Corporate Governance Mechanisms and Firm Financing in India

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Abstract

This study investigates the firm financing patterns in India and the role of corporate governance mechanisms. We use firm-level time series data of nearly 2000 listed companies from 1994 through 2000, to analyze the firm's corporate financing behavior in connection with its corporate governance arrangements, specially its shareholding pattern. Our results show that the capital structure of the firm is non-linearly linked to its corporate governance mechanisms (ownership structure). We find that firms with weaker corporate governance mechanisms (dispersed shareholding pattern, in particular measured by the entrenchment effects of group affiliation) tend to have a higher level of debt. Firms with higher foreign ownership or with low institutional ownership tend to have lower debt level. We do not find any significant relationship between ownership of directors and corporate with the firm financing in India. Overall, the findings presented in the paper provide evidence of definite role of corporate governance mechanisms in firm's financing decisions in India.

Keywords: Corporate Governance, Firm Financing, Capital Structure, and India

JEL Classification: G15, G32, G34

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Introduction

There has been reasonable consensus among practitioners and academicians about the importance of good corporate governance in the economy. Corporate governance has received much attention in the emerging market economies, like India in later half of the nineties. In a recent study for India, Kumar (2004), using a sample of more than 2000 listed firms, finds that corporate governance mechanism (ownership structure) significantly influences the firm performance. Corporate ownership structure can act as an incentive device for reducing the agency costs associated with the separation of ownership and management can be used to protect property rights of the firm.

A large body of literature does confirm the evidence that corporate governance, particularly the role of ownership structure, is crucial in determining the incentive of insiders to expropriate minority shareholder. The impact of corporate governance on the firm value has been extensively studied in recent years. The literature has highlighted the role of ownership structure that has the impact on the firm value. Most of the literature on corporate governance is concentrated in explaining the firm performance and its determinants. Yet, little is known as to how the corporate governance influences firm's financing policies (capital structure).

The paper aims to bridge research gap by providing a direct empirical test of the hypothesis. We hypothesis that the firms with poor corporate governance mechanisms tend to have higher level of debt than equity in their portfolio and vise-versa. We are particularly interested in the role of firm's ownership structure with connection to its capital structure. Our main research objective is to test whether there are links between the capital structure and corporate governance. If so, does debt constrain or facilitate entrenchment? The study of the relation between capital structure and corporate governance is advantageous, not only to enrich our understanding about whether or not firms that are vulnerable to expropriation issue

more debt to have more resources to use for private interests but also which ownership groups viz. foreign, corporate, director, institutional have positive or negative impact on the debt equity ratio of a firm. This paper also sheds lights on the other possible agency issues in determining the firm's financing decisions. These agency problems may arise between the firm's controlling shareholders and the debt providers and between the debt suppliers and their minority shareholders. For example, the controlling shareholder of a firm and the firm's debt providers might belong to the same business groups. In such a case, instead of performing the active monitoring and governance function, the debt suppliers could become the center of corrupted crony systems. As a consequence, this externality would lead to an increase in the level of non-performing loans and hinder the proper functioning of the financial system. The government may have to decide to bail out the system, and the associated agency costs would get be borne by the taxpayers as a last-resort.

In early 90s, India started with liberalization, which provides the unique natural environment to examine the impact of corporate governance on capital structure. Unlike corporations in the US and the UK, which have dispersed ownership, firms in India are mainly concentrated ownership, controlled by large shareholders. The family-controlled firm is the predominant type of corporation in India. The controlling shareholder often uses the pyramid structure, cross-holding structure, and dual-class shares (not very common though in Indian scenario) to enhance control of the firm. As a result, the divergence of ownership and control occurs in providing incentives for entrenchment.

While theoretical analysis of corporate governance points out counteracting mechanisms of control, the empirical literature tries to shed light on the role of these counteracting mechanisms, suggesting firm value is an outcome of these mechanisms. As large shareholdings are common in the world, except the US and the UK (Porta, Lopez-De-Silanes, and Shleifer (1999)), it is argued that large shareholders' incentive to collect

information and to monitor management reduces agency costs (Shleifer and Vishny (1986)). Most of the works in the literature have evolved against the backdrop of developed economies, while there is very little known (empirically) about such issues in emerging market economies. Bhaduri (2002) develop a model that accounts for the possibility of restructuring costs in attaining an optimal capital structure and address the measurements problem that arises due to the unobservable nature of attributes influencing the optimal capital structure. However, there is no empirical evidence on the relationship of corporate governance mechanism and capital structure of corporate firms in India. To our best knowledge there is no study in this context for India.

Since the pioneer work of Modigliani and Miller (1958) proposed the concept, that the general characteristics of a firm's ownership structure can affect performance has received considerable attention but few studies have looked at the relationship between ownership structure and capital structure. Corporate debt policy has also been viewed as an internal control mechanism, which can reduce agency conflicts between management and shareholders, particularly the agency costs of free cash flow as suggested by Jensen (1986). Jensen (1986) argues that managers with substantial amounts of free cash flow are likely to engage in non-optimal activities. Grossman and Hart (1980) suggest that debt is a disciplinary device that may be used to reduce the agency costs of free cash flow. However, as Myres (1977) demonstrates, debt can also have undesirable effects such as inducing managers to forego positive net present value projects. Jensen and Meckling (1976) argue that managerial shareholding can reduce managerial incentives to consume perquisites, expropriate shareholder's wealth and to engage in other non-maximizing behavior and thereby helps in aligning the interests between management and shareholders.

This paper examines the link between capital structure and shareholding pattern for a panel of more than 2000 publicly traded Indian corporate firms over the years 1994 to 2000.

We develop our regression framework based on the capital structure theory, suggested by corporate finance models. We include the factors that may affect the firm's capital structure into our empirical specifications. These factors are age, size, tangibility, marketing, advertising, distribution, R&D expenses, and profitability. We also include industry dummies to control the industry effect on firm's leveraging. The industry classification is defined based on National Sample Survey Organization's National Industrial Classification, 1998.

