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The Ownership and Industry Effects of Corporate Dividend Policy in India, 1961-2007

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Abstract

The cross-sectional trends in dividends are investigated at an aggregate level of ownership (*i.e.* closely/largely held and regulated firms), and at disaggregate level across 20 industries to examine how Indian Private Corporate Sector appropriated its profits over 1961-2007 periods. Alternatively it is examined whether internal funds are a significant source of finance and the dynamics of relation between dividends relative to earnings across type of companies and industries. Indian corporate sector pays relatively more equity dividends than preference dividends. Other things being equal, the probability of paying cash dividends decreases with share holder concentration and the regulated companies pay relatively larger dividends. Dividend payouts for all type of firms decline, and such tendency is more pronounced after liberalization periods indicating a greater choice of internal financing through retained earnings. The analysis of inter-corporate and inter-industry variations reveals that dividends interplays differently with exogenous factors.

Keywords: Dividend Policy, Indian Private Corporate Sector, Public and Private Limited Companies, Regulated Industry, Ownership Effect, Industry Cross-section.

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The dividend policy decision is regarded to be complex having implications for economy (macro level) and firm (micro level), as well. At the macro level it helps in formulating appropriate policies for achieving the national aggregate savings and sectoral distribution of those savings keeping in view the priorities of national credit plans as per Bhole (1980) and at the firm level, are crucial in taking investment and financial decisions according to Aurebach (1982), Mahapatra (1996), and Benito and Young (2001). The relationship between type of ownership and nature of industry the firm represents sector membership with their capital structures and dividend policies have received considerable attention in literature. The type of industry and sector in which a firm operates is likely to have a significant effect on its financing and dividend behavior. Harris and Raviv (1991) state that firms in a given industry have similar proportions of individual assets and liabilities while studies by Bowen *et. al.*, (1982), Bradley *et. al.*, (1984) and Kester (1986) find that specific industries have common financial characteristics and are relatively stable over time. Richardson *et. al.*, (2002) on the other hand confirm that the industry affiliation is a strong determinant of corporate cash holdings, acquisitions, R&D, capital expenditures, leverage, dividends and share repurchase policy.

The prior research on relationship between industry and dividend policies are mostly focused on dividend behavior of public limited and non-financial corporations with reference to developed capital markets alone. Similar work analyzing variation of dividends across industry groups and over time in the emerging market context is rare. Present study is an attempt to fill the gap and investigates empirically cross-sectional trends and specific shifts in corporate dividend patterns in India over the last four decades. The evidence and plausible explanations of changing dividend behavior and their earnings at an aggregate ownership; *i.e.* closely / largely held and regulated firms, and at disaggregate (PLCs across 20 industries) level are presented. Specifically it is looked at the extent to which a firm's observed dividend policy is similar to others across ownership types (Public Limited, Private Limited and Finance / Investment Companies in India, hereafter referred to as PLCs, PVLCs and FINCs respectively). The behaviors of PLCs have been subject to further analysis by classifying them into 20 industries to identify possible sources of variations. The focus is on providing

extensive cross-sectional description on how Indian corporate sector firms in general have appropriated their profits over the period 1960-61 through 2006-2007 periods. Alternatively it is examined whether internal funds are a significant source of finance. Also a look is taken at the relationship between dividend payments to equity and preference share holders relative to earnings across firms. A cross-sectional time-trend analysis is conducted to specifically answer the following questions; Does the trend in cash dividend payments differ across Public, Private and Investment companies? What are the variations over period of time and specifically after the post-reform periods? Which corporate type (industry) has higher payouts and earnings? Whether they retain their relative position over time and does the analysis of the dividend payment support the pecking order and the dividend smoothing hypothesis?

This remainder of the chapter is organized as follows. Section 1 describes the data and specifies time-trend models. Results and interpretations of the analysis are presented in section 2 whereas, section 3 concludes.

1. Data and Model Specifications

For purpose of analysis the data from Reserve Bank of India (RBI), emerging from two different dataset compilations namely the published data compendium by on the ‘Private Corporate Business Sector in India - Selected Financial Statistics from 1950-51 to 1997-98 (All Industries)’, and published compendium on ‘Selected Financial Statistics on Public Limited Companies 1974-75 to 1999-2007 (Selected Industries)’ consisting of industry level data respectively. In order to determine the differences in cash dividend and earnings behavior of the (PLCs), private limited (PVLCs) and finance companies (FINCs), we use the former source consisting data from 1950-51 to 1997-98 and various issues of the RBI bulletins to cover data for the balance periods on above three sub-sectors, at an all industry level. The average number of firms in sample, along with study year from which they are drawn is appended in table 1 (in Appendix). The cash dividend behavior relating PLCs, PVLCs, and the FINCs for all firms in dataset and the time period under consideration is forty-three years, 1961 through 2007 whereas the industry effects relating PLCs are analyzed for all the firms in the dataset for twenty-five years, 1976 through 2007. We divide the entire time-period into pre-reform period: 1961-1992 and 1976-1992 and the post- reform period 1993-2007 and 1993-2007 respectively, to capture the effect of policy break on the dividend decisions of firms. For the purpose of analysis of trends we consider only cash dividends (total dividends).

The variable size of earnings (SZEAR) is defined as total net profit after taxes after accounting for preference dividends is used as the earnings measure for equity dividends whereas profits after taxes (PAT) is the earnings measure for preference dividends. Both the earnings measures represent the profits available for appropriation to the share holders and preference holders respectively. Equity dividend payout ratio (EDPOR) and preference dividend payout ratio (PDPOR) is therefore given by total equity dividend (EQDIV) and preference dividend (PRFDIV) at the end of the year divided by SZEAR and PAT respectively. The equity return (EQRET) and preference return (PRFRET) are a function of respective dividends by the book value of the respective share capital, where the book value of shares includes bonus shares and shares issued for consideration other than cash.

The descriptive statistical tools are primarily used for analyzing the cross-sectional data. Annual sub-period averages across every five year period are computed to depict their changing behavior of dividends in the pre/post-reform and the full period. In order to compare the sub-group means across the cross section and over time we use non-parametric techniques for they do not assume equal variances. The Shapiro-Wilk (*S-W*) and Levene's Robust tests are calculated to detect normality and homogeneity of variance respectively. *S-W* test hypothesizes that the data are normally distributed, and a low significance value indicate that the distribution of the data differs significantly from a normal. The Levene statistic tests hypothesis of equality of variance of the dependent variable for groups defined by categorical factor variables and is an alternative to the Bartlett test that is less sensitive to departures from normality. This tests the null hypothesis of equality of variance of the dependent variable for groups defined by categorical factor variables. In order to test whether two independent samples (groups) come from the same population, Kolmogorov-Smirnov test (*K-S statistic*) is used. The *K-S* test is based on the maximum absolute difference between the observed cumulative distribution functions for both samples. When this difference is significantly large, the two distributions are considered to be different. The Kruskal Wallis-H (*KW-H*) test for several independent samples is used to detect the differences in distribution location, is an extension of Mann-Whitney *U* test and a nonparametric alternative to one-way *ANOVA*. In the *KW-H* test, the scores are ranked without regard to group membership. If the groups do not differ, the mean ranks will be similar to each other. The instantaneous growth rate, compounded annual growth rate (CAGR) and the linear trend are computed using semi-log (*log-lin*) and Linear trend model respectively for the full time period, pre and post-

liberalization period are computed. The instantaneous (constant) growth and the CAGR's is given as follows.

$$\ln Y_t = \beta_1 + \beta_2 t + u_t \dots\dots\dots(1)$$

From equation 1 where the X variable is time, we compute the constant percentage over the full period, $(100 \cdot \beta_2)$ *rate of growth* (if $\beta_2 > 0$) or *rate of decay* (if $\beta_2 < 0$) in the variable Y and the CAGR, over time is computed as

$$= (\ln \beta_2 - 1) \cdot 1 \dots\dots\dots(2)$$

To test for structural stability of regression model break due liberalization, we use simplest form of dummies to distinguish the pre-reform (pre-1992) and the post-reform (post 1993) period. This equation using the dummy variable approach unlike the Chow test pinpoints the source(s) of difference the intercept or the slope, or both in the two periods as under.

$$\ln Y_i = \alpha_1 + \alpha_2 D_i + \beta_1 X_i + \beta_2 (D_i X_i) + u_i \dots\dots\dots(3)$$

Where X_i and Y_i records time and the independent variable under study respectively. D_i equals one for observations in the pre-reform period and zero for observations in the post reform period. α_2 is the differential intercept and β_2 is the differential slope coefficient indicating how much the slope coefficient of the first period differs from the slope coefficient of the second period. The introduction of the dummy variable D in the multiplicative form (D multiplied by X) enables to differentiate between slope coefficients of two periods.

Assuming that $E(u_i) = 0$, we obtain

$$E(Y_i | D_i=1, X_i) = (\alpha_1 + \alpha_2) + (\beta_1 + \beta_2) X_i \dots\dots\dots(4)$$

$$E(Y_i | D_i=0, X_i) = \alpha_1 + \beta_1 X_i \dots\dots\dots(5)$$

which are, respectively, the mean functions for pre-reform and post-reform periods and can be used to test the following hypothesis: If the differential intercept coefficient α_2 is significant, but differential slope coefficient β_2 is statistically insignificant we may at least not reject the hypothesis that the two regressions have the same slope (the two regressions differ only in the intercepts) that is, two regressions are parallel. If both, the differential intercept α_2 and the differential slope coefficient β_2 is statistically significant, indicates that the two regressions are completely different, dissimilar. If differential intercept α_2 and differential slope coefficient β_2 are insignificant, then both regressions are coincident and if the differential intercept coefficient α_2 is statistically insignificant and β_2 is statistically

significant, we may accept the hypothesis that the two regressions have the same intercept that is the two regressions are concurrent.

The time trend for the full period and for the pre-reform and the post-reform period using dummies are computed using the following linear trend models respectively.

$$Y_i = \beta_1 + \beta_2 t + u_i \dots\dots\dots(6)$$

$$Y_i = \alpha_1 + \alpha_2 D_{2i} + \beta_2 t + u_i \dots\dots\dots(7)$$

Where t is variable X representing the time period and Y is the variable under study. D_i equals 1 to represent the pre-liberalization period whereas equals 0 to represent the post-liberalization period. Assuming that $E(u_i) = 0$, we obtain the following mean functions for the two periods as under

$$E(Y_i|X_i, D_i=1) = (\alpha_1 + \alpha_2) + \beta_1 X_i \dots\dots\dots(8)$$

$$E(Y_i|X_i, D_i=0) = \alpha_1 + \beta_1 X_i \dots\dots\dots(9)$$

2. Results and Interpretations

The results are presented in two parts, the Ownership and Regulated Industry effects and secondly the Inter-and Intra-Industry effects. The former follows first.

2.1 Ownership and Regulated Industry Effect

The descriptive statistics across the PLCs, the PVLCs and FINCs relating the dividend returns and dividend payout ratio over time are presented in table 2 and 3 respectively. For all periods the average equity dividend return with a range of 7-14 % earned by equity holders is twice that of preference holders, across all type of companies. However the variability in case of preference return is lower in all quinquenniums indicating relatively higher stability compared to equity return. Share holders of PLCs gained higher returns in post-reform periods compared to the former. Across all type of companies, the equity and the preference dividend returns in the post-reform period has declined compared to pre-reform periods. For post-reform period the equity return for PLCs increase significantly by 7%. The equity and preference return of PLCs followed by that of PVLCs and the highly regulated, FINCs are largest across both sub-periods and also in the full period under study.

