Corporate Governance and Financing Policy: New Evidence

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Abstract

Prior research has often taken the view that entrenched managers tend to avoid debt. Contrary to this view, I find that firms with weak shareholder rights, as measured by the Gompers et al. (2003) governance index, actually use more debt finance and have higher leverage ratios. I provide an explanation by showing that entrenched managers choose conservative investment policies and thus trade-off expected bankruptcy costs with tax shields of debt at higher leverage levels. Consistent with this, I find evidence that firms with weak shareholder rights have lower bond yields when issuing debt, enjoy higher credit ratings, and have a higher propensity to engage in conglomerate mergers. To address the potential endogeneity of the governance index, I use the exogenous shock to corporate governance generated by the adoption of state anti-takeover laws and find that managers increase leverage when they are less vulnerable to takeovers.

I. Introduction

The question of how agency costs impact financing policy has attracted attention at least since Jensen and Meckling (1976). A prevalent view in the existing literature is that managers prefer less leverage than is optimal, for instance to reduce their human capital risk. Berger, Ofek, and Yermack (1997) show that entrenched managers are more likely to use equity using a sample of 423 industrial firms between 1984 and 1991. They find lower leverage in firms run by CEOs with long tenure, low sensitivity to performance, a large board, a low fraction of outside directors in the board, and no major stockholder.[1] Based on their evidence they argue that entrenched managers use less leverage.[2]

In this paper, I revisit these facts in a broad sample, motivated by the observation that a complete analysis of the impact of governance mechanisms on financing decisions requires an analysis of how governance mechanisms affect both shareholders and debtholders. While the quality of corporate governance is often defined in terms of its value to shareholders, a governance regime might be harmful to debtholders by encouraging value-enhancing risk-taking that leaves debtholders with downside risk. With this intuition in mind, this paper studies how improved governance mechanisms affect firm financing.

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[1] Berger et al. (1997) recognize the presence of endogeneity in their measures of entrenchment. In particular, they interpret low pay-for-performance sensitivity as indication that the manager is entrenched. Hallman, Hartzell, and Pearce (2004) re-examine this interpretation, arguing that there is a substitution effect between incentives (i.e. pay-for-performance) and monitoring (threat of dismissal) such that managers subject to a lower threat of dismissal have a higher pay-for-performance sensitivity.

[2] In a related vein, Garvey and Hanka (1999) test whether managers reduce leverage when they are shielded from takeovers. See also Friend and Lang (1988), who find that the debt ratio is negatively related to managerial ownership. Kayhan (2003) extends the tests of Berger et al. for 1990-2002 to a larger sample and concludes that "the amount of net debt issues, however, does not appear to be influenced by entrenchment," but rather that entrenched managers achieve lower leverage through retaining more profits and issuing equity more opportunistically. However, other studies support the view of Jensen (1986) that debt is a time-consistent optimal mechanism to discipline self-serving managers. For example, Harvey, Lins, and Roper (2004) find that actively monitored debt (syndicate loans) benefits firms "with high expected managerial agency costs" and with "overinvestment problems resulting from high levels of assets in place or limited future growth opportunities." They show that equity holders "value compliance with monitored covenants, particularly when firms are prone to overinvest."

To proxy for managerial entrenchment in a broad sample, I use the index recently developed by Gompers, Ishii, Metrick (2003), which is based on a count of charter provisions that reduce minority shareholder rights.[3] Among the mechanisms included in this index are state law provisions that delay and/or make takeover attempts costly, anti-takeover provisions in the corporate charter, provisions that insulate management compensation and perk consumption from disgruntled shareholders, and provisions that lower shareholder voting power. The less protected the management of a firm is, the lower the governance (entrenchment) score it is assigned. I refer to the Gompers et al. index as an "entrenchment index" since higher values indicate higher levels of entrenchment.[4]

The main empirical result of the paper is that firms with strong shareholder rights rely more on equity to meet their financing needs; firms with weak shareholder rights rely more on debt. Perhaps reflecting the cumulative outcome of the effect of governance mechanisms on incremental financing decisions, I also find that firms with strong shareholder rights have lower leverage ratios. Thus, my results run counter to the existing evidence that "bad governance" is associated with less leverage.

This finding is highly robust. To address the potential endogeneity of the governance index, I also use the exogenous shock to corporate governance generated by the adoption of the "second-generation" state anti-takeover laws. I find that after the enactment of these laws, largely believed to increase managerial entrenchment, managers of firms incorporated in states passing such bills use more debt finance and have higher leverage ratios.

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[3] In this article "managerial entrenchment," "weak governance," and "weak shareholder rights" are used interchangeably.

[4] Appendix Table 1 provides a concise list of the main components of the Investor Research Responsibility Center sub-indices and the Gompers et al. index itself. The latter has 24 provisions. These include 22 firm-level provisions and six state laws (four of the laws are equivalent to four of the firm-level provisions). To conserve space, Appendix Table 1 reports solely the six state laws (it does not report the four firm-level provisions which are analogous to the corresponding four laws). Bebchuk, Cohen, and Ferrell (2004) attempt to refine the Gompers et al. (2003) index; I consider their version in robustness checks.

After documenting the robustness of these results, I provide a theoretical explanation for the negative relation between firm governance and leverage. My explanation is based on the endogenous choice of the risk of the investment policy made by the managers as a function of the strength of the corporate governance in place. The intuition is as follows. Well-monitored (or well-governed) managers are more likely to undertake risky (and value enhancing) projects because it is easier to distinguish between "bad" managerial luck and "bad" managerial judgment in a monitored environment. That is, well-functioning corporate monitoring mechanisms reduce the managers' human capital risk and provide them with incentives to take value enhancing risks. On the other hand entrenched managers or firms with weak corporate governance choose sub-optimally conservative investment policies. Based on the risk of their investment policy, firms would choose their optimal capital structures trading-off expected bankruptcy costs with debt-related benefits such as tax shields. Firms with riskier investment policies would have lower levels of debt compared to firms with safer investment policies. In equilibrium better governed firms would choose lower debt levels compared to badly governed firms.[5]

As additional support for this explanation, I offer several pieces of evidence. I find that weak governance firms have higher long-term credit ratings and face lower offer yields and bond ratings in non-convertible public debt issues. Firms with strong shareholder rights are either less likely to have such a credit rating assigned or have a lower credit rating when they are rated. These facts reflect the perceptions of credit rating agencies and bond market participants of firm riskiness. These results are consistent with the recent findings by Klock, Mansi, and Maxwell

[5] Hirshleifer and Thakor (1992) examine managerial conservatism and leverage. In their model with differential managerial ability, the incentives for reputation building make managers sub-optimally conservative. Risk-shifting incentives of leverage provide an offset which might move managerial risk-taking incentives closer to the optimal investment risk choice. Taking this offset into account shareholders choose leverage optimally to induce investment policy close to the optimum.

(2004) and Chava, Dierker, and Livdan (2004).[6] I also find that firms with weak governance tend to engage in more diversifying mergers and acquisitions while firms with strong governance tend to engage in focusing transactions. This is consistent with evidence from the 1970s in Amihud and Lev (1981), which suggests that undiversified managers engage in risk-reducing activities, such as conglomerate mergers, to reduce their human-capital risk. It is also consistent with Bertand and Mullainathan (2003), who show that entrenched managers "enjoy the quiet life" by engaging in risk-reducing projects upon the adoption of the anti-takeover state law provisions.

In summary, I find that the large-sample, cross-sectional relationship between managerial entrenchment and leverage is positive, not negative, and I offer some preliminary evidence that managerial risk-taking and the related stockholder-bondholder conflicts may play an important role in understanding this relationship.[7] The remainder of this paper is organized as follows. Section two presents the data and the empirical methodology. Section three presents the primary results. Section four presents a detailed discussion and further evidence. Section five concludes.

