Insider Control, Group Affiliation and Earnings Management In Emerging Economies: Evidence from India

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Abstract

Using a sample of group affiliated and standalone firms for the years 2001-06 from India, a large emerging economy dominated by family business groups and firms with concentrated ownership, we examine the relationship between insider control and opportunistic earnings management with specific focus on the effect of business group affiliation on this relationship. We test the alignment and the entrenchment hypotheses by examining opportunistic earnings management. We further examine if such behavior is influenced by the complexity of ownership structures that are manifested in incomplete and fragmented information about ownership stakes. Our results indicate that a non-linear U-shaped relationship exists between insider control and opportunistic earnings management and that this relationship is stronger for group affiliated firms as compared to that for standalones. Finally, incomplete and fragmented ownership information is found to be strongly related to opportunistic earnings management in group affiliated firms. Our results highlight that both insider control and group affiliation may independently influence agency costs in emerging economies. This in turn calls for policy actions that focus not only on individual firms but on business groups as consolidated identities.

JEL Classification: *G32, G34, G38, M41*

Keywords: *Corporate governance, ownership structures, regulation, earnings management*

1. Introduction

On January 7, 2009, Ramalinga Raju, the Chairman and controlling owner of Satyam Computer Services Limited – a blue chip technology company in India as well as in the US – resigned from his post after publicly declaring that Satyam's accounts have been manipulated and inflated for several years with his explicit involvement and without the knowledge of the board of directors.[1] The accounting fraud came into light after Satyam aborted acquiring majority stakes in two family owned firms belonging to the Satyam Business Group and owned by Raju and his family members, due to pressure from institutional investors. Once the admission of fraudulent accounting came to light, the share value of the company plunged by nearly 80 percent in a matter of days.

Dubbed as the "Enron" of India, the Satyam case highlights how inside owners of family owned business groups with concentrated ownership and control can successfully extract and conceal private benefits at the expense of outside minority shareholders through earnings manipulation.[2] It is of interest to note that earnings manipulation by Satyam's owners happened during a period much of which coincided with a steady increase in Satyam's market valuation up until the acquisition announcements. The accounting irregularities were also reportedly perpetrated during a period that witnessed introduction of comprehensive governance regulations to improve the integrity of financial statements.

[1] Raju publicly confessed that Satyam's balance sheet as of September 30, 2008 contained inflated figures for cash and bank balances, had an accrued interest that did not exist, an understated liability and an overstated debtor's position.

[2] The price of Satyam shares quadrupled between 2003 and 2005, and doubled between 2005 and 2006. Moreover, in September 2008, less than four months before the scandal broke, Satyam received the Golden Peacock Global Award for Excellence in Corporate Governance, instituted by World Council for Corporate Governance.

The objective of this study is to examine the relationship between insider control and opportunistic earnings management, with specific focus on the effect of business group affiliation on this relationship in India, a large emerging economy dominated by family business groups and firms with concentrated ownership. Recent research using both country-level and cross-country analysis has shown that ownership structures can have significant impact on the quality of financial reporting due to insider influence (see for instance, e.g., Fan and Wong, 2001; Haw et al., 2004; Ball and Shivakumar, 2005; Burgstahler et al., 2006). Extant research comparing corporate accounting frauds in the US and Europe, have also shown that differences in ownership structures due to diffused and concentrated holdings can account for differences in the nature of accounting irregularities, the perpetrators of these irregularities and the frequency of such incidents over time (Coffee, 2005).

Several high profile corporate scandals, both in developed and developing countries[3], have been attributed to concentrated ownership and complex family control structures. However, there are relatively few large sample or country level studies that have focused on examining the relationship between concentrated ownership and control and opportunistic earnings management (Bhaumik and Gregoriou, 2010). The need for such a study is imperative given the prevalence of concentrated ownership structures around the world and because accounting failures have economy wide implications by destabilizing capital markets and reducing credibility of financial reports. Both these affect the ability of firms to access long term external finance. From a policy perspective, designing optimal financial reporting regulations and accounting standards by not taking into account the influence of insiders on the quality of financial reporting may lead to "unexpected or ineffective" policy outcomes (Leuz and Wysocki, 2008).

[3] While the Satyam accounting fraud can be cited as an example in the context of India, a developing country, the cases of Parmalat in Italy and Hollinger in Canada where controlling shareholders engaged in accounting irregularities and fraud can be cited as cases in the context of developed countries (Coffee, 2005).

We exploit detailed shareholding data available for Indian firms to study the effect of insider control on opportunistic earnings management in firms with concentrated ownership structures and focus on two key yet relatively unexplored issues. The first issue involves examining the effect of insider control on opportunistic earnings management in terms of two competing hypotheses, namely the alignment and entrenchment hypotheses. The alignment hypothesis predicts that concentrated ownership reduces the incentives of controlling insiders for opportunistic earnings management and the entrenchment hypothesis predicts that such ownership will lead to earnings manipulation by insiders in order to extract private benefits of control from minority shareholders. The second issue focuses on capturing how incomplete information about the complexity of ownership structures as well as fragmentation of ownership stakes among inside owners can lead to 'opaqueness' of insider control and affect opportunistic earnings management.

A few empirical studies that have tested the alignment and entrenchment hypotheses associated with concentrated ownership and opportunistic earnings management offer conflicting predictions. For example, Wang (2006) studies the role of the founding family in the US and finds evidence of a U-shaped relationship between family ownership and absolute discretionary accruals. The turning point occurs around 33 percent, suggesting that the negative entrenchment effect of family control outweighs the positive alignment effect fairly quickly as the extent of insider ownership increases. In contrast, Ding et al. (2007) who study listed private sector firms in China find an inverted U shaped relationship with a turning point of 55 percent beyond which the alignment effect outweighs the entrenchment effect. The stark difference in results between these two studies suggests that the structure of concentrated ownership and control, and the associated agency costs may matter in influencing the outcome. In particular, the US study focuses on a sample of large founding family firms with long term investors over multiple generations,

whereas the sample for the Chinese study focuses on newly privatized firms which are not specifically family owned businesses. Cross-country studies suggest earnings management by ultimate owners may be significantly limited in countries with better statutory protection of minority shareholder rights (Luez et al., 2003; Haw et al., 2006). Thus the institutional background of the countries may also matter. Our analysis of Indian firms includes two distinct types of firms, those that are affiliated to family business groups and others that are essentially free standing entities. While the first category of firms is distinct from other entities in terms of their ownership, control structures and associated agency costs (Morck and Yeung, 2004), the second category is similar to firms in the US with regard to the absence of ownership cross-holding with other domestically listed firms. We contribute to the sparse and conflicting evidence using this unique sample that captures the distinct attributes.

Next, we analyze the extent to which complexity in insider control structures facilitate expropriation of minority shareholders via earnings management. The complexity in concentrated ownership structures is often measured in terms of the divergence between control and cash flow rights of controlling shareholders. Referred to as the wedge, it is considered to be a major source of agency problem in firms in emerging markets. One common mechanism through which such divergence is created is through pyramiding of affiliated firms in business groups. The existing evidence suggests that higher wedge leads to greater opportunistic earnings management in emerging economies. Our analysis contributes to this literature by using a unique measure to proxy the pyramiding effect. In particular, we develop and examine the concept of 'ownership opacity' which arises largely due to the inability of outsiders to decipher the complete chain of insider ownership and control in listed firms.[4] Using existing regulations on ownership disclosure,

[4] It is important to distinguish "ownership opacity" from "corporate opacity" as implied by Anderson et al. (2009). Corporate opacity in that paper is an index of four proxies, two related to stock price information asymmetry (trading volume and bid-ask spread) and two related to equity analyst attributes (following and

we identify two types of ownership opacity, one that arises due to incomplete disclosure of the identity of all insiders and their holdings, and the second arising due to fragmentation of insider ownership among multiple insiders.

The first type of opacity can arise if disclosure rules require the reporting of only those stock holdings that cross a particular threshold such as the 5 percent in the case of US companies, 25 percent in the case of German listed companies, and 1 percent in the case of Indian listed companies. Such regulations can be strategically exploited by controlling shareholders to conceal the identity and extent of shareholding of insiders by deliberately keeping their ownership holdings at less than the regulatory threshold to avoid mandatory disclosures. This is especially true for family owned companies. For example, in India, larger the percentage of one percent shareholding, lesser is the information available in the public domain. Thus more opaque is the ownership structure from the point of view of an outsider. We term opacity arising out of non-disclosure as Type 1 opacity.

The second type of ownership opacity captures the extent to which publicly disclosed insider shareholding is 'fragmented' among its declared constituents. This could be accomplished by distributing the disclosed ownership among a large number of inside owners with small ownership levels (just above one percent) rather than concentrating the ownership among a small number of large shareholdings. Many of these holders are generally unlisted companies and trusts on which further information, especially regarding their ownership structure, is not easily available in the public domain. Thus, by fragmenting, insiders can potentially create obstacles to active monitoring by outsiders by raising transaction costs. We term opacity arising from fragmentation as Type II opacity. We hypothesize that both types of opacity are engineered by the

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forecast error). Ownership opacity, on the other hand, relates to lack of transparency of the ultimate ownership structure of a firm.

desire to camouflage intra-group transactions and to facilitate earnings management to extract private benefits.

Our focus on India is guided by three important considerations. First, poor quality financial reporting with high incidence of earnings management (Sarkar et al., 2008), the prevalence of concentrated ownership with the dominance of business groups characterized by pyramidal structures, and high incidence of related party transactions (Table 1) make India an ideal setting for exploring the relationship between insider control and earnings management . Expropriation of minority shareholders by controlling owners (referred to as promoters) is well documented in India both in official reports as well as in the business press[5]. At the same time, unlike other emerging economies, India ranks at par with the US and UK with respect to minority shareholder rights. However, similar to the other emerging economies, India lags behind the US and UK in terms of accounting standards and the rule of law.

Second, the richness of ownership data that has to be mandatorily disclosed under Clause 35 of the Listing Agreement of the country's stock market regulator, Securities Exchange Board of India (SEBI), allows us to come up with a more accurate measure of insider control and compute measures of ownership opacity that has not been possible earlier.[6] Specifically, a unique feature of Indian ownership data is that the disclosure of data on insider promoter ownership is based on the concept of control rather than on cash flows. Insiders have to disclose their total holdings in a company in terms of their direct cash flow rights in the company as well as their indirect cash

[5] For instance, apart from the Satyam, about 300 odd cases have been referred to the Serious Fraud Investigation Office in India since 2002. A large majority of these pertain to group companies and involve misreporting of company performance as well as misuse and diversion of investor funds by controlling promoters (Sarkar, 2010).

[6] Clause 35 of the Listing Agreement of SEBI requires insiders (traditionally referred to as "promoters") to disclose on their own both their direct and indirect shareholding in the company through other persons/entities related to the insiders that together enables insiders to control the company.

flow rights in the company. The latter can be through companies they control and through individuals who act in concert with the insider. In contrast, in many of the existing studies on concentrated ownership, controlling insiders are identified by tracking down both their direct and indirect equity stakes through 'equity chains' using information available in the public domain and then defining different thresholds to define control (see for example, Claessens et al., 2000 and Lins (2003). Such an exercise may not be exhaustive due to missing data on all owners as is recognized in Claessens et al. (2000).[7] In contrast, the mandatory disclosure of both direct and indirect ownership of *all* insiders in control in India helps to largely eliminate the "omission bias" that is built into many studies.

--- Insert Table 1 about here ---

Finally, a study using Indian data is valuable since comprehensive governance reforms to bring shareholder protection in line with international best practices have been introduced relatively early on. This allows us to examine the relationship between insider control and opportunistic earnings management in the backdrop of emerging governance regulations and the strengthening of the institutional framework over time.[8] Corporate governance regulations for listed companies were implemented by the Securities Exchange Board of India (SEBI), the country's capital market regulator, from January 2001 with the objective of instituting the highest standards of corporate governance in the country. The Clause specified mandatory standards with respect to almost all aspects of governance, both in terms of attributes and effectiveness, as it relates to the

[7] For instance, Claessens et al. (2000), recognize the problem of omission bias in the context of computing ownership data and tracing the ultimate owner in East Asian corporations; data for 1164 corporations of the 5284 corporations considered, were missing or insufficient. Lins (2003), analyzing ownership structures in a cross-section of emerging economies had to eliminate China and Poland from the sample on account of not being able to identify 90 percent of the blockholdings in half the sample firms.

[8] The Clause was made applicable in a phased manner and all listed companies with the paid up capital of INR 30 million and above or net worth of INR 250 million more at any time in the history of the company, were covered as of March 31, 2003.

board, audit committee, investors grievance committee, remuneration committee as well as disclosures of ownership patterns, related party transactions and CEO/CFO certification of compliance with all the provisions of this Clause. Companies were required to file a compliance report every quarter and include a "Corporate Governance Report" in their annual reports.

