Corporate Governance and Dividends Payout in India

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ABSTRACT

This paper investigates the association between the corporate governance and the dividends payout policy for a panel of Indian corporate firms over the period 1994-2000. We explain the differences in the dividend payout behavior of the firms with the help of firm's financial structure, investments opportunities, dividend history, earnings trend, and the ownership structure. We find a positive association of dividends with earnings and dividends trend. Debt equity ratio is found to be negatively associated, whereas past investment opportunities exert a positive impact on dividends. Ownership by the corporate and directors is positively related with dividends payout in level, and corporate ownership is negatively related in square. Institutional ownership has inverse effect on dividends in comparison to corporate ownership in levels as well as in its squares. We find no evidence in favor of association between foreign ownership and divided payout growth.

JEL Classification: G32, G35.

Keywords: Corporate Governance, Ownership Structure, Dividends Payout, and India.

1. Introduction

Dividend payout has been an issue of interest in financial literature. Jensen and Meckling (1976) argue that information asymmetry between 'insiders' and 'outsider' may lead to agency cost. One of the mechanisms, they suggest to reduce 'outsiders' expropriation is to reduce free cash flows available to managers through high payouts by the firm in from of dividends and share repurchases. Dividends are referred to as rewards for providing finances to a firm in the literature, as without any dividend payout, shares would not have any value. Dividend payout policy has been the primary puzzling factor in the economics of corporate finance since the work of Black (1976). The dividend literature has primarily relied on two lines of hypothesis: signaling and agency cost. The cash flow hypothesis asserts that insiders have more information about firms' future cash flow than outsiders do, and they have incentive to signal that information to outsiders.

Dividends can be an ideal device for limiting rent extraction of minority shareholders. Large shareholders, by granting dividends, may signal their unwillingness to exploit them. Dividend payout, however guarantees, equal payout for both insider and outsider equity holders. Corporate governance in India differs dramatically from the dominant form of corporate governance in US, UK and other developed economies. Even within India, corporate governance is not homogenous; some firms operate as business group firms while others operate as stand alone firms. Group firms differ in depth and breadth of inter-firm relationship than stand alone ones. Ownership structure in India differs from most of the Anglo-Saxon countries like the US and UK. In India, large shareholders (especially directors and corporate) have ample incentives and ability to control. Empirical research on corporate

governance and dividend payout policy has mostly concentrated for developed economies like US, UK and Japan. In US, regulated and dispersed shareholding leave salient agency problems between managers and shareholders. In emerging market economies like India, widely held corporations are in the minority and are mostly held in few hands (block shareholders).

In this paper, we examine whether differences in ownership structure and owners identity across firms can explain their dividend payout differences in India. Using a large sample of Indian corporate firms over 1994-2000, our aim is to answer the following: Does shareholders identity matter? If it does, then, whether directors' ownership is more effective than foreign ownership, corporate ownership, or institutional ownership in determining the firm's dividend payout policy? Does dividend signal any conflict between the insider (manager) shareholders and outside shareholders? Does dividend change provide any new information about this conflict? Are dividends a method of aligning insider's interests with those of outside investors? Do group-affiliated corporations in India pay higher dividends than stand-alone firms, dampening insider expropriation? Does taxation policy influence payout decisions?

Our paper makes at least three major contributions to the literature, on the issue of corporate governance and dividends payout policy. First, we provide an evidence of the relationship between ownership structure and dividends payout for an emerging market economy. Second, we provide a more robust model to explain the dividends payout behavior using detailed historical information of the ownership structure, capital structure, investments opportunity, past dividends, and earnings trend. Thirdly, this is the very first example of using principles of corporate

governance in the context of the dividends payout, by providing evidence of the different behavior by different class of owners. We document that ownership is one of the important variables that influence the dividend payout policies. The relationship between ownership and dividends is different for different class of owners and at different levels, which suggests that influence of the ownership structure on dividend payout policy is non-linear. The impact changes with the change in the holding size as well as with their identity. We expect that firms, for which the interest alignment between different classes of owners is more likely to be severe, pay out less of their earnings as dividends. We test this proposition by estimating the modified partial adjustment model.

Our paper now proceeds as follows: Section 2 briefly reviews the existing literature and provides a brief introduction to economic and legal framework within which Indian corporate firms operate and its implication for dividend payout policy. Institutional details are presented in Section 3. Section 4 presents the data and variable constructions. The methodology used and the obtained results are presented in Section 5. Finally, some concluding remarks are presented in Section 6.

2. Literature Review

Substantial literature in the field of corporate finance (Linter (1956), Linter (1962), Bhattacharya (1979), Miller and Rock (1985)), suggests that the corporate dividend policy is designed to reveal earning prospects of a firm to their investors. Recent empirical evidence in favor of this model are mixed. Fama and Babiak (1968) argues that the firms, a priori, set their target dividend level and try to stick to it. In addition to the signaling approach, there may be interrelation between dividend

payout policy and agency costs of the firm (Jensen and Meckling (1976), Easterbrook (1984)). Dividend payout policy is an outcome of the conflict between the insiders and the outsiders (issues related with corporate governance and ownership structure). Jensen and Meckling (1976), Rozeff (1982), and Easterbrook (1984) presents agency cost explanations for changes in dividend payout, while analyzing whether dividends can act as a method to align manager's interests with those of investors. They argue that the firm pays dividends in order to reduce agency costs, as payment of dividends reduce the discretionary funds available to managers. Jensen (1986) documents that in presence of free cash flows, the firms pay dividends or retire their debts to reduce the agency cost of free cash flow. Kalay (1982) investigates a large sample of bond indentures focusing on conflict between shareholders and bondholders on the dividend decision. The paper finds that the stockholders do not pay themselves as much dividends as they are allowed to. Jensen, Solberg, and Zorn (1992) examine the determinant of cross-sectional differences in insider ownership, debt, and dividend policy. The authors' find that firms with higher insider ownership chooses lower level of debt and dividends.

Han, Lee, and Suk (1999) test the agency cost based hypothesis, which predicts, dividend payout to be inversely related to the degree of institutional ownership and the tax based hypothesis, predicting the dividends to be positively related with the institutional ownership. They provide support for the tax-based hypothesis, suggesting a "dividend clientele" for institution's preference for higher dividends. Porta, Lopez-De-Silanes, Shleifer, and Vishny (2000) argue that the dividends play a basic role in limiting insider expropriation because they remove the corporate wealth from insider control. They find that corporations in countries with

strong legal protection of minority shareholders pay higher dividends. Faccio, Lang, and Young (2001) relate dividends rates to the discrepancy that exists between the shareholder's ownership rights and its control rights. The ratio of ownership and control rights is used as a measure of the corporation's vulnerability to insider expropriation within a group of corporations. The authors find that significantly the corporations that are tightly affiliated pay higher dividends to a business group. By contrast, for corporations not tightly affiliated to a group is associated with significantly lower dividend rates. They provide evidence on the expropriation that takes place within business groups and on the differences in expropriation between Europe and Asia.

Fenn and Liang (2001) analyze how corporate payout policy is affected by managerial stock incentives. They find that managerial stock incentives mitigate the agency costs for firms with excess cash flow problems. They also find a strong negative relationship between dividends and management stock options. Gugler and Yurtoglu (2003), and Gugler (2003) investigate the relationship between dividends, ownership structures and control rights for German and Austrian firms, respectively. Gugler and Yurtoglu (2003) find large shareholding of the largest owner reduces the dividends payout ratio, while shareholding by the second larger owner increases it. Gugler (2003) documents the evidence that state controlled firms engage in dividend smoothing, while family controlled firms do not. The behavior of the bank and foreign controlled firm lies in between state controlled and family controlled firms, consistent with the expected "ranking" of information asymmetries and managerial agency cost hypothesis.

The literature on signaling hypothesis builds upon the pioneering work of the Bhattacharya (1979), who derived the existence conditions for a non-dissipative signaling model and show that dividends are signals for future cash flows, under the assumption that outside investors have imperfect information about the firm's profitability and the cash dividends are taxed at a higher rate than capital gains. Miller and Rock (1985) extend the standard finance model of the firms dividend by allowing the firms manager 'insider' to know more about the firm's financial health than 'outside' investors. They show that a consistent signaling equilibrium exists under asymmetric information. Healy and Palepu (1988) examine whether dividend policy changes convey information about the future earnings substantiated by cash. They find that investors interpret announcements of dividend initiations and omissions as manager's forecast of future earnings changes. Brennan and Thakor (1990) develop a theory of choice for distribution of cash from firm to shareholders. They show that a majority of a firm's shareholders may support a dividend payment for small distribution, despite the preferential tax treatment of capital gains for individual investors. For larger distributions as open market stock re-purchase, and for the largest distributions tender offer re-purchases is likely to be preferred by a majority of shareholders.

In case of India, Kevin (1992) shows that dividend stability is a primary determinant of payout while profitability is only of secondary importance. Mahapatra and Sahu (1993) do not find evidence in support of the Linter's model, whereas Mishra and Narender (1996) find support for the Linter's model in case of state-owned enterprises (SOEs). Bhat and Pandey (1994) find that payments of dividends depend on current and expected earnings as well as the pattern of past dividends.

Dividends are used in signaling the future prospects, and dividends are paid even if there is profitable investment opportunity. Mohanty (1999) attempts to examine the behavior of payout after the bonus issue. He finds that bonus-issuing firms yielded greater returns to their shareholders than those that did not make any bonus issue but maintained a steadily increasing dividend rate. Reddy (2002) examines the dividend behavior and attempts to explain the observed behavior with the help of a trade-off theory and signaling hypothesis. The paper supports earlier finding that dividend omissions have information content about future earnings, but do not find any evidence in support of the tax-preference theory. Roy and Mahajan (2003) provide regulatory oversight on dividends payout and suggest that regulation of dividend payout should address the inherent conflict of interest between shareholders and lenders to address the issue of information asymmetry between the insiders and the outsiders. The empirical evidence concerning the possible association of owners and payout policy is extremely limited, nearly none in case of emerging market economies, especially for India. Most of the studies have tried to explain these phenomena of dividends and institutional shareholders in developed countries. In a recent study Short, Keasey, and Duxbury (2002) examine the link between dividend policy and institutional ownership for UK firms. They find a positive association between dividends and institutional shareholders and negative association with managerial ownership. In emerging market economies like India, Korea, Taiwan, China etc., the institutional setup is quite different than those of the developed countries. Aivazian, Booth, and Cleary (2003) find that emerging market firms exhibit dividend behavior similar to those of US. However, the authors do not consider the corporate governance issues. Manos (2003), using data from India, estimates the cost minimization model of dividends and finds that government ownership, insider

ownership, risk, debt, and growth opportunities, have a negative impact on the payout ratio, whereas institutional ownership, foreign ownership and dispersed ownership have a positive impact on the payout ratio. However, his analysis is based on cross-sectional data.