II. Methodology and Data

In this section I describe the data and the basic empirical approach.

A. Corporate Governance

Since corporate governance is a central explanatory variable in this study, I start with its description. I use the entrenchment index introduced by Gompers et al. (2003). Their study focused on data from surveys conducted by the Investor Responsibility Research Center (IRRC)

[6] Klock et al. (2004) argue that anti-takeover provisions are viewed beneficially by bondholders, and Cremers et al. (2004) examine the joint effect of anti-takeover provisions and strong shareholder control on returns to bondholders. Cremers et al. find that strong shareholder rights are associated with lower bond yields when the firm is protected from takeovers, and with higher bond yields if the firm is not protected from takeovers. Chava et al. (2004) show that firms with strong shareholder rights pay higher rates on bank loans.

[7] Mauer and Sarkar (2004) analyze in a contingent claims framework the impact of bondholder-stockholder conflict on capital structure. They arrive at similar predictions for the cost of debt and leverage. However, in their framework the conflict between the bondholders and stockholders arises because the latter have incentives to overinvest.

in 1990, 1993, 1995, and 1998. Using these surveys, Gompers et al. define a governance index (the G-index) to characterize the strength of shareholder rights across firms. This index is based on the count of 24 anti-takeover provisions across five broad anti-takeover provision categories – delaying a hostile takeover bid, officer protection, voting rights, state laws, and other defenses. They compute their index by simply adding one for each present defensive provision present in the corporate charter. This count is now available for cross-sections from 1990, 1993, 1995, 1998, 2000, and 2002. For the years between surveys and for the years after 2002, I assume that the index score is the same as in the previous (survey) year. It appears that the Gompers et al. index is the best available broad-sample index of managerial entrenchment.[8]

B. Compustat and CRSP Data

I study a large unbalanced panel of firms that are covered by the IRRC data and also have data available from the CRSP/Compustat merged industrial annual database (CCM) for 1990-2003. The IRRC sample consists of 3,014 firms included in an unbalanced panel over the survey years 1990-2003 (for a total of 21,310 firm-year observations). The following filters are imposed. Financing firms (SIC codes 6000-6999), regulated utilities (SIC codes 4900-4999), and firm-years when the firm is involved in major mergers and acquisitions (Compustat footnote codes AB) are excluded.[9] Also excluded are firm-year observations that report cash flow data using format codes (Compustat item #318) 4, 5, and 6 (4 and 6 are undefined by Compustat; 5 is the Canadian file) or those in which the code is missing. To link Compustat to CRSP, I use only records with link types of 'LC', 'LN', 'LO', 'LS', 'LU' or 'LX'. I further remove missing observations, outliers and mis-recorded data for certain variables. The outliers are removed by

[8] My results do not depend on the assumption that the value of the entrenchment index in-between survey years is unchanged. In unreported results based solely on data from the survey years, I obtain largely similar results.
[9] Empirical tests on a sample that does not exclude these firm-years give very similar results to those presented here.

winsorizing the extreme observations in the 1% left or right tail of the distribution.[10] All variables are translated in constant 1995 dollars using the GDP deflator.

Even though my dataset is by far the most comprehensive among the studies of capital structure and managerial entrenchment, it is still subject to an important bias that stems from missing observations on firms taken private through leveraged buyouts (LBO). Since these firms presumably have both high leverage and close alignment of management with shareholders, one is left to wonder whether including these in my dataset would weaken my primary results. I argue that it would not. Even though these firms might appear to be shareholder-friendly, their managers may still undertake sub-optimally conservative (from the viewpoint of shareholders) investment policies, because of their concentrated ownership stakes. Thus, it would be optimal for these firms to rely more on debt finance because they are more conservative in their investment choices. In addition, the total assets of LBO firms represent on average less than 1% of the total assets of the firms in my data sample[11] and thus are unlikely to have economically significant impact on my results.

Summary statistics for the final sample are presented in Table 2. I split the sample firm-year observations by quintiles of the entrenchment index. I also present simple statistics for the top and bottom deciles of the entrenchment index (correspondingly the "democracy" and "dictatorship" firms in Gompers et al. (2003)).

The summary statistics immediately reveal a number of interesting patterns. First, book leverage, market leverage, the second measure of net change in leverage (defined below) all increase monotonically across the entrenchment quintiles. Second, firms with more entrenched

[10] Before any variables are trimmed, I follow Frank and Goyal (2003) in recording as zero values for certain variables whenever they are missing or combined with other data items in order to preserve the accounting identities; see the footnote to Table 1 for a detailed list of variables truncated in this manner.

[11] This average is computed as the 1991-2003 average annual ratio of the annual sum of total assets of leveraged buyouts (from SDC *Mergers and Acquisitions* database) to the annual sum of total assets of all firms in my dataset.

managements tend to be older: the difference between the average quintile age of the top and bottom entrenchment quintile portfolios is 15 years. Third, size increases monotonically across the quintiles. The difference between the average size of the firms in the top and bottom quintiles is $822 million. Fourth, the market-to-book ratio decreases non-monotonically across entrenchment quintiles. Fifth, there appears to be no systematic pattern of the total *level* of external financing across entrenchment quintiles. A similar conclusion applies for the internal cash flow and profitability of the firms. Finally, there is a non-monotonic increase in net debt issues and non-monotonic decrease in net equity issues across entrenchment quintiles.

C. Equity and debt issuance

I study the choice of claims issued from several aspects. The first and most important is based on the following accounting identity:

$$DEF_{i,t} \equiv \Delta W_{i,t} + DIV_{i,t} + INV_{i,t} - CFLOW_{i,t} = \Delta E_{i,t} + \Delta D_{i,t}, \quad (1)$$

where the components in this identity are (*i* indexes firm, and *t* indexes fiscal year):

$DEF_{i,t}$ = Financial deficit as defined in (1).

$\Delta W_{i,t}$ = Change in working capital, computed as the change in operating working capital plus the change in cash and cash equivalents plus the change in current debt.

$DIV_{i,t}$ = Cash dividends.

$INV_{i,t}$ = Net investments, computed as the sum of capital expenditures, increase in investments, acquisitions, other use of funds net of the sale of product, plant and equipment (PPE) and net of the sale of investment.

$CFLOW_{i,t}$ = Cash flow after interest and taxes, computed as income before extraordinary items, plus depreciation and amortization, plus extraordinary items and discontinued operations, plus deferred taxes, plus equity in net loss, minus earnings, plus other funds from operations, and plus gain (loss) from sales of PPE and other investments.

$\Delta E_{i,t}$ = Net equity issued, equal to sales of common stock minus stock repurchases.

$\Delta D_{i,t}$ = Net debt issued, equal to long-term debt issuance minus long-term debt reduction.

Please refer to Table 1 for a detailed definition of each of these variables.

To study financing policy, I follow the approach of Shyam-Sunder and Myers (1999) and Frank and Goyal (2003). In particular, I consider the following regression setup:

$$\Delta D_{i,t} = a + bDEF_{i,t} + \varepsilon_{i,t}, \quad (2)$$

where $\Delta D_{i,t}$ is the net amount of debt issued and the financing deficit, $DEF_{i,t}$, is as defined above. I run three versions of (2) to ascertain robustness. First, I use the Fama and MacBeth (1973) approach to robust parameter estimation. Second, I apply random year and firm effects with robust standard errors (the Huber/White heteroscedasticity consistent estimator) and an AR(1) autocorrelation in residuals correction. Third, I apply fixed firm and year effects.

III. Empirical Results

A. Financing

The results of regression (2) are presented in Table 3. The panels of the table illustrate the three regression approaches. Starting with the Fama-MacBeth regressions in Panel A, note the nearly monotonic increase in the coefficient on $DEF_{i,t}$ across quintiles. Note also that the explanatory power increases monotonically (as judged by the increase in average R^2) across entrenchment quintiles. Overall, the results suggest that firms with entrenched management are relying more on debt financing. This result, along with the observation of no difference of internal cash flow across entrenchment quintiles, suggests that managerial motives rather than financial constraints may drive these results. Finally, notice that the pecking order theory "works better" for the entrenched firms, as the majority of their financing is conducted via debt issues.

