on the age of the companies

Table 5: Descriptive Statistics on Dividend Rates

ALL COMPANIES												
Year	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
5% Trimmed Mean	21.08	22.55	23.68	22.02	20.45	19.94	20.44	18.55	19.20	22.05	27.70	32.58
Standard Deviation	17.10	17.96	19.46	21.48	23.93	30.56	42.54	44.37	64.78	61.38	97.48	92.46
(A) AGE CLASSIFICATION: Data on 177 companies the age of which is between 5 and 15 years												
5% Trimmed Mean	15.72	17.19	17.41	16.15	15.26	14.42	16.33	13.90	14.15	14.83	16.76	20.19
Standard Deviation	14.00	15.26	16.95	20.32	19.90	26.94	34.92	46.29	94.12	73.27	81.06	89.59
Data on 121 companies the age of which is between 15 and 25 years												
5% Trimmed Mean	20.58	21.18	22.03	18.59	17.86	17.66	16.63	15.02	13.92	15.43	18.31	24.41
Standard Deviation	17.60	17.78	20.59	19.66	27.54	36.29	38.42	41.81	39.57	45.72	49.47	56.34
Data on 309 companies the age of which is more than 25 years												
5% Trimmed Mean	24.44	26.30	28.03	26.92	24.54	24.02	24.38	22.68	24.53	29.65	39.80	44.40
Standard Deviation	17.72	18.68	19.46	21.85	23.94	29.61	47.38	44.03	50.31	58.45	116.39	103.29
(B) SALES CLASSIFICATION: Data on 494 companies whose sales are less than Rs. 1000 crores												
5% Trimmed Mean	19.57	20.75	21.63	19.93	18.35	17.21	17.35	14.91	14.60	16.66	20.17	24.24
Standard Deviation	16.14	16.59	18.32	19.77	22.38	28.30	40.65	36.99	35.93	39.44	47.27	54.12
Data on 31 companies whose sales are between Rs. 1000 crores and Rs. 1500 crores												
5% Trimmed Mean	30.22	33.95	32.57	29.56	25.79	27.26	32.30	30.69	30.95	40.50	51.81	57.92
Standard Deviation	18.81	21.81	18.82	19.89	25.47	25.65	38.34	37.28	42.23	54.45	63.43	72.49
Data on 82 companies whose sales are more than Rs. 1500 crores												
5% Trimmed Mean	27.26	30.52	33.33	33.38	32.30	35.22	37.04	39.89	49.09	58.93	77.48	85.72
Standard Deviation	19.71	20.75	22.80	27.27	28.47	39.31	50.30	71.15	142.23	121.91	220.36	193.99
(C) ASSET CLASSIFICATION: Data on 421 companies whose assets are less than Rs. 500 crores												

5% Trimmed Mean	18.59	19.50	19.93	18.10	16.45	15.06	14.65	12.35	11.86	13.47	16.48	20.10
Standard Deviation	14.92	15.95	17.38	19.13	19.47	22.83	35.99	33.85	32.91	35.28	42.52	48.61
Data on 70 companies whose assets are between Rs. 500 crores and Rs. 1000 crores												
5% Trimmed Mean	25.31	28.70	30.75	30.58	27.77	29.32	36.21	31.40	31.98	40.02	48.52	55.56
Standard Deviation	20.15	20.75	19.30	19.96	25.05	29.54	50.29	40.10	34.24	46.33	55.14	65.92
Data on 116 companies whose assets are more than Rs. 1000 crores												
5% Trimmed Mean	28.51	31.04	33.69	32.53	32.51	34.89	36.32	36.91	42.58	49.19	65.98	74.67
Standard Deviation	19.68	19.68	22.14	25.46	31.44	44.10	51.40	66.59	125.70	110.64	192.85	171.75

have shown averages and standard deviations generally below the overall averages and standard deviations. Among the different classes of companies based on age, companies the age of which is more than 25 years have shown averages and standard deviations that are substantially greater than those of the other classes of companies.

4.4.3. Year-wise pattern of dividend rate of companies classified on the basis of Sales

If the companies are classified according to their respective sales volume, then it is observed that companies the sales of which is less than Rs. 1000 crores have average and standard deviation below the overall average and standard deviation. The companies the sales of which is between Rs. 1000 crores and Rs. 1500 crores have averages that are generally higher than the overall averages, but have the standard deviations below the overall standard deviations. Finally, the companies the sales of which is more than Rs. 1500 crores have both the averages and standard deviations which are much higher than the overall averages and standard deviations. Among the different classes of companies based on sales, companies the sales of which is more Rs. 1500 crores have shown averages and standard deviations that are substantially greater than those of the other classes of companies.

4.4.4. Year-wise pattern of dividend rate of companies classified on the basis of Asset Size

When the companies are classified according to their respective asset size then it is observed that companies the assets of which are less than Rs. 500 crores have averages and standard deviations generally below the overall averages and standard deviations. Again, the companies the assets of which are between Rs. 500 crores and Rs. 1000 crores have averages that are generally higher than the overall averages, but have standard deviations generally below the overall standard deviations. Finally, the companies the assets of which are more than Rs. 1000 crores have both the averages and standard deviations which are generally much higher than the overall averages and standard deviations. Among the different classes of companies based on asset size, companies the assets of which are more than Rs. 1000 crores have shown averages and standard deviations which are substantially greater than that of the other classes of companies in this classification base.

4.5. Year-wise Pattern of Dividend Payout (Table 6)

4.5.1. Year-wise pattern of dividend payout of all the companies

Average dividend payout (5% trimmed mean), taking the entire sample companies together, has declined on an average, though in some intermittent periods it has gone up. The variability of dividend payout as measured by its standard deviation has not generally shown any considerable movement though in some years it has gone up considerably.

Table 6: Descriptive Statistics on Dividend Payout

ALL COMPANIES												
Year	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
5% Trimmed Mean	26.97	25.17	24.19	26.11	23.31	21.84	19.89	19.16	20.09	18.27	18.53	18.75
Standard Deviation	30.41	22.23	78.02	121.18	99.25	207.76	25.05	31.17	48.99	27.40	28.58	23.46
(A) AGE CLASSICIFICATION: Data on 177 companies the age of which is between 5 and 15 years												
5% Trimmed Mean	25.19	23.56	22.37	21.72	20.80	16.67	16.35	14.05	17.29	14.92	14.12	16.54
Standard Deviation	26.16	21.96	136.42	59.25	80.93	24.82	26.69	27.47	47.88	24.83	23.98	26.14
Data on 121 companies the age of which is between 15 and 25 years												
5% Trimmed Mean	27.24	27.05	24.99	26.48	19.36	19.93	16.88	18.73	17.32	17.30	15.82	17.10
Standard Deviation	23.01	25.10	21.51	240.52	87.63	78.62	19.25	25.87	73.33	37.03	23.04	22.42
Data on 309 companies the age of which is more than 25 years												
5% Trimmed Mean	27.90	25.47	24.94	28.60	26.34	25.81	23.36	22.29	23.04	20.71	22.25	20.67
Standard Deviation	34.88	21.17	32.75	65.91	112.34	285.79	25.76	34.54	35.72	23.97	432.22	22.17
(B) SALES CLASSIFICATION: Data on 494 companies whose sales are less than Rs. 1000 crores												
5% Trimmed Mean	27.19	25.06	24.39	25.66	22.54	20.41	18.25	17.74	17.32	16.24	16.69	17.11
Standard Deviation	32.60	22.76	52.02	121.88	108.63	57.70	24.07	32.27	45.49	28.06	30.15	23.66
Data on 31 companies whose sales are between Rs. 1000 crores and Rs. 1500 crores												
5% Trimmed Mean	31.01	32.84	25.11	32.93	28.05	36.14	32.19	24.03	27.79	23.97	23.68	25.49
Standard Deviation	21.25	26.95	18.54	49.96	24.62	894.51	39.10	34.42	44.09	22.56	20.44	27.25