3. Institutional Details

Large shareholders, like other emerging market economies, characterize Indian corporate firms' ownership structure. Majority control gives the largest shareholder incentive and control over key decisions, like dividend payout. The dominance of large shareholders may affect the dividend payout in several ways. There have been changes in the taxation policy for dividend during the sample period, which gives us an opportunity to test the tax-preference theory and its implications for the dividend payout in case of an emerging market economy, India. India operates a classical company tax system in which companies are taxed separately from the investors receiving the profits in form of dividends. Firms pay differential rate of corporate tax on their profits and shareholders pay income tax on the dividend income received.

This leads to twice taxation of profit earned by firm, one in the hands of company through corporate tax and other in hands of investors, in form of income tax. In such a case an investor should prefer to get less dividends paid and earnings to be retained by firm, as they can always get the amount by selling the shares in equity market, in form of 'home made dividend' (Black (1976)). Taxation policy is a key determinant of payout in developed countries (see Short, Keasey, and Duxbury (2002)). In case of India taxation policy is different than those of developed countries.

In India, before June 1, 1997 dividends were taxable as income in the hands of the shareholders. The law was amended with effect from June 1 1997, shifting the burden of dividend tax from the shareholders to the companies. This remained till March 31 2002. Hence, from June 1 1997 to March 31, 2002, domestic companies distributing dividends were liable to pay a dividend distribution tax and the dividend was exempt in the hands of the shareholders. Dividend payout may be beneficial, if used to offset tax liability against the capital loss, as after dividend payments, the prices of stocks fall. The signaling perspectives suggest that insiders use dividends as a signal of firm's future earnings. Most of the signaling and agency cost models assumes that there is separation of ownership and control and finance is raised externally through capital markets. However, the characteristic of financing in India is different than those of the developed nations. In India, most of the financing comes from financial institutions, and these lenders also have equity holding (in general) in the firm concerned. Hence, they have access to insider information as well. This reduces the importance of dividends as a signal of firms' financial health. We focus our attention on Indian corporate sector as an experimental setting as the Indian corporate sector offers the following advantages over other emerging market economies.

The Indian Corporate Sector has large number of corporate firms, lending it to large sample statistical properties. It is large by emerging market economy's standard and the contribution of the industrial and manufacturing sectors (value added) is close to that of in several advanced economies. Unlike several other emerging market economies, firms in India, typically maintain their shareholding pattern (dominant group) over the period of study, making it possible to identify the ownership affiliation of each sample firm with clarity. It is by and large a hybrid of the *"outsider*

systems" and the *"insider systems"* of corporate governance. The legal framework for all corporate activities including governance and administration of companies, disclosures, share-holders rights, dividend announcements has been in place since the enactment of the Companies Act in 1956 and has been fairly stable. The listing agreements of stock exchanges have also been prescribing on-going conditions and continuous obligations for companies. India has a well-established regulatory framework for more than four decades, which forms the foundation of the corporate governance system in India. Numerous initiatives have been taken by Securities Exchange Board of India (SEBI) to enhance corporate governance practice, in fulfillment of the twin objectives: investor protection and market development, for example: streamlining of the disclosure, investor protection guidelines, book building, entry norms, listing agreement, preferential allotment disclosures and lot more. Although the Indian Corporate Sector is a mix of government and private firms (which are again a mix of firms owned by business group families, and multi nationals and stand alone firms), it has not suffered from the cronyism that has dominated some of the developing economies. Accounting system in India is well established and accounting standards are similar to those followed in most of the advanced economies (Khanna and Palepu (2000)). This increases our confidence in the reliability of using Indian data.

4. Data and Variable Construction

This section is sub-divided in two parts: in sub-section 1, we introduce our data. Sub-section 2 briefly focuses on some key variables.

4.1. Data

The firm level panel data for our study is primarily obtained from the corporate database (PROWESS) maintained by Center for Monitoring the Indian Economy (CMIE). The data used in the analysis consists of all manufacturing firms listed on the Bombay Stock Exchange (BSE), for which we could get their historical share holding pattern along with the dividend payout ratio and other explanatory variables used in the study. We confine our analysis to BSE listed firms only because all the listed firms are required to follow the norms set by SEBI for announcing the financial accounts. The BSE also has the second largest number of domestic quoted companies on any stock exchange in the world after NYSE, and more quoted companies than either the London or the Tokyo stock exchange. We analyze data from 1994 to 2000, as this is the period for which we have the most coverage in the database.

To construct the data sample, we start with all companies listed in Prowess database. We exclude Public Sector firms as their dividend payments are highly influenced by a large number of social obligations, which may be difficult to account for. We also exclude financial firms and utilities because their dividend polices are highly constrained by external forces. We restrict our analysis to firms that have no missing data (on share holding pattern and dividends) for at least two consecutive years. We finally end up with 2575 firms resulting in an unbalanced panel of 5,224 observations. For this unbalanced panel of 5,224 observations, we collect the following additional data for each firm observation: Earnings, Gross Sales, Total Assets, and Debt to Equity ratio. Despite the problem of attrition and missing data, our sample provides several distinct advantages over the samples used in earlier studies.

As noted earlier, a distinct form of corporate governance exists in India. A distinguishing feature of the Indian corporate sector is the existence of industrial groups, which are predominantly family firms. For this study, we distinguish those firms that are member of groups from those that are independent. Membership in a corporate group is not easily defined. Similar to the prior studies like Khanna and Palepu (2000), we adopt the classification of CMIE, which classifies firms as group members if they exhibit strong group ties over the period of their existence. We look at the dividend cuts and increases, as well as the dividend omissions. Cuts and increases are defined as negative or positive growth in annual dividends respectively; in India most of the firms pay annual dividends unlike US, where dividends are paid quarterly. Dividend omissions are identified, if the firm's annual dividend is zero. We perform our analysis after restricting the dependent variable to lie between 1st and 99th percentile to tackle the problem of outliers.

4.2. Key Variables

The key variables of the interest are dividend payout ratio in percentage of their shares' face value (Div), managerial shareholding (director) (A number of studies, for example, Mork, Shleifer, and Vishny (1988) have used board of directors' equity holdings as a proxy for managerial ownership.), institutional investors shareholding (institutional), foreign investors shareholding (foreign), and corporate shareholding (corporate). We also include their squares, namely, ($director^2$), ($institutional^2$), ($foreign^2$) and ($corporate^2$) to examine the presence of non-linearity in ownership effect after a certain threshold. We also use growth in earnings, debt-equity ratio and growth in sales intensity as controls. Year dummies are also included to

control for contemporaneous macroeconomic shocks. A dummy variable (measuring the change in tax regime) is also included to control for potential tax clientele effects.[1] In order to examine the well-established dividend models in Indian context, dividends are calculated as the total amount of ordinary dividends relating to the accounting year. Earnings are calculated as net profit derived after depreciation, interest, and taxes, available for distribution to shareholders. In Table 1, we provide a detailed description of the variables used in our analysis.

5. Empirical Analysis

This section is divided in two sub-sections: sub-section 1 presents the empirical model. The descriptive statistics and regression results are presented in sub-section 2. Sub-section 3 analyses the endogeneity of ownership and in sub-section 4, we present results of some sensitivity analysis.

5.1. Empirical Model

For testing the hypothesized link between ownership and dividend policy, we use following models: the Full Adjustment Model (FAM), the Partial Adjustment Model (PAM) (Linter (1956)), the Waud Model (WM) (Waud (1966)), the Earnings Trend Model (Fama and Babiak (1968)) and the modified model of firm level characteristics proposed by Aivazian, Booth, and Cleary (2003). We further modify these models to account for the potential association between the ownership variables and dividend policy in lines with Short, Keasey, and Duxbury (2002).

5.1.1. The Full Adjustment Model (FAM)

The association between change in earnings (Ear) and change in dividends (ΔDiv), for firm *i* at time *t*, is given by:

$$\Delta \text{Div}_{it} = \text{Div}_{it} - \text{Div}_{i(t-1)} = a + b\,(\text{Ear}_{it} - \text{Ear}_{i(t-1)}) + \mu_{it} \qquad (1)$$

We assume that the firms with significant block holding may have a different b, and then the modified model becomes:

$$\begin{aligned}\Delta \text{Div}_{it} &= \text{Div}_{it} - \text{Div}_{i(t-1)} \\ &= a + b(\text{Ear}_{it} - \text{Ear}_{i(t-1)}) + b_f(\text{Ear}_{it} - \text{Ear}_{i(t-1)})*\text{Foreign} \\ &+ b_i(\text{Ear}_{it} - \text{Ear}_{i(t-1)})*\text{Institutional} + b_c(\text{Ear}_{it} - \text{Ear}_{i(t-1)})*\text{Corporate} \\ &+ b_d(\text{Ear}_{it} - \text{Ear}_{i(t-1)})*\text{Director} + \mu_{it}\end{aligned} \qquad (2)$$

The coefficients b_c, b_f, b_i, *and* b_d, denote the respective impacts of foreign ownership, institutional ownership, managerial (directors) ownership, and corporate ownership in association to the dividend payout ratio of the firm to the change in the earnings.

5.1.2. The Partial Adjustment Model (PAM)

According to this model, dividends paid are the result of a partial adjustment towards a target payout ratio. The change in dividends is determined by the difference between last year's dividend and this year's target payout level, which is assumed to be a fixed proportion of the earnings. In any given year firm adjusts partially to the target dividend level. Hence, the model becomes:

$$\Delta \text{Div}_{it} = \text{Div}_{it} - \text{Div}_{i(t-1)} = a + b\,(\text{Div}_{it} - \text{Div}_{i(t-1)}) + \mu_{it} \qquad (3)$$

where, b is the rate of adjustment to target payout ratio. Inclusion of ownership variables alters the above in the following way:

$$\begin{aligned}\Delta \text{Div}_{it} &= \text{Div}_{it} - \text{Div}_{i(t-1)} \\ &= a + b(\text{Ear}_{it} - \text{Ear}_{i(t-1)}) + b_f(\text{Ear}_{it} - \text{Ear}_{i(t-1)})*\text{Foreign} \\ &+ b_i(\text{Ear}_{it} - \text{Ear}_{i(t-1)})*\text{Institutional} + b_c(\text{Ear}_{it} - \text{Ear}_{i(t-1)})*\text{Corporate} \\ &+ b_d(\text{Ear}_{it} - \text{Ear}_{i(t-1)})*\text{Director} + g\,\text{Div}_{i(t-1)} + \mu_{it}\end{aligned} \quad (4)$$

5.1.3. The Waud Model (WM)

According to the Waud model, dividends paid are the result of 'the partial adjustment' and 'the adaptive expectations'. Waud proposes a second order rational distributed lag order model. [2]

With ownership variables, the modified Waud model can be represented as:

$$\begin{aligned}\Delta \text{Div}_{it} &= \text{Div}_{it} - \text{Div}_{i(t-1)} \\ &= a + b(\text{Ear}_{it} - \text{Ear}_{i(t-1)}) + b_f(\text{Ear}_{it} - \text{Ear}_{i(t-1)})*\text{Foreign} \\ &+ b_i(\text{Ear}_{it} - \text{Ear}_{i(t-1)})*\text{Institutional} + b_c(\text{Ear}_{it} - \text{Ear}_{i(t-1)})*\text{Corporate} \\ &+ b_d(\text{Ear}_{it} - \text{Ear}_{i(t-1)})*\text{Director} + g_1\text{Div}_{i(t-1)} + g_2\text{Div}_{i(t-2)} + \mu_{it}\end{aligned} \quad (5)$$

5.1.4. The Earnings Trend Model (ETM)

Fama and Babiak (1968) proposes a modified 'partial adjustment model' for dividend analysis.