In Table 4, I interact the entrenchment index G with the financing deficit:

$$F_{i,t} = \sum_i a_i + \sum_t b_t + cDEF_{i,t} + dG_{i,t-1} + eDEF_{i,t} \times G_{i,t-1} + fX_{i,t} + \varepsilon_{i,t}, \quad (3)$$

where $F_{i,t}$ alternately denotes net equity issues ($\Delta E_{i,t}$), net debt issues ($\Delta D_{i,t}$), and the change in long term debt ($\Delta LD_{i,t}$), each scaled by total assets. The vector $X_{i,t}$ contains a set of control variables based on Rajan and Zingales (1995), in particular changes in Tangibility(t), changes in Size(t), changes in Profitability(t), and changes in Market-to-book(t). I also include firm age(t).[12] I report results for specifications that include firm and year fixed effects.[13]

Our primary interest here is in the coefficient e. The odd-numbered models in Table 4 estimate (3) without controls while the even-numbered models include the controls. Net equity issuance is negatively associated with both the interaction term and with the entrenchment index. Controlling for various known capital structure influences, Table 4 shows that entrenched firms still issue less equity, and more net or long-term debt, to finance incremental capital needs. These results show that the pattern uncovered in Table 3 is robust to various control variables.

B. Levels of leverage and changes in leverage

Having documented a strong link between entrenchment and financing policy with flow of funds data, I next examine balance-sheet measures of leverage and changes in leverage. Book leverage is defined as book debt to total assets. Market leverage is defined as book debt divided by market value of assets (equal to total assets minus book equity plus market equity; market equity is shares outstanding (#25) times price (#199)). The left panels of Table 5 present leverage sorted by size and the entrenchment index. A positive association between entrenchment and leverage is apparent within every size quintile. Similar tabulations by firm age and profitability

[12] The regression is in differences since the dependent variable is also a flow.
[13] Robustness checks with fixed year and industry effects produce similar results.

again suggest a robust positive relationship between leverage and entrenchment. Although the relation between leverage and entrenchment index is non-monotonic, t-tests reject the equality of the mean of the top and bottom entrenchment quintile in every size, firm age, and profitability group. Double sorts by market-to-book and governance lead to similar results.

In Table 6, I study the relationship between entrenchment and changes in leverage. I use two proxies for the net change in leverage. The first follows Berger et al. (1997) and is net debt issuance minus net equity issuance scaled by total assets:

$$\Delta L_{1,i,t} = \frac{\Delta D_{i,t} - \Delta E_{i,t}}{A_{i,t}}. \tag{4}$$

A second proxy for the change in leverage follows Garvey and Hanka (1999):

$$\Delta L_{2,i,t} = \frac{D_{i,t-1} + \Delta D_{i,t}}{A_{i,t-1} + \Delta D_{i,t} + \Delta E_{i,t}} - \frac{D_{i,t-1}}{A_{i,t-1}} \tag{5}$$

where $D_{i,t-1}$ is lagged book debt and $A_{i,t-1}$ is lagged total assets.

Table 6 presents results for levels of leverage and these measures of changes in leverage in the following specification:

$$\begin{aligned} L_{i,t} = &\sum_i a_i + \sum_t b_t + c_0 G_{i,t-1} + c_1 \left(\frac{M}{B}\right)_{i,t-1} + c_2 \left(\frac{PPE}{A}\right)_{i,t-1} \\ &+ c_3 \left(\frac{EBITDA}{A}\right)_{i,t-1} + c_4 \log\left(A_{i,t-1}\right) + c_5 \left(\frac{D}{A}\right)_{i,t-1} + \varepsilon_{i,t} \end{aligned} \tag{6}$$

The regressions are performed using population-averaged random year and firm effects. I correct for AR(1) residual autocorrelation and apply the Huber/White heteroscedasticity-robust standard error estimator.

The results again point to the conclusion that firms with weak shareholder rights use more debt finance. Panels A and B use different sets of control variables but obtain very similar coefficients on the entrenchment variable, suggesting the robustness of the relation between

leverage and the Gompers et al. index. In Panel A, a one-standard-deviation increase in the entrenchment index (roughly, the addition of about three new provisions in the corporate charter) is associated with a 3.16 % above-the-mean increase in book leverage, a 2.25% above-the-mean increase in market leverage, 24% above-the-mean increase in $\Delta L_{1,i,t}$ and a 20% above-the-mean increase in $\Delta L_{2,i,t}$.

C. Control variables

Tables 4 and 6 include a variety of control variables previously argued to be determinants of the capital structure. Detailed variable definitions are given in Table 1. Here I briefly discuss the signs and significance of these estimates. Consider models (3) and (4) of Table 4. These coefficients are as expected: net debt issuance increases when tangibility increases, when profitability decreases, when market-to-book decreases, and when size increases. These relations apply also for long-term debt issuance except for the fact that long-term debt issuance is increasing when total assets are decreasing. Consider now models (1) and (2) in Table 6. In general, the coefficients on the control variables are similar to those in earlier research, including Rajan and Zingales (1995), Berger et al. (1997), Fama and French (2002), and Baker and Wurgler (2002).

D. Robustness

One feature of the Gompers et al. (2003) index is that the individual components of the index (takeover delay provisions, state-law anti-takeover provisions, voting rights provisions, management protection provisions – see Appendix Table 1 for brief description) are all equally weighted within the overall count. However, each sub-index might have a somewhat different effect on financing policy. Thus one direction in which to examine robustness is to consider the individual sub-components of the index. In Appendix Tables 2 and 3, I find that the results are

robust to three of the four sub-indices: the state-law anti-takeover provisions index; the officer protection index; and the index of charter provisions geared at delaying takeover attempts. The positive relationship between entrenchment and the use of debt, however, does not appear if one uses an index of entrenchment based purely on the voting rights of shareholders. I also examine the effect of redefining entrenchment using the sub-index of Bebchuk, Cohen, and Ferrell (2004).[14] The results are similar to those that obtain with the index of Gompers et al., but are generally less significant.

I also examine the robustness of the main results to alternative proxies for shareholder rights. Within a subsample of dual-class firms, I find results similar to those in the full sample (unreported). This is interesting since the presence of dual-class stocks is synonymous with the presence of high benefits of private control. Tables reporting the above tests are available upon request.

Finally, results appear robust to various sample selection filters. For example, they are robust to the exclusion of the firm-year observations of the first record for a firm in Compustat.

E. Causality

Causality is obviously a major concern in the study of leverage and corporate governance; leverage itself may be an efficient mechanism for governance (Jensen (1986)) and as such it may impact the choice of other governance mechanisms. Furthermore, it could be that the relationship I observe between leverage and governance mechanisms is due more to a spurious correlation induced by the impact of the 1980s takeover pressure on both, rather than any causal link. While there are limits to what one can say on this score, I study the regressions (1) and (2) in Table 6 in differences in an effort to address this concern. Since survey data for the

[14] Their index is based on the following six provisions: staggered boards, limits to shareholder bylaw amendments, supermajority requirements for mergers, supermajority requirements for charter amendments, poison pills and golden parachutes.

entrenchment index is available only for 1990, 1993, 1995, 1998, 2000, and 2002 I study the regression in cumulative changes across these years. The results of this battery of tests generally conform to those presented earlier, but statistical significance tends to be low.