We have contributed in four ways to the existing literature. First, we employ an econometric framework that specifically controls for firm specific unobserved heterogeneity and aggregate macroeconomic shocks. Second, our econometric methodology allows us to control for the unobserved firm heterogeneity caused by the ownership structure and other observed variables. This approach also provides evidence in favor of the fixed effect approach. Thirdly, it uses exact shareholding by different groups of owners, controlling for change in firm value due to small change in shareholding pattern (not exactly changing the dominance of a group), as in most of the cases shareholders dominance does not change dramatically. Finally, this paper is the very first study in case of India, which investigates the relationship between the ownership and capital structure.

Unlike the specifications of Faccio et al. (2003), we do not include the market-based variables, which are calculated based on the stock prices such as volatility and Tobin's Q because we are strongly convinced by the argument suggested by Joh (2003), to exclude the market-based measures when the stock market appears to be less efficient. We consider that stock markets in India are in line with this proposition. For this analysis of Indian data, accounting measures of performance are likely to be better measures of performance than share market based measures for at least these three reasons. First, researchers have shown existence of some market inefficiencies even in the developed countries. This suggests that the stock prices in India are not likely to reflect all available information, peculiarly during

the period of study. Second, a firm's accounting profitability s more directly reflected to its financial survivability than its market value, and many studies have used accounting measures to predict bankruptcy, or financial distress. Thirdly, most of the stocks do not trade regularly, which may result in inappropriate pricing of shares. Some stock market scams, also happened during the period of study, which makes us believe that stock prices during the period of study were prone to price manipulations.

Though the accounting measures may not take into account the future prospects of firm endurance but they do take into account the current scenario of financial strength. The share market measures of firm performance such as Tobin's q may run into severe problems in the context of emerging market economy specially India, as most of the firms, go for debt-financing in these economies rather than using finance from the share market. As a result, share market measures may not reflect the actual profits made by the investors on their investments. Moreover, stock price information is not readily available for the period of study for all the firms. Most of the stocks trade irregularly on the exchange and have very low levels of liquidity. We believe that such traded price may not provide actual information about the firm value for the thinly traded stocks. Moreover, share prices may not reflect true value of firms because it is driven by many factors, which may not be efficient, for example: noise trading, portfolio insurance, high transaction costs, and other factors unrelated to firm performance may induce randomness in stock prices. Stock market in India also faces high volatility during end of financial year due to annual central and state government budget announcements. Since market prices determine their values based on accounting information provided by the firms in their un-audited quarterly financial results, and audited annual financial results. A market measure of performance will also suffer from the drawbacks of the accounting performance measures, as well as problems of inefficient capital market. The declaration of the annual audited financial results, for the same period (April-March), does

not happen at the same time. Stock market may reflect prices adjusted to the information only after the declaration, which is different for different firms. Thus, taking the last closing price for calculation of the market value of firm may not be desirable, whereas, annual audited financial results are for the same period.

The firm level panel data for our study is primarily obtained from the CMIE, the Center for Monitoring the Indian Economy. The data used in the analysis consists of all manufacturing firms listed on The Stock Exchange, Bombay (BSE), for which we could get their historical shareholding pattern for the period of study. Public Sector firms and firms within financial services are not included in the analysis. 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.[1] We also restrict our analysis to firms that have no missing data (on sales, age, shareholding pattern, PBDIT and assets) for at least two consecutive years.[2] There are 2575 firms (5224 firm years) in our sample, for which there is data required for at least two consecutive years.[3] Our final sample consists of 2517 firms with 5,117 observations. We perform our analysis after restricting the proxy for capital structure (debt intensity) to lie between 1st and 99th percentile to tackle the problem of outliers, which may be influential. This leaves us with 5017 observations for 2478 firms.

The traditional aspect of the agency cost theory suggests that insider ownership aligns the interest of management and other stakeholders of the firm (Jensen and Meckling, 1976),

[1] We could not use data beyond year 2000, as the definitions of the ownership variables underwent a dramatic change following the new disclosure pattern since March 2001 according to SEBI. The details of this change are provided in the Appendix.
[2] We cannot avoid these conditioning because we cannot use firms with observations less than two continuous years of data in our methodology.
[3] We drop observations, where values reported for capital stock, sales and age are missing, zero, or negative.

as managers become self-constrained and avoid rent extraction, since they too have to bear the costs of such activities in a proportion of their ownership stake in the firm. Recent studies document that the controlling shareholders have significant discretion and power to expropriate minority shareholders, as high ownership precludes takeover threats and thus decreases firm value (Stulz, 1988). Because, majority owners can redistribute wealth, in both efficient and inefficient ways from other minority shareholders, whose interest need not coincide. This suggests a non-linear relation between block-holders share ownership and firm leverage. In other words, the costs of the concentrated ownership may exceed its benefits. We therefore, include four ownership variables: the managerial shareholding (director), institutional investors shareholding (institutional), foreign investors shareholding (foreign), and corporate shareholding (corporate) with their squares to examine the presence of ownership effect. The squares of the ownership variables are included to distinguish the change in their effect after a certain threshold, i.e. non-linear impact of ownership structure on capital structure.

Our sample includes more than 2000 firms from India. The significant increase of our sample coverage mainly comes from the extensive manual works in overcoming the data restrictions on the ownership structure information, which often required supplementary data collected from the annual reports of the firms, such as the information on historical shareholding pattern, business groups or families and their relatives. We provide the evidence by using firm-level panel data that allow us not only to econometrically control for individual firm heterogeneity but also to give more data that are informative, more degrees of freedom, and more efficiency.

Data and summary statistics

For our study of effects of ownership structure (shareholding pattern) on capital structure, in emerging economy, we focus our attention on Indian corporate sector. We choose this as an

experimental setting as Indian corporate sector offers several distinct advantages over other emerging market economies.

The Indian Corporate Sector has large number of corporate firms, lending itself to large sample statistical analysis. It is large by emerging market standards and the contribution of the industrial and manufacturing sectors (value added) is close to that in several developed economies. Unlike several other emerging markets, firms in India, typically maintain their shareholding pattern over the period of study, making it possible to identify the ownership affiliation of each sample firm with clarity. It is largely a hybrid of the outsider systems[4] and the insider systems[5] of corporate governance. The legal framework for all corporate activities including governance and administration of companies, disclosures, shareholders rights, has been in place since the enactment of the Companies Act in 1956 and has been fairly stable during the period of study. The listing agreements of stock exchanges have also been prescribing on-going conditions and continuous obligations for companies.[6] India has had 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 (read East-Asian economies). Accounting system in India is well established and are similar to those followed in most of the development economies.