The comparative descriptive statistics of dividend payout percentages on similar lines presented in table 3 reveal interesting facts. Over other two types of companies, FINCs pay relatively a larger proportion of their respective earnings (75 and 6% of SZEAR and PAT respectively) to their equity and preference holders in the entire period. This tendency remains

unchanged through the pre-reform and post-reform period as well. A positive effect aftermath the structural break period is noted in FINCs payout decisions, as they significantly increase their equity payout percentage by 145 %, from 55 to 135 % in the preceding sub-period. Broadly in sub-period 1993-2007, conservative dividend payout policy is followed by the Indian joint stock companies. The PLCs and the PVLCs following a conservative payout policy indicate a greater choice of internal financing through retained earnings, thereby significantly reducing their equity and preference dividend payouts after reform periods. Such conservatism is more pronounced in the PVLCs in relation to PLCs as their equity payout percentages decrease by 44 % compared to 20 %. Thus though Indian joint stock companies (across closely-held as well as the widely-held firms) demonstrate the tendency of decreasing dividends and such pattern is distinct in case of closely-held firms than their widely-held counterparts. Specifically, the results suggest retention ratios of public and the private limited companies have significantly improved aftermath reforms. Thus it may be safely said that the private corporate sector has become adequately self reliant in respect of financing its own need after reform periods, suggesting the tenets of the pecking order. Contrary, the regulated firms (finance companies) demonstrate a relatively poor corporate savings performance in India.

The results based on table 2 and 3 may hide substantial information, for inter-period variations within 1993-2007 periods are not accounted for. The absolute average rupee value of earnings available to equity and preference holder using five year data each commencing 1961 are therefore analyze. Table 4 reports that the SZEAR and PAT increase substantially in all quinquenniums. It is also evident that the average rupee values of equity dividend paid by the Indian joint stock companies' increase consistently in each successive quinquenniums, and preference dividends widely vary during the 1961-2007 period. Across all the three types of companies, the PLCs and the PVLCs are found to make relatively large and (low) aggregate nominal rupee equity dividend payments in full period, whereas on the preference front larger absolute values of rupee dividends are paid by the FINCs, both in the post-1991 and the full period. The impressive average earning by PVLCs by 277% in last three year period compared to preceding quinquennium is responsible for the aggregate averages for all type of companies to exceed preceding quinquennium averages of total aggregate earnings of Indian joint stock companies. But the absolute increase in the total average earnings of all types of companies put together don't translate in form of higher dividend payouts because of decrease in equity dividend payout percentage by FINCs by 33% to 133%, from 200% in the

last sub-period compared to the preceding. Thus the aggregate equity payout percentage for all three types of companies in the last sub-period fall by 12% compared to the preceding quinquennium. This decrease in equity payout percent is contrary to the fact that the individual average payout ratios of PLCs and PVLCs rise from 39 to 54% and 24 to 44% in the sub-period 2001-2007 compared to that of 1996-2007 respectively. Thus it seems that there are signs that tendency of decreasing dividends is reversing in case of PLCs and PVLCs in recent periods, specifically in post-2007 periods.

The instantaneous (constant) growth, the compound growth and the linear trend through the pre-reform, post-reform, and the full period (1961-2007) are presented in table 5. The instantaneous growth rate measures the growth in a given variable at a point in time, CAGR over a period of time, whereas the linear trend model measures the sustained absolute upward or downward movement in the behavior of a given variable. The annual growth rates of the dividend return on shares (equity and preference) register a downward trend across all types of companies in the post-reform period. Over the full period, the CAGR of rupee value of equity dividend paid by FINCs larger (16%) than that of PLCs and PVLCs (12 and 6%), and thus ranks highest in relative ranking in table 6. The CAGR of the rupee value of equity dividends paid PVLCs significantly increase from 0.70 percentage points to 35% in the post-reform period. Adopting the technique of dummy variable using a single regression model over the Chow test we test whether the mean parameter of the dividend function has changed in the two periods. We find that the differential intercept and the differential slope coefficient are both statistically significant and may accept the hypothesis that the regressions for both the periods are completely different (Dissimilar). Similarly, preference dividend payment of the PVLCs also record a highest annual growth rate of 43% in the post-reform period compared to the lowest growth rate it had in the pre-reform period. The growth rates of the annual equity and preference dividend payout percentage growth rates appended in table 4 measured in constant and compounded terms are negative (indicating a rate of decay) in the full period across all types of companies owing to the larger negative and statistical significant growth coefficients in the pre-reform period. The same dividend payout coefficients improve significantly in the post-reform period. FINCs for example, register the largest relative CAGR in case of equity and preference dividend payout percentages compared to other two types of companies, by recording an impressive 22 and 62% growth after the structural break period from the rate of decay with 4 and 10% before the break, respectively.

The relatively changing ranks across type of companies having highest (lowest) dividend payments and dividend return in the same period are comparatively analyzed in table 6. The relative ranking show that PLCs continue to retain its position as highest dividend payer and also yield the highest dividend return on equity and preference share across both sub-periods (pre and post-reform period) and the entire period under consideration, but when relatively ranked from highest to lowest across type of companies in terms of CAGR of equity dividend payments, loose its rank to PVLCs and FINCs in the post-reform and the full period respectively. The same table also reports relative ranks based on earnings available to equity and preference holders and their dividend payout ratios across types of companies. It is observed that the PLCs are relatively more profitable than the PVLCs and FINCs, but FINCs continue to have larger average dividend payout percentages (equity and preference) in pre, post-reform and the entire period with 78 and 6%, compared to 50 and 3% and 45 and 1.3% each for PLCs and PVLCs respectively.

The results of Kruskal-Wallis (*K-W*) statistic in table 7 indicate that mostly dividend related measures of Indian joint stock companies significantly differ (decrease) in the post-reform periods compared to its preceding periods as indicated by the above mentioned findings. All the results support general understanding that interest alignment between different classes of owners influences corporate dividend policy in India. The evidence that emerges from above discussion is in tandem with the fact that the dividend payments are higher where there are dispersed outsiders with little leverage over the insiders as long as the firm is in continuous need of equity capital and thus forces to them to return to the capital markets. In general, firms with sizeable “outside” financing such as common equity are subject to agency costs of managerial discretion and with no dominating share holders, managers have incentives to use cash dividends to convey information about the firms’ future performance.

The incentive to pay cash dividends declines as the shareholder concentration declines and supports Agency Cost hypothesis which begun with the work of Donaldson (1961, 1963) and Easterbrook (1984), suggesting dividends can help reduce the agency costs associated with the separation of ownership and control which occurs in companies. When the ownership of the company is highly diversified, individual investors have few incentives to control the actions of managers and if they do so, results in high cost for the company. In such a framework outsiders may prefer a high dividend policy with a view, better a dividend today than a highly uncertain capital gain from questionable future investment. La Porta *et. al.*,

(2000) show that a closely held firm does not need to increase its dividend or take on more debt to signal to insiders the higher quality of its earnings. In a similar study Yurtoglu (2000) describes the main characteristics of ownership structure of the Turkish companies listed on the Istanbul stock exchange and show that concentrated ownership and pyramidal structures have a negative effect on performance. Kalay and Michaely (2000, 2002) argue that asymmetric information and agency considerations are likely to be more severe in public rather than private firms. For a privately held firm it would be easier to transmit information through other vehicles, and easier to monitor managers, to prevent them from excessive spending. Hence the consequences of reducing dividends may be more severe for public firms and no difference is expected in case of financial firms. Public firms consequently are reluctant to reduce dividends. For China, Lee and Xiao (2003) find share holding concentration is positively associated with cash dividend paying decision, firms with high and intermediate share holding concentration have about equal tendency of paying cash dividends, but firms with low share holding concentration have much lower tendency of paying cash dividends. The results for regulated industry are also in tandem with literature. It is argued that the regulated firms give managers the incentive to pay higher dividends to force them to raise funds more frequently in the capital market. This is probably since regulated firms are more matured than the unregulated firms; managers have no much freedom to make them grow as significant difference in percentage of common stock held by insiders. Studies like that of Smith (1986) hypothesize that the regulated firms have a restricted growth prospects, restricted geography, product market, earnings *etc.* and the regulators act as delegated monitors of firm behavior, reducing considerably the wasteful investments engagements by managers or private consumption of the available FCF leading to more dividend distribution. Saxena (1999) finds that the mean DPRs for the regulated firms are larger than that of unregulated firms as these firms are less risky, have lower growth rates, much few insiders' holdings in its common stock and fewer investment opportunities. Regulation in case of such firms effectively reduces the possibility for corporate under-investment simply by transferring much of management's discretion over investment's decision to regulatory authorities. Similarly, Barclay *et. al.*, (1995) notes that the regulated industries have higher leverage ratios and pay higher dividends than unregulated corporations whereas, Collins *et. al.*, (1996) also find that the payout ratios for the financial firms and utilities are significantly larger than that for unregulated sample firms.

2.2 Inter and Intra-Industry Effects

The annual sub-period averages of amount of nominal rupee dividend distributed and dividend percentage return on the book value of shares (both equity and preference) across 20 industries over 1976 through 2007 period are appended in table 8. Across the industry cross-section, annual averages of nominal rupee value of dividend are calculated for every five year period commencing 1976. The total rupee of average equity and preference dividends in first sub-period (1976-1980) is the lowest, pick up successively to record highest payments in last quinquenniums (1996-2007) amounting to Rs.2,97,729.79 and Rs.7066.77 lakh, but quinquenniums 1991-1995 and 1996-2007 register a higher growth compared to other sub-periods respectively. This evidence give a clear impression that the in absolute terms, the dividend payments effected by select industries mark a significant rise in recent years. The behavior of equity and preference return however, is contrary to the pattern we notice above. The total average value of the equity and preference return is at its highest during the period 1981-85, at 19.20 and 8.34% and decreases to 16.39 and 6.59% till the last (1996-2007) quinquenniums respectively.

The annual sub-period averages of the amount of nominal rupee earnings available for repatriation as dividends and dividend payout percentages for 1976 through 2007 period are appended in table 9. The average nominal rupee earning measures of the select 20 industries available to equity holders and preference holders (SZEAR and PAT) consistently increase from the first quinquennium (1991-1995) to their highest levels in 1996-2007, and higher growth in the level of earnings is witnessed in sub-period 1991-95. Except for Jute, and Foundries, all industries record a massive spurt in their relative earnings over the time variable. The Jute industry faces the problem of increasing un-competitiveness, and SZEAR and PAT variable measuring earnings attributable to the equity and preference holders carry a negative sign through all quinquenniums. The firms affiliated to foundries segment report losses in the last quinquennium. Both these industries also remain as lone exceptions reporting aggregate losses in the post-reform period compared to former period. The average equity dividend payout ratios depict a constantly decreasing tendency over the entire period except for the third sub-period, 1986-1990. All firms in the select industries sample have significantly higher payouts exceeding 100 percentages in the quinquenniums 1979-80 and 1986-90 respectively and register a decline up to 46.83% in the last sub-period, 1996-2007. In the entire period, Cement and Jute industry record the largest and the lowest dividend payout

ratio of 296 and 3.86% respectively whereas; the Shipping and the Jute industry have the largest (170%) and the lowest (8.45%) payout in the pre and post-reform periods respectively.