In our case, the modified model takes the following form:

$$\begin{aligned}\Delta \text{Div}_{it} = \text{Div}_{it} - \text{Div}_{i(t-1)} = a + b(\text{Ear}_{it} - \text{Ear}_{i(t-1)}) + b_f\text{Ear}_{i(t-1)}*\text{Foreign} + \\ b_i\text{Ear}_{i(t-1)}*\text{Institutional} + b_c\text{Ear}_{i(t-1)}*\text{Corporate} + b_d\text{Ear}_{i(t-1)}*\text{Director} + \\ g\text{Div}_{i(t-1)} + \mu_{it}\end{aligned} \quad (6)$$

5.1.5. The Proposed Model (PM)

In view of Porta, Lopez-De-Silanes, Shleifer, and Vishny (2000), dividends play a basic role in limiting insider expropriation by removing corporate wealth from

insiders' control. Under the assumption that the managers are not perfect agents of owners, Easterbrook (1984) propose two forms of agency cost, the cost of monitoring, and cost of risk aversion on parts of managers. In Indian context, Bhat and Pandey (1994), on the basis of a survey of managers' perspective about dividend payment and retention, claim that dividend depends on current and expected earnings as well as the pattern of past dividends. They also document that dividend helps in signaling the future prospects of the firm, and dividends are paid even if the firm has profitable investment opportunity. In order to measure the investment opportunity across firms over time, we use past growth in sales intensity (defined as the ratio of gross sales to total assets). This measure was also used in (Porta, Lopez-De-Silanes, Shleifer, and Vishny (2000)).[3] Barclay, Smith, and Watts (1995) argues that tax penalty associated with dividend payments depends on the tax rate of the firm's investors, but all firms have access to same pool of investors and hence face the same potential tax penalty. Therefore, we would expect differences in dividend policy to be driven by factors other than taxes. However, we use tax dummy (for change in tax regime) in some of the regressions, which suggests that the change in taxation policy has no impact on dividends payout policy for Indian corporate firms.

Aivazian, Booth, and Cleary (2003) examine the influence of firm-level characteristics on the dividend decision. We however, propose a modified version of the model suggested by Linter (1956), Waud (1966), Fama and Babiak (1968), Short, Keasey, and Duxbury (2002) and Aivazian, Booth, and Cleary (2003). We propose that the dividend policy is influenced by the dividends payment of previous years as managers of a firm are reluctant to change the current dividend from past years dividend payment, unless they are unable to maintain it. We also note that dividend

payments are not only determined by the past dividends, but also by current and past earnings, investment opportunities, firm's capital structure (measured as Debt-Equity ratio) and the ownership structure of the firm. We use past growth in sales intensity as a proxy for investment opportunity included on the ground that higher historic growth might render dividends policy less relevant for inducing primary market monitoring. The inclusion of the debt equity ratio is mainly motivated by its potential monitoring role on managers. In particular, Jensen and Meckling (1976) argue that financial leverage play a role in reducing agency costs arising from the owner-manager conflict.

In our set-up, hence we propose the following model:

$$\begin{aligned}\text{Dividend Intensity}_{it} = {} & a_i + b_1 \text{Earnings Intensity}_{it} + b_2 \text{Earnings Intensity}_{i(t-1)} + \\ & b_3\, \textit{Debt Equity}_{it} + b_4\, \textit{Growthin Sales Intensity}_{it} + b_5 \text{Foreign}_{it} + \\ & b_6 \text{Institutio nal}_{it} + b_7 \text{Corporate}_{it} + b_8 \text{Director}_{it} + b_9 (\text{Foreign})^2_{it} + \\ & b_{10} (\text{Instituti onal})^2_{it} + b_{11} (\text{Corporate})^2_{it} + b_{12} (\text{Director})^2_{it} + \\ & g \text{Dividend Intensity}_{i(t-1)} + \mu_{it}\end{aligned} \tag{7}$$

where, dividend intensity is defined as the ratio of dividends to total assets. We also control for unobserved firm-effects (a_i) and μ_{it} denotes the error term. We use different specification of this model to capture the impact of ownership structure and observed firm-level characteristics. Gugler and Yurtoglu (2003) argue that although ownership and performance measures like return to total assets may be endogenous, it is unlikely that ownership and dividends are endogenous. We, therefore, believe that our results are robust to the endogeneity problem. However, we provide some empirical evidence in favor of our belief about the endogeneity issue in Section 5.3.

5.2. Descriptive Statistics and Regression Results

Table 2 reports industry-wise (2-digit NIC code) distribution of observation for each year. Summary statistics relating to the dependent variable and explanatory variables are presented in Table 3 for each year, and for the full sample. We observe that the mean level of dividend payments have significantly increased over the period, from 2.96% in 1994 to 3.41% in 2000. During the sample period the PBDIT (Profit before Depreciation, Interest and Tax) have remained almost stable from Rs. 27 Crores in 1994 to Rs. 33 Crores in 2000. We also find that even when the earnings growth rate has been negative (-0.002%), the dividend payments have been growing at the rate of 0.47% for full sample. This trend is consistent for all the periods in the sample. This may in turn, imply that the change in dividend payments are not solely determined by the change in earnings. The mean levels of foreign ownership have been decreasing from 11.73% in 1994 to 10.84% in 1997 to finally at 10.20% in 2000. Institutional investors' holding have remained more or less stable during the period form 1.91% in 1994 to 1.55% in 1997 to 1.59% in 2000, while that of directors' and corporate' have been significantly increasing. Mean level of retained profit by firms have also been reducing from 7.19 in 1994 to 5.29 in 1997 to 4.76 in 2000.

We use dividend growth as a dependent variable in this analysis unless otherwise stated. The results of the modified Linter model are shown in Table 4. Column 1 reports the result for dividend growth with time and industry dummies at 2-digit level. The coefficients of the lagged dividends are significant: first lag have negative impact while that of the second is positive. Current earnings (Ear) have positive and significant effect. In column 2, we restrict our analysis to a sample of firms without zero dividend growth. Result remains same as before while magnitude of the effect increases marginally. In column 3 and 4, we repeat the same analysis

with fixed-effects panel regressions. We infer that after controlling for unobserved firm heterogeneity, lagged dividends have no explanatory power in explaining current dividends. However, if we restrict our analysis to firms without zero dividends growth, results remains unaltered. Our results provide support for the Linter Models in presence of change in dividends payout. This result is in contrast to the results of Mahapatra and Sahu (1993) but corroborates the result of Mishra and Narender (1996).

The results for the modified full adjustment model (FAM) are shown in Table 5. Column 1 reports result with time and industry dummy at the 2-digit level. The coefficient of the earnings growth and interaction term of earnings growth with director's shareholding is positive, while the interaction term of institutional shareholding with earnings growth is negative and significant. Interaction of tax dummy with the earnings variable yields a negative and significant coefficient. In column 2, we control for unobserved firm-effects. Here we also use an indicator dummy taking the value of one for that owner who has the maximum share-holding among the ownership groups, and zero otherwise. Our finding remains same as before in terms of institutional ownership. However, interaction of tax dummy with the earnings variable looses its significance. We also perform similar exercises with other indicator variables constructed at different levels of ownership (for example 5%, 10% and 25%). We present the result for the 25% threshold in column 3. We document that the interaction term of earnings with institutional ownership has a negative impact on dividend payout. Our result is in sharp contrast to the findings of Short, Keasey, and Duxbury (2002).

In Table 6 we present regression results for the modified partial adjustment model (PAM). Results for dividend growth with time and industry dummy at the 2-digit level are reported in column 1. The coefficient for earnings is positive and significant, while the interaction variables (earnings with different ownership shareholding), in case of institutional and corporate, are negative and significant. We also document that the coefficient of the interaction term of earnings with group firm yields a negative significant coefficient. In column 2 of Table 6, we report the results of the fixed-effect regression. Results remain the same as in case of column 1 except the fact that the coefficient associated with 'corporate' and 'group', looses their significance, while that of the 'director' enters with a negative significant coefficient. In column 3, we use an indicator dummy taking the value of one for that owner who has the maximum shareholding among the ownership groups, and zero otherwise. We obtain similar results with interaction between indicator dummies (maximum) and earnings, as in case of column 2, except 'director' looses its significance. In columns 4, 5 and 6, we use indicators for the level of shareholding at 5%, 10%, and 25%, respectively. These indicator variables take the value of one if the shareholding by a particular group is more than the threshold level, zero otherwise. In case of 5% and 10%, as a thresh hold level, only first lag of dividend turns out to be significant with negative coefficient, none of the ownership variables are significant even at 10% level of significance. In column 6, with 25% as the level for designing our indicator variable, we find similar results as in case of indicator at the maximum level (column 3). We also note that except in the first case (column 1), lagged dividends always enters with a negative significant coefficient.

The results of the modified earnings trend model (ETM) are presented in Table 7. Column 1 reports the results for dividend growth with time and industry dummy at the 2-digit level, while the results controlling for unobserved firm-effects are presented in other columns. In column 1, the coefficient for the current earnings (Ear) is positive and significant and the interaction term of 'corporate' with past earnings is negative and significant. In column 2, we report the results where interaction terms are constructed using actual values of share holding and earnings. In this case the coefficient of the interaction between 'director' and 'corporate' shareholding with earnings is negative and significant. As before, we also construct an indicator dummy taking the value of one for that owner who has the maximum shareholding among the ownership groups, and zero otherwise. Results (Column 3) indicate that none of the interaction terms (interaction between lagged earnings and shareholding of different owners) is significant. The results in terms of this interaction variable remains the same if we use the ownership threshold at 5%, 10% or at 25% level. Our result also indicates that past dividend has negative and significant impact on dividends growth while current earning has positive and significant impact.