Data on 82 companies whose sales are more than Rs. 1500 crores											
5% Trimmed Mean	24.80	23.17	22.73	26.23	26.12	28.12	25.99	26.01	35.26	28.10	27.72	26.24
Standard Deviation	15.63	15.67	169.30	135.55	42.53	25.30	21.49	21.11	64.47	23.25	19.03	18.88
(C) ASSET CLASSFICATION: Data on 421 companies whose assets are less than Rs. 500 crores											
5% Trimmed Mean	27.31	24.95	24.21	27.97	21.81	19.65	16.93	16.83	16.02	15.01	15.18	15.90
Standard Deviation	33.79	22.58	55.62	131.42	117.43	62.21	23.01	34.20	48.10	28.45	30.87	24.16
Data on 70 companies whose assets are between Rs. 500 crores and Rs. 1000 crores											
5% Trimmed Mean	25.90	27.64	26.40	32.27	29.34	26.82	27.11	24.97	27.56	25.29	27.01	27.01
Standard Deviation	25.57	27.74	22.53	44.86	21.75	590.97	35.36	26.20	25.16	26.17	24.82	24.17
Data on 116 companies whose assets are more than Rs. 1000 crores											
5% Trimmed Mean	26.87	24.95	22.85	26.46	25.07	26.82	26.76	24.36	31.17	25.76	25.59	24.32
Standard Deviation	17.19	16.50	142.64	114.80	38.18	23.06	21.96	20.14	59.35	22.38	19.34	18.43

4.5.2. Year-wise pattern of dividend payout of companies classified on the basis of Age

Not much of deviation from this general trend is found for different classes of companies classified on the basis of their age. Again, the different classes of companies amongst themselves have also not shown any considerable variation in respect of average dividend payout and standard deviation of dividend payout.

4.5.3. Year-wise pattern of dividend payout of companies classified on the basis of Sales

Likewise there is a very insignificant deviation from this general trend found for different classes of companies classified on the basis of their sales. Again, the different classes of companies amongst themselves have also not shown any considerable variation in respect of average dividend payout and standard deviation of dividend payout.

4.5.4. Year-wise pattern of dividend payout of companies classified on the basis of Asset Size

When the companies are classified on the basis of their assets, then also very little deviation is found from the general trend. And also the inter-class variations in respect of year-wise average dividend payout and standard deviation of dividend payout are very slender.

4.6. Year-wise pattern of dividend yield (Table 7)

4.6.1. Year-wise pattern of dividend yield of all the companies

Average dividend yield (5% trimmed mean), taking the entire sample companies together, has not changed much during the study period. Though in the middle years of the study period it had increased quite a bit. The variability of dividend yield as measured by its standard deviation has not generally shown any considerable movement and it stays very low during the entire study period.

4.6.2. Year-wise pattern of dividend yield of companies classified on the basis of Age

Not much of deviation from this general trend is found for different classes of companies classified on the basis of their age. Although the companies the age of which is between 15 and 25 years have, in general, higher average yield in comparison with the other classes of companies. Standard deviation of dividend yield is also at a very lower level for all the classes of companies and no definite pattern is observed regarding the inter-class variation in respect of standard deviation of dividend yield.

4.6.3. Year-wise pattern of dividend yield of companies classified on the basis of Sales

No specific trend is observed regarding the inter-class variability in respect of mean dividend yield and standard deviation of dividend yield. Again, no specific observation can be made regarding the comparative analysis of overall average dividend yield or overall standard deviation of dividend yield and average dividend yield or standard deviation of dividend yield of particular classes of companies.

4.6.4. Year-wise pattern of dividend yield of companies classified on the basis of Asset Size

When the companies are classified on the basis of their assets then it is found that the companies having assets between Rs. 500 crores and Rs. 1000 crores and the companies having assets of more than Rs. 1000 crores have a slightly increasing trend in average

Table 7: Descriptive Statistics on Dividend Yield

ALL COMPANIES

Year	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
5% Trimmed Mean	1.92	1.88	2.92	3.63	3.84	3.36	3.17	3.72	3.29	3.43	2.22	1.65
Standard Deviation	4.33	4.98	3.24	4.09	4.52	4.31	13.23	4.98	7.01	4.82	3.51	2.60
(A) AGE CLASSIFICATION: **Data on 177 companies the age of which is between 5 and 15 years**												
5% Trimmed Mean	2.20	2.00	3.31	4.14	4.53	3.07	2.99	3.59	3.20	3.02	1.89	1.52
Standard Deviation	2.73	2.51	3.82	4.56	5.13	4.47	23.56	5.77	6.42	4.28	2.71	1.92
Data on 121 companies the age of which is between 15 and 25 years												
5% Trimmed Mean	2.15	2.18	3.42	4.09	4.24	3.88	3.37	4.32	3.45	3.53	2.31	1.72
Standard Deviation	2.58	2.27	3.52	4.33	4.92	5.01	4.74	5.76	4.90	5.74	3.10	2.40
Data on 309 companies the age of which is more than 25 years												
5% Trimmed Mean	1.66	1.69	2.53	3.21	3.31	3.34	3.22	3.63	3.31	3.64	2.38	1.71
Standard Deviation	5.54	6.64	2.66	3.64	3.87	3.87	3.97	4.06	8.00	4.70	4.02	2.99
(B) SALES CLASSIFICATION: **Data on 494 companies whose sales are less than Rs. 1000 crores**												
5% Trimmed Mean	2.16	1.99	3.12	3.81	4.08	3.25	3.12	3.60	3.23	3.27	2.20	1.53
Standard Deviation	4.75	5.49	3.42	4.26	4.72	4.38	14.56	5.13	4.95	4.93	3.75	2.74
Data on 31 companies whose sales are between Rs. 1000 crores and Rs. 1500 crores												
5% Trimmed Mean	1.22	1.66	2.33	3.44	2.95	3.44	3.01	3.35	2.98	3.26	2.15	1.57
Standard Deviation	0.98	1.27	2.22	3.53	3.09	3.84	2.75	3.21	3.22	2.92	1.99	1.28

Data on 82 companies whose sales are more than Rs. 1500 crores											
5% Trimmed Mean	1.05	1.47	2.07	2.68	2.95	4.01	3.61	4.65	3.82	4.56	2.43	2.40
Standard Deviation	0.97	1.09	2.14	2.94	3.45	4.03	4.23	4.50	14.55	4.60	2.28	1.98
(C) ASSET CLASSIFICATION: Data on 421 companies whose assets are less than Rs. 500 crores											
5% Trimmed Mean	2.25	2.05	3.15	3.78	4.10	3.17	2.97	3.38	3.07	3.16	2.18	1.51
Standard Deviation	5.06	5.86	3.48	4.37	4.79	4.45	15.67	5.13	4.94	4.85	3.95	2.89
Data on 70 companies whose assets are between Rs. 500 crores and Rs. 1000 crores											
5% Trimmed Mean	1.25	1.42	2.60	3.96	3.82	3.67	3.75	4.52	4.17	4.04	2.49	1.79
Standard Deviation	1.38	1.50	2.84	3.75	4.35	4.15	4.18	4.79	4.82	5.23	1.94	1.49
Data on 116 companies whose assets are more than Rs. 1000 crores											
5% Trimmed Mean	1.31	1.63	2.32.15	2.89	3.08	3.88	3.54	4.52	3.61	4.06	2.30	2.09
Standard Deviation	1.41	1.43	2.38	3.00	3.41	3.84	4.03	4.40	12.40	4.36	2.39	1.95

dividend yield and standard deviation of dividend yield. Regarding inter-class variability no specific trend is observed.