Using a sample of publicly listed group affiliated and non-affiliated (stand alone) companies over 2001-06 and having 5888 firm year observations, our results provide evidence of a non-linear relationship between insider control and opportunistic earnings management as measured by absolute discretionary accruals. Insider control reduces income smoothing up to a threshold, beyond which the entrenchment effect associated with concentrated ownership outweighs the positive alignment effect and increases income smoothing. Stated differently, insider control beyond a threshold level creates stronger incentives to manage earnings opportunistically to extract private benefits of control. This U-shaped relationship, between insider control and absolute discretionary accruals, also holds separately for group and non-group firms although the marginal effects are different. Additionally, consistent with existing studies, we find group affiliation to have an adverse effect on opportunistic earnings management. In particular, when insider control exceeds a threshold level of 26 percent, group affiliation has an adverse effect on earnings management. Finally, we find that ownership opacity influences earnings management significantly. Consistent with our expectations, we find that higher ownership opacity is associated with higher levels of absolute discretionary accruals only in the case of group affiliates. However, the effect of opacity is found to be sensitive to the type of opacity and the extent of insider control.

The rest of the paper is organized as follows. Section 2 discusses the background literature on insider control and earnings management. Section 3 discusses the sample of our study and defines the relevant variables. Section 4 discusses the empirical models estimated to examine the impact

of insider control and ownership opacity on opportunistic earnings management. Sections 5 and 6 present the main empirical results of our analysis with respect to insider control and opacity, respectively, and Section 7 concludes the paper.

2. Background Literature

The literature on concentrated ownership and opportunistic earnings management reveals conflicting predictions in terms of the alignment and entrenchment hypotheses. In Asian economies including India, concentrated ownership and control is the rule rather than the exception. When ownership and control are concentrated in the same hands, the nature of the agency problem in firms change from conflicts between shareholder and manager conflicts (Type I or vertical agency problems) to conflicts between the controlling inside shareholders and minority outside shareholders (Type II or "horizontal agency problems) a la Roe, 2004.

The alignment hypothesis posits that concentrated insider ownership and control can help align the interests of inside management with that of diffused outside shareholders and thus mitigate Type I agency problems. This is achieved if the objectives of both insiders and outsiders are defined in terms of firm value maximization (Morck et al., 1988; Anderson and Reeb, 2003; Demsetz and Lehn, 1985). If earnings management reduces firm value, the alignment hypothesis implies that insiders with concentrated equity positions will curtail opportunistic earnings management by managers. If they are key members of the management team, it is expected that they would not engage in such opportunistic behavior under the alignment hypothesis. The second implication of the alignment hypothesis, particularly for family owned and controlled firms, is that there are incentives to report earnings in 'good faith' so as to prevent damage to the family reputation and protect family wealth in the long run over future generations (Wang, 2006).

Reputational considerations are particularly important for family firms that seek to tap external sources of finance at favorable contracting terms. This may be jeopardized by insiders trying to gain in the short term by opportunistically managing earnings.

The entrenchment hypothesis focuses on the conflict between the controlling inside shareholders and minority outside shareholder (Type II agency problems). It focuses on how entrenched controlling shareholders extract private benefits of control at the expense of minority shareholders (Shultz, 1988; Gilson and Gordon, 2003). Controlling shareholders can become entrenched due to several reasons. Their concentrated ownership positions can make the firm less susceptible to external disciplinary forces from the takeover market. Additionally, if they have control rights in excess of their cash flow rights or if the equity structure is complex as in the case of business groups, the controlling shareholders can become entrenched. Further, when they are part of the board of directors, often in the capacity of Chairman and/or CEO (Ali et al., 2007), it can lead to entrenchment.

Under the entrenchment hypothesis, controlling shareholders engage in opportunistic earnings management to camouflage the different ways in which they seek to acquire and retain private benefits of control. For instance, controlling shareholders can manipulate a firm's earnings to extract private benefits of control through expropriation of cash, assets and equity (Bhaumik and Gregoriou, 2010). Controlling owners can engage in earnings manipulation and prevent subsequent detection because of their influence and control of the firm, including the generation and reporting of accounting information (Fan and Wong, 2002). With insiders typically serving on company boards, the board of directors as a whole may be ineffective in monitoring and preventing insiders from engaging in such activities (Wang, 2006; Han An and Naughton, 2004).

In addition to the benefits and costs of concentrated ownership and control as outlined above, there are other costs and benefits that come into play when such firms are associated with business groups (Masulis et al., 2009). Typical features of business groups are equity interlinks among group affiliates through pyramidal structure and cross-holdings which allow the ultimate owner of a group to control group firms without committing much equity. Additionally, group affiliates are connected through internal capital and labor markets, through related party transactions and through implicit relation based ties. Under the alignment hypothesis, reputational effects associated with earnings management are likely to be stronger for business group firms interlinked through internal capital and labor markets, because potentially adverse effects of earnings management in one firm could have negative spillovers to other group firms (Gopalan et al., 2007). Group reputation is particularly argued to be beneficial in emerging economies where minority investors are more vulnerable to expropriation due to weak regulatory and legal environment (Khanna and Yafeh, 2007).

The internal markets of business groups, coupled with pyramidal structures and related party transactions, can strengthen the entrenchment effect associated with earnings management by enabling the manipulation, distortion and distribution of group profits and earnings estimates across affiliates. This increases the costs of owning group affiliated firms. As Kim and Yi (2005) argue in the context of Korean business groups, business group affiliation provides insiders with more "opportunities and means" to use internal capital markets and related party transactions to engage in earnings management through asset acquisition and sales, equity investment, credit purchases and sales, payables and receivables, and in general through adjusting the volume or the price of intra-group trade. For instance, empirical evidence exists on how controlling shareholders in pyramidal group structures with related party transactions have engaged in earnings management to divert resources from over-performing group affiliates, where controlling insiders

have lower equity stake, to 'prop up' underperforming group affiliates, where insiders have higher stakes (Jian and Wong, 2004; Liu and Lu, 2004).

Studies on the relation between insider control and earnings management in emerging economies have examined the effect of divergence of control rights and cash flow rights (wedge) on discretionary accruals. Country level analysis of wedge is restricted to an analysis of Korean listed firms (Kim and Yi, 2005; Han and Naughton, 2004) and cross-country analysis of firms with concentrated ownership and control in select East Asian and European countries (Haw et al., 2006). The Korean evidence is mixed: Kim and Yi (2005) find a higher wedge (implying higher incentives to extract private benefits of control) to be associated with higher opportunistic earnings management while Han and Naughton (2004) find no statistically significant effect. The cross-country studies do find evidence of an adverse effect of higher wedge on discretionary accruals.[9] A few emerging economy studies have focused on the comparison of earnings management phenomenon in group affiliated vis-à-vis stand alone firms. Both Kim and Yi (2005), using Korean data, and Siregar and Utama (2008), using Indonesian data, finds that group affiliated firms engage in higher earnings management relative to non-affiliated firms. Finally, research examining the effect of large blockholding on earnings management in a sample of 142 privately listed Chinese companies, some of which are family owned (Ding et al., 2007),[10] shows that the relationship between the holdings of the largest shareholding block and discretionary accruals is an inverted U with higher concentration of shareholdings of the largest shareholders beyond a threshold of 55 percent leads to lower earnings management. This result, as mentioned earlier in the introduction, is contrary to the U-shaped relationship associated with concentrated ownership and control in family firms in the US (Wang, 2006).

[9] Fan and Wong (2002) too estimate in the context of select East Asian countries, the effect of wedge on earnings quality but focuses on earnings informativeness rather than earnings management.

[10] A listed company in China is defined as one in which the largest shareholder is a private company or an individual.

There are some similarities and differences between our study and those using Chinese data (e.g. Ding et al, 2007). Similar to the study on China, our analysis focuses on listed firms in an emerging economy. However, unlike the China based study, our sample is more representative of firms in other emerging economies. It helps understand the behavior of family owned and controlled firms,[11] as well as the effect of business group affiliation on pyramidal structures and cross-holdings.[12] Corporate governance institutions in India are well defined and at par with those in the US and UK (Sarkar and Sarkar, 2008). These have evolved over a sufficiently long time[13] and are relatively advanced with respect to the range, depth of existing statutes and legal framework regulating corporate activities (Sarkar and Sarkar, 2000). This is in stark contrast to other emerging economies, where corporate governance institutions are relatively new. India, however, like most emerging economies, have an enforcement regime that is weak relative to the "laws in the books." Several recent studies have argued that good quality enforcement is as important as good quality laws in order to reduce agency costs.

3. Sample and Variables

[11] Based on a sample of 307 large listed firms among the top 500 firms ranked in terms of market capitalization, it is found that as of March 2006, the proportion of family insiders as directors on company boards in group affiliates and standalones are 77 percent and 75 percent, respectively.

[12]Compared to Indian private sector listed firms, Chinese listed firms are relatively young with the first privately owned listed company appearing in 1992, and accounting for only 16 percent of the total listed firm in the Chinese stock market as of 2002 compared to more than 80 percent of the total listed companies in the Indian stock market. Further, in considering the ownership of the top shareholders, the analysis of Chinese listed firms considers only direct ownership; indirect ownership through pyramids is outside the scope of the study.

[13] For instance, the history of capital market in India dates back to more than hundred years with the establishment of the Bombay Stock Exchange in 1875, and the origins of the existing Companies Act, 1956, which governs the activities of Indian companies has its roots in the Indian Companies Act of 1913.

3.1 Sample

The sample for our analysis is drawn from the Prowess database created by the Center for Monitoring Indian Economy (CMIE). The Prowess database has formed the basis of several empirical studies on the Indian corporate sector (see for example, Khanna and Palepu, 2000; Sarkar and Sarkar, 2000; Bertrand et al., 2002). Our sample consists of all domestic private sector companies listed on the Bombay Stock Exchange for which complete accounting and stock market data are available for the financial years 2002 to 2006.[14] We consider only listed companies as most of the recent capital market regulations including Clause 49, are applicable to only listed companies. From this set we focus on domestic private sector companies as the issues relating to promoter ownership and pyramidal structure are mostly applicable to these companies.

--- Insert Table 2 about here ---

To select our sample, in Step 1 we consider those listed companies in Bombay Stock Exchange which satisfy the following five criteria, namely, (i) they belong to non-agricultural industries, (ii) have accounting and market data available for the financial years 2002 to 2006, (iii) are not government or foreign owned, (iv) are not classified in the Z category by exchange[15] (iv) and do not have outliers with regard to variables that capture firm characteristics (v). In Step 2 we delete those companies that have missing equity ownership information, and finally in Step 3 we delete those companies with missing information for computing discretionary accruals (which requires a minimum number of observations per industry) and control variables. Our final sample consists

[14] The financial year in India is from April 1 to March 31 of the following year. Thus the financial year 2003 covers the period from April 1 2002 to March 31 2003.

[15] The 'Z' group was introduced by BSE in July 1999 and includes companies which have failed to comply with its listing requirements and/or have failed to resolve investor complaints and/or have not made the required arrangements with both the depositories, viz., Central Depository Services (I) Ltd. (CDSL) and National Securities Depository Ltd. (NSDL) for dematerialization of their securities.
See http://www.bseindia.com/about/list_comp.asp for details.

of an unbalanced panel of 1658 distinct companies with 5888 company-year observations. Of these observations, 2881 observations (48.93 percent) come from group affiliated companies and the remaining from unaffiliated or standalone companies; similarly, 4614 observations (78.36 percent) are following the adoption of Clause 49 and the remaining are from the pre-regulation period. Details of the sample selection procedure are presented in Table 2.

3.2 Dependent Variable: Opportunistic Earnings Management

Earnings can be managed by the choice of accounting methods as well as the assumptions made to estimate accruals. It is easier to manage earnings using assumptions to estimate accruals since accounting method choices have to be disclosed under a country's accounting standards. Healy and Wahlen (1999) define such earnings management as being essentially opportunistic. Change in total accruals over time can proxy for the extent of earnings management if we assume that some portion of accruals is non-manipulated and constant over time. However, as suggested by Jones (1991), the non-manipulated accruals may not be constant over time and can be driven by some accounting fundamentals such as revenues adjusted for receivables, property, plant and equipment. Opportunistic earnings management can be then be captured by the residuals from a regression of total accruals on accounting fundamentals. The residuals are referred to as discretionary accruals.