[4] The management of the firm have nil or minimal shareholding.
[5] Management of the firm has significant shareholding.
[6] For more discussion on this, see Kar (2001), pg. 249.

Empirical Analysis

Himmelberg, Hubbard, and Palia (1999) have argued that regression of firm performance on ownership variables is potentially miss-specified because of the presence of the firm heterogeneity. Specifically, if some of the unobserved determinants of firm performance are also determinants of ownership, then ownership might spuriously appear to be a determinant of firm performance. Zhou (2001) have argued that the firm-fixed effects is not necessary in terms of ownership, as the ownership structure in general does not vary over time for a specific firm. Similar arguments may be valid while analyzing the impact of corporate governance (ownership structure) on firm's capital structure. However, in Indian case, the argument made by Zhou (2001) against the use of firm-level panel data analysis is not valid. Kumar (2004) provide detailed discussion on this issue and provided an explicit test to justify the inclusion of firm-fixed effects in both forms, namely, in terms of control variables as well as in terms of ownership structures. The study provides an explicit F-test for presence of fixed effect for control variables, ownership structure, separately as well as jointly. Percentage shareholding of different investors may be correlated, because, share ownership by Foreign, Institutional, Corporate and Director, along with the shares of 'other top 50 shareholders' and 'others not included above' adds up to '100' percent. In order to avoid the problem of multicollinearity, this study uses only four main shareholders, i.e. foreign, institutional, corporate, and director.

In this paper, we use firm-level fixed-effects panel data methodology. Primarily because, this model allows us to control for both year-variant but firm invariant omitted variable as well as firm variant but time-invariant variables.

This leads us to the estimation of the following equation:

$$\text{Capital Structure}_{it} = a + b_1*(\text{Ownership})_{it} + b_2*(\text{Control})_{it} + d_i + h_t + e_{it} \quad (1)$$

Where $(Ownership)_{it}$ variables measures the fraction of the equity of firm i, lying between 0 and 100, that is owned by different group of owners in period t. The $(Control)_{it}$ variables are firm-specific factors, which may also have influence on the capital structure.

By using panel data method one is better able to control for the effects of missing or unobserved variables. Specifically, under the fixed effects model, the intercepts are allowed to be different for different cross-sections and hence the effects of the omitted variables can be captured. The effects of the omitted variables are driven by either individual time-invariant variables or period individual-invariant variables. The individual time-invariant variables are variables that are the same for given cross-sectional units over time but vary across cross-sectional units (intangible assets, managerial skill). The period individual-invariant variables are variables that are same for all cross-sectional units at a given time but vary over the time (macro-economic scenario). All these omitted variables may correlate with the independent variable.

Econometric technique employed in the analysis overcome the possible heterogeneity and omitted variable problems, which often arise with cross-section analysis. In addition, the various measures of the dependent variables and the independent control variables that we use for our robustness checks can significantly mitigate the possible measurement errors. The hypothesized relationship between firm size and leverage is mixed. On the one hand, the larger firms usually have a higher debt ratio because it is usually easier for large firms to borrow from the banks or to raise debt in the capital markets. Further, larger firms can diversify their operations; therefore, the default risk might decrease which results in high debt ratio. On the other hand, information asymmetry is likely less severe for larger firms than for smaller firms. The outside investors might find it easier to get more information about the firms. This allows larger firm to raise equity directly from the capital markets, allowing large firms to have lower leverage.

The debt financing is still the prevalent method in the emerging market economies, where the financial system operates mainly under the bank-based economies. In the world of asymmetric information, the firm's tangible fixed assets can be often served as the collateral to lower the risk of the lenders who suffer from the agency cost of debt. Firms who have greater proportion of fixed assets tend to have higher debt ratio. We incorporate year dummy to control for unobserved macroeconomic effects. Detailed discussion of the variable construction is provided in the Appendix.1. Unless otherwise stated, we use debt intensity as our proxy for the capital structure in the regression analysis.

Descriptive Statistics

Insert Table 1 about here

We present a detailed structure at the 2-digit level industrial classification of our data in Table 1, which clearly reflects the unbalanced nature of the panel. Table 1 also depicts that most of the firms included in our sample belongs to NIC-1, NIC-2 or in the NIC-3 according to 1-digit industrial classification.

Table 2 presents summary statistics of financial data of the sample firms. Summary statistics relating to the variables used in the analysis is given in Table 2. Inspection of Table 2 reveals that the mean director ownership level for the whole sample is 17.29 percent. The mean percentage shareholders holding of corporate, in the whole sample is 26.12 percent. Our sample includes large as well as small firms with respect to sales and assets. Sales (mean Rs.179.66 Crore) vary between Rs. 40.91 to Rs. 20,301.39 Crore, with the median level at Rs. 4075 Crore. The mean ROA is 0.1057 with a maximum of 0.3836 and a minimum of -0.2519.

Insert Table 2 about here

The mean level of debt intensity is 0.2409 with a maximum of 4.0632, whereas minimum level of debt equity is –1361.67 with median at 0.82. Total borrowing varies from 0 to Rs. 11520.24 Crore with a standard deviation of 395.95 and kurtosis 284.109. The mean

level of PBDIT is 28.9 Crore whereas maximum is 4788.44 Crore and a minimum of –127.94 Crore, standard deviation of 123.62 and kurtosis of 525.67795. This once again reinforces wide variation that exists in our sample.