The results of the modified Waud Model (WM) are presented in Table 8. The results for dividend growth with time and industry dummy at the 2-digit level are reported in column 1 and that with fixed-effects in Column 2. In column 1, earnings exert positive and significant impact, while the coefficients of the interaction terms of earnings with 'institutional', 'foreign', and 'corporate' are negative and significant. The coefficient of the second lag of the dividend variable is positive and significant. Introduction of firm-effects (Column 2) changes our result. Other than current

earnings and the interaction of current earnings with 'institutional' shareholding, all other variable looses their significance.

In Table 9, we present the results for our proposed model of dividends payout policy. Instead of using dividends growth, here we use dividend intensity (defined as the ratio of dividends and total asset) as the dependent variable. The results with time and industry dummy at 2-digit level are reported in column 1 while that with firm specific fixed-effects is represented in other columns. The coefficient of lagged dividend intensity, earnings intensity and growth in sales intensity is positive and significant in column 1, whereas that of debt equity ratio is negative and significant. We document that none of the ownership variables are significant. Controlling for unobserved firm-effects (column 2) does not alter our results in case of earnings intensity, growth in sales intensity and debt-equity ratio. However, the impact of shareholding by the 'director' turns out to be significant and positive. The result corroborates the findings of Short, Keasey, and Duxbury (2002). In column 3, we also try to capture the non-linear effect of ownership variables. In order to do so, we use squares of ownership variables. From column 3, we can infer that earnings intensity, first lag of earnings intensity, and growth in sales intensity are all positive and significant. Suggesting that past profitability captures information on future growth prospects, and possibly because more profitable firms are more likely to grow in future, a higher level of dividends payout is observed. Impact of debt-equity ratio is negative and significant.

Our results in terms of ownership variable gives an interesting picture: the coefficient of 'institutional' ownership has non-linear impact on dividend intensity:

negative in level and positive in squares, whereas that of 'director' and 'corporate' exert positive effect in levels and negative effect in squares. This result of non-linear relationship between institutional shareholder and dividends intensity may be inferred as act of institutional investors as monitors of the firm managers, thus dampening in principle the need for high corporate payouts. However, it also suggests that institutions may influence higher dividends payouts by a company to enhance managerial monitoring by external capital markets, as their own direct monitoring efforts may be insufficient or too costly. However, the square of the shareholding of the 'director' is not significant.[4] In columns 4, we report the regression results with indicator dummies constructed for ownership variables at maximum level that is if an investor group has maximum stake in the firm (among the four) then the dummy for that investor group takes the value of one and zero for other investor groups. Column 5, 6, and 7 report the results of regression analysis with indicator dummies constructed for the group of owners, which takes the value of one if the shareholding is greater than 5%, 10%, and 25%, respectively zero otherwise. Results indicate that when foreign or institutional investors have majority shareholding, dividends payout is positively related with their stake. This implies that the foreign shareholders have positive and significant impact of dividends payout only in case when they have the majority shares in the firm. Our results indicate that if the shareholding by the foreign or institution is highest then the ownership variable exerts a significant positive impact on dividend intensity. Use of indicator dummy for the ownership at other thresholds (at 5%, 10% and 25%), yields the following: in case of indicator at 5% threshold, the shareholding by the 'corporate' has positive and significant impact on dividend intensity, while in case of indicator at 25% threshold, 'institutional'

shareholding has positive and significant impact. The results from Table 9 establish that the effect of ownership varies across different class of owners.

In order to investigate our findings further, we use the piece wise linear (spline) specification. The results with the spline specification for the ownership variable are presented in Table 10. For this analysis, we create spline nodes at 5%, 10%, 25%, and above.[5] We re-estimate the modified versions of the well-established dividend models, namely FAM, PAM, WM, and ETM. In column 1, we report the results for FAM, we find that 'foreign' has negative and significant impact, if the holding is between 10-25% and has positive and significant impact if the holding crosses the threshold limit of 25%. Negative and significant effect is obtained for the 'institutional' shareholding, if the holding lies between 10-25%, whereas in case of 'corporate' shareholding, the impact is positive and significant in case the holding is between 5-10%. In column 2, we report the results with the modified Partial Adjustment Model (PAM). The coefficient of the interaction term between earnings and 'foreign' has positive and significant effect, if the foreign shareholding lies between 5-10%. The effect is negative and significant if their shareholding is between 10-25% and becomes positive and significant if their holding increases beyond 25%. The shareholding of 'institutional' investor has negative impact if the holding lies between 10-25%. In case of 'corporate' shareholding, we find that they exert negative significant impact till their holding is below 5%, positive significant effect if it is between 5-10% and again negative effect if holding crosses 25%. Results with the shareholding pattern of foreign remains the same in case of modified Waud Model (WM, column 3). However, none of the other ownership variables are significant in case of modified Waud Model. The regression results for the modified Earnings

Trend Model (ETM, column 4) documents that that interaction term between first lagged value of earnings and 'corporate' has negative impact if the holding is above 25%.

5.3 Is Ownership Structure Endogenous?

Even though our results provide strong evidence that the firm's dividend payout policy is related to the proportion of the shares held by different group of owners, one could argue that outsiders, foreign outsiders, and institutional outsiders may only invest in a specific type of Indian firms that are well managed and profitable or vise versa, implying that the causal direction is in opposite direction. We address this concern by investigating the explanatory power of the dividends trend in explaining the shareholding of an investor group. Specifically the following regressions are estimated, for each group of owners:

$$\text{Group Ownership}_{it} = a_i + b\ \text{Dividend Intensity}_{i(t-1)} + g\ \text{Dividend Intensity}_{i(t-2)} + d\ \text{Dividend Intensity}_{i(t-3)} + \mu_{it} \quad (8)$$

where Dividend Intensity is defined as before, Foreign, Institutional, Corporate, and Director's ownership, are used as the dependent variable in each regression respectively. Regression results are presented in Table 11 (Panel A), similar regressions are also estimated using Dividends, instead of dividend intensity, results are provided in Table 11 (Panel B).

We do not find any lag of the dividends payout to have significant impact on any groups of the ownership variables. To investigate this issue further, we estimate a three stage least square (3SLS) regression. We have four equations in this case for the four ownership groups and one equation for the dividends intensity. We estimate

these equations in simultaneous equations framework. Our specification follows closely that of Demsetz and Villalonga (2001). Specifically, the following equations are used, for each group of owners:

$$\begin{aligned}\text{Group Ownership}_{it} &= a_i + b\ \text{Dividend Intensity}_{i(t-1)} + g\ \text{Dividend Intensity}_{i(t-2)} \\ &\quad + d\ \text{Earnings Intensity}_{i(t-1)} + f\ \text{Earnings Intensity}_{i(t-2)} + \mu_{it}\end{aligned} \quad (9)$$

For the dividends intensity we use the following equation:

$$\begin{aligned}&\text{Dividend Intensity}_{it} = a_i + b_1\text{Earnings Intensity}_{it} + b_2\text{Earnings Intensity}_{i(t-1)} \\ &+ b_3\text{Foreign}_{it} + b_4\text{Institutional}_{it} + b_5\text{Corporate}_{it} + b_6\text{Director}_{it} \\ &+ b_7(\text{Foreign})^2_{it} + b_8(\text{Institutional})^2_{it} + b_9(\text{Corporate})^2_{it} \\ &+ b_{10}(\text{Director})^2_{it} + g\,\text{Dividend Intensity}_{i(t-1)} + \mu_{it}\end{aligned} \quad (10)$$

Results of the regression are presented in Table 12. We do not find any lag of the dividends intensity to be significant in explaining any of the ownership variables. Result is qualitatively same as the one reported in Table 9, in case of dividends intensity in as the dependent variable.

However, one may argue that though ownership is not endogenous in case of dividends payout, it may be endogenous in case of performance.[6] In particular, outsiders, foreign outsiders, and institutional outsiders may be targeting a specific type of Indian firms for their investments. They may be systematically going after quality ore they may be systematically seeking out under performing assets. To address this issue, we have interacted incremental change in ownership variables with the performance of the firm. We use ROA (return over assets defined as a ratio of profit before depreciation and tax to total assets), ROE (return over equity defined as a ratio of profit before depreciation and tax to total equity), and Sales Intensity (defined as a ratio of total sales to total assets) as different measures of performance in this analysis. The sign of the significant interaction variables may provide some

insight about the behavior of the ownership group with the change in the performance. For example: if the coefficient of the interaction variable for foreign ownership and performance is positive and significant, one may infer that with increase in the firm performance, foreign ownership also has positive impact on the dividends. In particular, we estimate the following model:

$$\begin{aligned}
&\text{Dividend Intensity}_{it} = a_i + b_1\text{Earnings Intensity}_{it} + b_2\text{Earnings Intensity}_{i(t-1)} \\
&+b_3\text{Foreign}_{it} + b_4\text{Institutional}_{it} + b_5\text{Corporate}_{it} + b_6\text{Director}_{it} \\
&+b_7(\text{Foreign})^2_{it} + b_8(\text{Institutional})^2_{it} + b_9(\text{Corporate})^2_{it} \\
&+b_{10}(\text{Director})^2_{it} + d_1\ (\text{Grwoth in Foreign})*(\text{Performance})_{it} \\
&+d_2\ (\text{Grwoth in Institutional})*(\text{Performance})_{it} \\
&+d_3\ (\text{Grwoth in Corporate})*(\text{Performance})_{it} \\
&+d_4\ (\text{Grwoth in Director})*(\text{Performance})_{it} + g\,\text{Dividend Intensity}_{i(t-1)} + \mu_{it}
\end{aligned} \tag{11}$$

The results are reported in Table 13. We find that the Institutional have negative and significant impact of the dividends payout in linear term and positive in square term, which is consistent with our earlier findings, see column 3 of Table 9. Only incremental holding by directors, interacted with performance is found to be significant. No other ownership variable's incremental change interacted with the performance is found to be significant. That is to say that the outsiders, outside foreigner or institutional investors are not seeking out over/under performing assets. The causality is from the ownership structure to the dividends payout policy rather than from dividends payout to the ownership structure and ownership structure is not significantly influences by the performance or the dividends payout behavior of the firm.