The annual percentage growth rates of dividend, earnings, return and payout percentages across industry classification are presented in table 10, whereas appended tables 11 and 12 summarize the changing ranks based on absolute values and CAGR of annual nominal rupee dividends paid and dividend return on shares. The Basic chemical industry by nature pays the highest rupee value of equity and preference dividend in both the pre and post-reform and over the entire period 1976-2007, as well. In fact in the sub-period 1995-2007, this industry pays 17.47 and 15.12% of the total equity and preference dividends, paid by all select industries put together. Other capital intensive industries like that of Motor vehicles, Machinery, and Fertilizers follow in a decreasing order, larger equity dividend payments and more or less maintain similar ranks in the pre, post-reform and the full period. Table 11 and 12 also highlights the significant inter-period differences in the composition in the ranks of highest and lowest payers across industry classifications. The traditional industries producing consumer goods like Cotton, Tea and Rubber, lose their ranks as the second largest, sixth and tenth largest equity dividend payers in the pre-reform period to twelfth, eleventh and fifteenth position in the post-reform period respectively whereas, the firms affiliated to large sized and capital intensive industries like that of Electricity and Foundries significantly improve their relative positions as highest dividend payers, from fifteenth and fourteenth highest ranks in the pre-reform period to ninth and eighth rank as the highest dividend payers in post-reform period respectively. The Fertilizer, Electricity, Silk and Cotton industry in the order follow the basic chemical as the largest preference dividend payers. In the full period under study, table 12 reveals that industries like that of Construction, Rubber and Medicine reporting high compounded annual growth in their respective earnings follow low dividend payout ratios whereas those in Jute, and Shipping sector that are lowest in the order of growth in their earnings have larger dividend payout ratios indicating dividend payments are negative associated with their growth in line with the evidence of Friend and Puckett (1964).

The firms affiliated to industries involved in Production / Distribution of consumer goods like that Sugar, Paper and the Trading industries besides Jute and Construction are relatively least equity dividend payers. On the preference dividend front, the Tea, Jute, Construction, Shipping and Motor industry in an order, relatively pay the lowest. The Basic Chemical industry continues to report relatively larger rupee value of earnings attributable to

both, equity and preference shareholders in the pre and post reform, and the entire period 1976-2007 as well. In the sub-period 1995-2007, the Chemical Industry earns an average of 16.93% of the total average earnings put together by all select industries. This explains the tendency to pay larger dividends. Other large and capital-Intensive industries like that of Motor vehicles, Fertilizers, Medicines and Other machineries follow the Basic Chemical industry in that decreasing order and more or less maintain similar ranks in the pre, post-reform and the full period. The size of earnings, as a measure attributable to equity holders of the capital intensive industries like Cement and Fertilizers significantly improve their ranks as highest relative earners as the ninth and third largest in the post-reform period from seventeenth and ninth largest earning position in the pre-reform period. Whereas, the traditional industries like Foundries and Tea loose their importance as they drop their position as thirteenth and fourth largest earners in the pre-reform period to nineteenth and tenth largest position in the post- reform period respectively.

Significant inter-industry differences in the composition in the ranks with regards to highest and lowest payout percentages are evident. It is experienced that the traditional industries have higher payouts in the entire period. Firms affiliated to industries like Cotton, Cement, Ferrous/non-ferrous metal, Rubber, paper, Silk and Construction in a decreasing order top the equity payout percentage list with an average payout range of 82 to 200% in the entire period; largely attributable to the high payouts made in the pre-reform periods. However, drastic variations in the pre and post-reform period are experienced by the Cement, Construction, Paper, Rubber and Silk industries, for they significantly drop their payout percentages in the post-reform period inspite of average improvements in their earnings in the same period. The Cement industry for instance, enjoying the position as the first largest payout industry, relative to all select industries considerably decreases its payout ratio in the post-1991 periods to become an industry with 16th largest payout in the post-reform period despite improving its earnings from relatively 17th to 9th largest earner position.

On the other hand industries like Cotton, Metal and Other machinery pay relatively larger proportion of their earnings as dividends in the post-reform period, inspite of relative fall in their earnings and thus their payouts smooth earnings. Firms belonging to Jute, Electricity, Trading, Motor and Medicines in a decreasing order, pay relatively smaller portion of their earnings as equity dividends. The behavior of Jute industry can be directly correlated with the fragile earnings they report. The Jute industry which stands at the bottom end of the earnings list reporting significant increase in losses is also at the bottom end of the

list of industries with lowest dividend payout percentages. The dividend payouts of industries like basic chemicals, motor, medicines, other machinery and electricity generation / supply don't follow their respective earnings, for they in nature highly capital intensive and have higher investment avenues to and growth opportunities, thereby displaying their preference towards internally financing their growth requirements.

In the entire period, the shareholders belonging to Silk and Jute industry earn highest and the lowest average dividend return of 45 and 2.42% and 16 and 3.67% on equity and preference shares respectively. Drastic variations in the pre and post-reform period with regards to dividend return are experienced by share holders of Silk, Tea and Rubber industries. The average percentage equity dividend return drops by 46%, from 64 to 17, whereas it increases by 20% from 20.75 to 40.77% in case of silk and tea industry. On the preference front the shareholders of Silk industry shed its average return by 15% whereas of the Rubber industry gain by 11% in the post 1991 in relation to the pre-1991 periods.

In post-reform periods compared to the former, the *K-W* statistics reported in table 13 indicates that decrease in means of various dividend related variables for the select industries under study are sizeable and significant. Overall results imply the changing (decreasing) pattern of dividend behaviour across the inter and intra-industry cross-section during the study periods. The present study on ownership and industry effects of dividends suggests that the aggregate data at corporate sector level provide a useful and interesting perspective on the sectoral differences in dividend policies and their relationship with other earning variables, but masks many of the industry-specific behavior dominating dividend decisions. To capture such effects, we look at the dividend behavior of individual industries in which the firm operates. It is found that the dividend policies followed by the regulated industry are significantly larger than the un-regulated private and public firms. Further, the dividend payments are higher where there are dispersed outsiders and the incentive to pay cash dividends therefore declines as the shareholder concentration declines. Dividend policies of Indian firms respond to informational asymmetries, agency costs, and the institutional and contracting environment it is in. Firms systematically differ across industry class so far as their earnings management is concerned. We find that industries with higher reported compounded growth in the earnings pay fewer dividends, firms in capital intensive industry pay more while those in the production / distribution sector pay fewer dividends. Though differences in firm size contributes to the existing variations in nominal dividend and dividend related ratios across industry-classes, to some extent it is the stage of maturity or more

precisely the differences in the corporate type, the industry size, their technology / labour orientation, need for cash, fragility of earnings and the general economic trends specific to industry-class contributes to the existing variation in dividend policies, but nature of the industry seems to dominate largely. The overall evidence also signals that there exists some linkage between the product and the capital market.

3. Summary and Findings

The Indian corporate sector pays relatively more equity dividends than preference dividends, and the average equity dividend return earned by equity holders is twice that of preference holders. Other things being equal, the probability of paying cash dividends decreases with the share holder concentration in India. Across all the three types of companies, the widely-held firms pay the largest and the closely-held firms relatively lower aggregate nominal rupee equity dividend payments in the pre/post- reform and the full period. Private companies (closely held) are characterized by higher shareholding concentration compared to public limited companies, and other things being equal the probability of paying cash dividends, dividend returns and payout ratio decreases with shareholder concentration.

Most studies exclude regulated companies intentionally with a notion that their regulatory status may affect their dividend policies. We include financial companies as a proxy to study regulated industry effect and find that they pay relatively a larger proportion of their respective earnings to their equity and preference holders in the entire period. This tendency remains unchanged through the pre-reform and the post-reform period, as well and is consistent with the limited evidence we review. The absolute average rupee earnings available to equity holders and to preference-holders increase commencing 1961-2007 and earnings drastically increase in the post 1991 sub-period and this growth and clearly translate in higher growth of absolute dividends by private limited companies and finance companies in the post-reform and the full period respectively. The dividend policies follow wider patterns over time. The average dividend payout ratios for all type of companies decline in case of closely held as well as the widely held firms as well but fall is more pronounced in case of closely held firms, after the liberalization period indicating a greater choice of internal financing through retained earnings.

The Chemical Industry in India precedes other industries in terms of nominal rupee value of reported size of earnings and dividend payments. Other capital-intensive industries like that of Motor vehicles, Machinery, Silk and Fertilizers follow in a decreasing order,

larger equity dividend payments and more or less maintain similar ranks in the pre, post-reform and the full period. The firms in production/distribution of consumer goods like that of jute, sugar construction, paper and the trading industries are relatively bad equity dividend payers. In the entire period, the shareholders belonging to silk and (jute industry) earn highest and the (lowest) average dividend return on equity and preference shares respectively.

The dividend payment across/within industry exhibits significant variations over the sub-periods. The traditional industries like Cotton, Tea and Rubber pay relatively less nominal rupee value of equity dividend in the post-reform period whereas the firms affiliated to capital intensive industries like that of Electricity and Foundries significantly improve their relative positions as larger dividend payers in the post-reform period. Drastic variations in the pre and post-reform period with regards to dividend return are experienced by share holders of silk, tea and rubber industries. Incidentally, the industries making to the top the list of highest earners are eventually the largest payers. Large industries like cement and fertilizers significantly improve their ranks as highest relative earners in post-reform whereas, traditional industries like Foundries and Tea lose their importance as they drop their position as largest earners. The evidence in respect of dividend smoothening behavior by industry cross-section is mixed. The dividend payouts of industries like Basic Chemicals, Motor, Medicines, Other machinery and Electricity generation / supply don't follow their respective earnings, for they in nature highly capital intensive, and have higher investment and growth opportunities, thereby displaying their preference towards internally financing their growth requirements whereas, Cotton, Metal, and Other machinery pay relatively larger proportion of their earnings as dividends in the post-reform period, despite of relative fall in their earnings, and thus their payouts smooth earnings. In accordance with Zeckhauser and Pound (1990) industries differ with respect to maturity and information opacity, thus the degree of free cash flow problems and, consequently as Moh'd *et. al.*, (1995) prove empirically, payout ratios are likely to vary considerably across sectors.

More specifically, on analysis of inter-corporate and inter-industry variations in dividend policy for India it is found that dividends interplay differently with exogenous factors. It the differences in ownership concentration, external fund requirement based on technology, the type of the product they manufacture, the presence of growth opportunities *via* internal financing and the future earnings flows that they expect to generate, differences the inter-corporate, inter-industry variations in dividend policies. One important observation through the analysis on systematic cross-sectional pattern over a longer period of time is

worth re-mentioning. The average dividend payout ratios for all type of companies (closely-held, widely-held firms, and across industry cross-section) decline and such a tendency is more pronounced after the liberalization periods. Though this finding is based on aggregate level data the results are captivating and are in tandem with the recent evidence documenting dividend payments are disappearing, the world-over.