Further modifications to estimating discretionary accruals have been suggested in the literature since Jones (1991). Dechow et al. (1995) suggest that discretionary accruals be calculated after adjusting for change in receivables since it is often easier to exercise discretion over credit sales than cash sales. Kasznik (1999) suggests controlling for return on assets in estimation of discretionary accruals whereas Kothari et al. (2005) suggest adjusting firm level discretionary accruals by that of a performance matched portfolio. Dechow and Dichev (2002) introduce cash flow measures to assess accruals quality. Finally, Francis et al. (2005) combine the model of

Dechow et al. (2002) and Jones (1991) to construct an encompassing model of earnings quality. Since the Francis model is an encompassing model of discretionary accruals, we use it to proxy earnings management in our analysis. The Francis model for estimating discretionary accruals is given by:

$$TCA_{it} / A_{i,t-1} = \alpha_1 (1/A_{i,t-1}) + \alpha_2 (\Delta REV_{it}) / A_{i,t-1} + \alpha_3 (PPE_{it}) / A_{i,t-1} + \alpha_4 (CFO_{it-1}) / A_{i,t-1} + \alpha_5 (CFO_{it}) / A_{i,t-1} + \alpha_6 (CFO_{it+1}) / A_{i,t-1} + \varepsilon_{it} \quad \ldots (1)$$

where, CFO_{it-1}, CFO_{it} and CFO_{it+1} are the cash flows from operations in the years (t-1), t and (t+1), respectively; ΔREV_{it} is the change in revenues, PPE_{it} is the change in property, plant and equipment , and $A_{i,t-1}$ is total assets and ε_{it} is the error term. The dependent variable, TCA_{it}, is the total current accruals in year *t* calculated as $TCA_{it} = (\Delta CA_{it} - \Delta CL_{it} - \Delta Cash_{it} + \Delta STD_{it})$. Here ΔCA_{it} is the change in current assets, ΔCL_{it} is the change in current liabilities, $\Delta Cash_{it}$ is the change in cash and cash equivalents, ΔSTD_{it} is the change in short term debt in current liabilities.

The parameters of equation (1) are estimated for each year and each industry in our sample. Using the National Industrial Classification (NIC)[16] code at the two-digit level, the sample companies can be classified into 25 different industries. We require that there are at least 10

[16] The National Industrial Classification (NIC) code is published by the Central Statistical Organization, New Delhi, India, and has undergone several revisions since its inception in 1970. We use the NIC-1998 classification which is identical to the International Standard Industrial Classification (ISIC) – Rev. 3 in structure up to the 4 digit level.

observations in each industry in each year to ensure we have representative parameter estimates. Discretionary accruals (DA) are then calculated as:

$$DA = TCA_{it} / A_{i,t-1} - [\hat{\alpha}_1(1/A_{i,t-1}) + \hat{\alpha}_2(\Delta REV_{it})/A_{i,t-1} + \hat{\alpha}_3(PPE_{it})/A_{i,t-1} + \hat{\alpha}_4(CFO_{it-1})/A_{i,t-1} + \hat{\alpha}_5(CFO_{it})/A_{i,t-1} + \hat{\alpha}_6(CFO_{it+1})/A_{i,t-1}]$$

… (2)

where, $\hat{\alpha}_1$ to $\hat{\alpha}_6$ are the parameter estimates from equation (1).

This measure identifies discretionary accruals as those that have a low correlation with realized cash flows. Francis et al. (2005) also measure accruals quality using standard deviation of the residuals from equation (1) over the previous five years and further separate it into innate and discretionary components. Given the data constraints for this approach, we focus on examining the level of discretionary accruals using their model.

3.3 Variables of Interest

Our main variables of interest are equity ownership of controlling owners (henceforth referred to interchangeably as insiders or promoters), group affiliation, and ownership opacity.

3.3.1 Insider Control and Group Affiliation

Clause 35 of the Listing Agreement introduced by SEBI in 2002 provides the format for a listed company to disclose its ownership structure at the aggregate level. Data on both direct and indirect equity ownership of controlling owners is part of this disclosure under the heading "promoter holdings." The total promoter holdings are subdivided into "shares owned by promoters" and "shares owned by persons acting in concert" (PACs). Although the term

"promoter" is mentioned in Indian company law, it is not legally defined under the Companies Act, 1956 other than referring to persons/entities that assume the initial task of setting up a company. However, a promoter is clearly defined under the Disclosure and Investor Protection (DIP) Guidelines (2000) of SEBI from a "control" perspective,[17] where the term promoter includes the person or persons who are (i) in over-all control of the company or (ii) instrumental in the floatation of a company. The term "control" is defined under Clause (c) of sub-regulation (1) of Regulation (2) of the Substantial Acquisition of Shares and Takeover Regulations 1997 (Takeover Code) as the "right to appoint the majority of the directors or to control the management or policy decisions exercisable by a person or persons acting individually or in concert, directly or indirectly, including by virtue of their shareholding or management rights or shareholding agreements or voting agreements or in any other manner." For the period covered in our study, the direct holdings of promoters had to be disclosed under Clause 35 under the heading "Promoter" that was classified further into "Indian Promoters" and "Foreign Promoters."

The indirect holdings of promoters are covered under the heading "persons acting in concert," (PAC) as per Regulation 2(1) (e) (i) of the Takeover Code. PACs are described as those who engage in substantial acquisition of shares or voting rights or gain control over a target company for a common objective or purpose. As per Clause 35, PACs essentially include holdings by individuals/entities that have a controlling element that adds to the control exercised by the promoters.[18] Thus, PROM_CONTROL, the equity holding of controlling owners is defined as the

[17] The meaning of promoter and promoter group is defined as per Explanations I, II and III to sub-clause (m) of clause 6.8.3.2 of the DIP Guidelines 2000.

[18] Specifically, as detailed by the Secondary Market Advisory Committee (SMAC, 2004) of the SEBI, PACs refers to entities who are in control of the company, directly or indirectly, whether as a shareholder (including shareholding of 10% or more in such companies), director or otherwise, or person or persons named as promoters in any document filed with SEBI, stock exchange, Registrar of Companies or any other body of offer of securities to the public or existing shareholders. Thus, PACs can include a company, its holding company or subsidiary company or such company under the same management either individually or together with each other, its subsidiaries and also the directors of such companies. http://www.sebi.gov.in/commreport/clause35.html

sum total of promoter share and PACs. This data is obtained at the company level from the Prowess database for the years 2001 – 2006.

With regard to our second variable of interest, group affiliation, the Prowess database identifies firms by their association with a particular ownership group.[19] Group affiliation is represented by the dummy variable GROUP defined at the company level as: GROUP =1 if a firm is affiliated to a business group; GROUP = 0 otherwise. For all standalone or unaffiliated firms, therefore GROUP = 0.

3.3.2 Ownership Opacity

Based on Sarkar and Sarkar (2008), we construct two indices of ownership opacity. We exploit the information disclosed on individual equity holdings of the promoters to compute these indices. In addition to the disclosure of the aggregate ownership structure, Clause 35 of the Listing Agreement requires all listed companies to mandatorily disclose the identity of every equity holder who has *one percent or more* share ownership in the company along with the value of such ownership and the number of shares held. Thus, any discrepancy between the promoters' shareholding disclosed at the aggregate level and that summed up from the one percent disclosure is accounted by those promoter-shareholders with less than one percent ownership. It is with respect to these shareholders that we have no information on their identity or pattern of equity ownership. The more such divergence, the less we are likely to know the control and ownership structure of the controlling shareholders of the firm. To capture such opacity, which arise due to non-disclosure and which we term as Type 1 opacity, we construct the variable OPAQUE_1 as follows:

[19] Prowess associates a company to a group based on company prospectus/letter of offer, annual reports, disclosure of related party transactions, company website, house journals, equity shareholding details of listed companies and the list published by the Monopolies and Restrictive Trade Practices (MRTP) Commission.

OPAQUE_1 = Total promoters' share ownership from aggregate data minus total promoters' share ownership from 1 percent data, divided by total promoters' share ownership from aggregate data.

Table 3 illustrates the construction of the OPAQUE_1 measure based on disclosed information of one percent equity holdings for two flagship companies belonging to two well-known business groups in India, namely Reliance Industries of the Reliance Group, and Tata Steel of the Tata Group. While aggregate promoter ownership in Reliance Industries is 46.76 percent, around half of this ownership is accounted for by promoters with less than one percent holdings and hence their identities and shareholding are not available in the public domain. In contrast, in the case of Tata Steel, more than 90 percent of the aggregate promoter shareholding is accounted for in the one percent disclosure records so that OPAQUE_1 for Tata Steel is much less, at 0.08 as compared to 0.39 for Reliance Industries.

--- Insert Table 3 about here ---

The second indicator of opacity is derived from the structure of information on promoter ownership that is available in the one percent disclosures. Table 3 shows that there is considerable higher fragmentation of the ownership structure with regard to promoters and persons acting in concert (PACs) in the case of Reliance Industries compared to Tata Steel. While the ownership structure in Reliance Industries is more fragmented with one promoter and fourteen PACs, the ownership of Tata Steel is more consolidated with no PACs and two promoters. While fragmentation of ownership structure per se need not necessarily pose a problem in deciphering the inter linkages between group affiliates, the problem arises when many of the promoters and PACs are private unlisted companies so that the complete chain of control cannot be established.

This is the case largely with Reliance, where *all* fifteen promoters and PACs are private limited companies. In the case of Tata Steel, however, both promoters are publicly listed companies.

To capture the opacity that arises due to fragmentation of one percent or more equity holdings by insiders, which we term as Type 2 opacity, we construct the measure OPAQUE_2:

> OPAQUE_2 = (Total number of separate holdings by promoters of 1 percent or more) minus (total number of separate holdings by promoters of 5 percent or more) divided by total number of separate holdings by promoters of 1 percent or more.

We use the 5 percent as the cut-off value as this has been widely used in the literature to define block holding[20]. The larger the magnitude of OPAQUE_2, the more is the fraction of ownership held by the relatively smaller shareholders with equity ownership of less than 5 percent. As in the case of OPAQUE_1, estimate of OPAQUE_2 is higher for Reliance Industries as compared to Tata Steel. It is important to note in this context, that high values of OPAQUE_1 need not necessarily imply high values of OPAQUE_2. In this sense, each of these two measures carries independent information.

3.4 Control Variables

Opportunistic earnings management may be affected by factors other than our main variables of interest. To control for such effects we use the well known firm level attributes that have been documented in prior literature (Warfield et al., 1995; Ali et al., 2007). These include leverage (LEVERAGE), price to book ratio (PB), firm size (SIZE), systematic risk of equity (BETA), cash flow from operations (CFO), lagged total current accruals (L1ACCR), return on assets of current

[20] This is drawn from the legal definition of blockholders under Rule 13d-1(a) of the Securities Exchange Act of 1934 in the US.

year (ROA) and past years (PROA), variance in quarterly earnings (VAREPS), and the absolute level of return on assets (ABS_ROA) as well and its growth (ABS_ROA_GR). In addition, we consider two ownership measures relevant to the emerging markets namely the percentage of equity ownership by foreign institutional investors (FII_SHR) and banks and financial institutions (BANKS_FI_SHR). Finally, given that our period of analysis coincides with the inception and progression of governance reforms under Clause 49, we control for this effect by incorporating a dummy variable POST_CG49 which takes the value 1 from the year the particular firm adopted the Clause 49 regulations. All regressions include industry dummies and year dummies to control for unobserved industry and time specific effects. Detailed descriptions of variables are given in Table 4.

--- Insert Table 4 about here ---

4. Empirical Models

This section presents the earnings management models that we use to study the effects of insider control, group affiliation and ownership opacity on discretionary accruals.

4.1 Benchmark Model of Opportunistic Earnings Management

Our benchmark model of discretionary accruals is:

$$DA = \alpha + \beta_1 FII\_SHR + \beta_2 BANKS\_FI\_SHR + \beta_3 LEVERAGE + \beta_4 PB + \beta_5 SIZE + \beta_6 BETA + \beta_7 CFO + \beta_8 L1CACCR + \beta_9 ROA + \beta_{10} PROA + \beta_{11} VAREPS + \beta_{12} ABS\_ROA + \beta_{13} ABS\_ROA\_GR + \beta_{14} POST\_CG49 + \sum_i \gamma_i INDUSTRY_i + \sum_t \delta_t YEAR_t + error \quad (M1)$$

where, DA is the amount of discretionary accruals estimated using the Francis et al. model and the explanatory variables are as outlined in the previous section. We examine both unsigned as well as signed discretionary accruals. Further, we examine two subsamples, one with only positive and the other with only negative discretionary accruals since these can have different implications. While unsigned DA can be interpreted to be representing income smoothing, signed DA represents the earnings overstatement efforts by the firm. Since we consider both non-group (i.e. stand alone) firms with promoter influence as well as group firms in our analysis, there is a role for both measures to be examined, based on the issue we are focusing on.[21]

4.2 Effect of Insider Control on Earnings Characteristics

To identify the relative strengths of the alignment and entrenchment effect of promoter control on discretionary accruals we incorporate a quadratic term for the PROM_CONTROL variable along with other control variables as follows:

$$DA = \alpha + \phi_1 PROM\_CONTROL + \phi_2 PROM\_CONTROL^2 + \beta_1 FII\_SHR + \beta_2 BANKS\_FI\_SHR + \beta_3 LEVERAGE + \beta_4 PB + \beta_5 SIZE + \beta_6 BETA + \beta_7 CFO + \beta_8 L1CACCR + \beta_9 ROA + \beta_{10} PROA + \beta_{11} VAREPS + \beta_{12} ABS\_ROA + \beta_{13} ABS\_ROA\_GR + \beta_{14} POST\_CG49 + \sum_i \gamma_i INDUSTRY_i + \sum_t \delta_t YEAR_t + error \quad \text{(M2)}$$

[21] Frankel et al. (2002) suggest that income-increasing (positive) discretionary accruals are likely to be more opportunistic and that auditors are more likely to require adjustments to positive rather than negative accruals. However, Bedard et al. (2004) argue that aggressive earnings management includes both positive and negative discretionary accruals. The existence of bonus caps can make managers move current profits to the future by creating "cookie" jars. Further, managers can take "big baths" to generate negative discretionary accruals in periods of negative earnings so that the future turnaround looks impressive. Several papers including Klein (2002), Haw et al. (2004) have examined similar issues using absolute measures of discretionary accruals. We consider both signed and unsigned as opportunistic, interpreting the former as overstatement and the latter as smoothing.