5. FINDINGS: DETERMINANTS OF DIVIDEND POLICY

5.1. Results of Bi-variate Correlations

5.1.1. Correlation of Dividend Rate with the independent variables (Table 8)

When one-to-one relationships between dividend rate and selected independent variables are analyzed then it is observed that dividend rate is consistently, positively and significantly related to average dividend rate, earnings after tax of the current year, past year's earnings after tax, and expected earnings after tax of the future years. These observed relationships are in line with our hypothesized relationships. But, if we look at the relationship of dividend rate with cash position, cash flow and capital expenditure then positive and significant relationships are found. This is against our hypothesized relationships. Regarding the relationship between dividend rate and tax ratio, positive relationship is found though the result is not always significant. The relationship between dividend rate and interest expenses is found to be positive and the result is not found to be significant. This positive relationship is clearly against our hypothesized relationship. Finally, the relationship between dividend rate and share price behaviour is found to be mostly positive but rarely significant. This positive relationship is also against our hypothesized relationship.

5.1.2. Correlation of Dividend Payout with the independent variables (Table 9)

If we turn to the relationships between dividend payout and selected independent variables then it is observed that only average dividend payout is consistently, positively and significantly related to dividend payout. Relationships of dividend payout with other explanatory variables are found to be very weak, inconsistent and insignificant. Even it is found that dividend payout is generally negatively related to earnings related variables, namely, current year's earnings after tax, past year's earnings after tax, expected future earnings.

5.1.3. Correlation of Dividend Yield with the independent variables (Table 10)

In the matter of relationship between dividend yield and selected independent variables it is observed that like dividend payout dividend yield is also consistently, positively and significantly related to average dividend yield for the past three years. The direction of relationship of dividend yield with interest rate is found to be always negative and that of dividend yield with share price behaviour is found to be mostly negative though neither of these results is significant. Relationships of dividend yield with other explanatory variables are found to be weak, inconsistent and insignificant.

5.2. Detection of Multi-collinearity Problem (Tables 11 - 13)

To detect the dependence amongst the independent variables, at first year-wise correlation matrices during the entire study period have been formed. From those matrices the correlation amongst the homogeneous explanatory variables is observed. In this case current year's earnings after tax (E_t), past year's earnings after tax (E_{t-1}) and expected future earnings (E_{t+1}) are considered to be homogeneous variables. Correlation amongst these is observed and it is found that the correlation is very consistently positive and highly significant throughout the entire study period. As such these variables are condensed to

Table 8: Pearson correlation co-efficients between 'Dividend Rate' and selected 'Independent Variables'

Year Independent Variables	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
E_t	0.085*	0.086*	0.135**	0.166**	0.168**	0.256**	0.186**	0.296**	0.286**	0.329**	0.247**	0.247**
	(0.036)	(0.035)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
E_{t-1}	0.084*	0.072	0.099*	0.140**	0.164**	0.237**	0.187**	0.258**	0.296**	0.335**	0.241**	0.258**
	(0.039)	(0.076)	(0.014)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CP_t	0.104	0.123**	0.129**	0.153**	0.142**	0.205**	0.149**	0.415**	0.314**	0.407**	0.323**	0.261**
	(0.111)	(0.002)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
CF_t	0.039	0.043	0.075	0.113**	0.118**	0.203**	0.147**	0.240**	0.248**	0.305**	0.217**	0.230**
	(0.333)	(0.291)	(0.065)	(0.005)	(0.004)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
TR_t	0.326**	0.356**	0.336**	0.212**	0.297**	0.326**	0.180**	-0.017	0.035	0.041	0.041	0.063
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.680)	(0.391)	(0.317)	(0.316)	(0.120)
CEX_t	N.A.	0.033	0.095**	0.137*	0.076	0.204**	0.083*	0.117**	0.019	0.210**	0.135**	0.213**
		(0.420)	(0.020)	(0.001)	(0.064)	(0.000)	(0.044)	(0.004)	(0.654)	(0.000)	(0.001)	(0.000)
E_{t+1}	0.084**	0.065	0.116**	0.088*	0.067	0.107**	0.059	0.284**	0.275**	0.318**	0.245**	0.226**
	(0.039)	(0.113)	(0.004)	(0.030)	(0.101)	(0.008)	(0.147)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
$AVGDIV_{t-1}$	0.726**	0.714**	0.781**	0.781**	0.775**	0.794**	0.774**	0.772**	0.700**	0.764**	0.657**	0.793**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
I_t	0.005	0.001	0.029	0.043	0.032	0.065	0.015	0.044	0.028	0.040	0.015	0.052
	(0.896)	(0.989)	(0.479)	(0.288)	(0.437)	(0.111)	(0.711)	(0.284)	(0.491)	(0.330)	(0.705)	(0.198)
SP_t	0.201**	- 0.33	0.004	0.219**	0.280**	0.081**	0.023	0.009	0.042	0.034	-0.009	-0.128**
	(0.000)	(0.450)	(0.921)	(0.000)	(0.000)	(0.050)	(0.571)	(0.836)	(0.311)	(0.401)	(0.817)	(0.002)

Figures in the bracket indicate the exact level of significance (p – values)
 ** Correlation is significant at the 0.01 level (2-tailed).
  * Correlation is significant at the 0.05 level (2-tailed).

Table 9: Pearson correlation co-efficients between 'Dividend Payout' and selected 'Independent Variables'