5.4 Sensitivity Analysis

One may argue that the definition of the dividends intensity may bias the result in the suggested model. To further investigate, we redefine our dividend intensity variable, as a ratio of dividends and operating cash flow (div_opcflow), ratio of dividends and total income (div_totinc). We re-estimate our proposed model with these variables as our independent variable in the model. The results are provided in Table 14. Once again our results qualitatively remain the same as reported in the Table 9. We find that the earnings intensity is significant and positive, debt equity has negative influence (insignificant), corporate and director ownership has positive effect in linear term and negative impact in squares, institutional investors (foreign) have negative (positive) impact in linear in and positive (negative) in square terms.

6. Conclusion

Our paper offers an empirical examination of the agency theory explanation for the distribution of dividends policy in India, especially, analyzing the relationship between the ownership structure, corporate governance, and dividend payout using a large panel of Indian corporate firms over 1994-2000. To the best of our knowledge, it is the first attempt to use the well-established dividend payout models to examine the impact of ownership structures on dividend payout policies in context of an emerging market economy, India.

We find that ownership is one of the important variables that influence the dividend payout policy. However, the relationship is different for different class of owners and at different levels. This suggests that the ownership structure does not influence dividend pay out policy of the firm uniformly. The results support the hypothesis that the interest alignment between different classes of owners influences

the dividend payout policy. Further research may extend the present use of dividend payout models to examine the influence of ownership identity in case of other emerging market economies. Examining the influence of board structure on dividend payout policy would be an interesting exercise. However, this is left for future research.

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Table 1: List of Variables

Abbreviation	Description
Dividends Payout (Div)	Dividend is the total amount of dividend paid per share in the accounting year. Since in India, mostly dividends are paid annually (not quarterly), we construct our variable on basis of yearly dividend payments per share.
Dividend Intensity (Div Int)	Defined as the ratio of the dividends payments to total assets.
Foreign	Foreigners' Share Holding is equity held by foreigners as percentage of total equity shares. These include foreign collaborators, foreign financial institutions, foreign nationals, and non-resident Indians.
Institutional	Governments' and Financial Institutions' Share Holding is shares held by government companies as percentage of total equity shares. These includes insurance companies, mutual funds, financial institutions, banks, central and state government firms, state financial Corporations and other government bodies.
Corporate	Corporates' Share Holding is equity held by Corporate bodies as a percentage of total equity shares. These include corporate bodies excluding those already covered.
Director	Directors' Share Holding is equity held by Directors of the firm as defined in section 6 of the Companies Act, 1956., which includes the shares held by the family members (or the persons acting in concern) of the director.
Earnings (Ear)	We use net profit of the firm as the earning for the year. This is the revenue available to a firm for the distribution of the shareholders.
Earnings Growth (EG)	Earnings growth is calculated as the percentage increase in the current earnings from the past earnings.
Earnings Intensity (Ear Int)	Defined as the ratio of the net profit to total assets of the firm.
Group Dummy	This dummy takes the value of 1 if the firm belongs to a business group, 0 otherwise.
Tax Dummy	This dummy takes the value of 1 for the period before 1997, and 0 otherwise to indicate the change in the pattern of tax on dividends. Prior to the year 1997, dividends were taxed in the hands of the investor (receiver), whereas, from 1997 onwards dividend tax is deducted by the firm at the source.
Debt-Equity Ratio	Defined as the ratio of total debt to the equity capital of the firm, to measure the leverage.
Sales Intensity (Sale Int)	Defined as the ratio of the gross sales to total assets of the firm.
Growth in Sales Intensity	Calculated as the percentage increase in the current year from the past year
ROA (Return over Assets)	Ratio of Profit before depreciation, interest and tax (PBDIT) to total assets
ROE (Return over Equity)	Ratio of PBDIT to equity capital

Table 2: Data structure for NIC-2 digit Industry code

Based on the industrial classification of National Sample Survey Organization (NSSO), India's National Industrial Classification 1998.

Nic-2 Digit	1994	1995	1996	1997	1998	1999	2000	Total
11- Petroleum And Natural Gas		2	20	15	15	6	16	**74**
12- Mining Of Uranium And Thorium Ores			3	4	6	1	3	**17**
13- Mining Of Metal Ores					3	1	1	**5**
14- Other Mining And Quarrying	1	9	11	11	14	5	15	**66**
15- Manufacture Of Food Products And Beverages	15	35	72	70	106	58	118	**474**
16- Manufacture Of Tobacco Products	1	2	3	3	7	1	7	**24**
17- Manufacture Of Textiles	19	49	80	77	121	61	120	**527**
18- Manufacture Of Wearing Apparel; Dressing And Dyeing Of Fur	1	7	10	10	15	10	10	**63**
19- Tanning And Dressing Of Leather	5	5	5	9	10	4	16	**54**
20- Manufacture Of Wood And Of Products Of Wood And Cork	1	2	3	6	7	1	10	**30**
21- Manufacture Of Paper And Paper Products	5	10	18	22	37	18	26	**136**
22- Publishing, Printing And Reproduction Of Recorded Media	2	1	6	5	6	3	8	**31**
23- Manufacture Of Coke, Refined Petroleum Products And Nuclear Fuel	1	1	6	9	9	5	8	**39**
24- Manufacture Of Chemicals And Chemical Products	38	70	149	165	245	150	237	**1054**
25- Manufacture Of Rubber And Plastics Products	14	22	63	53	75	41	79	**347**
26- Manufacture Of Other Non-Metallic Mineral Products	11	22	35	42	58	17	56	**241**
27- Manufacture Of Basic Metals	19	31	54	77	93	46	101	**421**
28- Manufacture Of Fabricated Metal Products, Except Machinery And Equipment	2	8	22	18	25	17	21	**113**
29- Manufacture Of Machinery And Equipment	22	38	57	69	86	45	79	**396**
30- Manufacture Of Office, Accounting And Computing Machinery	2	2	4	5	10	5	20	**48**
31- Manufacture Of Electrical Machinery And Apparatus	10	17	43	39	51	27	45	**232**
32- Manufacture Of Radio, Television And Communication Equipment And Apparatus	7	10	17	30	31	14	30	**139**
33- Manufacture Of Medical, Precision And Optical Instruments, Watches And Clocks	1	2	10	9	14	9	12	**57**
34- Manufacture Of Motor Vehicles, Trailers And Semi-Trailers	8	16	28	33	56	21	48	**210**
35- Manufacture Of Other Transport Equipment	1	2	4	9	10	6	11	**43**
36- Manufacture Of Furniture		2	8	9	11	8	15	**53**
40- Electricity, Gas, Steam And Hot Water Supply	4	4	4	4	10	2	6	**34**
45- Construction					1		1	**1**
51- Wholesale And Retail Trade			1	1			16	**3**
65- Transport, Storage And Communications			2					**2**
70- Real Estate Activities							1	**1**
72- Computer And Related Activities		9	19	16	35	30	54	**163**
92- Sewage And Refuse Disposal, Sanitation Products						1		**1**
97- Recreational, Cultural And Sporting Goods				1		1		**2**
98-Diversified	7	10	10	22	34	10	21	**123**
Total	**197**	**388**	**776**	**843**	**1201**	**624**	**1195**	**5224**

Table 3: Summary statistics for each year 1994, 1995, 1996, 1997, 1998, 1999, 2000 and Full Sample

Variable	Mean	Std. Dev.	Median	Skewness	Kurtosis	IQR (Inter Quartile Range)
Year	**1994**					
Observations	**197**					
Dividends	2.959391	9.715776	0	6.627972	57.7392	1
Dividend-Growth	.	.	.	.	.	.
Net-Profit	10.48041	29.84264	1.92	5.205815	33.0931	6.05
Earnings-Growth	.	.	.	.	.	.
Sales	176.2538	417.5419	42.6	5.950523	49.95196	127.32
Total-Assets	209.7125	498.3326	49.19	4.610557	29.21531	123.2
Debt-Equity-Ratio	0.8322449	5.519481	0.975	-7.409476	79.65936	1.27
PBDIT	27.40299	64.00343	6.92	4.848675	31.72239	17.99
Equity-Capital	14.71431	26.06845	5.63	3.861602	20.90323	11.58
Operating Cash Flow	0	0	0	.	.	0
Total Income	179.9762	423.6937	44.37	5.871463	48.65261	129.9
Foreign	11.72528	16.38306	4.54	1.594999	4.644019	16.28
Director	12.23599	15.55293	4.86	1.444706	4.597163	19.24
Institutional	1.913807	5.907399	0	3.967472	19.38941	0.06
Corporate	24.16325	18.77791	21.2	0.5431714	2.485669	28.93
Year	**1995**					
Observations	**388**					
Dividends	2.938144	14.28489	0	9.869967	117.8254	1
Dividend-Growth	1.54375	5.095129	0	5.649618	41.0604	1
Net-Profit	12.35598	65.01537	2	12.13952	183.8876	5.955
Earnings-Growth	6.617813	24.31146	1.045	5.458111	41.09897	4.17
Sales	151.2843	496.5644	37.855	9.391906	113.5415	95.575
Total-Assets	205.1705	774.7791	39.695	10.14814	131.8623	92.85
Debt-Equity-Ratio	2.69634	34.72632	0.905	18.32863	354.5862	1.135
PBDIT	26.68791	109.3448	5.325	11.59221	171.1414	13.705
Equity-Capital	14.59121	36.90056	5.55	7.577526	74.56128	8.385
Operating Cash Flow	13.83193	80.68955	0	11.93618	181.1418	4.75
Total Income	157.579	514.1655	38.73	9.369258	113.4672	97.115
Foreign	10.99095	15.09072	4.61	1.791602	5.697582	15.55
Director	16.04964	18.59596	8.52	1.217778	3.683671	25.75
Institutional	1.949691	5.970014	0	5.068885	36.28111	0.105
Corporate	23.64312	18.61042	19.955	0.675519	2.720998	29.875