If $\phi_1 < 0$ and $\phi_2 > 0$, then there is a U-shaped relationship between ownership and discretionary accruals. This implies that earnings management reduces with increases in ownership, when ownership is below a certain threshold level, and increases thereafter. The alignment effect outweighs entrenchment effect at lower levels of ownership; the opposite holds true when controlling shareholders consolidate their ownership beyond that threshold. If $\phi_1 > 0$ and $\phi_2 < 0$ then the entrenchment effect is stronger than the alignment effect at lower levels of ownership and becomes weaker at higher levels of ownership.

4.3 Effect of Business Group Affiliation on Earnings Characteristics

We use a binary variable, GROUP, to capture the effect of group affiliation. To examine the group effect, we first estimate model (M2) above by dropping the promoter control variable *PROM_CONTROL* and incorporating GROUP as in the following specification (3).

$$DA = \alpha + \phi_1 GROUP + \beta_1 FII\_SHR + \beta_2 BANKS\_FI\_SHR + \beta_3 LEVERAGE + \beta_4 PB + \beta_5 SIZE + \beta_6 BETA + \beta_7 CFO + \beta_8 L1CACCR + \beta_9 ROA + \beta_{10} PROA + \beta_{11} VAREPS + \beta_{12} ABS\_ROA + \beta_{13} ABS\_ROA\_GR + \sum_i \gamma_i INDUSTRY_i + \sum_t \delta_t YEAR_t + error \quad \text{(M3)}$$

We then incorporate back the quadratic term of PROM_CONTROL as in (2) so that the full model for estimating the effect of insider control on DA is as follows:

$$DA = \alpha + \phi_1 PROM\_CONTROL + \phi_2 PROM\_CONTROL^2 + \phi_3 GROUP + \beta_1 FII\_SHR + \beta_2 BANKS\_FI\_SHR + \beta_3 LEVERAGE + \beta_4 PB + \beta_5 SIZE + \beta_6 BETA + \beta_7 CFO + \beta_8 L1CACCR + \beta_9 ROA + \beta_{10} PROA + \beta_{11} VAREPS + \beta_{12} ABS\_ROA +$$

$$\beta_{13}\, ABS\_ROA\_GR + \sum_i \gamma_i\, INDUSTRY_i + \sum_t \delta_t\, YEAR_t + error$$

(M4)

We further investigate the effect of group affiliation by splitting the sample into group and non-group firms and estimating model (M2) separately for these two subgroups for examining whether the effect of insider control on opportunistic earnings management is fundamentally different between these two types of firms.

4.3 Effect of Ownership Opacity on Discretionary Accruals

Finally, we introduce the measures of ownership opacity, OPAQUE_1 and OPAQUE_2 in our benchmark DA model given by specification (M1) and estimate the effect of each measure on discretionary accruals after controlling for group effects. Thus we estimate the following model:

$$DA = \alpha + \phi_1\, OPAQUE\_i + \phi_2\, GROUP + \beta_1\, FII\_SHR + \beta_2\, BANKS\_FI\_SHR + \beta_3\, LEVERAGE + \beta_4\, PB + \beta_5\, SIZE + \beta_6\, BETA + \beta_7\, CFO + \beta_8\, L1CACCR + \beta_9\, ROA + \beta_{10}\, PROA + \beta_{11}\, VAREPS + \beta_{12}\, ABS\_ROA + \beta_{13}\, ABS\_ROA\_GR + \sum_i \gamma_i\, INDUSTRY_i + \sum_t \delta_t\, YEAR_t + error \qquad \text{(M5)}$$

5. Empirical Results: Effect of Insider Control and Group Affiliation

5.1 Descriptive Statistics

We present two sets of descriptive statistics for our sample. Table 5.1 presents the mean values for all the variables used in our analysis, calculated separately for the sample as a whole and for group affiliated, standalone firms. Table 5.2 examines the pervasiveness of insider control for our

sample of firms, using different control thresholds to study how blockholding by insiders have changed over the period of our study.

--- Insert Table 5.1 about here ---

The results indicate that absolute discretionary accruals are around 8 percent of total assets for the complete sample. The positive and negative discretionary accruals are of a similar magnitude in the range of 7 percent to 9 percent of total assets, thus yielding almost close to zero signed discretionary accruals. The mean promoter ownership is about 50 percent. Compared to that, foreign institutional investors (FII_SHR) have only 1.6 percent ownership and banks and financial institutions (BANKS_FI_SHR) own only about 3.7 percent of total equity. Focusing on control variables, the mean firm size (log of market capitalization) (SIZE) is 18.8 and the mean leverage (LEVERAGE) is 0.32. The 12 quarter variation in earnings per share (VAREPS) is 0.41. The price-to-book ratio (PB) is around 1. Cash flow from operations (CFO_TA) is about 6 percent of total assets. The return on assets (ROA) is 13% and the 5-year return on assets (PROA) is 2.3 percent.

Interestingly, there are no significant differences between group and non-group firms in terms of absolute or signed discretionary accruals. In case of the promoter control (PROM_CONTROL) group, affiliates exhibit higher control at 50 percent as compared to 48 percent for standalones, with the difference being significant at the 5 percent level. Further, foreign institutional investors (FII_SHR), and banks and financial institutions (BANKS_FI_SHR) have higher equity ownership in group affiliates than standalones, with the differences being significant at 1 percent. Group affiliates are also larger in size (SIZE) than standalones, have higher profitability (ROA), higher market valuation (PB), higher cash flow (CFO_TA) and are more leveraged (LEVERAGE).

Concentrated insider ownership is predominant in Indian firms. Table 5.2 presents the distribution of firms by different cut-offs of insider control for each of the five years included in our study. At the 5 percent control threshold, 98 percent of firm year observations have insiders' holdings of five percent or more. This percentage has remained almost the same for sample firms in each of the years covered by the study. When the cut-off is increased to 20 percent, which is typically considered a level at which a block of shareholders can get effective control, the results do not change much: around 94 percent of sample observations have effective insider control. About 90 percent of sample firms on average have at least equal to 26 percent insider control, which is enough to block special resolutions[22] and around 47 percent of sample firms have majority control. The estimates in Table 5.2 thus show that insider control is pervasive in Indian firms; corresponding estimates obtained for group affiliates and standalones (not reported in the Table) paint a similar picture.

--- Insert Table 5.2 about here ---

5.2 Regression Results

5.2.1 Benchmark model

Table 6.1 presents the regression results for the benchmark model. Overall, the estimates are consistent with those found in earlier studies and confirm the validity of the benchmark model in the Indian setting.

Bank ownership reduces absolute discretionary accruals but increases signed discretionary accruals. This indicates higher bank ownership is related to lower negative discretionary accruals. Higher leverage is associated with an increase in absolute discretionary accruals, but to lower

[22] Under the Companies Act of 1956, important decisions like changing the line of business, diversification, amalgamation, alteration of shareholder rights, reduction in share capital, etc. have to be approved by a special resolution which is deemed to be accepted if "the votes cast in favor of the resolution … are not less three times the number of the votes, if any, cast against the resolution by the members so entitled and voting, (Section 189)."

values of signed as well as negative discretionary accruals. Higher operating cash flows are associated with lower signed discretionary accruals, whereas higher current accruals from a year ago are associated with higher signed discretionary accruals. Higher return on assets is related to lower absolute discretionary accruals but higher discretionary accruals. Absolute return on assets is positively (negatively) correlated with the unsigned (signed) discretionary accruals.

--- Insert Table 6.1 about here ---

5.2.2 Effect of insider control

The effect of insider control in terms of the alignment and entrenchment effects are presented in Table 6.2. Recall that the relative strength of these two effects are captured by the quadratic specification of the promoter control variables namely, PROM_CONTROL and $PROM\_CONTROL^2$. The coefficient estimates presented in Table 6.2 show that insider control has a non-linear effect on income smoothing, as measured by absolute discretionary accruals. Given that the coefficient of PROM_CONTROL is negative and that of $PROM\_CONTROL^2$ is positive, both being statistically significant at 1 percent, an increase in insider control reduces income smoothing with the relationship reaching a minimum when promoter control is around 50 percent, and then starts increasing thereafter. This result suggests that the alignment effect outweighs the adverse entrenchment effect until insider control reaches an absolute majority, and reversing thereafter. This U-shaped relationship of insider control is however not obtained with respect to signed discretionary accruals, irrespective of whether we consider the positive and negative values separately or together. The influence of the control variables on absolute discretionary accruals continue to hold as in the benchmark model.

--- Insert Table 6.2 about here ---

The U-shaped relationship that we obtain between insider control and absolute discretionary accruals is consistent with the result that Wang (2006) obtained using a sample of large US family firms. However, there are two important qualitative differences. First, the study by Wang finds evidence of both a statistically significant linear and positive relationship between family control and absolute discretionary accruals as well as evidence of a U-shaped relationship with a turning point of around 33 percent. These two apparently incongruous findings can be reconciled by noting that the mean (median) family equity ownership in the study (Wang, 2006) is 10.5 (5.0) percent so that most of the sample observations are less than the threshold value of 33 percent. Thus, the non-linear relationship is driven by a few firms at the higher end of the distribution. In our case, the finding of the non-linear relationship is unique in the sense that a linear specification leads to insignificant coefficient (unreported) of the promoter control variable. Second, the turning point in our study is around 50 percent which almost coincides with both the mean and median values of equity ownership. This suggests that the entrenchment effect outweighs the alignment effect for nearly half of the sample observations which occur when insiders have near absolute control over firm operations.[23]

Our result of a U-shaped relationship between insider control and absolute discretionary accruals is in contrast to the inverted U relationship obtained with respect to a sample of listed private sector firms in China (Ding et al., 2007). In that study, the interests of controlling insiders converge with those of outsiders when insider control exceeds absolute majority (between 55 and 60 percent). However, in China most listed companies have significant government ownership and business group companies are hardly dominant. In China, most companies are organized as a parent with a single subsidiary company. The subsidiary company is usually listed to provide access to external finance for expansion of the parent company (Fan, 2008). Accordingly,

[23] The average equity holding for observations with at least 50 per cent insider control is around 51 per cent and the estimate jumps to around 64.5 per cent for sample observations with insider control of at least 51 per cent (Table 4.3).

pyramidal ownership structures with complex cross holdings, where significant divergence between ownership and control exist, are less prevalent in Chinese companies. The contrasting results obtained in our study highlights the importance of organizational forms in influencing agency costs and accordingly observed economic outcomes.

5.2.3 Effect of Group Affiliation on Earnings Characteristics

The effect of business group affiliation on discretionary accruals is estimated in terms of Model 3 and Model 4 set out in Section 4. In Model 3, we capture the effect of group affiliation using a binary variable, GROUP and test the effect of group affiliation to the exclusion of promoter control. Table 6.3 presents these regression results.

Group affiliation has a positive effect on absolute discretionary accruals with the coefficient being statistically significant at 5 percent. In other words, compared to standalone firms, group firms engage in more income smoothing practices. This result reinforces the findings in the literature that group affiliation adversely affects the quality of earnings due to opportunistic earnings management by insiders (Kim and Yi, 2005; Siregar and Utama, 2008). Group affiliation however does not seem to affect the other measures i.e. unsigned, positive or negative discretionary accruals.