Year Independent Variable	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
E_t	- 0.023 (0.566)	0.077 (0.058)	0.001 (0.973)	- 0.017 (0.675)	-0.015 (0.724)	-0.015 (0.717)	0.00 (1.000)	0.036 (0.388)	-0.010 (0.816)	-0.007 (0.862)	-0.010 (0.804)	0.000 (0.994)
E_{t-1}	-0.010 (0.798)	0.076 (0.063)	0.000 (0.998)	-0.016 (0.699)	-0.017 (0.672)	-0.019 (0.642)	0.002 (0.952)	0.026 (0.528)	-0.007 (0.866)	-0.011 (0.783)	-0.017 (0.685)	-0.019 (0.642)
CP_t	0.103* (0.011)	0.204** (0.000)	-0.011 (0.789)	-0.005 (0.904)	-0.015 (0.706)	-0.012 (0.768)	-0.011 (0.782)	0.018 (0.667)	-0.006 (0.875)	-0.026 (0.530)	-0.01. (0.802)	-0.011 (0.790)
CF_t	-0.033 (0.412)	0.065 (0.111)	0.000 (0.990)	-0.017 (0.677)	-0.018 (0.667)	-0.014 (0.740)	0.006 (0.887)	0.031 (0.459)	0.002 (0.964)	0.000 (0.991)	-0.005 (0.912)	0.002 (0.966)
TR_t	0.017 (0.682)	-0.023 (0.580)	0.030 (0.456)	-0.003 (0.950)	-0.008 (0.851)	-0.038 (0.351)	-0.084* (0.040)	-0.017 (0.673)	0.000 (0.996)	-0.005 (0.908)	0.000 (0.995)	0.025 (0.536)
CEX_t	N.A.	0.059 (0.152)	-0.009 (0.828)	-0.008 (0.843)	-0.016 (0.693)	-0.013 (0.757)	-0.029 (0.480)	-0.003 (0.951)	0.017 (0.677)	-0.006 (0.887)	0.057 (0.166)	-0.019 (0.643)
E_{t+1}	-0.019 (0.642)	0.065 (0.112)	0.002 (0.965)	-0.007 (0.865)	-0.016 (0.705	-0.013 (0.759)	-0.001 (0.981)	0.035 (0.397)	-0.016 (0.706)	-0.010 (0.816)	-0.024 (0.552)	-0.005 (0.907)
$AVGDIV_{t-1}$	-0.063 (0.126)	0.133** (0.001)	0.095* (0.020)	0.195** (0.000)	0.030 (0.467)	0.107** (0.009)	0.102* (0.013)	0.202** (0.000)	270** (0.000)	0.278** (0.000)	0.208** (0.000)	0.288** (0.000)
I_t	-0.026 (0.527)	0.102* (0.012)	0.016 (0.704)	-0.005 (0.896)	-0.028 (0.498)	-0.013 (0.748)	0.020 (0.632)	0.034 (0.405)	0.059 (0.153)	0.070 (0.089)	0.050 (0.219)	0.044 (0.276)
SP_t	0.011 (0.802)	0.005 (0.911)	-0.001 (0.988)	0.001 (0.985)	0.011 (0.796)	-0.023 (0.585)	-0.012 (0.770)	-0.001 (0.975)	-0.053 (0.201)	0.027 (0.521)	0.016 (0.695)	0.007 (0.859)

Figures in the bracket indicate the exact level of significance (p – values)
 ** Correlation is significant at the 0.01 level (2-tailed).
  * Correlation is significant at the 0.05 level (2-tailed).

Table 10: Pearson correlation co-efficients between 'Dividend Yield' and selected 'Independent Variables'

Year / Independent Variables	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
E_t	-0.072 (0.099)	-0.039 (0.355)	-0.083* (0.045)	-0.089* (0.031)	-0.076 (0.064)	0.038 (0.362)	0.005 (0.895)	0.082* (0.046)	0.060 (0.139)	0.100* (0.014)	0.024 (0.561)	0.089* (0.028)
E_{t-1}	-0.071 (0.103)	-0.036 (0.401)	-0.081 (0.052)	-0.087* (0.036)	-0.092* (0.026)	0.027 (0.514)	0.008 (0.844)	0.067 (0.100)	0.071 (0.082)	0.093* (0.022)	0.027 (0.510)	0.092* (0.024)
CP_t	-0.076 (0.080)	-0.047 (0.268)	-0.075 (0.070)	-0.073 (0.080)	-0.078 (0.057)	-0.007 (0.862)	-0.009 (0.831)	0.081* (0.049)	0.093* (0.023)	0.097* (0.018)	0.004 (0.927)	0.071 (0.081)
CF_t	-0.078 (0.073)	-0.042 (0.329)	-0.076 (0.066)	-0.089* (0.031)	-0.086* (0.036)	0.023 (0.571)	0.000 (1.000)	0.062 (0.128)	0.043 (0.292)	0.091 (0.025)	0.015 (0.712)	0.085* (0.037)
TR_t	0.015 (0.738)	0.043 (0.308)	-0.056 (0.179)	0.029 (0.491)	0.159** (0.000)	0.226** (0.000)	0.061 (0.137)	-0.027 (0.512)	-0.001 (0.985)	0.106** (0.010)	0.089* (0.029)	0.093* (0.023)
CEX_t	N.A.	-0.023 (0.592)	-0.056 (0.185)	-0.049 (0.242)	-0.087* (0.038)	0.011 (0.7850)	0.007 (0.867)	0.046 (0.264)	-0.011 (0.789)	0.156* (0.000)	0.021 (0.616)	0.057 (0.168)
E_{t+1}	-0.071 (0.103)	-0.036 (0.401)	-0.081 (0.052)	-0.087* (0.036)	-0.092* (0.026)	0.027 (0.514)	0.008 (0.844)	0.067 (0.100)	0.071 (0.082)	0.093* (0.022)	0.027 (0.510)	0.092* (0.024)
$AVGDIV_{t-1}$	N.A.	N.A.	N.A.	0.315** (0.000)	0.543** (0.000)	0.598** (0.000)	0.155** (0.000)	0.447** (0.000)	0.420** (0.000)	0.387** (0.000)	0.553** (0.000)	0.465** (0.000)
I_t	-0.079 (0.069)	-0.040 (0.351)	-0.071 (0.088)	-0.078 (0.058)	-0.094* (0.022)	-0.028 (0.500)	-0.025 (0.541)	-0.037 (0.3680)	-0.036 (0.383)	-0.027 (0.504)	-0.075 (0.067)	-0.008 (0.836)
SP_t	-0.091* (0.043)	-0.062 (0.158)	-0.051 (0.232)	-0.157** (0.000)	-0.111** (0.007)	-0.076 (0.064)	-0.041 (0.319)	0.115** (0.005)	0.110** (0.007)	0.065 (0.114)	-0.009 (0.822)	-0.133** (0.001)

Figures in the bracket indicate the exact level of significance (p – values)

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 11: Year-wise Significant Correlation between Homogenous Explanatory Variables during 1993-94 to 2004-05

Variables / Year	E_t	E_{t-1}	E_{t+1}	CP_t	CF_t
1993-94	E_{t-1}^{**} E_{t+1}^{**}	E_t^{**} E_{t+1}^{**}	E_t^{**} E_{t-1}^{**}	CF_t^{**}	CP_t^{**}
1994-95	E_{t-1}^{**} E_{t+1}^{**}	E_t^{**} E_{t+1}^{**}	E_t^{**} E_{t-1}^{**}	CF_t^{**}	CP_t^{**}
1995-96	E_{t-1}^{**} E_{t+1}^{**}	E_t^{**} E_{t+1}^{**}	E_t^{**} E_{t-1}^{**}	CF_t^{**}	CP_t^{**}
1996-97	E_{t-1}^{**} E_{t+1}^{**}	E_t^{**} E_{t+1}^{**}	E_t^{**} E_{t-1}^{**}	CF_t^{**}	CP_t^{**}
1997-98	E_{t-1}^{**} E_{t+1}^{**}	E_t^{**} E_{t+1}^{**}	E_t^{**} E_{t-1}^{**}	CF_t^{**}	CP_t^{**}
1998-99	E_{t-1}^{**} E_{t+1}^{**}	E_t^{**} E_{t+1}^{**}	E_t^{**} E_{t-1}^{**}	CF_t^{**}	CP_t^{**}
1999-2000	E_{t-1}^{**} E_{t+1}^{**}	E_t^{**} E_{t+1}^{**}	E_t^{**} E_{t-1}^{**}	CF_t^{**}	CP_t^{**}
2000-01	E_{t-1}^{**} E_{t+1}^{**}	E_t^{**} E_{t+1}^{**}	E_t^{**} E_{t-1}^{**}	CF_t^{**}	CP_t^{**}
2001-02	E_{t-1}^{**} E_{t+1}^{**}	E_t^{**} E_{t+1}^{**}	E_t^{**} E_{t-1}^{**}	CF_t^{**}	CP_t^{**}
2002-03	E_{t-1}^{**} E_{t+1}^{**}	E_t^{**} E_{t+1}^{**}	E_t^{**} E_{t-1}^{**}	CF_t^{**}	CP_t^{**}
2003-04	E_{t-1}^{**} E_{t+1}^{**}	E_t^{**} E_{t+1}^{**}	E_t^{**} E_{t-1}^{**}	CF_t^{**}	CP_t^{**}
2004-05	E_{t-1}^{**} E_{t+1}^{**}	E_t^{**} E_{t+1}^{**}	E_t^{**} E_{t-1}^{**}	CF_t^{**}	CP_t^{**}