Regression Results

Insert Table 3 about here

Table 3 reports the results of the cross-sectional regression analysis with 1-digit industry dummies, for each year of the sample. To the best of our knowledge, no other study has used a panel data framework to analyze the impact of corporate governance on capital structure. We find that results vary across years in case of ownership variable's impact on debt intensity. Foreign ownership has non-linear impact on firm performance in 1994, and in 1996. The institutional investors' share has positive linear effect and negative effect in squares in 1996, and in 1997, 1998 square term becomes insignificant. Group firms are found to have significantly higher debt level in 1998, 1999, and in 2000. However, we note that Tangibility and LnSale have significantly positive impact for all the years. We also find that industry dummies are significant at 1% level for all the years. In sum, our cross-sectional results indicate that none of the ownership variables has consistently significant effect over the years.

Insert Table 4 about here

We report results of pooled OLS with one digit industry dummy in Table 4 (column 1). In pooled regression without any time dummy, we find that 'foreign', 'institutional' play significant role in the firm's capital structure choices, and their impact is non-linear, positive in levels, and negative in squares. Square of corporate ownership have positive and significant impact of debt intensity ratio. Column 2 of Table 4 reports the results with two-digit industry dummy (NIC-2 digit). The results in terms of impact of ownership variables are almost same as in Column 1. We repeat the same exercise with time dummies. We report the

results in Column 3 and 4 of Table 4, for NIC-1digit and NIC-2 digit, respectively. Once, again results are qualitatively same. We also document the evidence that industry and time dummies are significant, separately and jointly.

From the results of pooled OLS, we find that there is significant impact of ownership structure on capital structure of the firm. We now proceed with the fixed-effects panel-data model. We report the results of our regression analysis in Table 5, this analysis we use ROA as a measure of firm performance.

Insert Table 5 about here

Column 1 of Table 5 reports the result of the fixed-effect analysis for the full sample. Institutional ownership and square of foreign ownership have significant negative impact on the debt intensity of the firm. Square of institutional ownership have positive (significant at 12%) impact of debt intensity. In Column 2 of Table 5, we report the findings of the regression after restricting the sample to lie between 1% and 99% of debt intensity to take care of the outlier's effect. Column 3 reports the result after restricting the sample for 10% and 90%. Column 4 of the Table 5 reports the results after restricting the sample for only those firms for which debt intensity is positive. Our results remain same qualitatively, however, institutional ownership looses its significant in some cases. Square of foreign is found to have significantly positive impact on debt intensity, consistently. ROA has negative and significant impact on firm debt. This finding is in lines with the existing literature suggesting that the firms with high performance tend to have lower level of debt in their portfolio. Age has non-linear impact on firm debt, positive (insignificant) and negative in square (significant), suggesting that the younger firms rely on debt more than the equity, this trend reverses once they become older. This result is plausible as the older firms have the history of performance and they are known in the market, therefore they may have lower cost of capital if raised in form of equity than debt (intangible assets). We also find "Tangibility"

to have positive and highly significant impact on debt level of a firm. In Column 5 of Table 5, we present the findings of the regression analysis when we interact the group dummy with ownership structure of the firms. We find that group firms with higher foreign ownership, institutional ownership tend to have lower debt level. However, this negative impact of group dummy on debt is found for all the ownership categories though insignificant.

Insert Table 6 about here

For a robustness test of our findings, we re-run the above models (Table 5) with PBDIT as a measure of performance rather than ROA and present the findings in Table 6. Column 1 of Table 6 reports the result of the fixed-effect analysis for the full sample. Column 2 of Table 6 we report the findings of the regression after restricting the sample to lie between 1% and 99% of debt intensity to take care of the outlier's effect. Column 3 reports the result after restricting the sample for 10% and 90%. Column 4 of the Table 6 reports the results after restricting the sample for only those firms for which debt intensity is positive. In Column 5 of Table 6, we present the findings of the regression analysis when we interact the group dummy with ownership structure of the firms. Our findings remain almost similar (qualitatively) to the findings from Table 5. This once again reinforces our findings with regard to the impact of corporate governance practices on the debt intensity of a firm.

Insert Table 7 about here

To check whether ownership's collinearity has anything to do with the obtained results, we use each ownership group separately. In Table 7, we present our findings when we use only ownership variables as explanatory variable in the model of capital structure. One may argue that since the ownership variables may be correlated with each other, the previous results may be problematic because of collinearity. However, when we use one variable in the regression analysis, we may not be able to capture the impact of bilateral relationship

between two or more group of owners, and hence may not get the clear picture. We report the results for each group of owners separately as well as jointly. Column 1 of Table 7 presents the results when we use only foreign ownership as explanatory variables Column 2 for directors, Column 3 for Institutional, Column 4 for corporate investors. It is clear from the table that in such case only, square of foreign has negative and significant impact on debt intensity. Results remain similar even when we use all the ownership variables for the full sample (Column 5), for the sample restricted between 1% and 99% based on the debt intensity (Column 6), and for sample restricted between 10% and 90% (Column 7). However, one may note that in the Column 7, we also find the institutional has negative and significant impact on debt intensity. The results suggest that even if we do not take account of other variables, which may have influence on the debt holding (capital structure) of a firm, ownership structure do play a significant role.

Conclusions

This study investigated the financing patterns of Indian firms in last decade. In particular, this paper examined financing patterns over time and explored the potential differences across firms with corporate governance characteristics. In particular, the main focus of the paper was to study differences in financing patterns by shareholding pattern of foreign, corporate, director and institutional investors. Using the firm-level panel data of 2251 listed firms from India; we find that the firm-level corporate governance has non-linear relationship with the firm's capital structure.

The results provide evidence that the distribution of equity ownership among directors and external shareholders has a significant relationship with debt equity ratio. This provides support for the active monitoring hypothesis, which proposes that external block holders have greater incentives and an ability to monitor management. The results also indicate a curvilinear relationship between level of insider's ownership and debt equity relationship.

The higher debt ratio of the weaker corporate governance suggests that debt can facilitate expropriation in the economies where the institutions appear to be ineffective. Our empirical results shed new lights on the importance of these ownership structure and group specific factors, but how these factors affect the firm's debt structure remains for future studies. Still, little knowledge is available as to the mechanism of entrenchment that leads to the firm's financing choice. The pyramid or cross-holding structures can be partially used to explain the phenomenon, because the direct ownership structure is still common for Indian firms. Further, clinical analyses in the form of case studies might need to be carried out to further explore this issue.