--- Insert Table 6.3 about here ---

Table 6.3 provides preliminary evidence on the differential behavior of group firms in earnings management. However, this result depends on assuming that the coefficients of all the other parameters are same across group and non-group firms. To further examine the robustness of the above finding, we split our sample by group firms and non-group firms and estimate the effect of

insider control for each sub-sample. The results of this estimation are presented in Tables 7.1 and 7.2, respectively. Table 7.1 shows that the coefficient of PROM_CONTROL is negative and that of $PROM\_CONTROL^2$ is positive, with both coefficients statistically significant, at 5 percent and 1 percent, respectively. The magnitude of the coefficients suggests that the turning point is at 53.24 percent which is close to the level that we find in the full sample. Compared to these findings for group-affiliated firms, the estimates in Table 7.2 show that though the coefficients of PROM_CONTROL is negative and that of $PROM\_CONTROL^2$ is positive for standalone firms, these coefficients are significant only at the at the 10 percent level. Thus, our separate estimations of group and standalone firms suggest that the U-shaped relationship that we find in our full sample is driven mostly by the group affiliated firms. Thus there seems to be a strong group effect in the relation between discretionary accruals and group affiliation.

--- Insert Tables 7.1 and 7.2 about here ---

The final exercise that we conduct to get additional insights into the effect of group affiliation is by splitting the sample observations by different thresholds of insider control. Insider control in group firms can be exercised at relatively low levels of promoter ownership because of pyramiding. Table 6.3 indicates that group affiliation has an adverse effect, but it does not tell us the level of insider control that causes such an effect. For this, we first split the sample by three different control thresholds namely, 20 percent, 26 percent, 51 percent. As noted earlier, the 20 percent cut-off value is widely used in the literature to denote effective control, while the 26 percent cut-off value gives blockholders the right to block special resolutions under the Companies Act of 1956, and the 51 percent cut-off value gives the owners majority control. Corresponding to each of these control thresholds, we define LOW to be the set of firms with promoter ownership less than the threshold and HIGH to be the set of firms with equity ownership equal or above that threshold. We then re-estimate Model 3with the GROUP variable

for the LOW and HIGH sub-samples for each of the three thresholds identified above. Table 8 presents the results of these six regressions. As our main interest is on the effect of group affiliation, we present the parameter estimates of only the GROUP variable.

--- Insert Table 8 about here ---

For both 20 percent and 26 percent threshold levels, group affiliation has no effect in firms with promoter control below the thresholds (i.e., for LOW firms). In contrast, the coefficient of GROUP is positive and significant in the HIGH sample suggesting that group affiliation increases discretionary accruals in firms when promoter control exceeds the thresholds of 20 percent and 26 percent. For the 51 percent threshold, the coefficient on the GROUP variable is positive and significant for both the LOW and the HIGH sub-samples. Very interestingly, the coefficient on the GROUP variable in the HIGH sample with the 51 percent threshold is about twice the value of the corresponding estimates with the 20 percent and 26 percent thresholds. These results strongly suggest that group affiliation imposes additional costs in terms of earnings management when promoter control exceeds some minimum thresholds that give them effective control over the firm.

6. Effect of Ownership Opacity: Descriptive Statistics and Regression Results

Our analysis of ownership opacity and opportunistic earnings management is based on the sample of listed firms for which promoter ownership of one percent or more is available. The analysis covers the period from 2002-03, the first year the disaggregated data is available, to 2004-05, the latest year for which data was available at the time of analysis. As outlined earlier, we consider two measures of ownership opacity, OPAQUE_1 and OPAQUE_2. While OPAQUE_1 seeks to capture opaqueness of insider control due to partial disclosure of promoter holdings, OPAQUE_2 captures the opaqueness that arises from fragmentation of promoter holdings.

6.1 Descriptive Statistics

Table 9.1 presents the summary statistics of the sample used for the opacity analysis both in the aggregate as well as according to ownership groups. For the full sample, the mean value of OPAQUE_1 is 0.2584 and that of OPAQUE_2 is 0.1860. Comparing the opacity measures by ownership groups, we find that the mean opacity by both measures to be higher for standalones as compared to group affiliates, with the difference in each case being statistically significant at the one percent level. Differences between ownership groups with respect to other variables, including absolute discretionary accruals, are similar to those in the larger sample (Table 5.1).

--- Insert Table 9.1 about here ---

6.2 Regression Results

Tables 9.2 and 9.3 present the regression results with respect to ownership opacity and absolute discretionary accruals estimated using Model 5. Table 9.2 shows coefficient estimates with regard to OPAQUE_1 and OPAQUE_2 as well as other control variables for the full sample of 2736 firm year observations in the case of OPAQUE_1, and 2386 firm year observations in the case of OPAQUE_2. The first two columns of Table 9.2 present coefficient estimates without considering the effect of promoter control. The third and fourth column present coefficient estimates after specifying a quadratic relationship with PROM_CONTROL as in our original estimation.

As is evident from Columns 1 and 2 of the Table, neither ownership opacity measures have a statistically significant effect on absolute discretionary accruals. In other words, the non-disclosure of promoter equity below one percent and the fragmentation of promoter ownership do not seem to have any impact on opportunistic behavior of controlling insiders. Similar results hold with respect to the opacity measures after taking into account the effect of insider control

(Columns 3 and 4). However, with regard to the effect of PROM_CONTROL, while the U-shaped relationship is preserved when we consider OPAQUE_1, only a linear negative relationship with respect to absolute discretionary accruals is obtained when we consider OPAQUE_2. Thus, when we consider the full sample, i.e. pool group affiliates and standalone firms, we do not find any relation between opacity on discretionary accruals.

--- Insert Tables 9.2 about here ---

However, while opacity can impact both standalone and group affiliates, it is our hypothesis that the complex group structure associated with group affiliates via pyramiding and cross-holdings can compound the effect of non-disclosure and fragmentation of insider control in group firms as compared to standalones. This is despite the fact that as revealed by summary statistics, the average opacity levels are significantly higher in standalones as compared to group affiliates. However, once characteristics of group firms and standalones are controlled for in a multivariate framework, it is our expectation that the marginal effect of opacity on earnings management would be higher for group affiliates as compared to that of standalones.

--- Insert Tables 9.3 about here ---

To test this hypothesis, we now estimate the effect of OPAQUE_1 and OPAQUE_2 separately for group affiliated and standalone firms. The results of this estimation are presented in Table 9.3.We observe that OPAQUE_1 now has a positive and statistically significant relation with absolute discretionary accruals for group affiliated firms, while there is no such relation for standalones. The results are very similar using the second measure, OPAQUE_2. In other words, ownership opacity matters for opportunistic earnings management for group affiliated firms. It is worth noting that the estimations undertaken in Table 9.3 consider ownership opacity along with

indicators of insider control. If we drop the two variables with insider control (the linear and the quadratic terms) then the (unreported) coefficients attached to both OPAQUE_1 and OPAQUE_2 become significant for group affiliated firms while they continue to be insignificant for the standalone firms. Taken together, these results suggest that ownership opacity which captures the structure of ownership is a significant determinant of absolute discretionary accruals in group affiliated firms, over and above the effect that is exerted through the level of promoter control irrespective of how opacity is measured.

Given that opaqueness of insider control has statistically significant effect on opportunistic earnings management in group affiliated firms, we investigate whether the level of insider control in group affiliates has any effect on how opaqueness impacts earnings management. To examine this, we take the sample of group affiliated firms for the three years under consideration and split it by insider control thresholds of 20 percent, 26 percent and 51 percent. For each split, we estimate the effect of opaqueness on absolute discretionary accruals. Tables 10.1 and Table 10.2 present the estimation results with respect to OPAQUE_1 and OPAQUE_2, respectively.

--- Insert Tables 10.1 and 10.2 about here ---

An examination of the coefficient estimates for OPAQUE_1 for each threshold interestingly reveals that OPAQUE_1 has an effect on absolute discretionary accruals only for firms where insider control is less than 51 percent. Combining this with the finding that OPAQUE_1 has no effect for firms when promoter control exceeds the thresholds of 26 and 51 percent implies that within the 26 and 51 percent range, OPAQUE_1 increases absolute discretionary accruals. Thus, incomplete disclosure of promoter ownership has no bearing on opportunistic earnings management for the range where insiders have relatively low equity ownership (< 26 percent). One can interpret this in terms of insiders having insufficient control to manage earnings using

ownership opacity. This is also the range where the alignment effect is strong enough to outweigh any negative entrenchment effect. On the other hand, when insiders have absolute control (>=51 percent), they can potentially expropriate minority investors using opportunistic earnings management. In that case, the entrenchment effect is found to be strong enough to outweigh the benefits from convergence of interests such that non-disclosure of ownership information has little marginal effect on absolute discretionary accruals; thus our results make intuitive sense. For the intermediary range between 26 and 51 percent, when the positive effects of alignment of interests taper off and stronger entrenchment effects set in, the ultimate owners can successfully extract private benefits through tunneling. These owners have less than majority cash flow rights, but can conceal the ownership structure. within pyramidal set ups This result of masking ownership information to derive private benefits of control has not been previously documented in the literature.

Turning to the effect of OPAQUE_2 on absolute discretionary accruals (Table 10.2), we find a different set of results as compared to that with respect to OPAQUE_1. When we consider the effect at thresholds of less than 20 percent and 26 percent, like OPAQUE_1, we find no effect of OPAQUE_2 on absolute discretionary accruals for low levels of insider control. However, we observe that for the 51 percent threshold, while OPAQUE_2 has no effect for minority ownership, the coefficient of OPAQUE_2 is highly significant once promoters acquire majority stakes. Recall that OPAQUE_2 measure captures ownership fragmentation *within* the declared ownership structure. When promoters hold significantly high (declared) stakes in a company, one way of creating non-transparent ownership structure is through complex webs of control through cross-holdings and pyramiding which can be achieved by a large number of entities with each having small shareholdings. The fact that many of these smaller entities could be private limited companies which make it difficult to follow the ownership trail (as private companies are not required to disclose ownership patterns) makes this fragmentation an effective tool to conceal the

true ownership information. Our result suggests that such complexity is strongly correlated with indicators of earnings management in group affiliated companies.

6.3 Robustness checks

We conduct several analyses to check the robustness of our results. We test if our results are sensitive to the model used to measure discretionary accruals. For this we used the Jones (1991) model instead of the Francis et al. (2005) model to measure discretionary accruals. All our results remain qualitatively unchanged. We also examine if our results were sensitive to the definition of firm size by re-estimating the regressions using market capitalization of the firm instead of sales as a measure of size. Again, all our results remain robust. We also check that our results were not influenced by outliers. We reestimate the regressions by truncating the extreme one percent of the dependent variable values and winsorize the sample at the one percent values. Again all our results remain qualitatively robust. Finally, throughout the analyses, we used heteroskedasticity consistent standard errors to ensure that our statistical tests of coefficients were consistent.

7. Conclusion

Our empirical analysis of insider control and opportunistic earnings management in an emerging economy like India has sought to add to the sparse evidence that exists on this issue, particularly about countries where insider control in the corporate sector is a dominant feature. We studied three important aspects of insider dominance: promoter control, the effect of group affiliation and the impact of opacity on discretionary accruals.

We find consistent and robust evidence of a non-linear U-shaped relationship between promoter control and discretionary accruals which suggests that the relative strengths of the alignment effect vis-à-vis the entrenchment effect changes with changes in the levels of insider control with the entrenchment effect dominating the alignment effect once controlling owners acquire absolute

(majority) control of the firms. This relationship is largely driven by the group-affiliated firms. Our results of a U-shaped relationship are qualitatively consistent with the evidence on large founding family firms (Wang, 2006). However, it is opposite to the findings about Chinese private sector listed firms, which we ascribe to the difference in the organizational forms of corporate ownership between these two countries, China and India.

The second set of empirical analysis in our paper focuses on the effect of group affiliation on discretionary accruals. Consistent with existing evidence on emerging economies, we find that group affiliation increases earnings opportunism of insiders. We gain additional insights into the effect of group affiliation through our threshold analysis. The results reveal that the adverse effect of group affiliation sets in only when insider control reaches the critical minimum.

Finally, we examine how ownership opacity, an important measure of the complexity of insider control, affects opportunistic earnings management. Our results show that opacity of insider ownership manifested in both non-disclosure as well as fragmentation of equity amongst a large number of inside owners increases discretionary accruals. This effect is driven by the behavior of the group affiliated firms with the effect getting amplified with higher levels of control thresholds. In conclusion, our results highlight that both promoter control and group affiliation may independently influence agency costs in emerging economies. This in turn calls for policy actions that focus not only on individual firms but also business group firms as consolidated identities.

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Table 1: Ownership and Control Characteristics, Earnings Management, Shareholder Protection and Select Institutional Indicators: India and the US

This table provides a summary of various corporate governance characteristics related to financial reporting, ownership in India and the US. The data is obtained from various published articles and the Prowess database. The sources for the various items are 1: The data for India is computed from Prowess and the data for US is sourced from La Porta et al. (1999). 2: Leuz et al. (2003). 3: Masulis et al., (2009). 4: Bhattacharya et al. (2003). 5: La Porta et al. (1999). 6: La Porta, et al. (1998); (2000).