To address causality questions described in this subsection, I am able to identify and study an event that represents an exogenous shock to the managerial status.[15] For that purpose I use the variation in corporate governance generated by the adoption of the "second generation" state anti-takeover laws and examine changes in managerial preferences for debt financing upon the introduction of these laws. The first piece of anti-takeover legislation was the Williams Act of 1968, a federal statute that provided measures to protect target shareholders during the tender offer process, including stringent disclosure requirements. In the 1970s, individual states extended the provisions of the Williams Act in what is known as the "first-generation" anti-takeover laws. However, the Supreme Court deemed these laws unconstitutional in 1982 (*Edgar vs. Mite Corp.*) due to their cross-state jurisdictional reach. Following that ruling, states began to pass "second-generation" anti-takeover laws (SGAT), which were deemed constitutional by the Supreme Court in 1987 (*CTS Corp. v. Dynamics Corp. of America*). These laws took primarily three forms: business combination laws, fair price laws, and control share acquisition laws. Researchers believe that their impact has been to increase the entrenchment status of the incumbent managers. Since not all states passed such laws, the SGAT represent an exogenous

[15] Another concern that necessitates additional tests is that the one of the most significant links between the governance index and leverage is contained in the officer protection sub-index (see Appendix Table 2). Indeed, that may help reconcile my findings with the conventional wisdom that entrenched managers dislike debt. If managerial perk consumption is protected in contingencies triggered by financial distress or bankruptcy (i.e. provisions that place perks beyond the reach of creditors such as secular trust pension plans, severance packages, and golden parachutes) managers would be more willing to let their firms assume higher level of debt, partly since there is advantage to debt in terms of increased firm value (higher tax shields), as long as there exists some linkage between managerial contractual compensation and firm value. This complementary interpretation does not involve investment policy distortion and it could provide a direct explanation why officer protection sub-index appears most significant among all governance sub-indices. I am able disprove this hypothesis in studying the "second-generation" anti-takeover laws introduction's impact on leverage.

shock to the entrenchment status of the manager that allows us to study the effect of enactment of these laws on firms incorporated in states passing such bills, in comparison to firms from states not passing such bills.[16]

I use the sample period of 1983-1991 to study the impact of the SGAT laws adoption on leverage (Table 1 in Bertrand and Mullainathan (2003) provides a list of the event years). I follow the approach of Cheng, Nagar, and Rajan (2004) in studying the impact of the *first* law in the second-generation anti-takeover legislation that is passed in a firm's state of incorporation (usually the business combination laws), since, the passage of subsequent laws is facilitated by the passage of the first.

Univariate results on the SGAT experiment are presented in the last two columns of Table 2. Indeed both market and book leverage increase after the enactment of these laws. I next use a differences-in-differences (DID) panel data estimator[17] to study the impact of these laws on leverage. This methodology has been previously used by Bertrand and Mullainathan (1999, 2003). It provides an efficient use of the panel nature of the dataset, and does not restrict the sample to state laws passed in the same year (as in Garvey and Hanka (1999)). I estimate the following equation

$$L_{i,t} = \sum_i a_i + \sum_t b_t + cLAW_i * AFTER_{i,t} + dX_{i,t} + \varepsilon_{i,t}, \qquad (7)$$

[16] Firms were given the opportunity to opt out of these laws. However, since the decision to opt out is endogenous, I do not exclude these firms from my sample (doing so would incur a selection bias).

[17] This estimator could be easily illustrated with an example. Suppose we are interested in studying the impact of the New York State SGAT law adoption in 1985 on the leverage of firms incorporated in New York State. We would estimate the average leverage before its adoption in 1985 and after it to compute the difference. However, economy-wide and firm-specific factors other than the SGAT might have impacted leverage before and after 1985. Thus we need a control group of firms from a state not passing such bills, for example California. We would compare the differences in firm leverage in New York State, pre- and post-1985 with the differences in firm leverage in California – pre- and post-1985. The estimator then studies the difference in differences between the treatment (New York) and control (California) firm groups. Technically, we compute the estimate in a regression. For further details, see Bertrand and Mullainathan (1999). Heckman and Hotz (1989) and Gruber (1989) discuss the statistical properties of the DID estimator. Several studies used DID estimators to study the impact of SGAT laws adoption on: managerial ownership (Cheng, Nagar, and Rajan (2004)), executive compensation (Bertrand and Mullainathan (1999), and managerial risk-taking incentives (Bertrand and Mullainathan (2003)).

where included are both firm and year fixed effects, where i indexes firms, t indexes years, LAW_i is a treatment effect, equal to 1 if the firm is incorporated in a state passing anti-takeover law, and zero otherwise, and $AFTER_{i,t}$ is a dummy variable that equals 1 for the years after the introduction of the SGAT, and zero otherwise. The coefficient c in that regression is interpreted as the mean effect of the enactment of SGAT laws on leverage. This estimator exploits fully the panel nature of the dataset and it further allows that laws are passed at different times. Results from these tests are presented in Table 7 and appear to be both highly statistically and economically significant. Using the results in Panel A, book leverage has increased with 5.4% after the SGAT laws adoption.[18]

My results differ from these of Garvey and Hanka (1999). A potential explanation for it is the different, more restrictive sample selection procedure the latter employ. They consider only firms with complete Compustat and CRSP records in 1982-1993 which results in a sample of 1,203 firms (for example, any firm established in that period, such as Microsoft, would be excluded). Further excluded are firms from states that passed SGAT laws prior to 1987, such as New York State. This induces selection bias that may have important ramifications for the robustness of their findings.

IV. Discussion

A. Re-examining conventional wisdom

What can be driving the *positive* relationship between managerial entrenchment and leverage that is documented in the previous section? While I acknowledge that this relationship

[18]Book leverage and market leverage tabulations across size, firm age, and profitability dependent sorts corroborate these results. In addition, studying the impact of the SGAT laws adoption on the share of net debt issuance used to finance the financing deficit, I also find that after the event there is an increase in debt financing. These results are omitted to conserve space and are available upon request.

is, in practice, undoubtedly the outcome of many complex influences, I outline here three simple theoretical channels that might be behind a positive relationship.

The first channel emphasizes how managerial risk-taking incentives (or agency costs of debt) may affect financing policy (Hirshleifer and Thakor (1992), Leland (1998), Mauer and Sarkar (2004)). In a world with better monitoring (and consequently lower entrenchment of firm management) value-enhancing risk-taking is encouraged since directors of well-governed firms can easily tell "bad" managerial luck from "bad" managerial judgment (good corporate monitoring mechanism acts as a risk-sharing device for the human capital of the manager). Thus, it is optimal for such "safe" firms to assume higher leverage in order to benefit from tax shields.[19] Figure 1 illustrates this trade-off. In related work John, Litov and Yeung (2004) build a theoretical model that predicts that entrenched managers indeed choose sub-optimally conservative investment policies.[20]

The second hypothesis involves a voluntary pre-commitment to debt monitoring by entrenched managers (Jensen (1986, 1993)) as an explanation for the main results. While somewhat strained, this hypothesis suggests that entrenched managers might pre-commit to debt monitoring to avoid being taken over or because of the high equity financing costs associated

[19] Similar conclusion is reached in a different line of argument by Hirshleifer and Thakor (1992). In their model with differential managerial ability managerial reputation building incentives make managers to choose sub-optimally conservative investment policies. Risk-shifting incentives of leverage provide an offset which might move managerial risk-taking incentives closer to the optimal investment risk choices. Taking this offset into account shareholders choose leverage optimally to induce investment policy close to the optimum. Thus, in equilibrium with asymmetric information on investment choices, it might be ex ante beneficial to shareholders to commit not to monitor the manager so that the firm can assume higher leverage. However their paper generates predictions for takeovers that are exactly the opposite of mine. In their model when the probability of takeovers reduces, managerial conservatism goes down and a lower level of debt is optimal. This prediction is something I test directly using the SGAT laws adoption and find results opposite to it.