Variable	Mean	Std. Dev.	Median	Skewness	Kurtosis	IQR (Inter Quartile Range)
Year	**1996**					
Observations	**776**					
Dividend-Growth	0.4931973	8.635091	0	2.483092	99.25519	0
Net-Profit	10.99284	57.20673	1.4	16.36628	346.4207	5.945
Earnings-Growth	3.251871	25.25496	0.4099999	-0.6377308	76.28138	3.12
Sales	145.5972	447.394	31.16	9.79371	137.4928	105.74
Total-Assets	185.0257	727.9422	36.005	13.35779	242.2491	91.605
Debt-Equity-Ratio	2.54E+13	7.07E+14	0.78	27.8029	774.0013	1.08
PBDIT	25.65615	95.61308	4.52	11.58357	188.2903	15.57
Equity-Capital	13.56183	29.75849	5.66	8.083285	93.8609	7.46
Operating Cash Flow	15.41603	71.74774	1.59	13.54981	254.6491	9.43
Total Income	151.8276	468.5583	32.215	9.807343	138.097	108.52
Foreign	10.45977	14.97933	4.48	1.970004	6.334062	13.085
Director	17.0529	18.37928	11.175	1.101875	3.48244	27.235
Institutional	1.736121	5.189585	0	4.969405	36.65374	0.06
Corporate	23.5614	18.39632	19.79	0.6813302	2.717408	28.94
Year	**1997**					
Observations	**843**					
Dividends	2.809015	13.95336	0	13.66839	256.8686	1
Dividend-Growth	0.4662698	4.441676	0	8.556034	107.5426	0
Net-Profit	8.342242	54.31797	0.71	18.05476	414.3737	4.99
Earnings-Growth	-3.092877	18.2358	-0.2349999	-5.156015	46.95471	2.455
Sales	162.6643	494.2121	36.03	9.713402	137.1393	109.03
Total-Assets	212.8861	862.2407	39.38	15.08729	310.599	105.09
Debt-Equity-Ratio	1.009417	8.154612	0.86	6.525897	218.6699	1.15
PBDIT	27.38153	101.0078	4.47	11.50569	193.8081	15.96
Equity-Capital	14.64259	33.25432	6.05	7.524099	76.32997	7.76
Operating Cash Flow	20.14495	94.35436	2.33	13.16587	236.794	11.72
Total Income	168.0072	508.4679	36.45	9.553075	132.9083	113.42
Foreign	10.842	15.97831	3.95	1.979588	6.405052	13.78
Director	17.4837	18.66517	11.57	1.143167	3.788099	27.8
Institutional	1.55032	4.673506	0	5.380681	44.86148	0.08
Corporate	25.51754	19.67958	22.44	0.648637	2.735296	32.26

Variable	Mean	Std. Dev.	Median	Skewness	Kurtosis	IQR (Inter Quartile Range)
Year	**1998**					
Observations	**1201**					
Dividends	3.251457	21.74584	0	18.01424	387.9828	1
Dividend-Growth	-0.0298013	6.050295	0	6.241255	147.6791	0
Net-Profit	8.298351	63.72215	0.73	15.67359	332.6366	6.05
Earnings-Growth	-0.5048509	19.12619	-0.0100	3.910542	66.97831	2.635
Sales	192.1618	646.5114	46.21	12.5053	211.871	137.05
Total-Assets	262.492	1023.234	50.85	14.13554	285.1144	149.13
Debt-Equity-Ratio	1.140125	6.794416	0.875	2.275559	142.4375	1.28
PBDIT	30.13387	121.1573	5.2	13.65977	270.009	18.49
Equity-Capital	17.91868	51.93716	6.59	11.05148	164.2712	9.26
Operating Cash Flow	22.69403	120.6769	2.81	18.76104	473.0153	12.81
Total Income	197.8052	670.227	46.41	12.64907	217.7005	138.56
Foreign	11.69159	17.58171	3.86	1.948069	6.206544	14.41
Director	17.27679	19.14122	10.34	1.153718	3.656181	28.24
Institutional	1.782306	5.448266	0	4.88245	33.52673	0.07
Corporate	25.57475	20.10942	21.73	0.637666	2.646784	32.28
Year	**1999**					
Observations	**624**					
Dividends	3.625	31.34585	0	19.59808	426.1173	1
Dividend-Growth	0.700831	9.672368	0	17.69664	329.017	0
Net-Profit	5.978125	55.27748	0.38	13.28229	240.6061	5.785
Earnings-Growth	-0.3290027	23.18149	-0.05	3.66198	62.84842	3.32
Sales	185.8606	591.5369	44.485	11.7545	190.0638	148.595
Total-Assets	237.8205	701.2339	53.22	7.594618	73.34325	169.46
Debt-Equity-Ratio	0.1791653	28.56545	0.77	-19.32295	467.5678	1.4
PBDIT	26.68465	95.14216	4.765	9.942336	130.9438	19.43
Equity-Capital	17.65819	54.73713	6.705	12.83977	206.8435	10.265
Operating Cash Flow	22.95739	85.05983	2.98	9.953038	137.6494	15.255
Total Income	189.7717	608.769	44.815	11.9134	194.7889	152.035
Foreign	10.74279	17.01581	3.305	2.060138	6.604456	12.355
Director	18.72756	19.9137	12.59	1.031446	3.261527	29.485
Institutional	1.723109	5.453934	0	5.887923	48.92631	0.155
Corporate	26.33043	21.06445	22.27	0.7485803	2.900836	32.645

Variable	Mean	Std. Dev.	Median	Skewness	Kurtosis	IQR (Inter Quartile Range)
Year	**2000**					
Observations	**1995**					
Dividends	3.407531	19.3503	0	14.99784	304.6753	1
Dividend-Growth	0.7238806	4.100966	0	4.894653	30.61888	0
Net-Profit	8.349464	87.74391	0.41	18.42427	476.7241	5.3
Earnings-Growth	-0.2679108	30.76639	0.01	-2.006242	29.57728	5.01
Sales	207.7467	793.7086	43.6	16.20523	365.5868	136.24
Total-Assets	280.4855	1200.65	48.55	15.23977	319.5355	145.67
Debt-Equity-Ratio	1.110008	54.55585	0.72	-3.17305	550.1	1.39
PBDIT	32.96192	172.2373	4.04	19.43403	499.2359	17.1
Equity-Capital	19.58777	62.37926	6.3	11.39711	164.4125	10.6
Operating Cash Flow	24.06945	102.519	2.21	10.13487	135.0329	12.28
Total Income	214.0958	830.1617	44.75	16.67075	385.5376	139.26
Foreign	10.20126	17.52547	1.68	2.22889	7.668262	11.26
Director	17.63333	20.20792	10.36	1.203711	3.803419	28.99
Institutional	1.594234	4.882547	0	4.650461	30.40444	0
Corporate	29.82735	24.40191	25.73	0.773931	2.991131	37.36
Year	**Total**					
Observations	**5224**					
Dividends	3.127297	19.71018	0	20.06615	546.1371	1
Dividend-Growth	0.4662129	6.770699	0	11.92037	311.4547	0
Net-Profit	8.823888	66.09174	0.84	18.06328	490.2082	5.495
Earnings-Growth	-0.0017064	22.08932	0.02	0.921462	60.97185	2.84
Sales	179.6613	613.3287	40.75	14.51154	334.4967	121.915
Total-Assets	237.9011	939.2609	45.175	15.13918	344.2088	130.245
Debt-Equity-Ratio	3.77E+12	2.73E+14	0.82	72.22188	5217	1.26
PBDIT	28.90057	123.6202	4.76	17.96307	525.6795	17.045
Equity-Capital	16.72554	48.03879	6.14	12.20835	208.3833	9.07
Operating Cash Flow	20.03364	96.54302	1.885	15.37022	368.2992	10.795
Total Income	185.2738	637.2126	41.595	14.87465	354.3771	125.525
Foreign	10.86649	16.65778	3.495	2.032835	6.70571	13.07
Director	17.25054	19.16205	10.575	1.164618	3.704373	28.245
Institutional	1.705308	5.224912	0	5.063789	37.08057	0.06
Corporate	26.13281	20.93689	22.385	0.7732868	3.09978	32.59

Table 4: Linter Model with Time, Industry, and Firm Dummies

$Div_{it} - Div_{i(t-1)}$	(1)	(2)	(3)	(4)
Ear	0.022	0.102	0.024	0.161
	(0.000)**	(0.000)**	(0.112)	(0.001)**
Dividend-Lag1	-0.119	-0.579	-0.097	-1.007
	(0.030)*	(0.005)**	(0.380)	(0.000)**
Dividend-Lag2	0.087	0.287	-0.090	0.330
	(0.039)*	(0.106)	(0.289)	(0.050)+
Group Dummy	0.178	0.170		
	(0.044)*	(0.843)		
Tax-Dummy	0.028			
	(0.989)			
Observations	1170	367	1170	367
R-squared	0.236	0.479	0.661	0.840
Industry Effect (p-value)	0.45	0.00		

Numbers in parentheses are p-values of t-statistics. Standard Errors are robust to heteroscedasticity. Intercept term is used in the regression but not reported here. + significant at 10%, * significant at 5%, ** significant at 1%. Column 1, reports the result with 2-digit industry and time dummy. Column 2, reports results only for firm with change in dividends (positive or negative). Column 3, reports results of fixed-effects panel data regression, and column 4, reports the result of the fixed-effects panel data for firms with change in dividends.

Table 5: Regression Results for Full Adjustment Model (FAM)

$Div_{it} - Div_{i(t-1)}$	(1)	(2)	(3)
Earnings Growth (EG)	0.082	0.064	0.034
	(0.000)**	(0.008)**	(0.145)
EG*Institutional	-0.040	-0.053	-0.033
	(0.001)**	(0.000)**	(0.050)*
EG*Director	0.036	-0.005	0.004
	(0.105)	(0.762)	(0.784)
EG*Foreign	0.016	-0.019	0.019
	(0.378)	(0.316)	(0.410)
EG*Corporate	-0.013	-0.027	-0.003
	(0.389)	(0.182)	(0.885)
EG*Group	-0.015	-0.010	-0.003
	(0.347)	(0.637)	(0.870)
EG*Tax	-0.037	-0.004	0.001
	(0.008)**	(0.785)	(0.928)
Observations	2013	2013	2013
R-squared	0.208	0.633	0.633
Time Effect (p-value)	0.13	0.34	0.20

Numbers in parentheses are p-values of t-statistics. Standard Errors are robust to heteroscedasticity. Intercept term is used in the regression but not reported here. + significant at 10%, * significant at 5%, ** significant at 1%. Column 1, reports the result with 2-digit industry and time dummy. Column 2, reports results of the fixed-effects panel data for firms with indicator dummies at maximum for ownership variables, and column 3, reports results with indicator dummy at 25% for ownership variables.