	India	US
I. Percentage of widely held firms (top 20 listed firms)[1]	10	80
II. Percentage of family controlled firms (top 20 listed firms)	90	20
III. Mean ownership concentration[2]	43	12
IV. Characteristics of Family Business Groups[3]		
(i)Percentage of group affiliated firms controlled through pyramids	10.02	0.90
(ii) Percentage of market capitalization held by group controlled firms	20.89	3.04
(iii) Percentage of market capitalization held by pyramid controlled firms	4.10	0.69
(iv) Pyramid Layer	0.36	0.31
V. Aggregate Earnings Management Score[4]	19.1	2.0
VI. Shareholder Protection[5]		
(i) Oppressed minority mechanism	1	1
(ii) Antidirector Rights of Minority Shareholders[a] (scale of 6)	5	5
VII. Institutional Indicators[6]		
(i) Efficiency of Judicial System	8	10
(ii) Rule of Law	4.17	10
(iii) Auditor's per 100,000	9	168
(iv) Disclosure Level	61	85
(v) Opacity in Accounting	79	25
(vi)Accounting Standard	57	71

Table 2: Sample Selection Steps

This table provides the steps followed in arriving at the final sample. The Prowess database from the Center for Monitoring the Indian Economy (CMIE) is the source of the data used in this sample. The sample consists of publicly listed Indian companies that trade on the Bombay Stock Exchange (BSE). The 'Z' listed companies are those that have failed to comply with BSE's listing or other requirements (see footnote 14 for more details). Outliers are those that have either (i) leverage < 0 or leverage > 10, (ii) roa > 100% or roa < -100%, (iii) abs_roa_gr > 1000% or abs_roa_gr < -1000%

	Firm year	Firms
Step 1: All BSE listed firms with the following criteria (i) Non-agricultural industries (ii) Basic accounting and market data available for 2001-06 (iii) Not government or foreign listed (iv) No outliers for leverage, ROA and abs growth in ROA (v) Not Z listed in the BSE	10749	2431
Less: missing ownership data	909	
Step 2	9840	
Less: missing data for discretionary accruals and control variables	3952	
Step 3: Final sample	5888	1658

Table 3: Computation of Opacity Measures (Year 2004)

This table provides two examples of how ownership opacity is computed. OPAQUE_1 is a measure of incomplete disclosure of promoter ownership, measured as the difference between the total promoter ownership and the level for which the identity of the owners are required to be reported, expressed as a fraction of the total promoter ownership. OPAQUE_2 is a measure of the fragmentation of promoter ownership, computed as the difference between the number of promoters affiliated owners at the 1% level and at the 5% level, expressed as a fraction of the former. The two examples relate to two well-known business groups, Reliance and Tata. The data is from Prowess.

Name of Affiliate	**Type of Insider**	**Identity of Insider**	**Percentage Share**
Reliance Industries Ltd.	Indian Promoters	Petroleum Trust	7.51
Reliance Industries Ltd.	Persons Acting In Concert	Sanchayita Mercantile Pvt Ltd	2.46
Reliance Industries Ltd.	Persons Acting In Concert	Reliance Enterprises Pvt Ltd	2.26
Reliance Industries Ltd.	Persons Acting In Concert	Florentine Trading Pvt Ltd	1.87
Reliance Industries Ltd.	Persons Acting In Concert	Velocity Trading Pvt Ltd	1.77
Reliance Industries Ltd.	Persons Acting In Concert	Madhuban Merchandise Pvt Ltd	1.75
Reliance Industries	Persons Acting In	Ornate Traders Pvt Ltd	1.4

Ltd.	Concert		
Reliance Industries	Persons Acting In	Reliance Polyolefins Pvt Ltd	1.37
Ltd.	Concert		
Reliance Industries	Persons Acting In	Tresta Trading Pvt Ltd	1.19
Ltd.	Concert		
Reliance Industries	Persons Acting In	Reliance Capital Ltd	1.18
Ltd.	Concert		
Reliance Industries	Persons Acting In	Amur Trading Pvt Ltd	1.18
Ltd.	Concert		
Reliance Industries	Persons Acting In	Yangste Trading Pvt Ltd	1.16
Ltd.	Concert		
Reliance Industries	Persons Acting In	Reliance Energy & Project Development Pvt	1.15
Ltd.	Concert	Ltd	
Reliance Industries	Persons Acting In	Reliance Aromatics & Petrochemicals Pvt	1.15
Ltd.	Concert	Ltd	
Reliance Industries	Persons Acting In	Reliance Chemicals Pvt Ltd	1.05
Ltd.	Concert		
Reliance Industries	Total Insider Ownership : Aggregate Ownership Data (Z1)		***46.76***
Ltd			
	Total Insider Ownership : One Percent Data (Z2)		***28.45***
	OPAQUE_1 = (Z1– Z2)/Z1		***0.39***
	Total number of separate holdings by promoters of 1 percent or more (Y1)		***15***
			1
	Total number of separate holdings by promoters of 5 percent or more (Y2)		***0.93***
	OPAQUE_2 = (Y1 – Y2)/Y1		
Tata Steel	Indian Promoters	Tata Sons Ltd	19.8
Tata Steel	Indian Promoters	Tata Motors Ltd	4.66
Tata Steel	Total Insider Ownership : Aggregate Ownership Data (Z1)		***26.56***
	Total Insider Ownership : One Percent Data (Z2)		***24.46***
	OPAQUE_1 = (Z1– Z2)/Z1		***0.08***
	Total number of separate holdings by promoters of 1 percent or more (Y1)		***2***
			1
	Total number of separate holdings by promoters of 5 percent or more (Y2)		***0.50***
	OPAQUE_2 = (Y1 – Y2)/Y1		

Table 4: Variable Descriptions

This table describes the variables used in the analysis. The discretionary accruals measures are proxies for opportunistic earnings management; the ownership measures are proxies for firm governance based on ownership patterns or characteristics; the control variables include variables that have been documented in the literature to affect discretionary accruals.

Variables	
Discretionary accruals	
abs_DA_Francis	absolute discretionary accruals using the Francis et al. (2005) model
res_DA_Francis	signed discretionary accruals using the Francis et al. (2005) model
pos_DA_Francis	signed discretionary accruals using the Francis et al. (2005) model if it is >0; missing otherwise
neg_DA_Francis	signed discretionary accruals using the Francis et al. (2005) model if it is <0; missing otherwise
Ownership	
prom_control	percentage of equity ownership by promoters (direct promoter equity + equity of persons acting in concert)
prom_control^2	square of promoter_control
fii_shr	percentage of equity ownership by foreign institutional investors
banks_fi_shr	percentage of equity ownership by banks and financial institutions
Group	dummy variable; group =1 if firm is affiliated to business group, zero otherwise.
opaque_1	total promoters' share ownership from aggregate data minus total promoters' share ownership from 1 percent data, divided by total promoters' share ownership from aggregate data.
opaque_2	total number of separate holdings by promoters of 1 percent or more minus total number of separate holdings by promoters of 5 percent or more divided by total number of separate holdings by promoters of 1 percent or more.
Control Variables	
size	log of sales
nrsize	percentile ranking of markets capitalization, scaled to range between -0.5 and +0.5
leverage	ratio of debt to total assets
vareps	variance of earnings per share over the prior 12 quarters
pb	market capitalization divided by book value of equity
beta	beta computed using the single factor CAPM
cfo_ta	operating cash flows divided by total assets from the previous year
l1caccr_ta	1 year lagged value of current accruals divided by total assets from the previous year
roa	return on assets
proa	average return on assets from the prior 5 years
abs_roa	absolute value of return on assets
abs_roa_gr	absolute value of growth in return on assets
postcg_49	corporate governance regulation dummy; equal to one if firm has adopted regulation, zero otherwise.

Table 5.1: Summary Statistics

This table provides the mean values of the different variables for three alternative cuts of the data (i) entire sample (ii) standalone firms (iii) group-affiliated firms. Standalone firms are those that are not affiliated with any business group in India.The number of standalone firm observations is 3007 and the number of group-affiliate firm observations: 2881

	All Firms		By Ownership group		
Variable	N	Mean	Standalones	Group Affiliated	t-diff
abs_DA_Francis	5525	0.0835	0.0833	0.0837	0.16
res_DA_Francis	5525	0.002	0.0042	-0.0001	-1.24
pos_DA_Francis	2977	0.0794	0.0791	0.0796	0.15
neg_DA_Francis	2548	-0.0883	-0.0884	-0.0882	0.05
prom_control	5888	0.4911	0.48	0.5027	4.78
fii_shr	5888	0.0158	0.0061	0.0259	15.36
banks_fi_shr	5888	0.0367	0.0169	0.0574	25.46
size	5888	18.7956	17.9056	19.7245	38.84
nrsize	5888	0.0446	-0.0874	0.1823	44.39
leverage	5888	0.3212	0.2834	0.3607	12.3
vareps	5888	0.4089	0.2058	0.6208	12.07
pb	5888	1.0676	0.911	1.2311	1.56
beta	5888	1.0169	0.9758	1.0598	5.2
cfo_ta	5783	0.0573	0.049	0.0658	4.65
l1caccr_ta	5778	0.0054	0.0115	-0.0007	-3.45
roa	5888	0.1302	0.1241	0.1365	3.74
proa	5888	0.0238	0.0225	0.0251	1.23
abs_roa	5888	0.1449	0.1429	0.1469	1.41
abs_roa_gr	5888	0.6996	0.776	0.6199	-5.26

Table 5.2: Distribution of Firm Year Observations by Insider Control Thresholds: 2001-06

This table provides the distribution of firms by different cut-offs of insider control for each of the five years included in our study. It presents the pervasiveness of insider control at different control thresholds. It also shows how blockholding by insiders have changed over time. Figures in brackets represent the number of observations.

Insider Control Thresholds (%)	Percentage of Observations by Year					Percentage of All Firm-Year Observations
Year	2002	2003	2004	2005	2006	2002-06
>= 5	99.85 (909)	98.45 (1083)	98.32 (1172)	98.23 (1227)	98.46 (1403)	98.40 (5794)
>= 20	95.01 (876)	94.54 (1040)	94.21 (1123)	93.75 (1171)	93.68 (1335)	94.17 (5545)
>= 26	88.39 (815)	89.90 (989)	90.43 (1078)	89.83 (1122)	89.61 (1277)	89.69 (5281)
>= 51	45.01 (415)	47.81 (526)	48.15 (574)	47.31 (591)	47.15 (672)	47.18 (2778)
>=75	5.53 (51)	5.36 (59)	5.12 (61)	5.36 (67)	5.33 (76)	5.33 (314)
Total Number of Observations	922	1100	1192	1249	1425	5888

Table 6.1: Benchmark Model of Discretionary Accruals

This table provides the regression results for the benchmark model of discretionary accruals. Four alternative measures of discretionary accruals are used: absolute, signed, only positive and only negative. Statistical significance at the 1%, 5% and 10% level are denoted as ***, **, and * respectively. All variables are described in Table 4.

$$DA = \alpha + \beta_1 FII\_SHR + \beta_2 BANKS\_FI\_SHR + \beta_3 LEVERAGE + \beta_4 PB + \beta_5 SIZE + \beta_6 BETA + \beta_7 CFO + \beta_8 L1CACCR + \beta_9 ROA + \beta_{10} PROA + \beta_{11} VAREPS + \beta_{12} ABS\_ROA + \beta_{13} ABS\_ROA\_GR + \beta_{14} POST\_CG49 + \sum_i \gamma_i INDUSTRY_i + \sum_t \delta_t YEAR_t + error$$

.