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Appendix

Table 1 Financial Year, Study Year and Number of Indian Joint-Stock Companies by Type of Companies, 1961 through 2007

Financial Year (Yr. ending)	PLCs		PVLCs		FINCs	
	Study Year	Number	Study Year	Number	Study Year	Number
1960-61	1965-66	1333	1965-66	501	1960-61	113
1961-62		1333		501	1962-63	176
1962-63		1333		501		176
1963-64		1333		501	1964-65	194
1964-65		1333		501		194
1965-66		1333		501	1966-67	195
1966-67	1501	701	195			
1967-68	1969-70	1501	1970-71	701	1968-69	219
1968-69		1501		701		219
1969-70		1501		701	1970-71	220
1970-71		1650		701		220
1971-72	1975-76	1650	1975-76	1001	1972-73	244
1972-73		1650		1001		244
1973-74		1650		1001	1974-75	261
1974-75		1650		1001		261
1975-76		1650		1001	1977-78	297
1976-77		1980-81		1720		1980-81
1977-78	1720		1011	1978-79	299	
1978-79	1720		1011		299	
1979-80	1720		1011	1980-81	305	
1980-81	1720		1011		305	
1981-82	1982-83	1651	1982-83	1004	1982-83	307
1982-83		1651		1004	307	
1983-84	1984-85	1838	1984-85	1027	1984-85	325
1984-85		1838		1027		325
1985-86	1986-87	1942	1986-87	1096	1986-87	400
1986-87		1942		1096		400
1987-88	1988-89	1885	1988-89	1019	1988-89	506
1988-89		1885		1019		506
1989-90	1990-91	2131	1990-91	1096	1990-91	411
1990-91		2131		1096		411
1991-92	1992-93	1802	1992-93	1005	1992-93	510
1992-93		1802		1005		510
1993-94	1994-95	1720	1994-95	839	1994-95	472
1994-95		1720		839		472
1995-96	1996-97	1930	1996-97	853	1996-97	705
1996-97		1930		853		705
1997-98	1998-99	1848	1998-99	890	1998-99	725
1998-99		1848		890		725
1999-00	2000-01	1927	2000-01	1126	2000-01	1024
2000-01		1927		1126		1024
2001-02	2002-07	2031	2002-07	1338	2002-07	957
2002-07		2031		1338		957
Annual Sub-period Averages						
1961-1992		1662		877		241
1992-2007		1883		1009		937
1961-2007		1719		911		434

Note: PLCs, PVLCs and FINCs refer to Indian Public Limited, Private Limited and Finance/Investment companies. **Sources:** a. Published compendium titled 'Private Corporate Business Sector in India - Selected Financial Statistics from 1950-51 to 1997-98 (All Industries)', 2001 and RBI Bulletins (Various Issues), Reserve Bank of India, Mumbai.

Table 2 Descriptive Statistics Relating Return and Payout Percentages by Indian Joint Stock Companies, Year Ending 1976-2007.

Statistics	Equity Dividend Return			Preference Dividend Return		
	PLCs	PVLCs	FINCs	PLCs	PVLCs	FINCs
Pre-Reform period (1961-1992)						
Mean	12.00	7.38	7.40	7.35	3.74	4.66
Median	11.52	6.79	7.12	7.09	3.44	4.84
St. Dev	2.48	2.52	2.21	1.10	1.43	0.90
Post-Reform period (1993-2007)						
Mean	18.71	7.02	8.88	4.95	2.33	3.60
Med.	17.72	6.82	6.20	4.46	1.26	3.32
StDev.	2.39	1.70	4.62	1.72	2.39	1.72
Full period (1961-2007)						
Mean	13.72	7.29	7.78	6.73	3.38	4.36
Med.	12.60	6.82	7.02	6.93	3.18	4.79
StDev.	3.83	2.33	3.02	1.65	1.81	1.27

Source and Notes: Same as in Table 1.

Table 3 Descriptive Statistics Relating Payout Percentages by Indian Joint Stock Companies, Year Ending 1976-2007.

Statistics	Equity Dividend Payout Ratio			Preference Dividend Payout Ratio		
	PLCs	PVLCs	FINCs	PLCs	PVLCs	FINCs
Pre-Reform period (1961-1992)						
Mean	53.03	50.41	54.87	3.22	1.66	3.32
Med.	55.50	46.50	47.49	3.00	1.50	2.79
StDev.	13.20	42.45	21.89	2.11	1.66	2.26
Post-Reform period (1993-2007)						
Mean	42.36	28.00	134.97	0.82	0.45	11.41
Med.	43.00	23.00	49.78	1.00	0.00	3.97
StDev.	12.43	13.01	222.49	0.75	0.52	18.61
Full period (1961-2007)						
Mean	50.30	44.67	75.36	2.60	1.35	5.66
Med.	51.00	35.00	49.22	2.00	1.00	3.01
StDev.	13.70	38.32	115.72	2.13	1.54	10.54

Source: Same as in Table 1.

Table 4 Annual Sub-period Averages of Nominal Rupee Dividend, Dividend Return, Earnings and Payout Ratios of Indian Joint-Stock Companies by Type of Companies (Public Limited , Private Limited and Finance Companies), 1961 through 2007

Year	1961-65	1966-70	1971-75	1976-80	1981-85	1986-90	1991-95	1996-00	2001-07
Public Limited Companies									
EQDIV	76.77	100.42	143.50	221.49	368.35	787.47	2058.08	4301.20	5748.33
PRFDIV	7.75	9.36	11.94	13.46	13.57	12.62	9.38	103.80	131.67
EQRET	11.42	9.66	9.86	11.22	12.63	14.67	19.13	18.67	17.83
PRFRET	6.66	6.53	6.95	7.47	7.48	8.61	6.74	5.36	3.50
SZEAR	127.65	162.67	356.99	453.69	820.28	1422.47	6090.72	11496.60	11101.33
PAT	135.40	171.50	368.93	467.15	833.85	1435.09	6100.10	11600.40	11233.00
EDPR	60.20	62.60	42.20	52.40	46.00	61.00	36.20	39.40	54.33
PDPR	5.80	5.80	3.40	3.00	1.60	1.00	0.00	1.20	1.00
Private Limited Companies									
EQDIV	109.18	82.94	94.46	118.46	107.04	106.86	243.02	476.84	3690.90
PRFDIV	2.68	2.60	3.30	3.86	4.62	4.26	2.36	10.88	62.60
EQRET	12.34	7.49	6.47	7.39	5.87	5.15	7.35	6.49	6.91
PRFRET	5.71	5.06	3.60	3.41	3.28	2.34	1.99	2.91	1.23
SZEAR	168.02	153.98	242.00	261.16	396.46	402.22	1337.62	2052.10	7733.23
PAT	170.70	156.58	245.30	265.02	401.08	406.48	1339.98	2062.98	7795.83
EDPR	64.80	54.20	44.60	53.80	28.40	70.80	17.60	23.80	43.67
PDPR	1.80	1.60	1.40	1.80	1.20	2.80	0.00	0.40	1.00
Finance Companies									
EQDIV	26.32	34.32	35.58	46.18	71.86	217.06	1362.74	2743.94	3426.30
PRFDIV	-	3.30	2.98	3.26	4.10	4.54	20.18	244.12	294.00
EQRET	7.52	7.28	6.53	5.33	6.36	8.71	14.53	8.00	4.38
PRFRET	-	5.09	4.82	4.97	4.66	3.42	3.82	4.91	2.34
SZEAR	30.38	47.40	57.06	104.92	209.14	659.38	4844.84	4845.58	3794.03
PAT	30.38	50.70	60.04	108.18	213.24	663.92	4865.02	5089.70	4088.03
EDPR	88.54	72.61	62.34	44.77	37.84	33.62	28.73	199.80	133.06
PDPR	-	6.58	4.97	3.21	2.15	0.79	0.43	14.13	17.91

Notes: EQDIV, PRFDIV, EQRET, PRFRET, SZEAR, PAT, EDPR, EDPR, and PDPR refers to Total Rupee value of cash equity dividend, Preference dividend, Equity return (dividends by the book value of the respective share capital), Preference return, Size of Earnings (net profit after taxes after accounting for preference dividends) as the earnings measure for equity dividend payments, Net profit after taxes as the earnings measure for preference dividend payments, Equity dividend payout ratio (dividend by respective measure of earnings) and Preference dividend payout ratio respectively.

Source: Same as in Table 1.

Table 5 Annual Percentage Growth Rates of Annual Nominal Rupee Dividend Paid & Dividend Return on Shares Equity & Preference) of Indian Joint-Stock Companies by Type of Companies, 1961 through 2007

Variables	Instantaneous			Linear Trend			Annually Compounded			Type of Regression
	1961-92	1993-07	1961-07	1961-92	1993-07	1961-07	1961-92	1993-07	1961-07	
Public Limited Companies										
EQDIV	9.63	10.50	11.72	34.73	392.65	122.41	10.11	11.07	12.43	Coincident
PRFDIV	1.75	34.71	5.27	0.19	16.83	2.31	1.77	41.50	5.42	Dissimilar
EQRET	1.51	-1.62	1.81	0.20	-0.31	0.25	1.52	-1.61	1.82	Dissimilar
PRFRET	0.90	-5.95	-0.88	0.07	-0.30	-0.04	0.91	-5.77	-0.88	Dissimilar
SZEAR	10.46	4.95	12.58	79.49	345.88	291.14	11.02	5.07	13.40	Parallel
PAT	10.26	5.11	12.43	79.68	362.71	293.46	10.80	5.24	13.24	Parallel
EDPR	-0.82	5.55	-0.86	0.00	0.02	0.00	-0.82	5.70	-0.86	Dissimilar
PDPR	-8.50	29.60	-7.15	0.00	0.00	0.00	-8.15	34.45	-6.90	Dissimilar
Private Limited Companies										
EQDIV	0.70	30.39	5.57	0.80	436.23	39.49	0.70	35.51	5.73	Dissimilar
PRFDIV	0.79	43.27	2.98	0.04	7.64	0.66	0.79	54.14	3.02	Dissimilar
EQRET	-2.51	-1.50	-1.13	-0.20	-0.07	-0.10	-2.48	-1.49	-1.13	Coincident
PRFRET	-3.98	-6.15	-3.76	-0.13	-0.10	-0.09	-3.90	-5.97	-3.69	Coincident
SZEAR	4.16	20.55	8.08	16.90	810.74	104.36	4.25	22.81	8.42	Dissimilar
PAT	4.17	20.63	8.05	16.94	818.38	105.02	4.26	22.91	8.39	Dissimilar
EDPR	-3.46	9.84	-2.51	-0.01	0.03	-0.01	-3.40	10.34	-2.48	Dissimilar
PDPR	-3.38	22.64	-5.07	0.00	0.00	0.00	-3.32	25.41	-4.95	Dissimilar
Finance Companies										
EQDIV	8.76	8.01	13.62	11.86	199.60	76.47	9.16	8.34	14.59	Coincident
PRFDIV	3.19	31.02	13.27	0.20	33.01	7.16	3.24	36.38	14.19	Dissimilar
EQRET	0.85	-15.21	0.33	0.09	-1.28	0.05	0.85	-14.11	0.33	Dissimilar
PRFRET	-1.24	-2.04	-1.63	-0.04	-0.08	-0.05	-1.23	-2.02	-1.62	Coincident
SZEAR	12.86	-16.94	13.18	41.53	-207.85	138.46	13.72	-15.58	14.08	Dissimilar
PAT	12.77	-15.95	13.33	41.75	-174.84	144.26	13.62	-14.75	14.26	Dissimilar
EDPR	-4.10	20.07	-0.07	-0.02	0.00	0.00	-4.01	22.23	-0.07	Dissimilar
PDPR	-11.04	48.11	-0.62	0.00	0.00	0.00	-10.45	61.79	-0.62	Dissimilar

Notes and Source: Same as in Table 4.