Table 6: Regression Results of Partial Adjustment Model (PAM)

$Div_{it} - Div_{i(t-1)}$	(1)	(2)	(3)	(4)	(5)	(6)
Ear	0.062	0.093	0.071	0.044	0.045	0.056
	(0.000)**	(0.001)**	(0.002)**	(0.085)+	(0.082)+	(0.016)*
Ear*Institutional	-0.028	-0.001	-0.053	-0.002	0.002	-0.041
	(0.000)**	(0.004)**	(0.000)**	(0.890)	(0.926)	(0.000)**
Ear*Director	-0.005	-0.001	-0.028	-0.018	-0.007	-0.017
	(0.616)	(0.063)+	(0.154)	(0.254)	(0.690)	(0.335)
Ear*Foreign	-0.009	-0.001	-0.020	0.022	0.012	-0.006
	(0.119)	(0.303)	(0.206)	(0.143)	(0.307)	(0.519)
Ear*Corporate	-0.025	-0.001	-0.015	0.003	0.008	0.009
	(0.000)**	(0.120)	(0.301)	(0.848)	(0.593)	(0.381)
Ear*Group	-0.021	-0.023	-0.024	-0.029	-0.028	-0.027
	(0.039)*	(0.310)	(0.270)	(0.172)	(0.176)	(0.229)
Ear*Tax	-0.015	0.007	0.007	0.005	0.005	0.013
	(0.066)+	(0.389)	(0.356)	(0.509)	(0.505)	(0.290)
Dividend-Lag1	0.011	-0.269	-0.268	-0.274	-0.269	-0.291
	(0.603)	(0.001)**	(0.001)**	(0.001)**	(0.001)**	(0.001)**
Observations	2013	2013	2013	2013	2013	2013
R-squared	0.304	0.677	0.676	0.672	0.668	0.675
Time Effect (p-value)	0.08	0.67	0.57	0.70	0.63	0.53

Numbers in parentheses are p-values of t-statistics. Standard Errors are robust to heteroscedasticity. Intercept term is used in the regression but not reported here. + significant at 10%, * significant at 5%, ** significant at 1%. Column 1, reports the result with 2-digit industry and time dummy. Column 2, reports results of the fixed-effects panel data model. Column 2, reports results of the fixed-effects panel data for firms with indicator dummies at maximum for ownership variables, and column 4, 5, and 6 reports results with indicator dummies at 5%, 10%, and 25% for ownership variables, respectively.

Table 7: Regression Results of Earnings Trend Model (ETM)

$Div_{it} - Div_{i(t-1)}$	(1)	(2)	(3)	(4)	(5)	(6)
Ear	0.026	0.045	0.043	0.038	0.040	0.045
	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Ear-Lag1	0.017	0.020	-0.016	-0.037	-0.030	-0.025
	(0.243)	(0.523)	(0.513)	(0.250)	(0.301)	(0.313)
Ear-Lag1*Institutional	-0.005	0.000	0.028	0.002	0.024	0.040
	(0.633)	(0.659)	(0.334)	(0.908)	(0.217)	(0.135)
Ear-Lag1*Director	-0.008	-0.001	-0.033	-0.025	-0.029	-0.021
	(0.525)	(0.009)**	(0.133)	(0.156)	(0.132)	(0.241)
Ear-Lag1*Foreign	-0.009	-0.001	-0.015	0.012	0.005	-0.013
	(0.203)	(0.129)	(0.421)	(0.478)	(0.729)	(0.263)
Ear-Lag1*Corporate	-0.026	-0.001	-0.011	0.019	0.016	0.004
	(0.001)**	(0.055)+	(0.524)	(0.303)	(0.393)	(0.730)
Ear-Lag1*Group	-0.010	-0.001	0.007	0.003	-0.001	0.003
	(0.349)	(0.978)	(0.748)	(0.894)	(0.967)	(0.895)
Ear-Lag1*Tax	-0.012	0.012	0.012	0.007	0.008	0.018
	(0.156)	(0.175)	(0.202)	(0.543)	(0.490)	(0.157)
Dividend-Lag1	0.036	-0.234	-0.245	-0.255	-0.245	-0.257
	(0.118)	(0.004)**	(0.003)**	(0.004)**	(0.005)**	(0.003)**
Observations	2013	2013	2013	2013	2013	2013
R-squared	0.304	0.676	0.670	0.668	0.671	0.674
Time Effect (p-value)	0.08	0.79	0.73	0.80	0.76	0.67

Numbers in parentheses are p-values of t-statistics. Standard Errors are robust to heteroscedasticity. Intercept term is used in the regression but not reported here. + significant at 10%, * significant at 5%, ** significant at 1%. Column 1, reports the result with 2-digit industry and time dummy. Column 2, reports results of the fixed-effects panel data for firms with actual shareholding. Column 3, reports results of the fixed-effects panel data for firms with indicator dummies at maximum for ownership variables, and column 4, 5, and 6 reports results with indicator dummies at 5%, 10%, and 25% for ownership variables, respectively.

Table 8: Regression Results of Waud Model (WM)

$Div_{it} - Div_{i(t-1)}$	(1)	(2)
Ear	0.046	0.094
	(0.001)**	(0.023)*
Ear*Institutional	-0.037	-0.058
	(0.000)**	(0.060)+
Ear*Director	-0.006	-0.042
	(0.408)	(0.197)
Ear*Foreign	-0.014	-0.050
	(0.042)*	(0.143)
Ear*Corporate	-0.031	-0.018
	(0.000)**	(0.585)
Ear*Group	-0.008	-0.045
	(0.413)	(0.221)
Ear*Tax	-0.004	0.006
	(0.669)	(0.426)
Dividend-Lag1	-0.037	-0.166
	(0.183)	(0.095)+
Dividend-Lag2	0.040	-0.068
	(0.040)*	(0.479)
Observations	1170	1170
R-squared	0.346	0.690
Time Effect (p-value)	0.16	0.51

Numbers in parentheses are p-values of t-statistics. Standard Errors are robust to heteroscedasticity. Intercept term is used in the regression but not reported here. + significant at 10%, * significant at 5%, ** significant at 1%. Column 1, reports the result with 2-digit industry and time dummy. Column 2, reports results of the fixed-effects panel data model.

Table 9: Regression Results of Proposed Model (PM)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Div Int_{it}	**None**	**Own**	**Own**	**Max**	**5**	**10**	**25**
Div Intensity Lag1	0.457	-0.003	-0.012	-0.003	-0.006	0.001	-0.008
	(0.000)**	(0.952)	(0.819)	(0.952)	(0.917)	(0.985)	(0.882)
Ear Intensity	0.101	0.070	0.070	0.071	0.070	0.071	0.071
	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Ear Intensity Lag1	-0.015	0.016	0.017	0.014	0.016	0.016	0.015
	(0.076)+	(0.139)	(0.086)+	(0.207)	(0.124)	(0.136)	(0.177)
Debt Equity	-0.001	-0.002	-0.003	-0.002	-0.003	-0.003	-0.003
	(0.000)**	(0.018)*	(0.002)**	(0.018)*	(0.008)**	(0.012)*	(0.012)*
Growth in Sales Intensity	0.007	0.004	0.004	0.004	0.004	0.004	0.004
	(0.000)**	(0.008)**	(0.005)**	(0.013)*	(0.013)*	(0.010)*	(0.013)*
Foreign	-0.000	-0.000	0.000	0.002	-0.001	-0.001	0.002
	(0.884)	(0.976)	(0.709)	(0.067)+	(0.448)	(0.321)	(0.111)
Institutional	0.000	-0.000	-0.001	0.007	-0.002	-0.003	0.005
	(0.917)	(0.588)	(0.069)+	(0.004)**	(0.351)	(0.327)	(0.001)**
Director	0.000	0.000	0.000	0.003	0.003	0.002	0.003
	(0.999)	(0.075)+	(0.055)+	(0.147)	(0.123)	(0.368)	(0.117)
Corporate	0.000	0.000	0.000	0.001	0.003	0.001	0.001
	(0.369)	(0.304)	(0.052)+	(0.294)	(0.069)+	(0.443)	(0.145)
$(Foreign)^2$			-0.000				
			(0.575)				
$(Institutional)^2$			0.000				
			(0.032)*				
$(Director)^2$			-0.000				
			(0.166)				
$(Corporate)^2$			-0.000				
			(0.053)+				
Group Dummy	-0.002						
	(0.005)**						
Tax Dummy	-0.001						
	(0.602)						
Time Effect (p-value)	0.02	0.54	0.48	0.49	0.54	0.58	0.42

Numbers in parentheses are p-values of t-statistics. Standard Errors are robust to heteroscedasticity. Intercept term is used in the regression but not reported here. + significant at 10%, * significant at 5%, ** significant at 1%. Column 1, reports the result with 2-digit industry and time dummy. Column 2, and 3 reports results of the fixed-effects panel data model for firms with actual shareholding. Column 4, reports results of the fixed-effects panel data for firms with indicator dummies at maximum for ownership variables, and column 5, 6, and 7 reports results with indicator dummies at 5%, 10%, and 25% for ownership variables, respectively.

Table 10: Regression Results of the Spline Specification with Max Indicator

$Div_{it} - Div_{i(t-1)}$	FAM	PAM	WM	ETM
EG	0.054			
	(0.449)			
EG*Foreign(..,5)	-0.003			
	(0.708)			
EG*Foreign(5,10)	0.008			
	(0.383)			
EG*Foreign(10,25)	-0.004			
	(0.004)**			
EG*Foreign(25,..)	0.003			
	(0.014)*			
EG*Director(..,5)	0.007			
	(0.325)			
EG*Director(5,10)	-0.008			
	(0.440)			
EG*Director(10,25)	0.002			
	(0.568)			
EG*Director(25,..)	-0.000			
	(0.920)			
EG*Institutional(..,5)	0.010			
	(0.206)			
EG*Institutional(5,10)	-0.004			
	(0.559)			
EG*Institutional(10,25)	-0.004			
	(0.065)+			
EG*Institutional(25,..)	-0.001			
	(0.651)			
EG*Corporate(..,5)	-0.013			
	(0.395)			
EG*Corporate(5,10)	0.009			
	(0.090)+			
EG*Corporate(10,25)	-0.001			
	(0.648)			
EG*Corporate(25,..)	-0.000			
	(0.828)			
Ear		0.097	0.084	0.040
		(0.010)**	(0.109)	(0.000)**
Ear*Foreign(..,5)		-0.002	-0.007	
		(0.632)	(0.330)	
Ear*Foreign(5,10)		0.013	0.016	
		(0.012)*	(0.027)*	
Ear*Foreign(10,25)		-0.005	-0.007	
		(0.003)**	(0.000)**	
Ear*Foreign(25,..)		0.002	0.003	
		(0.048)*	(0.000)**	
Ear*Director(..,5)		0.004	0.007	
		(0.550)	(0.449)	
Ear*Director(5,10)		-0.005	-0.002	
		(0.581)	(0.850)	
Ear*Director(10,25)		0.001	0.002	