** Correlation is significant at 1% level (2-tailed)

* Correlation is significant at 5% level (2-tailed)

Table 12: Result of Factor Analysis during 1993-94 to 2004-05 (among X1, X2, and X3)

Year	Factors	Eigen Values	% of Total Variance
1993-94	1	2.811	93.707
	2	0.143	04.777
	3	0.046	01.515
1994-95	1	2.807	93.578
	2	0.155	05.183
	3	0.038	01.239
1995-96	1	2.910	97.012
	2	0.061	02.011
	3	0.029	00.977
1996-97	1	2.227	74.252
	2	0.730	24.328
	3	0.043	01.422
1997-98	1	2.264	75.456
	2	0.705	23.490
	3	0.031	01.054
1998-99	1	2.306	76.881
	2	0.633	21.095
	3	0.061	02.024
1999-2000	1	2.278	75.923
	2	0.700	23.330
	3	0.022	00.747
2000-01	1	2.923	97.444
	2	0.060	02.010
	3	0.017	00.546
2001-02	1	2.935	97.828
	2	0.047	01.564
	3	0.018	00.608
2002-03	1	2.900	96.680
	2	0.078	02.608
	3	0.022	00.712
2003-04	1	2.846	94.874
	2	0.120	04.009
	3	0.035	01.117
2004-05	1	2.716	90.517
	2	0.223	07.438
	3	0.061	02.045

Where:

X1 = Current Year's Earnings after Tax (E_t)

X2 = Past Year's Earnings after Tax (E_{t-1})

X3 = Expected Future Earnings after Tax (E_{t+1})

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

Table 13: Result of Factor Analysis during 1993-94 to 2004-05 (Between X4 and X5)

Year	Factors	Eigen Values	% of Total Variance
1993-94	1	1.407	70.355
	2	0.593	29.645
1994-95	1	1.701	85.505
	2	0.290	14.495
1995-96	1	1.718	85.912
	2	0.282	14.088
1996-97	1	1.677	83.862
	2	0.323	16.138
1997-98	1	1.757	87.861
	2	0.243	12.139
1998-99	1	1.672	83.578
	2	0.328	16.422
1999-2000	1	1.839	91.971
	2	0.161	08.029
2000-01	1	1.781	89.028
	2	0.219	10.972
2001-02	1	1.876	93.809
	2	0.124	06.191
2002-03	1	1.903	95.174
	2	0.097	04.826
2003-04	1	1.780	89.015
	2	0.220	10.985
2004-05	1	1.872	93.602
	2	0.128	06.398

Where:
X4 = Cash Position at the end of the year (CP_t)
X5 = Cash Flow during the year (CF_t)

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

form factor(s). Likewise, cash position of the company (CP_t) and cash flow during the year (CF_t) are considered to be homogeneous variables. Correlation in different years of these variables shows significant and strong correlation between these variables in all the years of study. Hence, these are condensed to form another set of factor(s).

For such factor analysis Principal Component Method of extraction is followed. In the matter of rotation of variables, for fullest extraction, Varimax rotation with Kaiser Normalization is followed.

In the study three factors, namely, f1, f2 and f3 are extracted to explain the total and condensed impact of current year's earnings (E_t), past year's earnings (E_{t-1}) and expected future earnings (E_{t+1}). Likewise, two factors, namely, f4 and f5 have been extracted to include the condensed impact of cash position of the company (CP_t) and cash flow during the year (CF_t). Again, in the present study, all the extracted factors have been considered

for regression analysis so that total variation of the components can be explained by the factors although f1 and f2 sufficiently capture the impact of the respective group of homogeneous variables.

5.3. Analysis of Multiple Regression

5.3.1. Regression results taking Dividend Rate as the dependent variable (Table 14)

Regression results taking Dividend Rate as the dependent variable has shown healthy R^2 values in all the years of study. In fact the range is as high as 0.518 to 0.746. This R^2 value is to be regarded as very high in the context of magnitude of cross-section data. Such high R^2 value signifies that dividend rate is well explained by the explanatory variables taken under the study.

From the regression results it is seen that the impact of f1 (factor containing condensed impact of current year's earnings, past year's earnings and expected future earnings) has been positive all through and has been significant at 1% level in 7 out of 12 years of study. The impact of f4 (factor containing condensed impact of cash position of the company and cash flow during the year) has been negative all through and has been significant at 1% level for 6 years and at 5% level for 2 years of study. In case of tax ratio (TR), it has positive impact on dividend rate in all the years except one year. This positive impact is seen to be significant at 1% level in 6 years of study. The most significant impact on dividend rate of a particular year comes from the average dividend rates calculated on the basis of last three years' average (AVGDIV). The result in this case is significant in all the years and at 1% in 11 years of study. Regarding interest expenses (I) and capital expenditure (CEX), no definite impact is traced. Finally, in respect of share price behaviour (SP), its impact on dividend rate is found to be positive in all the years. This result is found to be significant at 1% level in 4 years and at 5% and 10% levels in one year each. The constant factor is also found to be positive and significant at 1% level in 5 years. But it is negative in 5 years out of which it is significant at either 1% or 5% level in 3 years.

It is interesting to note here that one-to-one relationship between dividend rate and earnings related variables remains the same even if we go through multiple regression. But the one-to-one relationship is reversed in case of cash related variables when we go through multiple regression.

5.3.2. Regression results taking Dividend Payout as the dependent variable (Table 15)

R^2 values in this respect is not high in all the years of study. In fact the range is as low as 0.002 to 0.091. This low R^2 value signifies that dividend payout is poorly explained by the explanatory variables taken under the study.

From the regression results it is seen that the impact of f1 has not been unidirectional (either positive or negative). The impact is not also significant barring one year. The impact of f4 has been, on an average, negative (8 years out of 12 years of study). Clear and significant result is not found in case of impact of tax ratio (TR), interest expenses (I) or capital expenditure (CEX). Regarding share price behaviour the result is generally positive but not significant even at 10% level.

The constant factor is also found to be positive in all the years of study. Again, it is significant at 1% level in 9 years, at 5% and 10% level only in one year each.