Table 6 Relative Ranks based on Absolute and CAGR of Equity and Preference Dividend Measures by Indian Joint Stock Companies, 1976-2007.

Period	1961-1992			1993-2007			1961-2007		
Type	PLC's	PVLC's	FINC's	PLC's	PVLC's	FINC's	PLC's	PVLC's	FINC's
Absolute Aggregate based Ranks									
EQDIV	1	2	3	1	3	2	1	2	3
PRFDIV	1	2	3	2	3	1	1	3	2
EQRET	1	2	3	1	3	2	1	2	3
PRFRET	1	3	2	1	3	2	1	3	2
SZEAR	1	2	3	1	3	2	1	2	3
PAT	1	2	3	1	3	2	1	2	3
EDPOR	2	3	1	2	3	1	2	3	1
PDPOR	2	3	1	2	3	1	2	3	1
CAGR based Ranks									
EQDIV	1	3	2	2	1	3	2	3	1
PRFDIV	2	3	1	2	1	3	2	3	1
EQRET	1	3	2	2	1	3	1	3	2
PRFRET	1	3	2	2	3	1	1	3	2
SZEAR	2	3	1	2	1	3	2	3	1
PAT	2	3	1	2	1	3	2	3	1
EDPOR	1	2	3	3	2	1	2	3	1
PDPOR	2	1	3	2	3	1	3	2	1

Note: 1=Highest, 3=Lowest Rank Source: Same as in Table 4.

Table 7 Results of K-W Test to detect Differences in Dividend Related Measures due to the Impact of Economic Reforms across Indian Joint Stock Companies.

K-W Stats.	EQDIV	PRFDIV	EQRET	PRFRET	SZEAR	PAT	EDPR	P DPR
Public Limited Companies								
Chi-Square	24.00	5.47	20.34	12.30	23.73	23.73	5.34	12.89
Asymp. Sig.	0.00***	0.02**	0.00***	0.00***	0.00***	0.00***	0.02**	0.00***
Private Limited Companies								
Chi-Square	24.00	0.34	0.01	7.90	23.73	23.73	6.14	15.84
Asymp. Sig.	0.00***	0.56	0.93	0.01***	0.00***	0.00***	0.01***	0.00***
Finance Companies								
Chi-Square	24.00	22.27	0.00	5.00	13.91	14.97	0.75	0.14
Asymp. Sig.	0.00***	0.00***	0.86	0.03**	0.00***	0.00***	0.39	0.71

Note and Source: Same as in Table 4.

**Table 8 Annual Sub-Period Averages of Nominal Dividend Distributed and Dividend Return across Industry
Cross-section, 1976-2007**

Industry	Rupee Value of Equity & Preference Dividend					Equity & Preference Dividend Return Percentages				
	1976-80	1981-85	1986-90	1991-95	1996-00	1976-80	1981-85	1986-90	1991-95	1996-00
Basic Chemical	3479.80	5315.69	11077.89	27659.84	52002.00	13.58	13.30	15.02	13.80	16.00
	263.00	226.84	300.51	190.78	1068.84	11.21	7.19	12.21	5.86	7.27
Cement	700.40	879.75	1536.34	8021.73	9192.27	11.52	10.57	8.74	15.48	13.23
	34.80	72.05	27.32	63.42	160.77	5.65	12.58	4.43	9.31	7.00
Fertilizers	1047.60	1016.61	3457.27	8002.17	26921.52	14.23	12.25	14.93	13.48	17.53
	104.40	61.80	187.58	130.71	826.37	13.28	6.01	17.49	7.06	8.33
Construction	117.80	242.44	822.01	1695.07	3909.37	10.10	14.02	12.96	13.41	8.24
	7.00	39.84	2.08	0.00	17.55	10.05	8.77	2.46	0.00	1.60
Cotton	1860.40	3446.72	5718.24	6045.92	8180.32	9.76	13.47	15.76	17.51	11.95
	97.20	59.01	113.44	33.88	595.06	5.40	3.39	7.91	3.69	5.07
Electricity	394.20	862.55	1359.04	4236.05	16475.06	11.68	14.40	16.35	18.54	21.74
	57.20	79.56	56.70	44.27	906.20	8.28	8.03	7.00	3.98	6.97
Electric Mach.	1702.60	2970.02	3821.23	9792.17	20509.21	11.35	13.82	11.00	13.24	14.64
	80.60	72.85	48.11	60.10	436.13	9.25	8.87	6.84	5.80	3.53
Metal	552.40	922.97	1687.93	3589.43	6272.12	7.19	8.39	10.15	12.66	10.56
	34.80	45.66	56.13	16.53	165.25	6.43	6.60	9.51	4.06	3.39
Foundry	360.40	599.95	1576.97	9836.62	8793.97	6.51	8.31	10.32	16.03	6.78
	33.80	23.51	44.75	43.95	316.20	6.24	4.62	8.16	4.66	6.09
Jute	68.00	39.90	45.51	174.02	55.65	3.23	1.77	1.80	4.11	1.19
	27.60	11.08	6.63	15.17	1.37	4.83	2.30	2.30	8.60	0.33
Other Machinery	1748.40	3281.26	5553.31	12131.52	20496.36	12.06	14.28	14.09	19.72	21.81
	113.60	86.83	60.17	37.66	50.95	9.04	7.40	7.70	9.22	2.73
Medicines	1046.80	1801.10	3380.38	6959.21	24785.50	16.82	14.16	16.59	19.29	37.21
	13.00	11.46	9.81	4.75	516.78	5.22	6.18	8.80	1.73	15.13
Motor	1110.00	2715.87	5800.08	13619.77	40898.77	10.34	19.55	19.63	20.43	31.50
	53.20	132.27	32.23	18.65	78.47	6.08	16.62	5.56	7.54	2.15
Paper	769.60	946.95	1383.31	3129.10	2818.52	10.06	7.61	7.33	16.15	7.60
	70.40	59.52	45.93	53.24	193.49	6.78	5.75	6.44	15.07	7.32
Rubber	500.60	737.56	1990.34	3978.84	4438.74	11.57	10.51	16.63	20.57	15.28
	5.60	6.16	88.41	26.24	235.16	5.28	2.85	20.74	9.13	32.06
Shipping	359.40	325.24	1128.27	4873.81	5956.30	8.00	4.88	8.27	19.40	13.42

Continued Table 8 Annual Sub-Period Averages of Nominal Dividend Distributed and Dividend Return across Industry Cross-section, 1976-2007

Industry	Rupee Value of Equity & Preference Dividend					Equity & Preference Dividend Return Percentages				
	1976-80	1981-85	1986-90	1991-95	1996-00	1976-80	1981-85	1986-90	1991-95	1996-00
	3.33	8.36	5.50	89.79	191.81	2.10	1.88	1.88	5.94	9.84
Silk	523.60	3800.15	1531.47	6520.99	30533.76	13.30	167.22	10.51	14.03	20.50
	55.20	51.24	39.35	52.91	895.51	7.92	47.72	10.01	11.50	3.24
Sugar	211.80	281.60	735.18	1347.11	2212.52	4.95	6.94	14.59	17.24	11.15
	19.40	28.16	27.92	30.88	256.07	3.71	7.32	10.20	10.89	7.39
Tea	720.20	1412.44	4773.41	8217.93	7742.84	15.72	16.09	30.44	44.19	37.34
	10.40	7.34	9.10	5.11	27.70	7.08	5.96	6.89	8.51	1.81
Trading	451.40	804.41	1160.18	1905.21	5534.99	9.60	13.30	12.69	12.38	10.22
	25.60	17.50	17.58	5.77	292.34	5.68	3.28	7.20	2.20	3.85

Source: Published compendium on 'Selected Financial Statistics on Public Limited Companies 1974-75 to 1999-2007 (Selected Industries)' and RBI Bulletins (Various Issues), Reserve Bank of India, Mumbai.

Table 9 Annual Sub-Period Averages of Rupee Earnings measure; Size of Earnings, Profits after Taxes and Dividend Payout Percentage's across Industry Cross-section, 1976-2007

Period	Size of Earnings & Profits after Taxes					Equity & Preference Dividend Payout Ratio				
	1976-80	1981-85	1986-90	1991-95	1996-00	1976-80	1981-85	1986-90	1991-95	1996-00
Basic Chemical	9074.20	12708.18	20227.25	76838.10	129418.38	38.23	43.43	63.69	39.17	43.11
	9337.20	12935.02	20527.76	77028.88	130487.22	2.74	1.81	1.85	0.31	0.99
Cement	946.40	4479.02	-5724.27	30977.73	19491.87	99.30	155.55	632.31	27.52	30.28
	981.20	4551.06	-5696.95	31041.16	19620.49	4.77	50.70	8.56	0.26	0.24
Fertilizers	2692.00	4557.61	5074.74	20229.71	86468.62	41.78	25.41	115.51	50.70	31.35
	2796.40	4607.05	5262.32	20360.42	87294.99	4.47	1.11	4.62	1.01	0.99
Construction	285.00	1081.54	1324.17	5258.89	17109.63	82.88	24.04	238.40	37.45	24.66
	290.60	1121.38	1325.42	5258.89	17116.65	6.07	2.64	0.92	0.00	0.05
Cotton	2191.20	2996.03	1751.85	18871.21	4411.71	218.90	232.77	349.13	123.42	91.87
	2288.40	3055.03	1865.29	18905.10	5006.77	25.95	4.28	6.46	0.27	4.97
Electricity	1119.00	4061.71	7457.26	18551.79	54878.13	35.60	25.06	19.33	21.55	31.78
	1176.20	4141.27	7513.96	18578.35	55784.33	4.86	2.82	0.85	0.20	1.50
Electric Mach.	3405.20	7005.60	5567.69	24988.36	53731.96	53.45	45.24	71.32	49.20	39.93
	3485.80	7078.45	5615.80	25048.46	54168.09	2.78	1.06	0.92	0.46	0.93
Metal	798.20	1324.83	3729.79	7447.85	7334.47	534.52	63.99	51.45	58.27	119.69
	833.00	1370.50	3785.92	7464.38	7499.71	82.37	3.03	2.19	0.35	8.84

Continued Table 9 Annual Sub-Period Averages of Rupee Earnings measure; Size of Earnings, Profits after Taxes and Dividend Payout Percentage's across Industry Cross-section, 1976-2007