The previous research in agency theory does confirm that the corporate governance, in particular the role of ownership structure, can affect firm performance by mitigating agency conflicts between managers and shareholders. This study extends the agency framework and tests the hypotheses, which concern the relationship between ownership structure and capital structure. The results have considerable implication regarding the corporate governance debate. By arguing for a link between the ownership structure and capital structure and through empirical support, this paper adds to an understanding of variation in capital structure and role of corporate governance. Moreover, the analysis of corporate governance in the financial institutions and its impacts on the firms will be very helpful, in particular for regulators to propose concrete measures for improving the financial system.

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Appendix 1
List of Variables

Abbreviation	Description
Debt Intensity	Debt Intensity is the ratio of long-term borrowings (total borrowings + short term bank borrowings - commercial paper) to total assets.
Debt Equity	A measure of a company's financial leverage calculated by dividing long-term debt by the shareholders equity. It indicates what proportion of equity and debt the company is using to finance its assets.
ROA	We measure Return on Assets as the ratio of return to total assets, where return is defined as the difference between operating revenues and expenditure before tax and interest payments (i.e. PBDIT) and total asset of firm includes fixed assets, investments and current assets. R&D expenditures are included in operating expenditure in the year incurred, even though the R&D results may produce technical breakthroughs that will benefit the firm for years to come. We treat, therefore, R&D as investment rather than as current expenditure. Total assets include value of fixed assets, investments, and current assets. ROA = Profit Before Depreciation, Interest and Tax (PBDIT) / Total Assets
Ownership Variables	
Foreign	Foreigners' Share Holding is share 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 equity 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	Corporate 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. This includes the share held by the family members of the director.
Control Variables	
Age	Age is defined as the number of years since its inception. Where incorporation year pertains to the most recent incarnation year of the firm. In the case of firms that were reorganized, the year of incorporation may not reflect the true age of a firm (age calculated as above may give negative ages also). Therefore, we restrict our analysis to those firm-years whose age is non-negative, as calculated.
lnSale	Defined as natural logarithm of Gross Sales. Gross Sales denotes the revenue generated by an enterprise during a given accounting period. It excludes other income and income from non-recurring transactions, income of extra-ordinary nature and prior period income. Sales are always taken gross of indirect taxes such as excise duties.
Manufacturing Intensity	Measured as the ratio of manufacturing sales over gross sales. Sales of Manufacturing Goods are the sales generated through sale of its ownership manufactured goods.
R&D Intensity	R&D Intensity is the ratio of total expenditure (capital and current account) incurred by the firm in research and development to gross sales.
Marketing Intensity	Marketing Intensity is the ratio of marketing expenses of the firm to its gross sales.
Distribution Intensity	Distribution Intensity is the ratio of distribution expenditure to gross sales.
Tangibility	The tangibility of the firm's assets (Tangibility) is defined as total assets minus current assets divided by total assets. i.e. fixed assets divided by total assets.

Appendix 2
Formula for Construction of Ownership Variables

Definition of the ownership variable prior and after March, 2001 with reference to Note 7. We do not find one to one correspondence from earlier definition to the new definition for some of the ownership variables used in the study.

As per disclosure before March 2001	
Variable	**Construction of the ownership variable**
Foreign holdings (Foreign)	Total Equity Holding (Foreign) + Foreign Equity (Collaboration)
Institutional Investors (Institutional)	Financial Institutions, Govt. / Financial institutions
Development Financial Institutions (Dev. Fin. Inst.)	State Financial Corporations Equity Holding
Govt. Cos. (Govt.)	Government and Government Companies Equity Holding
Financial Institutions (Fin. Inst.)	Financial Institutions Equity Holding - State Financial Corporations Equity Holding
Corporate bodies (Corporate)	Equity Holding (Corporations) + Other Corporate Bodies Equity Holding
Directors (Director)	Directors and their Relatives Equity Holding + Indian Promoters Equity Holding + Foreign Promoters Equity Holding
Other top 50 share holders (not covered above)	Equity Holding of other Top50 Shareholders
Others including Indian Public	Others Equity Holding
Total Equity Holding	Total Equity
As per new disclosure pattern since March 2001	
New Variables nearest possible mapping with Old Ownership Variables	
Promoters Equity Holding	Indian Promoters Equity + Government and Government Companies Equity + Other Government Equity + Foreign Equity (Collaborator) + Foreign Equity (Promoters)
Indian Promoters Equity Holding	Indian Promoters Equity + Government and Government Companies Equity + Other Government Equity
Private Equity Holding	Indian Promoters Equity
Government Equity Holding	Government and Government Companies Equity + Other Government Equity
Foreign Promoters/Collaborator's Equity Holding	Foreign Promoters Equity Holding + Foreign Collaborator's Equity Holding
Institutional Investors Equity Holding	Foreign Institutions Equity Holding (FIIs) + Financial Institutions Equity Holding
Private Corporate Bodies Equity Holding	Indian Public's Equity Holding + Foreign Individuals Equity Holding + Corporations Equity Holding + Directors and their Relatives Equity Holding + Equity Holding of other Top50 Shareholders)
Others including Indian Public	Others Equity Holding
Total Equity Holding	Total Equity

Table 1 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 2
Descriptive Statistics for Full Sample