Table 14: Results of Multiple Regressions during 1993-94 to 2004-05 (Dependent Variable: DR)

DR	f1 Coeff. (t-value)	f2 Coeff. (t-value)	f3 Coeff. (t-value)	f4 Coeff. (t-value)	f5 Coeff. (t-value)	TR Coeff. (t-value)	AVGDP Coeff. (t-value)	I Coeff. (t-value)	SP Coeff. (t-value)	CEX Coeff. (t-value)	Constant Coeff. (t-value)
1993-94 (R^2 = 0.576)	29.603 (5.7667)	17.561*** (5.644)	12.989*** (5.109)	-35.335*** (-4.804)	-21.843*** (-4.696)	0.107*** (4.154)	0.677*** (17.937)	0.048* (1.672)	1.175*** (3.015)	N.A .	8.509*** (7.667)
1994-95 (R^2 = 0.637)	13.752*** (2.823)	9.700*** (2.834)	7.373*** (3.101)	-20.412*** (-2.612)	-8.707*** (-2.735)	0.097*** (3.308)	0.832*** (23.579)	0.031 (0.174)	0.782 (1.535)	0.097 (0.841)	7.711*** (6.405)
1995-96 (R^2 = 0.656)	13.030*** (3.066)	10.771** (2.417)	16.289*** (3.537)	-33.949*** (-3.264)	-13.118*** (-3.087)	0.148*** (4.929)	0.835*** (26.063)	0.027 (1.578)	0.053 (0.239)	0.009 (1.507)	6.270*** (5.640)
1996-97 (R^2 = 0.647)	14.681*** (2.965)	2.928** (2.418)	2.561*** (3.496)	-13.506*** (-2.769)	3.939* (1.878)	0.077*** (3.161)	0.829*** (26.761)	-0.008 (-0.681)	5.033*** (4.580)	0.002 (0.396)	2.802* (2.301)
1997-98 (R^2 =0.656)	15.126*** (3.531)	2.697** (2.332)	1.120 (1.335)	-13.331*** (-3.058)	3.331** (2.287)	0.122*** (3.200)	0.843*** (26.115)	0.002 (0.160)	7.922*** (6.381)	-0.004 (-0.924)	-2.440* (1.817)
1998-99 (R^2 = 0.668)	11.092** (2.444)	2.907** (2. 006)	-1.804 (-1.533)	-8.466* (-1.866)	-1.591 (-0.941)	0.154*** (3.066)	1.056*** (27.85)	0.008 (0.570)	1.811*** (3.703)	0.008 (1.308)	-3.512** (-2.557)
1999-00 (R^2 = 0.611)	10.904 (1.109)	3.696 (1.380)	1.910 (1.288)	-7.789 (-0.775)	0.316 (0.128)	0.060 (1.078)	1.347*** (26.392)	-0.013 (-0.540)	1.252** (2.018)	-0.013* (-1.755)	-3.772* (-1.924)
2000-01 (R^2 = 0.746)	42.017*** (5.452)	25.147*** (4.154)	17.716*** (5.856)	-41.991*** (-4.003)	28.905*** (8.534)	0.001 (0.031)	1.050** (32.067)	-0.001 (-0.277)	4.365* (1.742)	-0.017 (-3.003)	-2.351 (-1.025)
2001-02 (R^2 = 0.527)	38.620*** (2.702)	32.109** (2.517)	22.508** (2.208)	-49.207** (-2.048)	-19.020*** (-2.719)	-0.005 (-0.260)	1.165*** (21.118)	0.009 (0.205)	3.567 (0.844)	0.012** (2.223)	-3.272 (-0.704)
2002-03 (R^2 = 0.625)	21.985 (1.065)	9.017 (0.495)	10.455 (1.033)	-11.573 (-0.390)	2.448 (0.377)	0.002 (0.124)	1.010*** (24.279)	-0.033 (-0.738)	1.598 (0.669)	-0.015 (-0.795)	4.646 (1.326)
2003-04 (R^2 = 0.518)	107.70*** (3.000)	70.671*** (2.917)	39.268* (1.836)	-118.953** (-2.412)	47.982*** (2.846)	0.022 (0.043)	1.114*** (18.688)	-0.002 (-0.022)	0.140 (0.119)	0.016 (0.778)	11.217** (2.323)
2004-05 (R^2 = 0.767)	9.266 (0.704)	14.432 (0.664)	5.981 (0.427)	-8.773 (-0.308)	1.144 (0.152)	0.035 (1.180)	0.976*** (36.377)	-0.051 (-1.442)	0.853 (1.134)	-0.004 (-0.456)	9.832*** (3.338)

Figures in the bracket indicate the exact level of significance (p – values)

  ** Significant at the 0.01 level (2-tailed).

   * Significant at the 0.05 level (2-tailed).

Table 15: Results of Multiple Regressions during 1993-94 to 2004-05 (Dependent Variable: DP)

DP	f1 Coeff. (t-value)	f2 Coeff. (t-value)	f3 Coeff. (t-value)	f4 Coeff. (t-value)	f5 Coeff. (t-value)	TR Coeff. (t-value)	AVGDP Coeff. (t-value)	I Coeff. (t-value)	SP Coeff. (t-value)	CEX Coeff. (t-value)	Constant Coeff. (t-value)
1993-94 ($R^2 = 0.014$)	1.597 (0.113)	-0.08 (-0.009)	-2.699 (-0.386)	-6.344 (-0.309)	-7.305 (-0.564)	0.0409 (0.579)	-0.068[*] (-1.767)	0.049 (0.610)	0.722 (0.649)	N.A.	29.244[***] (9.414)
1994-95 ($R^2 = 0.022$)	-3.241 (-0.346)	-2.554 (-0.387)	-1.777 (-0.386)	1.187 (0.078)	-0.866 (-0.140)	-0.037 (-0.609)	0.095[**] (2.850)	0.028 (0.818)	0.249 (0.250)	0.009 (0.925)	23.811[***] (10.172)
1995-96 ($R^2 = 0.010$)	11.644 (0.391)	10.596 (0.399)	12.259 (0.380)	-26.673 (-0.405)	-9.718 (-0.326)	0.121 (0.581)	0.324[*] (1.936)	0.088 (0.727)	0.005 (0.003)	-0.006 (-0.155)	18.474[*] (2.174)
1996-97 ($R^2 = 0.038$)	5.721 (0.123)	1.387 (0.122)	-1.485 (-0.214)	-8.420 (-0.184)	6.252 (0.315)	-0.055 (-0.234)	0.732[***] (4.538)	0.033 (0.282)	1.411 (0.134)	-0.027 (-0.501)	17.318 (1.518)
1997-98 ($R^2 = 0.002$)	6.213 (0.193)	0.452 (0.053)	0.113 (0.017)	-5.817 (-0.175)	0.608 (0.055)	-0.091 (-0.333)	0.045 (0.582)	-0.033 (-0.435)	3.084 (0.340)	-0.004 (0.102)	32.087[***] (3.370)
1998-99 ($R^2 = 0.014$)	-28.467 (-0.518)	-9.108 (-0.520)	-3.561 (-0.241)	25.719 (0.466)	7.945 (0.385)	-0.503 (-0.869)	0.355[**] (2.465)	-0.029 (-0.174)	-2.959 (-0.505)	0.011 (0.126)	36.500[**] (2.321)
1999-00 ($R^2 = 0.019$)	-1.599 (-0.185)	-0.605 (-0.253)	-0.408 (-0.354)	1.917 (0.215)	-0.507 (-0.228)	-0.104[**] (-2.033)	0.022[**] (2.101)	-0.008 (-0.382)	-0.083 (-0.146)	-0.005 (-0.679)	24.098[***] (14.279)
2000-01 ($R^2 = 0.048$)	24.245[**] (2.348)	17.775[**] (2.200)	9.358[**] (2.300)	-31.826[**] (-2.258)	9.094[**] (2.004)	-0.001 (-0.339)	0.144[***] (4.494)	0.042[**] (1.999)	0.429 (0.126)	-0.005 (-0.717)	17.980[***] (5.818)
2001-02 ($R^2 = 0.078$)	15.587 (1.185)	12.937 (1.109)	11.032 (1.158)	-27.976 (-1.267)	-10.684[*] (-1.665)	0.002 (0.094)	0.366[***] (6.362)	0.039 (1.033)	-3.464 (-0.876)	0.007 (1.496)	18.587[***] (4.235)
2002-03 ($R^2 = 0.079$)	20.231 (1.1440)	17.399 (1.416)	10.160 (1.477)	-31.103 (-1.530)	5.255 (1.217)	-0.001 (-0.035)	0.136[***] (6.266)	0.057[*] (1.876)	0.820 (0.497)	0.001 (0.111)	16.377[***] (6.845)
2003-04 ($R^2 = 0.091$)	17.968 (1.076)	9.444 (0.888)	1.504 (0.266)	-34.042 (-1.611)	12.276[**] (1.706)	0.019 (0.934)	0.102[***] (4.753)	0.098[**] (2.535)	0.102 (0.207)	0.043[***] (5.117)	15.987[***] (8.147)
2004-05 ($R^2 = 0.084$)	-6.707 (-0.849)	-10.485 (-0.802)	-8.540 (-1.021)	12.827 (0.745)	-3.577 (-0.796)	0.011[***] (0.621)	0.128 (6.774)	0.007 (0.320)	0.057 (0.123)	0.005 (0.849)	18.429[***] (10.828)