Period	Size of Earnings & Profits after Taxes					Equity & Preference Dividend Payout Ratio				
Industry	1976-80	1981-85	1986-90	1991-95	1996-00	1976-80	1981-85	1986-90	1991-95	1996-00
Foundry	689.80	1405.96	3927.73	26514.81	-22859.22	119.13	80.93	46.17	58.51	33.73
	723.60	1429.48	3972.48	26558.76	-22543.02	11.97	2.59	1.43	0.41	0.66
Jute	-268.20	-1541.50	-2891.82	-1854.50	-2338.17	6.96	2.61	2.00	13.01	3.88
	-240.60	-1530.42	-2885.19	-1848.43	-2337.89	3.02	0.45	0.04	0.26	0.01
Other Machinery	4564.40	8577.82	8013.43	40540.36	49016.71	38.25	39.29	76.67	31.88	62.86
	4678.00	8664.65	8073.60	40578.01	49057.47	2.49	1.03	0.95	0.12	0.07
Medicines	1935.40	3323.49	8052.23	29237.79	72371.63	54.88	54.54	45.66	26.19	34.05
	1948.40	3334.95	8062.03	29239.69	72785.05	0.70	0.38	0.16	0.01	0.58
Motor	3449.00	10485.95	15241.34	42727.18	155038.70	33.21	26.25	41.09	48.74	26.93
	3502.20	10618.22	15273.57	42745.83	155101.48	1.74	1.42	0.28	0.05	0.05
Paper	1434.60	-398.57	-1421.94	9687.04	843.14	79.11	427.14	85.28	34.61	19.14
	1505.00	-339.05	-1376.00	9740.29	1036.63	6.71	1181.67	3.37	0.66	1.07
Rubber	761.40	1481.08	5108.89	8754.92	16187.37	413.61	206.50	43.51	48.47	29.94
	767.00	1487.24	5197.30	8781.15	16375.50	5.09	1.91	1.83	0.29	0.93
Shipping	-327.20	-2125.37	-2310.98	7205.53	5896.89	43.14	8.46	28.25	220.61	118.62
	32.20	-1800.13	-1182.71	12079.34	11853.19	0.50	0.06	0.03	6.88	12.20
Silk	1487.40	10428.64	2855.33	21190.38	71324.62	37.41	241.76	61.43	31.39	42.36
	1542.60	10479.88	2894.68	21243.30	72220.13	3.72	9.43	1.62	0.32	1.83
Sugar	-346.60	89.77	3220.00	5717.00	3840.72	92.38	44.08	23.29	95.51	77.39
	-327.20	117.93	3247.92	5747.87	4045.58	11.39	4.96	1.03	2.42	8.94
Tea	1574.80	3822.87	11492.66	16287.89	18166.07	49.41	92.07	44.89	53.25	49.77
	1585.20	3830.21	11501.76	16291.97	18177.15	0.71	0.66	0.08	0.02	0.04
Trading	1069.60	2094.92	3947.69	8410.09	23955.18	43.54	39.11	30.41	24.14	25.20
	1095.20	2112.42	3965.26	8415.86	24247.53	2.40	0.90	0.52	0.09	1.19

Notes: The values appearing across each industry are in two rows. The upper row represents the values for Size of Earnings and Equity Dividend payout ratio respectively and in the lower row represents Profit after Taxes and Preference Dividend Ratio respectively. **Source:** Same as in Table 8.

Table 10 Annual Percentage Growth Rates of Dividend and Earning Related Measures (Equity & Preference) across Industry Cross-section of Companies, 1961 through 2007

Type Period	Instantaneous			Linear Trend			Annually Compounded			Type Of Regression
	1961-92	1993-07	1961-07	1961-92	1993-07	1961-07	1961-92	1993-07	1961-07	
Basic Industrial Chemicals										
EQDIV	12.52	8.65	0.14	1028.24	3174.23	2340.57	13.34	9.04	14.99	Parallel
PRFDIV	1.38	42.23	0.05	3.14	260.55	33.68	1.39	52.55	4.93	Dissimilar
EQRET	0.91	1.24	0.01	0.00	0.00	0.00	0.92	1.25	0.59	Coincident
PRFRET	-0.32	9.07	-0.02	0.00	0.00	0.00	-0.32	9.49	-2.44	Coincident
SZEAR	10.02	4.56	0.14	2114.07	1976.84	5868.49	10.54	4.67	14.61	Coincident
PAT	9.91	4.82	0.14	2117.21	2237.39	5902.17	10.41	4.94	14.50	Coincident
EDPR	2.50	4.09	0.00	0.01	0.02	0.00	2.53	4.18	0.33	Coincident
PDPR	-8.53	37.41	-0.09	0.00	0.00	0.00	-8.18	45.37	-8.36	Dissimilar
Cement										
EQDIV	11.03	-16.81	13.02	195.52	-1051.57	449.50	11.67	-15.47	13.90	Dissimilar
PRFDIV	-2.67	-26.71	-1.30	0.56	-7.73	2.58	-2.64	-23.44	-1.29	Coincident
EQRET	-1.68	-19.18	0.15	0.00	-0.02	0.00	-1.66	-17.45	0.15	Dissimilar
PRFRET	-2.04	32.97	3.04	0.00	-0.01	0.00	-2.02	39.06	3.09	Coincident
SZEAR	0.79	-87.62	8.03	460.50	-7664.10	1067.87	0.79	-58.36	8.36	Parallel
PAT	0.81	-87.64	7.77	461.05	-7671.83	1070.45	0.81	-58.37	8.08	Parallel
EDPR	-11.41	-10.20	-6.99	0.11	-0.02	-0.09	-10.78	-9.70	-6.75	Coincident
PDPR	-26.04	65.98	-12.18	-0.02	0.00	-0.02	-22.93	93.44	-11.46	Dissimilar
Chemical Fertilizers										
EQDIV	12.30	20.03	0.17	295.62	3217.27	1142.86	13.09	22.18	18.04	Coincident
PRFDIV	7.48	40.84	0.11	6.37	201.22	32.04	7.77	50.44	11.99	Dissimilar
EQRET	-0.21	4.36	0.01	0.00	0.01	0.00	-0.21	4.45	0.96	Coincident
PRFRET	-1.09	3.09	-0.03	0.00	0.00	0.00	-1.09	3.14	-3.22	Coincident
SZEAR	6.08	29.48	0.16	426.62	10861.22	3571.14	6.27	34.29	17.25	Concurrent
PAT	6.08	29.59	0.16	432.99	11062.45	3571.14	6.26	34.43	17.11	Concurrent
EDPR	6.22	-9.45	0.01	0.05	-0.05	0.00	6.42	-9.01	0.68	Coincident
PDPR	-2.69	11.25	-0.08	0.00	0.00	0.00	-2.65	11.91	-7.98	Coincident
Construction										
EQDIV	19.47	13.54	0.18	103.79	292.26	171.38	21.50	14.50	19.41	Coincident
PRFDIV	5.09	-10.70	0.06	-0.08	2.22	-0.44	5.22	-10.15	6.71	Coincident
EQRET	2.78	-16.30	-0.01	0.00	-0.01	0.00	2.82	-15.04	-1.10	Dissimilar

Continued Table 10 Annual Percentage Growth Rates of Nominal Rupee Dividend Paid, Dividend Return on Shares, Rupee Earning Measures and Dividend Payout Percentage's (Equity & Preference) across Industry Cross-section of Companies, 1961 through 2007

Type	Instantaneous			Linear Trend			Annually Compounded			Type Of Regression
Period	1961-92	1993-07	1961-07	1961-92	1993-07	1961-07	1961-92	1993-07	1961-07	
PRFRET	21.81	-103.28	0.18	-0.01	0.00	-0.02	24.36	-64.40	19.61	Dissimilar
SZEAR	11.95	20.05	0.20	171.45	1726.88	727.92	12.69	22.20	22.46	Coincident
PAT	11.87	20.06	0.20	171.37	1729.10	727.48	12.60	22.22	22.35	Coincident
EDPR	5.23	-6.51	-0.02	0.08	-0.02	-0.02	5.37	-6.30	-2.44	Coincident
PDPR	17.84	-149.68	0.17	0.00	0.00	0.00	19.53	-77.61	18.10	Dissimilar
Cotton / Blended Textiles										
EQDIV	10.26	4.95	0.07	386.04	330.20	303.44	10.80	5.07	7.47	Coincident
PRFDIV	-3.71	75.35	0.04	-0.50	156.79	20.08	-3.64	112.45	4.11	Dissimilar
EQRET	4.95	-11.76	0.01	0.01	-0.01	0.00	5.07	-11.09	1.28	Dissimilar
PRFRET	0.40	12.77	0.00	0.00	0.00	0.00	0.40	13.62	-0.38	Coincident
SZEAR	14.95	-45.09	0.09	579.82	-3975.73	366.94	16.12	-36.30	9.06	Coincident
PAT	14.92	-45.03	0.09	579.31	-3818.94	387.03	16.09	-36.26	9.05	Coincident
EDPR	4.11	-9.20	-0.02	0.05	-0.31	-0.06	4.20	-8.79	-1.63	Coincident
PDPR	-10.82	62.28	-0.05	-0.02	0.01	-0.01	-10.25	86.42	-5.21	Dissimilar
Electricity Generation and Supply										
EQDIV	11.65	23.64	0.18	103.42	2369.55	710.20	12.35	26.67	19.48	Dissimilar
PRFDIV	-1.27	68.56	0.08	-0.77	265.88	34.96	-1.26	98.50	8.47	Dissimilar
EQRET	3.42	-0.97	0.03	0.00	0.00	0.00	3.48	-0.97	2.84	Coincident
PRFRET	-1.51	-50.85	0.05	0.00	0.01	0.00	-1.50	-39.86	4.82	Dissimilar
SZEAR	17.53	17.64	0.19	705.71	6789.58	2435.98	19.16	19.29	20.51	Coincident
PAT	17.17	18.05	0.18	113752.06	106696.60	2470.94	18.73	19.78	20.29	Coincident
EDPR	-5.88	6.00	-0.01	-0.01	0.01	0.00	-5.71	6.19	-0.86	Concurrent
PDPR	-18.44	-44.53	0.00	0.00	0.00	0.00	-16.84	-35.94	-0.27	Coincident
Electric Machinery										
EQDIV	9.15	13.62	0.12	299.22	2040.71	888.02	9.58	14.59	13.06	Coincident
PRFDIV	-2.75	52.88	0.02	-1.77	127.39	15.17	-2.71	69.70	2.41	Dissimilar
EQRET	-0.67	-0.51	0.01	0.00	0.00	0.00	-0.67	-0.51	0.91	Coincident
PRFRET	-3.36	-5.45	-0.05	0.00	0.00	0.00	-3.30	-5.30	-5.27	Coincident
SZEAR	7.33	14.44	0.13	433.84	3532.55	2317.37	7.61	15.54	14.11	Coincident
PAT	7.16	14.64	0.13	432.07	3659.94	2332.55	7.43	15.76	14.01	Coincident
EDPR	1.82	-0.82	-0.01	0.01	-0.01	0.00	1.84	-0.82	-0.92	Coincident

Continued Table 10 Annual Percentage Growth Rates of Nominal Rupee Dividend Paid, Dividend Return on Shares, Rupee Earning Measures and Dividend Payout Percentage's (Equity & Preference) across Industry Cross-section of Companies, 1961 through 2007