[20] In the framework of John, Litov, Yeung (2004), the manager knows the optimal amount of perks that he would want to consume when cashflows are realized. In a sub-game perfect equilibrium context, when he takes the investment policy decision (at time zero) he would be influenced by the fact that he will not be able to consume this optimal amount in the very bad cash-flow states of the project. His incentives at time zero would then be isomorphic to that of a senior debt holder whose promised payment is equal to the optimal amount of perks that he would consume if there is enough project cash. In this sense his investment policy would be more conservative, the larger his optimal perks are (which are higher the worse the governance is).

with high private benefits of control (as in Myers (2000) and Shleifer and Wolfenzon (2002)). Or, they might maintain an opaque information environment to facilitate their diversion of corporate resources; [21] this could further lead to costly equity financing in a pecking order setup, where entrenched managers would first tap internal resources for financing investment, and when these run out, tap debt markets.[22] Thus the need for some external capital may "force" entrenched managers to pre-commit to debt monitoring. The free-cash flow argument has been refined by Stulz (1990), who points out that debt constrains overinvestment but also constrains underinvestment.

A third hypothesis, or related set of hypotheses, involves the strategic use of debt to retain corporate control. Harris and Raviv (1988) and Stulz (1988) show that managers whose control is being challenged may use debt to inflate their relative voting rights, e.g. by issuing short-term debt and using the proceeds to buy shares from non-contesting shareholders. Debt can also serve as a time-consistent pre-commitment device to avoid inefficient future investment and thereby discourage potential bidders (Zwiebel (1996), Novaes (2003)). Mueller and Panunzi (2004) propose that debt can discourage a raider from attempting a takeover, since raiders often conduct "bootstrap takeovers" in which the takeover attempt is financed with debt that is collateralized with the assets of the target. This in turn creates incentives for the target management to pledge its assets prior to the tender offer.

Clearly, despite the fact that a positive entrenchment-leverage relationship is somewhat counterintuitive, there is nonetheless no shortage of theories that have the potential to shed light

[21] Perotti and von Thadden (2003) build a model to study the impact of different governance structures on diffusion of information. Their model predicts that lender-dominated firms will discourage informative prices, as this would endogenously deteriorate the value of lender claims through the channel of risk-taking.

[22] Since monitoring differs across types of debt claims, it is an open question whether entrenched managers would prefer private or public debt. Dennis and Mihov (2003) document a negative relationship between managerial equity ownership and the likelihood of public debt issue but do not discuss the above issue.

on it, and they are difficult to test.[23] In light of this fact, my goal is not to determine which of the above theories is "correct," but is somewhat less ambitious. My goal here is simply to provide some affirmative support that the positive entrenchment-leverage relationship driven at least in part by the first channel above, the managerial risk-taking incentives channel, which makes several relatively straightforward testable predictions.

B. Evidence from the cost of debt issuance

To test the hypothesis that debt providers view entrenched managers as less likely to engage in asset substitution, I study how perceptions of firm creditworthiness vary with the Gompers et al. index. In particular, I examine the gross underwriting spreads, credit ratings, and offer yields the sample firms pay when issuing debt claims in public markets.[24]

The source for these costs of debt proxies is the non-convertible public debt issues data in SDC *Global Issues*. The data is compiled from regulatory filings, news sources, company releases and prospectuses. I exclude all convertible debt issues. Although the database does not contain the universe of all traded debt, I can see no reason to suspect a systematic reporting bias.[25] The data provides information on the issue dates of various debt claims, their maturity,

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[23] For instance, the second channel suggests that firms with weak governance suffer higher costs of equity. Unfortunately, measuring the cost of equity is a notoriously delicate task. In unreported results I am able to document a positive relation between measures of equity issuance costs (underpricing, discounting and underwriter spreads in seasoned equity offerings) and entrenchment index. These however have low statistical significance. In addition equity issuance costs by nature are sunk costs, and may not be relevant for the equity issuance decisions since equity is an infinitely lived security.

[24] I choose to study debt *issue* costs instead of debt costs because the latter could vary not only because of demand side factors (such as bondholders' perception of creditworthiness) but also because of factors related to the supply side (managerial preferences for debt financing). That is, a firm may be "risky" technologically and still have low cost of debt, e.g. because its management dislikes debt. Thus, I consider the cost of debt conditional on the corporate decision to issue public debt. I do not study private debt issued by the sample firms, since Chiva, Livdan, and Dierker (2004) have already done so. However, private debt might be relatively more important for firms in this sample. Also, I do not address debt covenants in any detail, but again these could be major determinants of the cost of debt. For instance, Billett, King, and Mauer (2004) write that "firms use restrictive covenants to control stockholder-bondholder conflicts over the exercise of growth options, and that short-term debt and restrictive covenants are substitutes in controlling such conflicts" and that "restrictive covenants help attenuate the negative effect of growth opportunities on leverage."

[25] Kim, Palia, and Saunders (2003) also use the SDC *Global Issues* database to study the long-term behavior of debt underwriting spreads. The dataset however is not free of errors; for 233 of the debt issues the final maturity date is

various measures of the cost of debt, and fees charged by investment banks for specific issues. As a proxy for the overall cost of debt I use the gross underwriting spread and the offer yield for the non-convertible debt issues of the firms in the IRRC sample. The bond yield is the offer yield to maturity in percentage points, which investors will receive if the security is held (and not defaulted on) to the first maturity date. The gross underwriting spread is the total fee paid to the investment banking group that placed the debt issue.

The approach I take is to relate these cost-of-debt indicators to the entrenchment index, controlling for various firm and issue-specific characteristics. Among the firm characteristics I control for are company profitability as measured by the return on assets, leverage, and size. The security-specific characteristics include the log of the debt's maturity (in years), the debt issue's size relative to the size of the firm, and the unscaled log of the size of the debt issue. I also consider separate specifications that include or exclude issue-specific credit ratings provided by Standard & Poor's and Moody's, since credit rating agencies might incorporate part or all of the provisions in the entrenchment index (directly or indirectly) in their evaluations.

From the initial total of 39,325 issues in the sample period, I drop company-year observations on financial firms and regulated utilities as well as all offerings of less than $10 million.[26] This leaves 5,478 debt issues. I merge these with the firm sample from IRRC and obtain 3,642 matches, representing 533 firms which have an average of 6.8 bond offerings across the sample period of 1991-2003. Firms issuing debt have an average entrenchment index of 9.7 while non-issuers have an average of 8.9. A nonparametric Wilcoxon rank-sum test rejects the equality of these means at the 1% level.

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recorded improperly. For these, I have manually checked the data with Bloomberg data feed and have corrected maturity dates accordingly.

[26] The results are not sensitive to this bound on issue proceeds.

Next I consider the relationship between the entrenchment index and the cost of debt proxies. There are 2,663 offerings with data on the offer yield, the gross underwriting spread, and control variables. The average offer yield for these issues is 7.01% and the average gross underwriting spread is 0.74%. Regressions of these variables on the entrenchment index are presented in Table 8. I use fixed year and industry effects (at the 3-digit SIC code) since a Hausman test statistics for random effects rejects their presence of 1% level. Offer yield and gross underwriting spreads are presented in percentage points of total proceeds, while yield spread is presented in terms of basis points.

Table 8 provides some indication that, consistent with the asset substitution story, entrenched-firm managers can issue debt at a lower cost. Controlling for a variety of firm and issue characteristics, both the underwriting spread and the offer yield is lower for issues by entrenched managers. These results reinforce other recent sources of evidence that entrenched managements enjoy lower costs of debt. For instance, Anderson, Mansi and Reeb (2004a,b) find that founding-family ownership, a high proportion of independent directors on the board, and a large board size is associated with a lower cost of debt.