Variable	abs_DA_ Francis	res_DA_Francis	pos_DA_ Francis	neg_DA_Francis
Intercept	0.0561***	0.0042	0.0317***	-0.0394***
post_cg	490.0065	0.0012	0.006	0.0015
fii_shr	0.0236	-0.0048	-0.0103	0.0482
banks_fi_shr	-0.0694***	0.0463***	-0.0171	0.072***
leverage	0.0384***	-0.0318***	0.0028	-0.057***
pb	-0.0002	0.0001	0	0.0003
Nrsize	-0.0037	0.0024	0.0005	0.0094
beta	0.0018	-0.0023*	0	0.0011
cfo_ta	-0.0107	-0.7358***	-0.5330***	-0.5434***
l1caccr_ta	-0.0166	0.0227**	-0.0083	0.0192
Roa	-0.2466***	0.8019***	0.5423***	0.5921***
proa	-0.1312***	0.0800***	-0.0719**	0.1352***
vareps	0.0005	-0.0005	-0.001	0.0002
abs_roa	0.3924***	-0.3622***	-0.1317*	-0.3906***
abs_roa_gr	0.0052**	0.0021	0.0063	-0.0012
Obs	5465	5465	2949	2516
Adj R-Sq	0.1276	0.5416	0.4458	0.4734
Pr > F	0	0	0	0

Table 6.2: Effect of Promoter Control on Discretionary Accruals

This table examines the effect of promoter control on discretionary accruals. Four alternative measures of discretionary accruals are used: absolute, signed, only positive and only negative. Promoter control is measured as the percentage of ownership by promoters and affiliated parties. Statistical significance at the 1%, 5% and 10% level are denoted as ***, **, and * respectively. All variables are described in Table 4.

$$DA = \alpha + \phi_1 PROM\_CONTROL + \phi_2 PROM\_CONTROL^2 + \beta_1 FII\_SHR + \beta_2 BANKS\_FI\_SHR + \beta_3 LEVERAGE + \beta_4 PB + \beta_5 SIZE + \beta_6 BETA + \beta_7 CFO + \beta_8 L1CACCR + \beta_9 ROA + \beta_{10} PROA + \beta_{11} VAREPS + \beta_{12} ABS\_ROA + \beta_{13} ABS\_ROA\_GR + \beta_{14} POST\_CG49 + \sum_i \gamma_i INDUSTRY_i + \sum_t \delta_t YEAR_t + error$$

Variable	abs_DA_ Francis	res_DA_Francis	pos_DA_ Francis	neg_DA_Francis
intercept	0.0820***	0.0029	0.0434***	-0.0517***
prom_control	-0.1303***	-0.0054	-0.0546	0.0497
prom_control^2	0.1308***	0.0137	0.0519	-0.042
fii_shr	0.0189	0.0008	-0.0158	0.0541
banks_fi_shr	-0.0665***	0.0518***	-0.0187	0.0761***
leverage	0.0388***	-0.0319***	0.0029	-0.0581***
pb	-0.0002	0.0001	0	0.0003
Nrsize	-0.0047	0.0015	0.0006	0.0091
beta	0.0018	-0.0022	-0.0001	0.0012
cfo_ta	-0.0101	-0.7364***	-0.5315***	-0.5433 ***
l1caccr_ta	-0.0173	0.0231**	-0.0089	0.0196
roa	-0.2396***	0.8021***	0.5429***	0.5885***
Proa	-0.1325***	0.0779**	-0.0722**	0.1329***
Vareps	0.0005	-0.0005	-0.001	0.0002
abs_roa	0.3888***	-0.3627***	-0.1313*	-0.3896***
abs_roa_gr	0.0051**	0.0021	0.0062	-0.0011
post_cg49	0.0068	0.0013	0.0061	0.0014
Industries dummies	included	included	included	included
Time dummies	included	included	included	included
Obs	5465	5465	2949	2516
Adj R-Sq	0.1304	0.5416	0.4461	0.4734
Pr > F	0	0	0	0

Table 6.3: Effect of Group Affiliation on Discretionary Accruals

This table examines the effect of group affiliation on discretionary accruals. Four alternative measures of discretionary accruals are used: absolute, signed, only positive and only negative. Group affiliation is measured using a dummy variable, which takes a value of 1 if the firm is affiliated with a business group. Statistical significance at the 1%, 5% and 10% level are denoted as ***, **, and * respectively. All variables are described in Table 4.

$$DA = \alpha + \phi_1 GROUP + \beta_1 FII\_SHR + \beta_2 BANKS\_FI\_SHR + \beta_3 LEVERAGE + \beta_4 PB + \beta_5 SIZE + \beta_6 BETA + \beta_7 CFO + \beta_8 L1CACCR + \beta_9 ROA + \beta_{10} PROA + \beta_{11} VAREPS + \beta_{12} ABS\_ROA + \beta_{13} ABS\_ROA\_GR + \sum_i \gamma_i INDUSTRY_i + \sum_t \delta_t YEAR_t + error$$

Variable	abs_DA_ Francis	res_DA_Francis	pos_DA_ Francis	neg_DA_Francis
intercept	0.0531***	0.004	0.0307**	-0.0383***
group	0.0077**	0.0006	0.0026	-0.0028
fii_shr	0.0198	-0.0051	-0.0116	0.0496
banks_fi_shr	-0.0763***	0.0458***	-0.0196	0.0750 ***
leverage	0.0372***	-0.0319***	0.0025	-0.0569***
pb	-0.0002	0.0001	0	0.0003
nrsize	-0.0102	0.0019	-0.0016	0.0119
beta	0.0017	-0.0023*	-0.0001	0.0011
cfo_ta	-0.0116	-0.7359***	-0.5330***	-0.5427***
l1caccr_ta	-0.016	0.0227**	-0.0083	0.0188
roa	-0.2451***	0.8020***	0.5423***	0.5911***
proa	-0.1272***	0.0804***	-0.0703*	0.1342 ***
vareps	0.0003	-0.0005	-0.001	0.0003
abs_roa	0.3949***	-0.3620***	-0.1309*	-0.3917***
abs_roa_gr	0.0052**	0.0021	0.0063	-0.0012
post_cg49	0.0051	0.0011	0.0056	0.0019
Industry dummies	included	included	included	included
Time dummies	included	included	included	included
Obs	5465	5465	2949	2516
Adj R-Sq	0.1284	0.5416	0.4457	0.4733
Pr > F	0	0	0	0

Table 7.1: Effect of Promoter Control on Discretionary Accruals - Group Affiliated Firms

This table examines the effect of promoter control on discretionary accruals using the sample of group affiliated firms. Four alternative measures of discretionary accruals are used: absolute, signed, only positive and only negative. Promoter control is measured as the percentage of ownership by promoters and affiliated parties. Statistical significance at the 1%, 5% and 10% level are denoted as ***, **, and * respectively. All variables are described in Table 4.

$$DA = \alpha + \phi_1 PROM\_CONTROL + \phi_2 PROM\_CONTROL^2 + \beta_1 FII\_SHR + \beta_2 BANKS\_FI\_SHR + \beta_3 LEVERAGE + \beta_4 PB + \beta_5 SIZE + \beta_6 BETA + \beta_7 CFO + \beta_8 L1CACCR + \beta_9 ROA + \beta_{10} PROA + \beta_{11} VAREPS + \beta_{12} ABS\_ROA + \beta_{13} ABS\_ROA\_GR + \beta_{14} POST\_CG49 + \sum_i \gamma_i INDUSTRY_i + \sum_t \delta_t YEAR_t + error$$

Variable	abs_DA_ Francis	res_DA_Francis	pos_DA_ Francis	neg_DA_Francis
intercept	0.1034***	-0.0041	0.0456***	-0.0444**
prom_control	-0.2033**	-0.0271	-0.1089	0.0258
prom_control^2	0.1909***	0.0175	0.0746	-0.0231
fii_shr	0.0212	-0.0306	-0.0222	-0.0014
banks_fi_shr	-0.0761***	0.0486**	-0.0253	0.0627**
leverage	0.0493**	-0.0273*	0.0184	-0.0582***
pb	-0.0001	0	0.0001	0.0001
nrsize	-0.0042	-0.0077	-0.0102	-0.004
beta	0.0023	0.003	0.0021	-0.0013
cfo_ta	0.0346	-0.8312***	-0.5588***	-0.6899***
l1caccr_ta	-0.0132	0.0138	-0.0171	0.0047
roa	-0.2832**	1.0042***	0.7607***	0.7887***
proa	-0.0960**	0.1088***	0.0071	0.1365***
vareps	0.0004	-0.0015*	-0.0014	-0.0011
abs_roa	0.4211***	-0.4316***	-0.2800*	-0.4383***
abs_roa_gr	0.0069	0.0089*	0.0135	0.0023
post_cg49	0.0125*	0.0105	0.0142**	0.0053
Industries dummies	included	included	included	included
Time dummies	included	included	included	included
Obs	2766	2766	1452	1314
Adj R-Sq	0.1496	0.6175	0.453	0.61
Pr > F	0	0	0	0

Table 7.2: Effect of Promoter Control on Discretionary Accruals - Standalone Firms

This table examines the effect of promoter control on discretionary accruals using the sample of standalone firms. Four alternative measures of discretionary accruals are used: absolute, signed, only positive and only negative. Promoter control is measured as the percentage of ownership by promoters and affiliated parties. Statistical significance at the 1%, 5% and 10% level are denoted as ***, **, and * respectively. All variables are described in Table 4.

Variable	abs_DA_ Francis	res_DA_Francis	pos_DA_ Francis	neg_DA_Francis
intercept	0.0690***	0.0055	0.0395***	-0.0572***
prom_control	-0.0772*	0.0129	-0.0009	0.0674
prom_control^2	0.0764*	0.0088	0.0144	-0.0469
fii_shr	-0.0184	0.0595	-0.0076	0.2104***
banks_fi_shr	-0.0968***	0.0466	-0.0354	0.1488***
leverage	0.0221*	-0.0334***	-0.0131	-0.0517***
pb	-0.0010**	0.0004	0.0002	0.0010***
nrsize	-0.0134	0.0099	0.0102	0.0251*
beta	0.0008	-0.0025	-0.0006	0.0073
cfo_ta	-0.0492	-0.6635***	-0.5189***	-0.4501***
l1caccr_ta	-0.02	0.0243	-0.0064	0.0252
roa	-0.2129***	0.6930***	0.4394***	0.4864***
proa	-0.1476**	0.053	-0.1243 **	0.118**
vareps	0.0012	0.0016	-0.0017	0.0021
abs_roa	0.3796***	-0.3438***	-0.0659	-0.3865***
abs_roa_gr	0.0036**	-0.0018	0.0014	-0.002
post_cg49	-0.0055	-0.0022	-0.0039	0.006
Industries dummies	included	included	included	included
Time dummies	included	included	included	included
Obs	2699	2699	1497	1202
Adj R-Sq	0.144	0.4876	0.5019	0.4056
Pr > F	0	0	0	0

Table 8: Group Effect by Promoter Control Thresholds

This table provides sensitivity analysis of group affiliation by splitting the sample observations by different thresholds of insider control. The sample is split using three different control thresholds namely, 20 percent, 26 percent, 51 percent. The 20 percent cut-off value captures effective control, the 26 percent cut-off value captures when blockholders have the right to block special resolutions under the Companies Act of 1956, and the 51 percent cut-off value captures majority control by insiders. Corresponding to each of these control thresholds, LOW is defined to be the set of firms with promoter ownership less than the threshold and HIGH to be the set of firms with equity ownership equal or above that threshold. The regression model below is estimated separately for the LOW and HIGH sub-samples using each of the three thresholds identified above. The table below presents the results of these six regressions. To save space, the parameter estimates of only the GROUP variable is tabluated. Statistical significance at the 1%, 5% and 10% level are denoted as ***, **, and * respectively. All variables are described in Table 4.

$$DA = \alpha + \phi_1 GROUP + \beta_1 FII\_SHR + \beta_2 BANKS\_FI\_SHR + \beta_3 LEVERAGE + \beta_4 PB + \beta_5 SIZE + \beta_6 BETA + \beta_7 CFO + \beta_8 L1CACCR + \beta_9 ROA + \beta_{10} PROA + \beta_{11} VAREPS + \beta_{12} ABS\_ROA + \beta_{13} ABS\_ROA\_GR + \sum_i \gamma_i INDUSTRY_i + \sum_t \delta_t YEAR_t + error$$

DA measure	Promoter control thresholds					
	Low (<20%)	High (>=20%)	Low (<26%)	High (>=26%)	Low (<51%)	High (>=51%)
abs_DA_Francis	0.0064	0.0059**	0.0103	0.0058*	0.0083*	0.0109***
res_Francis_TA	-0.018	0.0001	-0.0009	0.0009	0.0048	-0.0032
pos_DA_Francis	-0.0119	0.0016	0.0046	0.0017	0.0075	-0.0004
neg_DA_Francis	-0.0022	-0.0028	0.0015	-0.0001	0.0001	-0.0072

Table 9.1: Summary Statistics: Opacity Analysis

This table provides the mean values of the different variables using data for which the two opacity measures, opaque_1 and opaque_2, can be computed i.e. years 2003-05. The mean values are presented for three alternative cuts of the data (i) the entire sample (ii) the standalone firms (iii) group-affiliated firms. Standalone firms are those that are not affiliated with any business group in India.