Type	Instantaneous			Linear Trend			Annually Compounded			Type Of Regression
Period	1961-92	1993-07	1961-07	1961-92	1993-07	1961-07	1961-92	1993-07	1961-07	
Ferrous / Non-Ferrous Metal Products										
PDPR	-9.92	38.24	-0.11	0.00	0.00	0.00	-9.44	46.59	-10.18	Dissimilar
EQDIV	11.44	5.37	12.22	137.59	206.76	273.28	12.13	5.52	12.99	Coincident
PRFDIV	0.13	66.61	0.64	0.22	36.45	4.59	0.13	94.66	0.65	Dissimilar
EQRET	3.51	-9.49	2.11	0.00	-0.01	0.00	3.58	-9.05	2.13	Dissimilar
PRFRET	0.64	5.37	-6.57	0.00	0.00	0.00	0.64	5.51	-6.36	Coincident
SZEAR	20.06	-82.08	7.27	326.54	-2011.34	326.51	22.21	-55.99	7.55	Dissimilar
PAT	21.28	-82.07	7.85	326.76	-1974.90	331.10	23.71	-55.99	8.16	Dissimilar
EDPR	-8.62	17.41	-2.71	-0.36	0.28	-0.16	-8.26	19.01	-2.68	Coincident
PDPR	-21.14	81.52	-14.54	-0.06	0.03	-0.03	-19.06	125.97	-13.53	Dissimilar
Foundries and Engineering Workshops										
EQDIV	15.79	-18.74	16.40	211.21	-1453.35	509.18	17.10	-17.09	17.82	Dissimilar
PRFDIV	-0.19	60.68	7.81	0.87	33.10	10.81	-0.19	83.46	8.12	Dissimilar
EQRET	4.77	-39.10	-0.62	0.00	-0.03	0.00	4.89	-32.36	-0.62	Dissimilar
PRFRET	-0.30	6.31	-3.55	0.00	0.00	0.00	-0.30	6.52	-3.49	Coincident
SZEAR	21.35	-121.66	6.72	375.76	-18697.77	-579.80	23.80	-70.38	6.95	Dissimilar
PAT	20.85	-121.66	6.42	376.63	-18664.67	-568.99	23.18	-70.38	6.63	Dissimilar
EDPR	-2.67	-38.63	-6.85	-0.05	-0.08	-0.04	-2.64	-32.04	-6.62	Dissimilar
PDPR	-18.51	40.87	-15.34	-0.01	0.00	0.00	-16.90	50.48	-14.22	Dissimilar
Jute Textiles										
EQDIV	-4.83	-23.07	1.20	-2.02	-30.11	2.82	-4.72	-20.60	1.21	Parallel
PRFDIV	-10.14	-17.40	-1.72	-1.87	-0.89	-1.13	-9.64	-15.97	-1.70	Coincident
EQRET	-5.99	-30.04	-2.95	0.00	-0.01	0.00	-5.81	-25.95	-2.91	Parallel
PRFRET	7.94	-28.75	27.49	0.00	-0.01	0.00	8.26	-24.99	31.64	Coincident
SZEAR	-7.46	0.00	-4.98	-171.38	-58.22	-79.49	-7.19	0.00	-4.86	Coincident
PAT	-7.49	0.00	-5.00	-173.24	-59.11	-80.62	-7.21	0.00	-4.88	Coincident
EDPR	-10.83	-21.22	-0.58	0.00	-0.02	0.00	-10.26	-19.12	-0.58	Coincident
PDPR	-0.42	-40.70	26.90	0.00	0.00	0.00	-0.42	-33.43	30.87	Coincident
Machinery other than Transport and Electrical										
EQDIV	11.90	9.71	12.48	465.62	1640.11	930.32	12.64	10.20	13.29	Coincident
EQRET	2.52	3.33	3.02	0.00	0.01	0.01	2.55	3.39	3.07	Coincident

Continued Table 10 Annual Percentage Growth Rates of Nominal Rupee Dividend Paid, Dividend Return on Shares, Rupee Earning Measures and Dividend Payout Percentage's (Equity & Preference) across Industry Cross-section of Companies, 1961 through 2007

Type Period	Instantaneous			Linear Trend			Annually Compounded			Type Of Regression
	1961-92	1993-07	1961-07	1961-92	1993-07	1961-07	1961-92	1993-07	1961-07	
PRFRET	-0.07	-9.03	-3.73	0.00	-0.02	0.00	-0.07	-8.64	-3.66	Coincident
PRFDIV	-6.39	-15.79	-9.98	-4.59	0.91	-3.94	-6.19	-14.60	-9.49	Coincident
SZEAR	9.18	-5.80	11.68	1046.14	-1815.39	2329.73	9.62	-5.63	12.39	Parallel
PAT	9.03	-5.80	11.56	1041.55	-1814.48	2325.79	9.45	-5.63	12.26	Parallel
EDPR	2.72	15.50	0.80	0.02	0.10	0.01	2.76	16.77	0.80	Parallel
P DPR	-15.42	77.27	-11.87	0.00	0.00	0.00	-14.29	116.57	-11.19	Dissimilar
Medicines and Pharmaceutical Preparations										
EQDIV	11.49	25.07	15.23	255.17	4049.81	1065.83	12.18	28.49	16.45	Dissimilar
PRFDIV	-10.31	60.71	9.69	-0.61	133.72	17.09	-9.79	83.50	10.17	Dissimilar
EQRET	0.26	12.40	3.79	0.00	0.04	0.01	0.26	13.20	3.86	Dissimilar
PRFRET	1.02	-95.77	16.27	0.00	0.01	3353.76	1.02	-61.62	17.67	Dissimilar
SZEAR	15.03	16.69	18.67	836.68	8099.34	3353.76	16.21	18.17	20.52	Coincident
PAT	14.97	16.88	18.65	836.07	8233.06	3370.85	16.15	18.38	20.51	Coincident
EDPR	-3.53	8.38	-3.43	-0.02	0.03	-0.01	-3.47	8.74	-3.38	Dissimilar
P DPR	-25.27	-127.13	13.32	0.00	0.00	0.00	-22.33	-71.95	14.25	Dissimilar
Motor Vehicles										
EQDIV	16.75	19.15	17.60	603.84	4464.18	1765.06	18.24	21.11	19.24	Coincident
PRFDIV	-14.57	38.95	-6.05	-5.19	18.50	-1.58	-13.56	47.63	-5.87	Dissimilar
EQRET	4.75	8.71	4.54	0.01	0.02	0.01	4.86	9.10	4.65	Coincident
PRFRET	-5.83	-3.22	-1.31	0.00	-0.01	0.00	-5.66	-3.17	-1.30	Coincident
SZEAR	15.03	30.05	17.54	1539.21	16973.70	6490.36	16.22	35.06	19.18	Coincident
PAT	14.87	30.06	17.44	1534.02	16991.41	6488.44	16.03	35.06	19.06	Coincident
EDPR	1.72	-10.90	0.06	0.01	-0.07	0.00	1.73	-10.33	0.06	Dissimilar
P DPR	-29.44	23.45	-15.03	0.00	0.00	0.00	-25.50	26.42	-13.96	Coincident
Paper and Paper Products										
EQDIV	6.56	-15.49	6.44	79.53	-383.41	119.49	6.78	-14.35	6.65	Dissimilar
PRFDIV	-1.87	-31.15	-4.58	-0.81	-1.75	3.43	-1.85	-26.76	-4.47	Coincident
EQRET	0.38	-29.55	-0.62	0.00	-0.02	0.00	0.38	-25.58	-0.61	Dissimilar
PRFRET	4.10	-66.12	-4.86	0.01	-0.01	0.00	4.19	-48.38	-4.75	Dissimilar
SZEAR	-1.42	-105.57	2.50	103.52	-5113.64	68.53	-1.41	-65.21	2.53	Dissimilar

Continued Table 10 Annual Percentage Growth Rates of Nominal Rupee Dividend Paid, Dividend Return on Shares, Rupee Earning Measures and Dividend Payout Percentage's (Equity & Preference) across Industry Cross-section of Companies, 1961 through 2007

Type Period	Instantaneous			Linear Trend			Annually Compounded			Type Of Regression
	1961-92	1993-07	1961-07	1961-92	1993-07	1961-07	1961-92	1993-07	1961-07	
PAT	-0.39	-0.90	3.46	102.71	-5115.40	71.96	-0.39	-0.89	3.52	Coincident
EDPR	-7.45	-26.12	-9.42	-0.10	-0.05	-0.11	-7.18	-22.99	-8.99	Coincident
PDPR	-17.22	-41.75	-21.92	-0.29	0.00	-0.27	-15.82	-34.13	-19.68	Coincident
Rubber and Rubber Products										
EQDIV	14.39	2.65	12.07	203.74	127.73	221.26	15.47	2.68	12.83	Dissimilar
PRFDIV	17.31	45.42	12.97	4.91	64.46	8.46	18.90	57.49	13.85	Parallel
EQRET	4.71	-7.58	2.31	0.01	-0.01	0.00	4.83	-7.30	2.33	Concurrent
PRFRET	7.63	27.89	10.72	0.01	0.10	0.01	7.93	32.17	11.32	Coincident
SZEAR	25.26	15.38	19.79	618.35	2069.06	757.07	28.74	16.62	21.88	Coincident
PAT	24.92	15.62	19.61	623.26	2133.51	765.52	28.30	16.91	21.66	Coincident
EDPR	-11.14	-12.73	-7.46	-0.28	-0.05	-0.17	-10.55	-11.95	-7.19	Coincident
PDPR	-7.86	18.23	-0.42	0.00	0.00	0.00	-7.56	19.99	-0.42	Coincident
Shipping										
EQDIV	16.13	-11.68	19.44	124.65	-417.20	298.65	17.51	-11.02	21.46	Coincident
PRFDIV	12.61	12.74	15.01	3.36	19.49	8.40	13.44	13.58	16.20	Coincident
EQRET	7.36	-19.34	9.04	0.00	-0.02	0.00	7.64	-17.59	9.46	Coincident
PRFRET	3.62	16.97	-1.47	0.00	0.00	0.00	3.69	18.50	-1.46	Coincident
SZEAR	8.24	-3.97	14.61	16.32	-1022.37	412.83	8.59	-3.89	15.73	Coincident
PAT	12.01	16.68	19.01	140.97	-1439.57	711.48	12.76	18.16	20.94	Coincident
EDPR	9.53	13.47	14.18	0.14	0.12	0.06	10.00	14.42	15.24	Coincident
PDPR	2.36	-39.06	-4.57	0.00	0.01	0.01	2.39	-32.34	-4.47	Coincident
Silk and Rayon Textiles										
EQDIV	14.62	8.93	19.54	221.93	2416.99	1187.18	15.75	9.34	21.59	Coincident
PRFDIV	0.68	65.39	10.59	0.10	224.80	34.75	0.68	92.31	11.17	Dissimilar
EQRET	-0.67	-8.91	-0.50	0.01	-0.01	-0.02	-0.67	-8.53	-0.50	Coincident
PRFRET	5.92	-4.68	-4.91	0.01	-0.01	-0.01	6.10	-4.58	-4.79	Coincident
SZEAR	15.40	-54.56	16.15	515.08	-3288.14	2654.50	16.65	-42.05	17.53	Coincident
PAT	14.90	-54.23	15.78	515.18	-3063.33	2689.25	16.07	-41.86	17.09	Coincident
EDPR	-0.03	3.87	-2.04	-0.04	0.03	-0.05	-0.03	3.95	-2.02	Coincident
PDPR	-13.48	60.21	-10.60	0.00	0.01	0.00	-12.61	82.60	-10.06	Dissimilar