Variable	N	Mean	Median	Max	Min	Std Dev	Skew ness	Kurtosis
Foreign	5224	10.8664	3.495	100	0	16.6578	2.0328	6.7057
Director	5224	17.2505	10.575	97.49	0	19.1621	1.1646	3.7043
Institutional	5224	1.7053	0	60.06	0	5.2249	5.0637	37.0805
Corporate	5224	26.1328	22.385	100	0	20.9368	0.7733	3.0997
Debt Intensity	5224	0.2409	0.2127	4.0632	0	0.2088	3.1698	38.9731
Debt Equity	5219	3.77e+12	0.82	1.97e+16	-1361.67	2.73e+14	72.2218	5217
Equity Capital	5224	16.7255	6.14	1054.75	0	48.0387	12.2083	208.3833
Total Borrowings	5224	95.1109	15.245	11520.24	0	393.9525	13.4061	264.109
Total Assets	5224	237.9011	45.175	29368.82	.1	939.2609	15.1391	344.2088
ROA	5224	0.1039	0.1103	3.6667	-2.2437	0.1313	1.0175	144.226
PBDIT	5224	28.9005	4.76	4788.44	-127.94	123.6202	17.9631	525.6795
Age	5224	22.4232	15	175	0	20.8056	1.9049	7.6928
LnSale	5117	3.6409	3.7447	9.9185	-4.6051	1.9367	-0.5198	4.0131
Tangibility	5224	0.4442	0.4361	0.9831	0	0.2041	0.1487	2.3552
Advertising Intensity	5224	1.9821	0.01	737.88	0	16.6978	30.5951	1226.289
Marketing Intensity	5224	3.0303	0.26	152.09	0	9.9448	6.8578	65.4025
Distribution Intensity	5224	4.6391	0.24	555.36	0	23.2471	13.1677	225.1718
R&D Intensity	5224	0.6228	0	681	0	10.5763	54.4925	3363.058
Group Dummy	5224	0.4297	0	1	0	0.4951	0.2838	1.0805

Table 3
Results of Cross-sectional regressions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	1994	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
ROA	-0.160	-0.145	-0.121	-0.065	-0.333	-0.428	-0.192
	(0.278)	(0.148)	(0.114)	(0.286)	(0.000)**	(0.000)**	(0.000)**
Age	-0.001	-0.001	-0.001	-0.001	-0.002	-0.002	-0.001
	(0.677)	(0.214)	(0.191)	(0.110)	(0.002)**	(0.002)**	(0.073)+
Square of Age	4.13e-06	3.71e-06	2.48e-06	6.48e-06	6.51e-06	1.3e-05	3.37e-06
	(0.729)	(0.696)	(0.703)	(0.506)	(0.237)	(0.086)+	(0.420)
LnSale	0.046	0.026	0.016	0.024	0.029	0.042	0.013
	(0.152)	(0.018)*	(0.031)*	(0.011)*	(0.002)**	(0.000)**	(0.072)+
Square of LnSale	-0.003	-0.002	-3.39e-04	-0.001	-0.001	-0.002	-0.001
	(0.400)	(0.308)	(0.730)	(0.226)	(0.333)	(0.100)+	(0.235)
Tangibility	0.396	0.369	0.408	0.496	0.470	0.485	0.440
	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Marketing Intensity	-0.653	0.309	-0.079	0.327	-0.001	0.258	-0.311
	(0.149)	(0.285)	(0.563)	(0.115)	(0.994)	(0.282)	(0.061)+
Advertising Intensity	-0.516	0.262	-0.009	-0.285	0.232	-0.029	0.388
	(0.491)	(0.326)	(0.960)	(0.083)+	(0.289)	(0.916)	(0.217)
Distribution Intensity	-0.003	0.342	0.094	-0.003	0.043	0.044	0.129
	(0.995)	(0.042)*	(0.467)	(0.979)	(0.788)	(0.804)	(0.407)
R&D Intensity	2.021	1.581	-1.557	0.369	0.015	-0.006	-0.410
	(0.488)	(0.684)	(0.327)	(0.421)	(0.913)	(0.000)**	(0.625)
Foreign	0.005	0.001	0.002	2.1e-04	0.001	-2.58e-04	4.28e-04
	(0.035)*	(0.683)	(0.093)+	(0.812)	(0.371)	(0.791)	(0.570)
Director	2.57e-04	3.68e-04	0.001	-0.002	-3.91e-04	-4.25e-04	-3.93e-05
	(0.922)	(0.770)	(0.405)	(0.044)*	(0.579)	(0.663)	(0.957)
Institutional	0.006	0.002	0.006	0.004	0.003	0.002	0.003
	(0.265)	(0.525)	(0.001)**	(0.060)+	(0.038)*	(0.485)	(0.127)
Corporate	-0.001	-0.001	3.98e-04	1.23e-04	2.42e-04	-0.002	-0.001
	(0.496)	(0.479)	(0.621)	(0.874)	(0.719)	(0.024)*	(0.209)
Square of Foreign	-9.45e-05	-2.59e-05	-3.34e-05	-2.19e-05	-1.6e-05	-1.7e-05	-1.99e-05
	(0.017)*	(0.288)	(0.040)*	(0.124)	(0.232)	(0.261)	(0.068)+
Square of Director	-1.98e-05	-2.1e-05	-1.57e-05	1.76e-05	7.64e-06	-7.21e-06	-2.93e-06
	(0.647)	(0.281)	(0.207)	(0.164)	(0.460)	(0.594)	(0.788)
Square of Institutional	-1.21e-04	-3.29e-05	-8.64e-05	-4.24e-05	-3.19e-05	-6.79e-06	-8.8e-05
	(0.519)	(0.506)	(0.029)*	(0.288)	(0.498)	(0.901)	(0.214)
Square of Corporate	2.43e-05	1.09e-05	2.04e-06	7.43e-07	4.05e-06	3.21e-05	1.2e-05
	(0.403)	(0.506)	(0.859)	(0.944)	(0.653)	(0.006)**	(0.093)+
Group Dummy	0.033	0.019	0.019	0.017	0.022	0.033	0.050
	(0.195)	(0.232)	(0.117)	(0.139)	(0.030)*	(0.025)*	(0.000)**
Constant	-0.112	-0.072	0.042	0.341	-0.018	-0.132	0.126
	(0.213)	(0.234)	(0.415)	(0.000)**	(0.815)	(0.003)**	(0.000)**
Observations	183	356	721	786	1126	587	1059
R-squared	0.481	0.417	0.407	0.447	0.453	0.527	0.403
Industry Effect	0.000**	0.000**	0.080+	0.000**	0.000**	0.000**	0.000**

+, *, and ** denote significance at the 10%, 5%, and 1% levels, respectively. p-values are reported in parentheses.