		(0.659)	(0.582)	
Ear*Director(25,..)		-0.001	-0.001	
		(0.453)	(0.323)	
Ear*Institutional(..,5)		0.000	-0.005	
		(0.930)	(0.495)	
Ear*Institutional(5,10)		0.002	0.011	
		(0.698)	(0.327)	
Ear*Institutional(10,25)		-0.003	-0.005	
		(0.079)+	(0.178)	
Ear*Institutional(25,..)		-0.001	-0.000	
		(0.354)	(0.828)	
Ear*Corporate(..,5)		-0.017	-0.011	
		(0.018)*	(0.166)	
Ear*Corporate(5,10)		0.007	0.002	
		(0.074)+	(0.728)	
Ear*Corporate(10,25)		-0.001	0.001	
		(0.778)	(0.725)	
Ear*Corporate(25,..)		-0.001	-0.001	
		(0.077)+	(0.440)	
Dividend Lag1		-0.307	-0.227	-0.238
		(0.000)**	(0.006)**	(0.004)**
Dividend Lag2			-0.067	
			(0.341)	
Ear Lag1				0.008
				(0.856)
Ear Lag1*Foreign(..,5)				-0.003
				(0.620)
Ear Lag1*Foreign(5,10)				0.008
				(0.177)
Ear Lag1*Foreign(10,25)				-0.003
				(0.108)
Ear Lag1*Foreign(25,..)				-0.000
				(0.966)
Ear Lag1*Director(..,5)				0.003
				(0.593)
Ear Lag1*Director(5,10)				-0.011
				(0.221)
Ear Lag1*Director(10,25)				0.003
				(0.330)
Ear Lag1*Director(25,..)				-0.000
				(0.719)
Ear Lag1*Institutional(..,5)				-0.005
				(0.464)
Ear Lag1*Institutional(5,10)				0.006
				(0.555)
Ear Lag1*Institutional(10,25)				-0.001
				(0.769)
Ear Lag1*Institutional(25,..)				0.001
				(0.433)
Ear Lag1*Corporate(..,5)				-0.008
				(0.401)
Ear Lag1*Corporate(5,10)				0.006

				(0.137)
Ear Lag1*Corporate(10,25)				0.001
				(0.780)
Ear Lag1*Corporate(25,..)				-0.001
				(0.049)*
Observations	2013	2013	1170	2013

Numbers in parentheses are p-values of t-statistics. Standard Errors are robust to heteroscedasticity. Intercept term is used in the regression but not reported here. + significant at 10%, * significant at 5%, ** significant at 1%. Column 1, reports the result for FAM, column 2, for PAM, Column 3, for Waud Model, and column 4, for ETM.

Table: 11 Results of Explaining Ownership with Dividends Trend

Panel: A	(1)	(2)	(3)	(4)
	Institutional	**Foreign**	**Corporate**	**Director**
Dividend Intensity lag1	-17.5144	4.7531	41.9501	2.5277
	(0.205)	(0.900)	(0.235)	(0.918)
Dividend Intensity lag2	-13.0433	-57.3529	-66.1758	68.0992
	(0.212)	(0.388)	(0.544)	(0.321)
Dividend Intensity lag3	-18.1479	17.7011	-10.0367	-15.4746
	(0.101)	(0.870)	(0.904)	(0.777)
Panel: B				
	Institutional	**Foreign**	**Corporate**	**Director**
Dividend Lag1	-0.0423	-0.1804	0.1126	-0.0200
	(0.155)	(0.256)	(0.150)	(0.240)
Dividend Lag2	-0.0202	-0.0975	0.0599	0.0028
	(0.327)	(0.407)	(0.425)	(0.792)
Dividend Lag3	0.0280	0.0425	-0.0255	-0.0038
	(0.319)	(0.802)	(0.787)	(0.782)

Numbers in parentheses are p-values of t-statistics. Standard Errors are robust to heteroscedasticity. Intercept term is used in the regression but not reported here. + significant at 10%, * significant at 5%, ** significant at 1%. Column 1, reports the result for Institutional ownership as dependent variables. Column 2, 3, and 4 report for the regression results for Foreign, Corporate, and Director's ownership as dependent variable, respectively.

Table: 12 Three Stage Least Squares (3SLSS) Regression

Growth in Institutional	**Coefficient**	**P-value**
Earnings Intensity Lag1	-1.3243	(0.317)
Earnings Intensity Lag2	-0.8284	(0.604)
Dividend Intensity_Lag1	-4.6786	(0.708)
Dividend Intensity_Lag2	-5.4119	(0.663)
Growth in Corporate		
Earnings Intensity Lag1	7.4910	(0.010)*
Earnings Intensity Lag2	-8.5729	(0.015)*
Dividend Intensity_Lag1	-24.5882	(0.371)
Dividend Intensity_Lag2	13.9739	(0.609)
Growth in Director		
Earnings Intensity Lag1	-0.8154	(0.783)
Earnings Intensity Lag2	5.0031	(0.162)
Dividend Intensity_Lag1	2.9398	(0.916)
Dividend Intensity_Lag2	-11.9800	(0.666)
Growth in Foreign		
Earnings Intensity Lag1	-0.8592	(0.677)
Earnings Intensity Lag2	-0.5709	(0.819)
Dividend Intensity_Lag1	-2.8210	(0.885)
Dividend Intensity_Lag2	21.2935	(0.270)
Dividend Intensity		
Foreign	1.73E-05	(0.620)
Institutional	-2.82E-05	(0.698)
Director	3.27E-05	(0.256)
Corporate	-7.69E-06	(0.791)
(Foreign) ^{2}	3.81E-07	(0.536)
(Institutional) ^{2}	2.48E-07	(0.901)
(Director) ^{2}	-2.69E-07	(0.602)
(Corporate) ^{2}	5.60E-07	(0.279)
Earnings Intensity	1.90E-02	(0.000)***
Earnings Intensity Lag1	-5.43E-03	(0.058)
Dividend Intensity_Lag1	8.25E-01	(0.000)***

Numbers in parentheses are p-values of t-statistics. Standard Errors are robust to heteroscedasticity. Intercept term is used in the regression but not reported here. + significant at 10%, * significant at 5%, ** significant at 1%.

Table: 13 Regression Results for Different Measures of Performance

Dividend Intensity	**(1)**	**(2)**	**(3)**
	ROA	**ROE**	**Sales Intensity**
Dividend Intensity $_{(t-1)}$	-0.015	-0.014	-0.010
	(0.783)	(0.792)	(0.854)
Earnings Intensity	0.068	0.069	0.069
	(0.000)**	(0.000)**	(0.000)**
Earnings Intensity $_{(t-1)}$	*0.016*	*0.016*	0.017
	(0.111)	*(0.108)*	(0.099)+
Debt Equity	-0.003	-0.003	-0.003
	(0.003)**	(0.002)**	(0.002)**
Growth in Sales Intensity	0.004	0.004	0.004
	(0.011)*	(0.006)**	(0.005)**
Foreign	0.000	0.000	0.000
	(0.571)	(0.763)	(0.697)
Institutional	-0.001	-0.001	-0.000
	(0.074)+	(0.034)*	(0.133)
Director	0.000	0.000	0.000
	(0.439)	(0.252)	(0.243)
Corporate	0.000	0.000	*0.000*
	(0.047)*	(0.055)+	*(0.104)*
Square of Foreign	-0.000	-0.000	-0.000
	(0.647)	(0.551)	(0.597)
Square of Institutional	0.000	0.000	0.000
	(0.031)*	(0.025)*	(0.030)*
Square of Director	-0.000	-0.000	-0.000
	(0.237)	(0.260)	(0.269)
Square of Corporate	-0.000	-0.000	-0.000
	(0.044)*	(0.049)*	(0.067)+
Performance*(Growth Foreign)	-0.000	0.000	-0.000
	(0.417)	(0.561)	(0.826)
Performance *(Growth Institutional)	0.000	0.000	-0.000
	(0.840)	(0.246)	(0.433)
Performance *(Growth Corporate)	-0.000	0.000	0.000
	(0.694)	(0.935)	(0.733)
Performance *(Growth Director)	0.001	0.000	0.000
	(0.096)+	(0.449)	(0.466)
Observations	753	753	753

Numbers in parentheses are p-values of t-statistics. Standard Errors are robust to heteroscedasticity. Intercept term is used in the regression but not reported here. + significant at 10%, * significant at 5%, ** significant at 1%.

Table: 14 Table for Different Measures of Dividend Intensity

Dividend Intensity $_t$	**Operating Cash Flow**	**Total Income**
Dividend Intensity $_{(t-1)}$	-0.001	0.126
	(0.140)	(0.033)*
Earnings Intensity	0.067	0.059
	(0.028)*	(0.000)**
Earnings Intensity $_{(t-1)}$	0.023	0.009
	(0.506)	(0.427)
Debt Equity	-0.000	-0.000
	(0.314)	(0.861)
Growth in Sales Intensity	0.012	-0.001
	(0.128)	(0.276)
Foreign	0.000	0.000
	(0.887)	(0.128)
Institutional	-0.005	-0.000
	(0.186)	(0.313)
Director	0.002	0.000
	(0.355)	(0.093)+
Corporate	0.003	0.000
	(0.092)+	(0.199)
Square of Foreign	-0.000	-0.000
	(0.903)	(0.712)
Square of Institutional	0.000	0.000
	(0.220)	(0.232)
Square of Director	-0.000	-0.000
	(0.414)	(0.142)
Square of Corporate	-0.000	-0.000
	(0.189)	(0.181)
Observations	1730	762

Numbers in parentheses are p-values of t-statistics. Standard Errors are robust to heteroscedasticity. Intercept term is used in the regression but not reported here. + significant at 10%, * significant at 5%, ** significant at 1%.

[1] This dummy takes the value of one before 1997 and zero otherwise.

[2] See Waud (1966) for detailed derivation of the model.

[3] We, however, note that this has the disadvantage of relying on the past to measure for the future investment opportunities.

[4] The threshold for the 'institution' occurs at 17.3% while that of 'corporate' at 30.5%.

[5] Spline nodes are created to allow for a piecewise linear relation between the two variables, growth in dividends payout and the ownership structure, this technique allows the slope of the regression equation to change at spline nodes and ensures that the regression line is continuous at the different spline nodes, which is unlikely to be the case if one uses a slope dummy instead. Say, we define spline nodes at 5, 10, and 25. Then, under the spline technique, four spline variables (the number of spline variables is always one more than the number of knots) are defined as follows:

Spline1 = 5 if $x \geq 5$
= x if $x < 5$

Spline2 = 5 if $x \geq 10$
= x - 5 if $5 < x < 10$
= 0 if $x < 10$

Spline3 = 15 if $x \geq 25$
= x - 10 if $10 < x < 25$
= 0 if $x < 25$

Spline4 = x - 25 if $x > 25$
= 0 if $x < 25$

A piecewise linear relation between y and x is then be obtained by running a linear regression with the four spline variables.

[6] The author is thankful to the referee for suggesting this point.