An alternative explanation of my results on the linkage between cost of debt issuance and corporate governance is that target bondholders dislike takeovers since in these instances they could be expropriated. This conjecture however is not borne by the data as Billett, King, and Mauer (2003) find that average takeover announcement bond returns for targets are significantly positive while these for acquirers are significantly negative (their sample period is 1980s and 1990s). Thus is appears that indeed firm riskiness is what drives the linkage between cost of debt issuance and corporate governance presented in this subsection.

C. Evidence from credit ratings

Next I consider credit ratings. Graham and Harvey (2001), Faulkender and Petersen (2003), and Kisgen (2003) argue that credit ratings have a direct impact on financing decisions. My approach here is to examine whether the long-term credit ratings of firms vary according to the entrenchment index.

I use the long-term issuer credit rating assigned by Standard & Poor's. This rating reflects the company's overall creditworthiness rather than the ability to repay specific obligations. In particular, it aims to measure the ability and readiness of a debtor to meet its long-term financial commitments (maturities of more than one year) when due. It ranges from AAA (strong ability to pay financial obligations) to CC (vulnerable). These rating variables are assigned a six-way code classification, 1 through 6, with 1 being the lowest credit rating; these correspond accordingly to S&P's bond ratings of B or below, BB, BBB, A, AA, and AAA (for Moody's bond ratings, the six groups would be B or below, Ba, Baa, A, Aa, and Aaa).

Of the sample of 23,204 firm-year observations in the IRRC data, a total of 9,442 have S&P long-term credit ratings assigned. After removing utilities and financial firms, 6,699 firm-year pairs, corresponding to a total of 788 firms with credit ratings, remain (the total number of IRRC firms is 3,133). The average entrenchment index for firms without any rating is 8.81, while those with a rating average 9.42. A Wilcoxon rank-sum test rejects the equality of these means at the 1% level.

The ordered probit regression reported in the left side of Table 9 is as follows:

$$\text{Prob}\left(\text{Credit Rating}_{i,t} = w\right) = \Phi\left(\alpha_1 G_{i,t-1} + \alpha_2 L_{i,t-1} + \alpha_3 ROA_{i,t-1} + \alpha_4 Size_{i,t-1}\right), \quad (8)$$

where $w \in \{1,2,3,4,5,6\}$ and $\Phi(.)$ denotes the standard normal distribution cumulative density function. As controls I include leverage, profitability and size (to conserve space, these

coefficients are suppressed).[27] Table 9 shows that as entrenchment increases, bond ratings increase, even controlling for several variables that should directly influence bond ratings. I also report results of regressions in which I include dictatorship and democracy dummy variables, and report the difference between the two coefficients. These regressions give a similar impression.[28]

The assumption of normality of the underlying probit model might be violated in the data. To address this, I perform a regression where I manage to transform the discrete dependent variable (the credit ratings) into a continuous one and thus perform OLS panel data regressions free of the underlying assumption of normality. To do this I attach to each rating category the spread between that credit rating yield and the Treasury note with same maturity. Since I use the *long-term* S&P credit issuer ratings, I accordingly assign to these the average yields on the Lehman Brothers annual *long-term* corporate notes. I have retrieved these for issuer ratings of AAA, AA, A, BBB, BB, B, CCC and below for 1991-2003 from Datastream. Results are reported in Panel B. Indeed, the results in panel A are robust to the assumption of normality underlying the probit model I use.

D. Evidence from mergers and acquisitions

As suggested by Jensen (1993), Gompers et al. (2003), and many others, one venue for inefficient investments is acquisition activity. Amihud and Lev (1981) and Morck, Shleifer, and Vishny (1990) argue that entrenched managers may engage in diversifying mergers, perhaps pursuing unrelated conglomeration to diversify their human capital risk. Even if downsizing might be more profitable in expectation, entering a new line of business might increase the

[27] In unreported results I also include a control for the probability of default, Altman's Z-score, as in MacKie-Mason (1990). The entrenchment index coefficient remains unchanged.

[28] IRRC added new firms to the dataset after the survey in 1998, i.e. from 2000 onwards. Thus the sample increases substantially in recent years. Notice the concurrent increased sensitivity of the S&P credit rating to the entrenchment index.

survival probability of the firm. Or, if the firm performed poorly last period, the manager might try to acquire a new line of business, one in which the manager might perform better.

I use the SDC *Mergers and Acquisitions* database to obtain data on acquisition activity. Between 1/1/1990 to 12/31/2003, there are a total of 51,861 acquisitions completed by US public firms in which the target is also a US firm (public or private). Excluding buybacks, recapitalizations and exchange offers reduces the sample to 48,665 transactions. Of these, there are 11,829 acquisitions accomplished by the sample firms. After dropping financial and regulated firms as before, 8,837 transactions remain. Of these I classify all acquisitions as non-diversifying if the target and the acquirer are in the same industry (to define industry groups I use the Fama and French (1997) 48 industry portfolio definitions). By this definition, there are a total of 4,427 diversifying and 4,410 synergistic mergers. These correspond to 1,429 public targets and 7,408 private targets.

The first test is simply to regress the number of acquisitions per firm-year on the entrenchment index. Since firms may not have acquisitions in a given year, I use a Poisson regression to address the censoring of the dependent variable. The panel Poisson regression is:

$$\Pr\left[Count_{i,t} = j\right] = \frac{e^{-\lambda_{i,t}} \lambda_{i,t}^{\ j}}{j!},\ j = 0,1,2,3,\ldots,\ E\left[Count_{i,t}\right] = \lambda_{i,t} = e^{z_{i,t}'\beta}, \tag{9}$$

which includes as control variables the book-to-market ratio, the return on assets, the size of the firm, Fama-French (1997) industry dummies, and year dummies. Notice that the size of the sample for the first model is 16,040, since when there is no acquisition I assign a count of zero. More interestingly, I perform a Poisson regression which counts only diversifying mergers, and compare it to one in which I count only non-diversifying mergers.

The results strongly indicate that firms with entrenched managers are more likely to conduct diversifying mergers. Conversely, firms with strong shareholder rights are more likely to engage in focused mergers than those with insulated managers.

In the right columns of Table 10, I present the results of the regression of the "acquisition ratio" on the control variables and the entrenchment index. The acquisition ratio is defined as the sum of the value of all corporate acquisitions during the sample period scaled by the average of the market value at the beginning and end of the year the acquisition occurred. First I present tobit estimates of the acquisition ratio for the entire sample on the entrenchment index, control variables (as above) and random industry and year effects. Tobit regression is appropriate because of the censoring; the acquisition ratio is very often zero. Interestingly, based on the entire sample there is no significant relation between governance and the acquisition ratio. However, that is due to the offsetting effects of governance on the propensity to engage in diversifying and synergistic mergers. Consistent with the idea that entrenched managers seek lower investment risk, entrenched-managers firms are more likely to buy unrelated targets.

E. State anti-takeover laws adoption and firm riskiness

Even though the evidence of the impact of SGAT laws adoption on leverage is congruent with the one based on Gompers et al. entrenchment index, it is not clear whether higher leverage after the SGAT laws passage is due to the investment risk distortion I describe above. To corroborate my statement on this count, I refer to the evidence presented in Bertrand and Mullainathan (2003). The latter document that upon the passage of the SGAT laws, "the destruction of old plants falls, but the creation of new plants also falls... overall productivity and profitability decline in response to these laws". This is consistent with the hypothesis that the increase in the managerial entrenchment as a result of the passage of the SGAT laws is indeed associated with sub-optimally conservative investment policies.

V. Conclusion

In this paper, I find that firms whose managers are more entrenched, as measured by the Gompers et al. (2003) index of anti-takeover provisions, use more debt to fund financing deficits and maintain higher leverage ratios overall. This large-sample relationship runs counter to the traditional intuition that entrenched managers prefer less debt.