Table 4
Results of Pooled Regressions Analysis with Industry and Time Dummy

	(1)	(2)	(3)	(4)
	NIC-1	**NIC-2**	**NIC-1-T**	**NIC-2-T**
ROA	-0.196	-0.197	-0.190	-0.191
	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Age	-0.001	-0.001	-0.001	-0.001
	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Square of Age	3.33e-06	3.74e-06	3.71e-06	4.16e-06
	(0.188)	(0.133)	(0.142)	(0.095)+
LnSale	0.021	0.020	0.021	0.020
	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Square of LnSale	-0.001	-0.001	-0.001	-0.001
	(0.024)*	(0.044)*	(0.019)*	(0.036)*
Tangibility	0.456	0.454	0.455	0.453
	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Marketing Intensity	-0.024	-0.009	-0.030	-0.015
	(0.759)	(0.910)	(0.694)	(0.848)
Advertising Intensity	-0.085	-0.032	-0.073	-0.018
	(0.266)	(0.698)	(0.340)	(0.822)
Distribution Intensity	0.112	0.100	0.110	0.097
	(0.027)*	(0.078)+	(0.029)*	(0.086)+
R&D Intensity	-0.006	-0.006	-0.007	-0.007
	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Foreign	0.001	0.001	0.001	0.001
	(0.067)+	(0.090)+	(0.049)*	(0.066)+
Director	-0.001	-4.77e-04	-0.001	-0.001
	(0.132)	(0.161)	(0.118)	(0.140)
Institutional	0.004	0.003	0.004	0.003
	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Corporate	-3.63e-04	-4.5e-04	-3.48e-04	-4.38e-04
	(0.233)	(0.141)	(0.252)	(0.150)
Square of Foreign	-2.16e-05	-2.17e-05	-2.27e-05	-2.28e-05
	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Square of Director	2.64e-06	2.28e-06	2.62e-06	2.27e-06
	(0.611)	(0.654)	(0.614)	(0.655)
Square of Institutional	-4.52e-05	-4.67e-05	-4.58e-05	-4.74e-05
	(0.013)*	(0.013)*	(0.011)*	(0.011)*
Square of Corporate	9.32e-06	1.07e-05	8.66e-06	1.01e-05
	(0.017)*	(0.006)**	(0.026)*	(0.010)*
Group Dummy	0.033	0.030	0.033	0.031
	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Constant	-0.160	0.130	-0.162	0.126
	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Observations	4818	4818	4818	4818
R-squared	0.396	0.410	0.397	0.411
Industry Effect	0.000**	0.000**	0.000**	0.000**
Time Effect			0.072+	0.071+
Joint Effect			0.000**	0.000**

+, *, and ** denote significance at the 10%, 5%, and 1% levels, respectively. p-values are reported in parentheses.

Table 5
Results of Panel Data Regressions with ROA

	(1)	(2)	(3)	(4)	(5)
	None	**1-99**	**10-90**	**Debt Int.>0**	**1-99-Group**
ROA	-0.206	-0.185	-0.158	-0.185	-0.179
	(0.000)**	(0.000)**	(0.000)**	(0.001)**	(0.000)**
Age	0.004	0.002	-0.002	0.008	0.002
	(0.191)	(0.406)	(0.479)	(0.002)**	(0.504)
Square of Age	-8e-05	-7.47e-05	-3.27e-05	-7.47e-05	-7.28e-05
	(0.006)**	(0.007)**	(0.233)	(0.001)**	(0.009)**
LnSale	0.007	0.006	0.007	0.001	0.006
	(0.430)	(0.457)	(0.188)	(0.874)	(0.476)
Square of LnSale	-4.16e-04	4.69e-04	0.001	-0.001	3.48e-04
	(0.773)	(0.747)	(0.407)	(0.652)	(0.809)
Tangibility	0.365	0.339	0.324	0.336	0.341
	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Marketing Intensity	-0.251	-0.387	-0.176	-0.292	-0.377
	(0.140)	(0.030)*	(0.209)	(0.131)	(0.036)*
Advertising Intensity	-0.126	-0.337	-0.227	-0.294	-0.322
	(0.481)	(0.035)*	(0.176)	(0.088)+	(0.042)*
Distribution Intensity	-0.018	0.262	0.146	0.196	0.244
	(0.936)	(0.064)+	(0.336)	(0.222)	(0.088)+
R&D Intensity	-0.010	-0.033	0.547	-0.026	-0.039
	(0.936)	(0.772)	(0.386)	(0.817)	(0.707)
Foreign	0.001	0.001	4.89e-04	0.001	
	(0.504)	(0.528)	(0.540)	(0.244)	
Director	-0.001	4.09e-04	-3.31e-04	-0.001	
	(0.492)	(0.681)	(0.665)	(0.439)	
Institutional	-0.005	-0.004	-0.005	-0.006	
	(0.064)+	(0.139)	(0.027)*	(0.028)*	
Corporate	-2.01e-04	-0.001	-0.001	-5.79e-04	
	(0.828)	(0.418)	(0.321)	(0.677)	
Square of Foreign	-3.46e-05	-3.69e-05	-2.43e-05	-3.64e-05	
	(0.094)+	(0.024)*	(0.100)+	(0.026)*	
Square of Director	1e-05	-2.03e-05	--5.32e-06	-2.03e-05	
	(0.639)	(0.177)	(0.668)	(0.633)	
Square of Institutional	1.28e-04	6.39e-05	1.44e-04	6.37e-05	
	(0.115)	(0.343)	(0.067)+	(0.065)+	
Square of Corporate	-1.35e-06	2.80e-06	5.15e-06	2.80e-06	
	(0.916)	(0.771)	(0.584)	(0.986)	
Foreign*Group					-0.001
					(0.107)
Institutional*Group					-0.002
					(0.052)+
Corporate*Group					-4.37e-04
					(0.252)
Director*Group					-3.51e-04
					(0.671)
Constant	0.105	0.136	0.162	0.060	0.130
	(0.073)+	(0.017)*	(0.001)**	(0.266)	(0.019)*
Observations	5117	4818	4127	4867	4818
Adj R-squared	0.819	0.825	0.791	0.823	0.825
Time Effect	0.050+	0.040*	0.090+	0.000**	0.060+

+, *, and ** denote significance at the 10%, 5%, and 1% levels, respectively. p-values are reported in parentheses.