	All Firms		By Ownership group		
Variable	N	Mean	Standalones	Group Affiliated	t-diff
abs_DA_Francis	2743	0.8111	0.0808	0.0815	0.19
prom_control	2909	0.4998	0.4922	0.5079	2.39
fii_shr	2909	0.0151	0.0056	0.0252	11.8
banks_fi_shr	2909	0.0358	0.0167	0.0562	17.69
opaque_1	2909	0.2585	0.2975	0.2172	-7.39
opaque_2	2909	0.1860	0.1968	0.1748	-3.00
nrsize	2909	0.4644	-0.0827	0.1828	31.07
leverage	2909	0.3238	0.2864	0.3634	8.66
vareps	2909	0.4116	0.2005	0.6346	8.70
pb	2909	0.8006	0.6969	0.9101	0.57
beta	2909	1.0359	1.0069	1.0665	4.50
cfo_ta	2821	0.0583	0.0514	0.0653	2.86
l1caccr_ta	2870	-0.0030	0.0048	-0.0112	-3.67
roa	2909	0.1258	0.1196	0.1324	2.85
proa	2909	0.0227	0.0225	0.0231	0.20
abs_roa	2909	0.1403	0.1390	0.1418	0.73
abs_roa_gr	2909	0.6819	0.7567	0.6031	-3.74
post_cg49	2909	0.8731	0.7992	0.9512	12.84

Table 9.2: Effect of Ownership Opacity on Absolute Discretionary Accruals - All Firms

This table examines the effect of ownership opacity on discretionary accruals using all the firms in the sample. The absolute value of discretionary accruals is used for estimating the regression parameters. Promoter control is measured as the percentage of ownership by promoters and affiliated parties. Statistical significance at the 1%, 5% and 10% level are denoted as ***, **, and * respectively. All variables are described in Table 4.

$$DA = \alpha + \phi_1 OPAQUE\_i + \phi_2 GROUP + \beta_1 FII\_SHR + \beta_2 BANKS\_FI\_SHR + \beta_3 LEVERAGE + \beta_4 PB + \beta_5 SIZE + \beta_6 BETA + \beta_7 CFO + \beta_8 L1CACCR + \beta_9 ROA + \beta_{10} PROA + \beta_{11} VAREPS + \beta_{12} ABS\_ROA + \beta_{13} ABS\_ROA\_GR + \sum_i \gamma_i INDUSTRY_i + \sum_t \delta_t YEAR_t + error$$

Variable	abs_DA_Francis			
	Model 1	Model 2	Model 3	Model 4
intercept	0.0574***	0.0750***	0.0905***	0.0786***
opaque_1	0.0094		0.0057	
opaque_2		0.0074		0.0066
prom_control			-0.1714***	-0.0804*
prom_control^2			0.1561**	0.0716
fii_shr	0.0135	0.0677*	0.0218	0.0678*
banks_fi_shr	-0.0357	-0.0241	-0.0568*	-0.0449
leverage	0.0400**	0.0146	0.0292**	0.0042
pb	-0.0003	-0.0001	-0.0002	-0.0001
nrsize	-0.002	-0.0102	-0.0057	-0.0150*
beta	-0.004	0.0003	-0.0045	0.0009
cfo_ta	-0.0689	-0.0557	-0.0772***	-0.0650***
l1caccr_ta	-0.0403**	-0.0474**	-0.0339**	-0.0413**
roa	-0.163**	-0.1808***	-0.1496***	-0.1780***
proa	-0.0747	-0.1206**	-0.0647**	-0.1029**
vareps	-0.001	-0.0007	-0.0004	-0.0003
abs_roa	0.3355***	0.3050***	0.3203***	0.3020***
abs_roa_gr	0.0079	0.0028	0.0084***	0.0028*
Post_cg49	0.0042	0.0008	0.0036	0.0043
Industry dummies	included	included	included	included
Time dummies	included	included	included	included
Obs	2736	2386	2736	2386
Adj R-Sq	0.1323	0.1409	0.0951	0.0754
Pr > F	0	0	0	0

Table 9.3: Effect of Ownership Opacity on Absolute Discretionary Accruals: Group Affiliated and Standalone Firms

This table examines the effect of ownership opacity on discretionary accruals. The effect is separately estimated using the sample of group affiliated firms and the sample of standalone firms. The absolute value of discretionary accruals is used for estimating the regression parameters. Promoter control is measured as the percentage of ownership by promoters and affiliated parties. Statistical significance at the 1%, 5% and 10% level are denoted as ***, **, and * respectively. All variables are described in Table 4.

$$DA = \alpha + \phi_1 OPAQUE\_i + \phi_2 GROUP + \beta_1 FII\_SHR + \beta_2 BANKS\_FI\_SHR + \beta_3 LEVERAGE + \beta_4 PB + \beta_5 SIZE + \beta_6 BETA + \beta_7 CFO + \beta_8 L1CACCR + \beta_9 ROA + \beta_{10} PROA + \beta_{11} VAREPS + \beta_{12} ABS\_ROA + \beta_{13} ABS\_ROA\_GR + \sum_i \gamma_i INDUSTRY_i + \sum_t \delta_t YEAR_t + error$$

Variable	**abs_DA_Francis**		**abs_DA_Francis**	
	Group affiliated	Standalones	Group affiliated	Standalones
Intercept	0.1059	0.0783	0.1196	0.0551
opaque_1	0.0164**	-0.0011		
opaque_2			0.0111**	0.0034
prom_control	-0.2286**	-0.0988	-0.1903**	-0.0179
prom_control^2	0.1961**	0.0965	0.1634**	0.0211
fii_shr	-0.0002	0.0431	0.0516	0.0631
banks_fi_shr	-0.0663*	-0.0769	-0.0528	-0.0620
leverage	0.0278**	0.0243	-0.0076	0.0148
pb	-0.0002	-0.0014	0.0004	-0.0014**
nrsize	-0.0155	-0.0058	-0.0182	-0.0195
beta	-0.0057	-0.0048	0.0019	0.0005
cfo_ta	-0.1166***	-0.0548	-0.0535	-0.0742**
l1caccr_ta	-0.0752**	0.0049	-0.0697	-0.0126
roa	0.0061	-0.2360	-0.1386	-0.2113***
proa	-0.0557	-0.0599	-0.0793	-0.1179**
vareps	-0.0004	-0.0019	0.0001	-0.0027
abs_roa	0.2121***	0.3786	0.2183	0.3737***
abs_roa_gr	0.0143***	0.0040	0.0023	0.0036
Post_cg49	0.0037	0.0027	0.0027	0.0032
Industry dummies	included	included	included	included
Time dummies	included	included	included	included
Obs	1376	1360	1176	1210
Adj R-Sq	0.1096	0.0971	0.0529	0.0923
Pr > F	0	0	0	0

Table 10.1: Effect of Non-Disclosure (OPAQUE_1) on Absolute Discretionary Accruals - Group Affiliated Firms

This table examines the sensitivity of the effect of incomplete ownership information (opaque_1) on discretionary accruals due to variation in insider control for the group affiliated firms. The results below are estimated by splitting the sample into two groups, based on the level of insider control. Three different insider ownership thresholds are considered: 20 percent, 26 percent, 51 percent. The 20 percent cut-off value captures effective control, the 26 percent cut-off value captures when blockholders have the right to block special resolutions under the Companies Act of 1956, and the 51 percent cut-off value captures majority control by insiders. Corresponding to each of these control thresholds, LOW is defined to be the set of firms with promoter ownership less than the threshold and HIGH to be the set of firms with equity ownership equal to or above that threshold. The regression model below is estimated separately for the LOW and HIGH sub-samples using each of the three thresholds identified above. Statistical significance at the 1%, 5% and 10% level are denoted as ***, **, and * respectively. All variables are described in Table 4.

$$DA = \alpha + \phi_1 OPAQUE\_1 + \beta_1 FII\_SHR + \beta_2 BANKS\_FI\_SHR + \beta_3 LEVERAGE + \beta_4 PB + \beta_5 SIZE + \beta_6 BETA + \beta_7 CFO + \beta_8 L1CACCR + \beta_9 ROA + \beta_{10} PROA + \beta_{11} VAREPS + \beta_{12} ABS\_ROA + \beta_{13} ABS\_ROA\_GR + \sum_i \gamma_i INDUSTRY_i + \sum_t \delta_t YEAR_t + error$$

	Promoter Control Thresholds					
	Low (<20%)	High (>=20%)	Low (<26%)	High (>=26%)	Low (<51%)	High (>=51%)
intercept	0.1985	0.0804***	-0.1125	0.0797***	0.2972	0.0771***
opaque_1	-0.1467	0.0123	0.0270	0.0110	0.0363**	-0.0035
fii_shr	0.3279	0.0408	-0.2098	0.0481	0.0011	0.0035
banks_fi_shr	-0.6938	-0.0601**	-0.2864*	-0.0443	-0.0531	0.0537*
leverage	0.3058	-0.0007	0.1525**	-0.0015	0.0571**	-0.1078
pb	-0.3031***	-0.0001	0.0181	-0.0001	-0.0001	-0.0189**
nrsize	0.2695	-0.0148	-0.0180	-0.0119	-0.0109	-0.0006**
beta	-0.1311	-0.0050	-0.0335	-0.0027	-0.0099	-0.0349
cfo_ta	0.1467	-0.0615**	-0.1289	-0.0697***	-0.1713***	0.0028
l1caccr_ta	-0.1493	-0.0788***	0.0769	-0.0765***	-0.0639***	-0.0256***
roa	0.5675	-0.1149**	0.4539**	-0.1246***	0.0819	-0.0819**
proa	0.7294	-0.0802**	-0.3420	-0.0567	-0.0725	-0.1832
vareps	-0.1568	0.0005	0.0114	0.0003	-0.0011	-0.0463
abs_roa	0.7466	0.1874	0.6073**	0.1925***	0.3056***	0.0017
abs_roa_gr	0.0633***	0.0029***	0.0638***	0.0032	0.0812***	0.2165**
post_cg49	-0.0199	-0.0013	0.0434	-0.0032	-0.0112	0.0046
Obs	36	1340	101	1275	691	685
Adj R-Sq	0.7813	0.0524	0.5960	0.0480	0.1779	0.0376
Pr > F	0	0	0	0	0	0

Table 10.2: Effect of Fragmentation (OPAQUE_2) on Absolute Discretionary Accruals - Group Affiliated Firms

This table examines the sensitivity of the effect of fragmented ownership information (opaque_2) on discretionary accruals due to variation in insider control for the group affiliated firms. The results below are estimated by splitting the sample into two groups, based on the level of insider control. Three different insider ownership thresholds are considered: 20 percent, 26 percent, 51 percent. The 20 percent cut-off value captures effective control, the 26 percent cut-off value captures when blockholders have the right to block special resolutions under the Companies Act of 1956, and the 51 percent cut-off value captures majority control by insiders. Corresponding to each of these control thresholds, LOW is defined to be the set of firms with promoter ownership less than the threshold and HIGH to be the set of firms with equity ownership equal or above that threshold. The regression model below is estimated separately for the LOW and HIGH sub-samples using each of the three thresholds identified above. Statistical significance at the 1%, 5% and 10% level are denoted as ***, **, and * respectively. All variables are described in Table 4. Note: There were too few observations to estimate the "LOW" regression for the 20 % threshold.

$$DA = \alpha + \phi_1 OPAQUE\_2 + \beta_1 FII\_SHR + \beta_2 BANKS\_FI\_SHR + \beta_3 LEVERAGE + \beta_4 PB + \beta_5 SIZE + \beta_6 BETA + \beta_7 CFO + \beta_8 L1CACCR + \beta_9 ROA + \beta_{10} PROA + \beta_{11} VAREPS + \beta_{12} ABS\_ROA + \beta_{13} ABS\_ROA\_GR + \sum_i \gamma_i INDUSTRY_i + \sum_t \delta_t YEAR_t + error$$

	Promoter Control Thresholds				
	High# (>=20%)	Low (<26%)	High (>=26%)	Low (<51%)	High (>=51%)
intercept	0.0681	0.1139	0.0659***	0.0868**	0.0524**
opaque_2	0.0099	0.0304	0.0109	0.0003	0.0490**
fii_shr	0.0707	-0.0977	0.0744*	0.0931*	0.0274
banks_fi_shr	-0.0372	-0.2393	-0.0258	-0.0564	-0.0614
leverage	-0.0021	-0.0147	-0.0049	0.0138	-0.0249
pb	0.0005	0.0223	0.0004	0.0001	0.0015
nrsize	-0.0157	0.0256	-0.0147	-0.0104	-0.0231
beta	0.0033	-0.1018	0.0063	-0.0094	0.0110
cfo_ta	-0.0160	-0.4209**	-0.0177	-0.0721**	-0.0429
l1caccr_ta	-0.0876	0.2436	-0.0830***	-0.0383	-0.0949**
roa	-0.1471	-0.0822	-0.1606***	-0.1461**	-0.1663*
proa	-0.0463	-0.6833**	-0.0123	-0.1698***	0.0343
vareps	0.0002	0.0137	0.0001	0.0001	0.0008
abs_roa	0.1885	0.5813**	0.1974**	0.2275**	0.2055**
abs_roa_gr	0.0029	-0.0004	0.0033	-0.0016	0.0093**
post_cg49	-0.0009	0.0644	-0.0021	-0.0040	0.0050
Obs	1160	65	1111	600	576
Adj R-Sq	0.0386	0.3288	0.0323	0.0554	0.0546
Pr > F	0	0	0	0	0