This result is highly robust. I verify that the potential endogeneity of the governance index I use does not drive the observed empirical pattern. For that purpose, I study an exogenous shock to corporate governance generated by the adoption of "second generation" state anti-takeover laws, largely believed to have increased managerial entrenchment. Using the variation in corporate governance generated by the introduction of these laws, I find largely similar results.

After outlining several theoretical channels that could lead to this relationship, I find empirical support for an explanation based on the idea that firms with weak shareholder rights assume sub-optimally conservative ("safe") investment policies and as such would benefit from higher leverage. Specifically, because the firms with entrenched managers are safer, they would trade-off expected bankruptcy costs with tax shields of debt at higher leverage levels. Consistent with this interpretation, I show that both bondholders and credit rating agencies view firms with weak shareholder rights as less risky: in particular, debt issues by entrenched firms have (controlling for various firm- and issue-specific influences) higher ratings, lower offer yields, and lower gross underwriting spreads. I also find that entrenched-firm managers are more likely to engage in diversifying mergers, consistent with a desire to reduce investment risk. The results thus provide surprising new evidence on the direction and the importance of the linkage between corporate governance mechanisms and financing decisions.

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Figure 1. Optimal leverage for firms with weak and strong corporate governance. The former are deemed safer since management of firms with weak corporate governance assume sub-optimally conservative investment policies. Thus expected bankruptcy costs trade-off with firm tax shields at higher debt levels for such firms. In the figure V^{STRONG} denotes the value of firms with strong corporate governance and V^{WEAK} the value of firms with weak corporate governance.

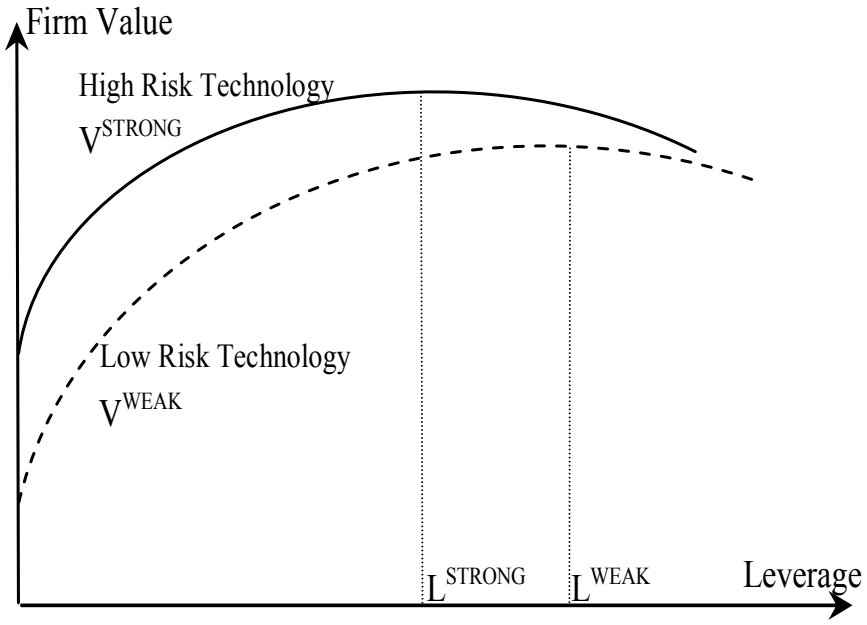

Table 1: Variable Definitions.

Variable		Description	Source
Main Variables			
Net equity issues	$\Delta E_{i,t}$	Sale of common & preferred stock (Compustat data item #108) – purchase of common & preferred stock (#115) divided by assets (#6). The resulting variable is winsorized at 1% in both tail of the distribution.	Compustat.
Net debt issues	$\Delta D_{i,t}$	Long-term debt issuance (#111) – long term debt reduction (#114) divided by assets (#6). The resulting variable is winsorized at 1% in both tail of the distribution.	Compustat.
Change in working capital	$\Delta W_{i,t}$	For firms reporting format code 1, the change in working capital equals the sum of items #236+#274+#301. For firms reporting format codes 2 and 3, the change in net working capital is #236+#274-#301. For format code 7, the value is given by #302-#303-#304-#305-#307+#274-#312-#301. The resulting variables are scaled with total assets and then winsorized at 1% in both tail of the distribution.	Compustat.
Investment	$INV_{i,t}$	For firms reporting format codes 1 to 3, investments is equal to #128+#113+#129+#219-#107-#109. For firms reporting format codes 7, investments is equal to #128+#113+#129-#107-#109-#309-#310. The resulting variables are scaled with total assets and then winsorized at 1% in both tail of the distribution.	Compustat.
Cash dividends	$DIV_{i,t}$	Represented by data item #127 in Compustat. The resulting variable is scaled with total assets and then winsorized at 1% in both tail of the distribution.	Compustat.
Internal cash flow	$CFLOW_{i,t}$	For firms reporting format codes 1, 2 and 3, it equals #123+#124+#125+#126+#106+#213+#217+#218. For firms reporting format code 7, it equals #123+#124+#125+#126+#106+#213+#217+#314. The resulting variable is scaled with total assets and then winsorized at 1% in both tail of the distribution.	Compustat.
Financing deficit[29]	$DEF_{i,t}$	The sum of the cash dividends, investments and change of working capital minus internal cash flow. The sum is further winsorized at 1% in both tails of the distribution.	Compustat.
Gross debt issued	$GRD_{i,t}$	Long-term debt issuance (#111) scaled by total assets (#6) as of end of fiscal year. The variable is winsorized at 1% in both tail of the distribution.	Compustat.
Change in debt ratio	$\Delta LD_{i,t}$	Change in the long-term debt (#9) to total assets (#6) as of the end of the current fiscal year. The variable is winsorized at 1% in both tail of the distribution.	Compustat.
Book equity	$BE_{i,t}$	Total assets (#6) – total liabilities (#181)– preferred stock (#10) + deferred taxes (#35) + convertible debt (#79) as of the end of the current fiscal year; if preferred stock is missing, then I subtract the redemption value of preferred stock (#56). If redemption value is also missing then I subtract the carrying value (#130). In this computation, if deferred taxes are recorded as missing or combined with other items, I record them as 0.	Compustat.
Book debt	$D_{i,t}$	Book debt, defined as total assets (#6) – book equity, both as of the end of the current fiscal year.	Compustat.
Book leverage	$BL_{i,t}$	Book debt ($D_{i,t}$) to total assets (#6) at the end of the current fiscal year. The variable is further winsorized at 1% in both tails of the distribution.	Compustat.
Market leverage	$ML_{i,t}$	Book debt divided by: [total asset (#6)– book equity + total shares outstanding (#25) * price (#199)]. The resulting variable is winsorized at 1% in both tails of the distribution.	Compustat.
Net change in leverage, I	$\Delta L_{1,i,t}$	Measure of leverage defined as $\Delta L_{1,i,t} = \frac{D_{i,t-1} + \Delta D_{i,t}}{A_{i,t-1} + \Delta D_{i,t} + \Delta E_{i,t}} - \frac{D_{i,t-1}}{A_{i,t-1}}$, where $D_{i,t}$ is book debt and $A_{i,t}$ is total assets at the end of the current fiscal year. The resulting measure is winsorized at the 1% in both tails of the distribution.	Compustat.
Net change in leverage, II	$\Delta L_{2,i,t}$	$\Delta L_{2,i,t} = \left(\Delta D_{i,t} - \Delta E_{i,t}\right) / A_{i,t}$, where $D_{i,t}$ is book debt and $A_{i,t}$ is total assets at the end of the current fiscal year. Measure II is similar to the one in Berger, Ofek, Yermack (1997), while measure I is similar to the measure applied by Garvey, Hanka (1999). The resulting measure is winsorized at the 1% in both tails of the distribution.	Compustat.
Governance Variables			
Entrenchment index	$G_{i,t}$	An index that counts the presence of 24 anti-takeover, voting, compensation-related and anti-takeover state law provisions present in the corporate charter of a firm. The index is introduced by Gompers, Ishii, Metrick (2003).	Investors Responsibility Research Center (IRRC).