Table 6
Results of Panel Data Regressions with PBDIT

	(1)	(2)	(3)	(4)	(5)
	None	**1-99**	**10-90**	**Debt Int.>0**	**1-99-Group**
PBDIT	4.61e-05	3.89e-05	3.55e-05	3.89e-05	3.96e-05
	(0.067)+	(0.102)	(0.127)	(0.049)*	(0.098)+
Age	0.008	0.006	0.001	0.012	0.006
	(0.015)*	(0.046)*	(0.670)	(0.000)**	(0.064)+
Square of Age	-8.42e-05	-7.88e-05	-3.84e-05	-7.88e-05	-7.68e-05
	(0.005)**	(0.006)**	(0.176)	(0.001)**	(0.008)**
LnSale	-1.42e-04	-2.53e-04	0.005	-0.005	-2.94e-04
	(0.984)	(0.972)	(0.310)	(0.551)	(0.968)
Square of LnSale	-0.002	-0.001	-0.001	-0.002	-0.001
	(0.122)	(0.439)	(0.427)	(0.108)	(0.389)
Tangibility	0.389	0.356	0.346	0.357	0.357
	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Marketing Intensity	-0.200	-0.330	-0.160	-0.235	-0.321
	(0.231)	(0.059)+	(0.250)	(0.217)	(0.071)+
Advertising Intensity	-0.092	-0.306	-0.194	-0.262	-0.294
	(0.601)	(0.045)*	(0.236)	(0.110)	(0.054)+
Distribution Intensity	-0.011	0.264	0.162	0.198	0.249
	(0.960)	(0.055)+	(0.272)	(0.203)	(0.075)+
R&D Intensity	-0.013	-0.035	0.566	-0.024	-0.042
	(0.916)	(0.764)	(0.375)	(0.835)	(0.689)
Foreign	0.001	3.97e-04	4.62e-04	0.001	
	(0.605)	(0.652)	(0.571)	(0.299)	
Director	-0.001	0.001	-3.19e-04	-0.001	
	(0.597)	(0.624)	(0.684)	(0.499)	
Institutional	-0.004	-0.002	-0.004	-0.005	
	(0.193)	(0.354)	(0.061)+	(0.092)+	
Corporate	-1.67e-04	-0.001	-0.001	-5.86e-04	
	(0.860)	(0.431)	(0.377)	(0.651)	
Square of Foreign	-3.11e-05	-3.26e-05	-2.07e-05	-3.26e-05	
	(0.149)	(0.057)+	(0.186)	(0.046)*	
Square of Director	6.94e-06	-2.23e-05	-5.25e-06	-3.23e-05	
	(0.748)	(0.154)	(0.679)	(0.709)	
Square of Institutional	7.74e-05	1.5e-05	1.12e-04	1.5e-05	
	(0.391)	(0.834)	(0.119)	(0.243)	
Square of Corporate	-1.40e-06	3.43e-06	4.52e-06	3.43e-06	
	(0.913)	(0.724)	(0.631)	(0.965)	
Foreign*Group					-0.001
					(0.193)
Institutional*Group					-0.002
					(0.033)*
Corporate*Group					-4.07e-04
					(0.303)
Director*Group					-4.17e-04
					(0.630)
Constant	0.039	0.078	0.100	0.002	0.071
	(0.481)	(0.131)	(0.036)*	(0.965)	(0.150)
Observations	5117	4818	4127	4867	4818
Adj R-squared	0.814	0.820	0.787	0.818	0.820
Time Effect	0.050+	0.030*	0.060+	0.000**	0.050+

+, *, and ** denote significance at the 10%, 5%, and 1% levels, respectively. p-values are reported in parentheses.

Table 7: Results of Panel Data Regressions with only ownership variables

Column 1 of the table reports the results only with "Foreign" ownership as an explanatory variable. Column 2 of the table reports the results only with "Director" ownership as an explanatory variable. Column 3 of the table reports the results only with "Institutional" ownership as an explanatory variable. Column 4 of the table reports the results only with "Corporate" ownership as an explanatory variable. Column 5 of the table reports the results only with four ownership categories as explanatory variables. Column 6 of the table reports the results only with four ownership categories as explanatory variables, and sample is restricted to lie between 1 and 99 percentile based on the dependent variable. Column 7 of the table reports the results only with four ownership categories as explanatory variables, and sample is restricted to lie between 10 and 90 percentile based on the dependent variable. Dependent variable in all the regressions is Debt Intensity. +, *, and ** denote significance at the 10%, 5%, and 1% levels, respectively. p-values are reported in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Foreign	**Director**	**Institutional**	**Corporate**	**All**	**1-99**	**10-90**
Foreign	0.001				0.001	0.001	0.001
	(0.259)				(0.339)	(0.452)	(0.362)
Square of Foreign	-4.02e-05				-4.13e-05	-3.92e-05	-2.69e-05
	(0.023)*				(0.066)+	(0.026)*	(0.093)+
Director		4.66e-04			-0.001	2.02e-04	-0.001
		(0.653)			(0.470)	(0.843)	(0.465)
Square of Director		-1.74e-05			1.01e-04	-1.8e-05	-9.29e-07
		(0.279)			(0.649)	(0.265)	(0.946)
Institutional			-0.002		-0.003	-0.002	-0.004
			(0.524)		(0.232)	(0.463)	(0.095)+
Square of Institutional			-9.65e-06		5.95e-05	-5.09e-06	9.55e-05
			(0.898)		(0.506)	(0.947)	(0.244)
Corporate				-3.31e-04	-1.28e-04	-0.001	-0.001
				(0.671)	(0.896)	(0.399)	(0.489)
Square of Corporate				5.86e-06	-2.59e-06	3.90e-06	3.76e-06
				(0.562)	(0.846)	(0.709)	(0.724)
Constant	0.240	0.241	0.239	0.240	0.273	0.265	0.251
	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Observations	4906	4906	4906	4906	5224	4906	4178
Adj R-squared	0.795	0.794	0.794	0.793	0.790	0.796	0.748
Time Effect	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**