Figures in the bracket indicate the exact level of significance (p – values)

** Significant at the 0.01 level (2-tailed).

 * Significant at the 0.05 level (2-tailed).

Table 16: Results of Multiple Regressions during 1993-94 to 2004-05 (Dependent Variable: DY)

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DY	f1 Coeff. (t-value)	f2 Coeff. (t-value)	f3 Coeff. (t-value)	f4 Coeff. (t-value)	f5 Coeff. (t-value)	TR Coeff. (t-value)	AV GDY Coeff. (t-value)	I Coeff. (t-value)	SP Coeff. (t-value)	CEX Coeff. (t-value)	Constant Coeff. (t-value)
1993-94 **(R^2 = 0.014)**	0.568 (0.284)	0.236 (0.193)	0.313 (0.315)	-0.903 (-0.311)	-0.083 (-0.045)	0.003 (0.360)	N.A .	-0.003 (-0.278)	-0.274 (-1.768)	N.A .	2.736*** (6.529)
1994-95 **(R^2 = 0.010)**	0.216 (0.096)	0.103 (0.065)	0.093 (0.084)	-1.098 (-0.300)	0.0166 (0.008)	0.019 (0.912)	N.A .	-0.001 (-0.215)	0.356 (-1.485)	0.001 (0.054)	2.629*** (5.068)
1995-96 **(R^2 = 0.015)**	0.366 (0.314)	0.206 (0.169)	0.621 (0.493)	-1.918 (-0.671)	-0.512 (-0.440)	-0.009 (-1.118)	N.A .	0.000 (0.065)	-0.074 (-1.201)	0.001 (1.122)	3.355*** (11.868)
1996-97 **(R^2 = 0.164)**	2.828 (1.281)	0.730 (1.425)	0.281 (1.073)	-3.175 (-1.221)	1.120 (1.012)	-0.007 (0.962)	0.406 (8.387)	-0.000 (-0.079)	-2.253 (-6.125)	0.000 (0.099)	4.247*** (11.471)
1997-98 **(R^2 = 0.340)**	1.832 (1.083)	0.323 (0.757)	0.336 (1.358)	-2.405 (-1.082)	0.741 (0.968)	0.052*** (5.252)	0.772 (14.654)	0.002 (0.525)	-1.416*** (-4.115)	0.000 (0.159)	1.850*** (4.608)
1998-99 **(R^2 = 0.395)**	0.627 (0.693)	0.044 (0.155)	-0.155 (-0.677)	-0.369 (-0.413)	0.040 (0.126)	0.047*** (5.098)	0.729*** (17.221)	0.002 (0.884)	-0.210** (-2.258)	-0.000 (-0.397)	0.411 (1.455)
1999-00 **(R^2 = 0.027)**	0.477 (0.103)	0.023 (0.018)	-0.046 (-0.062)	-0.229 (-0.048)	-0.227 (-0.191)	0.033 (1.238)	0.529*** (3.429)	-0.000 (-0.088)	-0.283 (-0.928)	-0.000 (-0.156)	1.847* (1.733)
2000-01 **(R^2 = 0.145)**	1.532 (0.992)	0.909 (0.753)	0.818 (1.345)	-1.420 (-0.674)	0.722 (1.065)	-0.000 (-0.511)	0.305*** (8.650)	-0.001 (-0.494)	0.655 (1.263)	0.000 (0.546)	2.556*** (5.694)
2001-02 **(R^2 = 0.218)**	3.294** (2.309)	2.189* (1.717)	1.439 (1.412)	-4.032* (-1.677)	-1.686** (-2.408)	-0.001 (-0.751)	0.118*** (10.214)	-0.002 (-0.492)	0.858* (1.978)	0.001*** (2.836)	1.718*** (3.786)
2002-03 **(R^2 = 0.360)**	-2.554 (1.243)	-2.687 (-1.495)	-0.849 (-0.842)	3.516 (1.185)	-0.878 (-1.390)	0.001 (1.043)	0.668*** (16.471)	-0.005 (-1.305)	-1.490*** (-5.546)	0.006*** (2.892)	2.979*** (8.593)
2003-04 **(R^2 = 0.336)**	2.022 (01.206)	1.005 (0.949)	0.258 (0.454)	-2.020 (-0.955)	-0.006 (-0.095)	0.002 (1.332)	0.419*** (15.99)	-0.006* (-1.805)	-0.024 (-0.487)	0.000 (0.597)	1.011*** (4.534)
2004-05 **(R^2 = 0.240)**	0.349 (0.432)	0.622 (0.464)	0.591 (0.690)	-0.430 (-0.244)	-0.181 (-0.395)	0.002 (1.105)	0.292 (12.072)	-0.029 (-1.300)	-0.109 (-2.327)	-0.001 (-1.963)	1.254*** (6.491)

Figures in the bracket indicate the exact level of significance (p – values)

  ** Significant at the 0.01 level (2-tailed).

  * Significant at the 0.05 level (2-tailed).

5.3.3. Regression results taking Dividend Yield as the dependent variable (Table 16)

R^2 values in this respect is not as high as found when DR is taken as dependent variable but at the same time it is not as low as is found when DP is taken as dependent variable. In fact the range is 0.014 to 0.395. This moderate R^2 value signifies that dividend yield is moderately explained by the explanatory variables taken under the study.

From the regression results it is seen that the impact of f1 is positive in all the years except one year. But the result is not significant barring one year. The impact of f4 has been negative but it is not significant. Clear and significant result is not found in case of impact of tax ratio (TR), interest expenses (I) or capital expenditure (CEX). Regarding share price behaviour (SP), the result is mixed indicating that there is no clear impact of this variable on dividend yield.