Continued Table 10 Annual Percentage Growth Rates of Nominal Rupee Dividend Paid, Dividend Return on Shares, Rupee Earning Measures and Dividend Payout Percentage's (Equity & Preference) across Industry Cross-section of Companies, 1961 through 2007

Type Period	Instantaneous			Linear Trend			Annually Compounded			Type Of Regression
	1961-92	1993-07	1961-07	1961-92	1993-07	1961-07	1961-92	1993-07	1961-07	
EQDIV	11.55	1.02	11.79	57.65	42.74	97.31	12.25	1.03	12.52	Coincident
PRFDIV	1.68	7.51	5.95	0.43	18.62	6.76	1.70	7.80	6.13	Coincident
EQRET	9.25	-14.30	4.57	0.01	-0.02	0.00	9.69	-13.33	4.68	Dissimilar
PRFRET	5.48	31.41	6.75	0.00	-0.02	0.00	5.64	36.90	6.98	Coincident
SZEAR	25.26	21.53	17.07	203.23	-674.46	293.94	28.73	24.03	18.62	Coincident
PAT	25.36	21.95	17.09	203.67	-655.84	300.71	28.86	24.54	18.64	Coincident
EDPR	-0.27	5.82	0.49	0.00	-0.02	0.00	-0.27	5.99	0.49	Coincident
PDPR	-10.98	75.28	1.44	-0.01	0.01	0.00	-10.40	112.30	1.45	Dissimilar
Tea										
EQDIV	19.57	-1.25	13.08	544.22	33.54	406.92	21.62	-1.25	13.97	Dissimilar
PRFDIV	-1.72	32.23	0.77	-0.05	2.97	0.00	-1.70	38.03	0.78	Dissimilar
EQRET	8.50	-1.06	5.52	0.02	0.00	0.01	8.88	-1.05	5.68	Concurrent
PRFRET	2.37	49.00	21.72	0.00	-0.01	0.00	2.39	63.23	24.26	Coincident
SZEAR	21.47	5.28	13.86	1275.38	1335.57	908.06	23.95	5.42	14.87	Coincident
PAT	21.41	5.29	13.82	1275.32	1338.54	908.06	23.87	5.43	14.82	Coincident
EDPR	-1.90	-6.54	-0.78	-0.02	-0.03	-0.01	-1.88	-6.33	-0.78	Coincident
PDPR	-23.12	69.86	12.46	0.00	0.00	0.00	-20.64	101.09	13.27	Coincident
Trading										
EQDIV	9.89	17.80	11.70	86.03	579.41	218.23	10.40	19.48	12.41	Coincident
PRFDIV	-6.60	98.30	2.49	-0.92	87.24	11.14	-6.39	167.25	2.52	Dissimilar
EQRET	1.70	-16.10	-0.76	0.00	-0.01	0.00	1.71	-14.87	-0.76	Concurrent
PRFRET	-3.57	7.23	-3.69	0.00	0.00	0.00	-3.51	7.49	-3.62	Parallel
SZEAR	13.35	19.60	15.20	348.74	3400.55	1049.69	14.28	21.65	16.42	Coincident
PAT	13.17	19.90	15.20	347.81	3487.79	1060.83	14.08	22.02	16.42	Concurrent
EDPR	-3.50	-1.84	-3.58	-0.01	0.00	-0.01	-3.44	-1.83	-3.52	Coincident
PDPR	-19.80	78.40	-12.70	0.00	0.00	0.00	-17.96	119.02	-11.93	Dissimilar

Source: Same as in Table 8.

Table 11 Changing Relative Ranks (1=Highest to 20=Lowest) based on Absolute (A) & CAGR (G) of Annual Nominal Rupee Dividends Paid and Dividend Return on Shares (Equity & Preference) in Year Ending, 1976 through 2007

Industry	Equity Dividend						Preference Dividend						Equity Return						Preference Return					
	A1	A2	A3	G1	G2	G3	A1	A2	A3	G1	G2	G3	A1	A2	A3	G1	G2	G3	A1	A2	A3	G1	G2	G3
Basic Chemical	1	1	1	8	10	9	1	1	1	6	10	10	6	10	9	13	5	13	3	9	4	14	7	12
Cement	12	10	12	15	18	11	11	14	13	13	19	16	14	12	12	19	16	14	9	5	7	17	2	8
Fertilizers	9	4	5	9	3	6	2	2	2	3	11	3	7	9	8	16	3	11	2	7	3	15	11	13
Construction	19	18	18	2	7	4	16	19	18	4	16	8	11	19	13	10	15	19	11	20	17	1	20	3
Cotton	2	12	8	16	12	18	3	5	5	15	2	11	9	11	10	4	12	10	17	17	16	11	6	9
Electricity	14	8	9	11	2	13	7	3	3	10	3	6	5	5	5	9	7	7	8	11	12	16	17	7
Electric Mach.	5	7	6	18	6	3	6	7	6	14	8	13	12	14	11	17	6	12	6	15	11	18	14	19
Metal	11	14	13	14	11	14	10	15	15	8	4	15	16	16	17	8	11	9	10	18	14	10	10	20
Foundry	15	9	11	5	19	7	12	8	8	9	7	7	17	17	19	5	20	17	15	12	15	13	9	14
Jute	20	20	20	20	20	20	17	20	19	18	18	17	20	20	20	20	19	20	19	16	20	2	16	1
Other Machinery	3	5	3	10	8	12	4	17	14	16	17	20	8	4	6	11	4	6	7	10	10	12	15	16
Medicines	7	6	7	13	1	8	18	6	7	19	6	5	4	2	3	15	1	5	13	4	9	9	19	4
Motor	4	2	2	3	4	5	5	16	16	20	12	19	3	3	4	6	2	4	5	14	8	20	12	10
Paper	13	17	17	19	17	19	8	13	9	12	20	18	18	15	18	14	18	16	16	2	5	6	18	17
Rubber	10	15	15	7	13	15	13	12	11	1	9	2	10	6	7	7	9	8	4	1	2	3	4	5
Shipping	17	13	14	4	16	2	20	11	17	2	14	1	19	8	16	3	17	1	20	6	19	7	5	11
Silk	8	3	4	6	9	1	9	4	4	7	5	4	1	7	1	18	10	15	1	8	1	4	13	18
Sugar	18	19	19	12	14	16	14	10	10	5	15	9	15	13	15	1	13	3	12	3	6	5	3	6
Tea	6	11	10	1	15	10	19	18	20	11	13	14	2	1	2	2	8	2	14	13	13	8	1	2
Trading	16	16	16	17	5	17	15	9	12	17	1	12	13	18	14	12	14	18	18	19	18	19	8	15

Notes: The letters A and G represents Absolute and Annually Compounded Growth rates respectively, the suffix 1, 2, and 3 attached to such letters indicate the Pre-reform, Post-reform and the Full-period respectively. **Source:** Same as in Table 8.

Table 12 Changing Ranks (1=Highest to 20=Lowest) based on Absolute & CAGR of Annual Nominal Rupee Earnings and Dividend Payout Percentages (Equity & Preference) in Year Ending, 1976 through 2007

Industry	Size of Earnings						Profit after Taxes						Equity Dividend Payout						Preference Dividend Payout					
	A1	A2	A3	G1	G2	G3	A1	A2	A3	G1	G2	G3	A1	A2	A3	G1	G2	G3	A1	A2	A3	G1	G2	G3
Basic Chemical	1	1	1	13	11	12	1	1	1	14	12	12	15	9	15	6	7	5	12	10	13	6	11	11
Cement	17	9	10	18	18	16	17	9	10	18	19	16	1	16	2	20	15	18	3	15	3	19	6	15
Fertilizers	9	3	3	17	2	8	9	3	3	17	2	8	10	10	12	2	14	3	8	6	9	4	14	10
Construction	16	14	14	12	4	1	16	15	14	13	4	1	6	14	8	3	11	13	9	20	12	1	20	2
Cotton	12	13	13	10	15	15	11	14	13	8	16	15	2	2	1	4	13	11	4	4	4	8	7	9
Electricity	8	8	8	6	6	4	8	8	8	6	6	4	18	18	19	15	5	10	11	8	10	13	18	6
Electric Mach.	5	7	7	16	9	13	5	7	7	16	10	13	11	8	13	7	9	9	13	9	14	7	10	13
Metal	14	15	15	5	17	17	14	16	16	4	18	17	4	3	3	17	1	14	2	3	2	16	1	17
Foundry	13	19	18	4	20	18	13	19	19	5	20	18	8	7	9	12	20	17	6	13	7	14	9	19
Jute	19	20	20	20	12	20	20	20	20	20	13	20	20	20	20	18	18	7	16	16	17	3	16	1
Other Machinery	3	6	5	14	14	14	3	6	5	15	15	14	14	6	14	5	2	2	14	17	16	11	3	14
Medicines	7	4	4	9	7	3	7	4	4	7	7	3	13	15	16	14	4	15	19	14	19	18	19	3
Motor	2	2	2	8	1	5	2	2	2	10	1	5	17	12	17	8	16	6	17	18	18	20	12	18
Paper	18	17	17	19	19	19	18	17	18	19	14	19	5	17	5	16	19	20	1	7	1	12	17	20
Rubber	10	12	12	1	8	2	10	12	12	2	9	2	3	11	4	19	17	19	10	12	11	5	13	7
Shipping	20	16	19	15	13	9	19	13	15	12	8	9	19	1	6	1	3	1	20	1	6	2	15	8
Silk	6	5	6	7	16	7	6	5	6	9	17	7	7	13	7	9	8	12	7	5	8	10	8	12
Sugar	15	18	16	2	3	6	15	18	17	1	3	6	12	4	10	10	6	4	5	2	5	9	4	5
Tea	4	10	9	3	10	10	4	10	9	3	11	10	9	5	11	11	12	8	18	19	20	17	5	4
Trading	11	11	11	11	5	11	12	11	11	11	5	11	16	19	18	13	10	16	15	11	15	15	2	16

Notes and Source: Same as in Table 11.

Table 13 Results of K-W Test to Detect Differences in Dividend Related Measures due to the Impact of Economic Reforms across Industry Cross-section

<i>K-W Stats.</i>	EQDIV	PRFDIV	EQRET	PRFRET	SZEAR	PAT	EDPOR	PDPOR
Pre-Reform periods								
Chi-Square	195.23	213.54	147.73	82.61	152.37	148.76	101.31	91.99
Asymp. Sig.	0.00***	0.00***	0.00***	0.00***	0.00***	0.00***	0.00***	0.00***
Post-Reform periods								
Chi-Square	120.83	62.91	92.64	30.85	94.55	92.75	60.97	40.07
Asymp. Sig.	0.00***	0.00***	0.00***	0.04**	0.00***	0.00***	0.00***	0.00***

Notes: a. *K-W Stats.* denote Kruskal-Wallis test statistics b. *Asymp. Sig.* is Asymptotic Significance **Source:** Same as in Table 8.