The constant factor is also found to be positive in all the years of study. Again, it is significant at 1% level in 9 years and at 10% level only in one year.

5.4. Limitations of the Study

(1) History of dividend payment could be better observed if more companies can be taken under the sample. Though the sample itself is not a small one yet considering the number of companies listed in BSE the sample size can be increased further.

(2) In the calculation of dividend yield because of non-availability of share price data calculation cannot be done in the initial years. This limitation may be overcome in future studies.

(3) The study attempts to explain dividend rate, dividend payout and dividend yield by the same set of explanatory variables. These three measures of dividend payment signify three different dimensions. Hence, different sets of explanatory variables may be used for the dependent variables, especially for dividend payout [as done by Dhameja (1978)].

5.5. Scope of Further Study

The purpose of this section is to point out some relevant areas of research in line of this work in which future researchers may take some interest. These are given as follows:

- The study has compartmentalized the companies from the viewpoint of age, sales and assets. Such compartmentalization could be done on different other grounds like industry classification, shareholding pattern, etc.
- Now with the increased availability of data, study with broader sample could be undertaken.
- Studies could be done on effect of dividend announcement on share price as done earlier in association with the other causal factors of share price.

6. SUMMARY AND CONCLUSION

In the first part of the study, trends in dividend payment have been studied. It is found that average dividend payment has been increased continuously. Company-wise variability in dividend payment has increased much faster. The number of companies not paying dividend as well as the companies paying dividend at lower rates have been increasing. Again, companies having higher dividend payment are also increasing. Thus when the companies are paying dividend they are paying it large. Real dividend growth rate is much lower than nominal dividend growth rate. Older companies, companies with higher sales volume and companies with larger asset base are found to have paid dividend on a higher scale.

In the second part of the study, impact of certain factors on the dividend payment is examined. From the examination, it is found that average dividend (for the past three years) has significant role to play in the determination of current year's dividend. Current year's earning, past year's earnings and expected future earnings taken together is also a good determining factor in the payment of dividend. Evidence is found that accumulation of cash balance and increase in positive cash flows prompt the company to pay lesser dividend. In such cases companies are expected to invest in new and profitable investment opportunities from their internal sources. Factors like, interest burden of a company, tax payment to be made by such a company, capital expenditure requirement of the company or share price behaviour associated with the company are found to have zero or very low impact on the payment of dividend.

In the study, incidence of dividend payment has been assessed from three different dimensions, namely, dividend as a percentage of nominal values of outstanding shares (dividend rate), dividend as a percentage of current earnings of the company (dividend payout) and dividend as percentage of market price of outstanding shares of the company (dividend yield). Study results show that dividend rate is more or less explained by a good number of interdependent variables used in the study. But the explanatory power of these variables comes down considerably in the matter of their relation with dividend payout or dividend yield.

In fine, it can be concluded that private sector Indian companies are basically characterized by stability in divided payment and no clear evidence is found in respect of information content of dividend.

7. REFERENCES

Aharony, J. & Swary, I., 1980. Quarterly Dividend and Earnings Announcements and Stockholders' Returns: An Empirical Analysis. *Journal of Finance*, 35, 1-12.

Asquith, P. and Mullins, D. W., 1986. Signalling with, Dividends, Stock Repurchases, and Equity Issues. *Financial Management,* 15, 27-44.

Baker, H. K., Mukherjee, T. K. & Paskelian, O. G., 2005. How Norwegian Managers View Dividend Policy. Available from www.fma.org/SLC/papers/NorwegiandividendPolicy-12-28-05-FMA.pdf. [Accessed 12 December 2007]

Bathala, C. & Rao, S., 2005. An Econometric Model and Empirical Analysis of Interrelationships between Debt, Dividends and Cost of Capital. *Conference Proceeding of International Conference on Research in Finance and Accounting*, IIM, Lucknow, India.

Benartzi, S., Michaely, R. & Thaler, R. H., 1997. Do Changes in Dividends Signal the Future or the Past? *Journal of Finance*, 52, 1007-1034.

Bhat, R. & Pandey, I. M., 1994. Dividend Decision: A Study of Managers' Perceptions. *Decision*, 21 (1 & 2), 67-86.

Brav, A., Graham, J. R., Harvey. C. R. & Michaely. R., 2005. Payout Policy in 21st Century. *Journal of Financial Economics*, 77, 483-527.

Brennan, M. J., 1970. Taxes, Market Valuation and Corporate Financial Policy. *National Tax Journal*, 23, 417-427.

Brittain, J., 1966. Corporate Dividend Policy. The Brookings Institution, Washington.

Collins, M. C., Saxena, A. K. & Wansley, J. W., 1996. The Role of Insider and Dividend Policy: A Comparison of Regulated and Unregulated Firms. *Journal of Financial and Strategic Decisions*, 9 (2), Summer, 1-9.

De Angelo, H., 1991. Payout Policy and Tax Deferral. *The Journal of Finance*, LXVI, (1), March, 357-368.

DeAngelo, H., DeAngelo, L. and Skinner, D. J., 1996. Reversal of Fortune: Dividend Signalling and the Disappearance of Sustained Earnings Growth. *Journal of Financial Economics*, 40, 341-371.

DeAngelo, H., DeAngelo, L. & Skinner, D. J., 2004. Are dividends disappearing? Dividend concentration and the consolidation of earnings. *Journal of Financial Economics*, 72, 425-456.

Dhemeja, N. L., 1976. Corporate Dividend Behaviour with Special Emphasis on Growth and Controlled Companies. *Unpublished Doctoral Dissertation*, IIM, Ahmedabad, India.

Easterbrook, F. H., 1984. Two Agency Costs Explanations of Dividends. *American Economic Review,* 74, 650-659.

Fudenberg, D. and Tirole, J. (1995): Game Theory*,* Massachusetts Institute of Technology.

Gordon, M. J., 1962. Optimal Investments and Financing Policy. *Review of Economics and Statistics*, 37-51.

Grullon, G., Michaely, R. & Swaminathan, B., 2002. Are dividend changes a sign of firm maturity? *Journal of Business*, 75, 387–424.

Gugler, K., 2003. Corporate governance, dividend payout policy, and the interrelation between dividends, R&D, and capital investment. *Journal of Banking and Finance*, 27, 1297-1321.

Gupta, A., 1999. Dividend Policy in MNC-owned Indian Subsidiaries (A Post-1994 Study with Reference to Selected Companies. *Indian Accounting Review*, 3 (1).

Jahur, M. S. and Naznee, S., 2005. Determinants of Dividend Policy – An Empirical Study of Some Selected Corporate Sector in Bangladesh. *The Cost and Management*, 33(6), 58-68.

Jensen, M. C., and William H. M., 1976. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3, 305-360.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. & Vishney, R. W., 1999. Agency Problems and Dividend Policies Around the World. *Journal of Political Economy*, 106, 1113-1155.

Lintner, J., 1956. Distribution of Incomes of Corporations. *American Economic Review*, 46, 97-133.

Miller, M. H. & Modigliani, F., 1961. Dividend Policy, Growth and Valuation of Shares. *The Journal of Business*, XXIV, 411-433.

Oza, H. S., 2004. Dividend Decision: A Managerial Approach [A Study of Selected Enterprises]. *Executive Chartered Secretary*, November, 40-46.

Walter, J. E., 1963. Dividend Policy: Its Influence on the Value of the Enterprise. *The Journal of Finance*, May, 280-291.