[29] In the computation of the financing deficit components, I follow Frank and Goyal (2003) in recording as zero the following items when they are either missing or combined with other data items (Compustat data item is shown in brackets): depreciation and amortization (# 125), other funds from operation (defined as #124 + #126 + #106 + #213 + #217; I have recorded as zero all individual components if missing or combined with other item), accounts receivable (#302), inventory (#303), accounts payable and accrued liabilities (#304), income taxes-accrued (#305), net change in asset & liabilities (#307), increase in investments (#113), sale of investment (#109), capital expenditure (#128), sale of property plant and equipment (#107), acquisitions (#129), short term investment change (#309), investing activities-other (#310), purchase of common and preferred stock (#115), cash dividend (#127), long-term debt reduction (#114), changes in current debt (#301), other financing activities (#312), exchange rate effect (#314), other sources of funds (#219), working capital change (#236).

Democracy dummy	$Dict_{i,t}$	Dummy variable that equals one if the entrenchment index $G \leq 5$, and zero otherwise.	Based on IRRC.
Dictatorship dummy	$Demc_{i,t}$	Dummy variable that equals one if the entrenchment index $G \geq 14$, and zero otherwise.	Based on IRRC.
Control Variables			
Market-to-book	$(M/B)_{i,t}$	The ratio of the market value of assets to the book value of asset. The market value is calculated as the sum of the book value of assets and the market value of common stock less the book value of common stock and deferred taxes, [Total assets (#6) – book equity + market equity], where are components are as of the end of the current fiscal year. The resulting variable is winsorized at 1% in both tails of the distribution.	Compustat.
Asset tangibility	$(PPE/A)_t$	Equals net property, plant and equipment (#8) divided by total assets as of the current fiscal year. The resulting variable is winsorized at 1% in both tails of the distribution.	Compustat.
Profitability	$(EBITDA/A)_{i,t}$	Equals EBITDA (#13) divided by total assets as of the current fiscal year. The resulting variable is winsorized at 1% in both tails of the distribution.	Compustat.
Firm size	$\log A_{i,t}$	Equals the natural logarithm of total assets (#6) as of the end of the fiscal year. The variable is winsorized at 1% in both tails of the distribution.	Compustat.
Earnings before tax to assets	$(ET/A)_{i,t}$	Equals earnings before interest and tax (#18+#16) divided by total assets in the current fiscal year t divided by assets at the end of the current fiscal year. The variable is winsorized at 1% in both tails of the distribution.	Compustat.
Dividend/ book equity	$(Div/BE)_{i,t}$	Common stock dividends (#21) scaled by book equity as of current fiscal year. The variable is winsorized at 1% in both tails of the distribution.	Compustat.
Dividends/ market equity	$(Div/ME)_{i,t}$	Common stock dividends (#21) divided by market equity as of end of fiscal year. The variable is winsorized at 1% in both tails of the distribution.	Compustat.
Depreciation/ assets	$(Dp/A)_{i,t}$	Depreciation expense (#14) in the current fiscal year divided by total assets at the end of fiscal year. The variable is winsorized at 1% in both tails of the distribution.	Compustat.
R&D/ assets	$(RD/A)_{i,t}$	Research and development expense (#46) in the current fiscal year divided by total assets at the end of fiscal year. If research and expenses are missing (i.e. not material) I record the item as 0. The variable is winsorized at 1% in both tails of the distribution.	Compustat.
Firm Age	$Age_{i,t}$	Firm age measured as the difference between the current year and the year when the firm has first appeared on the CRSP tape.	CRSP monthly stock file.
Cost of Debt Variables			
Standard and Poor's long term issuer credit rating	$SPRLT_{i,t}$	Long term issuer credit rating assigned by the Standard & Poor's. The rating indicates the ability and readiness of a debtor to meet its long-term financial commitments (maturities of more than one year) when due. This indicator ranges from AAA (strong ability to pay financial obligations) to CC (vulnerable). The numerical code transformation of the letter ratings ranges from 1 through 6, with 1 being the lowest credit rating; these correspond to bond ratings closest to: B or below, BB, BBB, A, AA, and AAA.	Compustat
Rating Spread	$SPREADR_{i,t}$	Computed by attaching to each annual S&P long-term issuer credit rating the corresponding annualized rating spread of the Lehman Brothers long-term corporate notes (e.g. AAA, AA, AA, BBB, BB, B, C and below) over a corresponding maturity Treasury notes. The data for these aggregate indices is from Datastream for 1990-2003.	Datastream and Lehman Brothers Fixed Income database.
Yield spread	$YIELD_{i,t}$	The spread over treasury notes with the same maturity is the difference (in basis points) between the yield on the bond and the yield on a comparable maturity treasury bond. SDC Global Issues database reports this item only for fixed rate, non-convertible debt issues.	SDC Global Issue database
Offered bond yield	$OFRYIELD_{i,t}$	The bond yield is the offer yield to maturity in percentage points at the time of issuance, which investors will receive if the security is held to the first maturity date.	SDC *Global Issue* database
Gross underwriting spread	$GSPREAD_{i,t}$	The total compensation to the investment-banking group. The dollar gross spread is the difference between the price at which the underwriting syndicate obtains the bonds from the issuing firm and the offer price at which it sells them. It consists of management fee, selling concession and underwriting fee. The variable is in percentage points from the total proceeds.	SDC *Global Issue* database
Moody's Bond Rating	$MRATING_{i,t}$	Moody's rating of the debt issue at the time of the offer provided by SDC Global Issues database. The rating variables are assigned a six-way code classification from 1 through 6, with 1 being the lowest credit rating; these correspond accordingly to bond ratings of: B or below, Ba, Baa, A, Aa, Aaa.	SDC *Global Issue* database
S&P's Bond Rating	$SPRATING_{i,t}$	S&P's rating of the debt issue at the time of the offer provided by SDC Global Issues database. Codes as the S&P long-term issuer credit rating above.	SDC *Global Issue* database
Mergers and Acquisitions			
Measure of relatedness	$RELDUMMY_{i,t}$	A dummy variable equal to one if both the target and the bidder belong to the same Fama, French (1997) 48 industry portfolio, and zero otherwise.	Ken French's website; SDC *M&A* database.
Acquisition Ratio	$ACQR_{i,t}$	The sum of the value of all corporate acquisitions accomplished by the company during the calendar year scaled by the average of the company market value at the beginning and end of the calendar year.	SDC *M&A* database.
Acquisition Count	$ACQC_{i,t}$	The number of acquisitions the firm accomplished during a given calendar year.	SDC *M&A* database.

Table 2: Summary statistics by entrenchment index quintile. All variables are scaled by total assets and winsorized at the 1% in both tails of the distribution. The data items notation corresponds to the Compustat code or is defined in Table 1.

		Entrenchment Index Quintile					Top & Bottom Deciles		Pre-SGAT laws intro	Post-SGAT laws intro
	Data item	1 (Low) $G \leq 6$	2 $G = \{7,8\}$	3 $G = \{9,10\}$	4 $G = \{11,12\}$	5 (High) $G \geq 13$	Democracy $G \leq 5$	Dictatorship $G \geq 14$		
Number of observations		2,515	2,720	2,870	2,404	1,522	1,411	718	22,115	14,516
Assets										
+ Cash	*#162*	0.083	0.085	0.070	0.059	0.051	0.078	0.050	0.062	0.095
+ Short term investments	*#193*	0.054	0.042	0.030	0.022	0.012	0.055	0.014	0.084	0.044
+ Receivables-total	*#2*	0.163	0.165	0.175	0.172	0.177	0.164	0.172	0.195	0.203
+ Inventories	*#3*	0.159	0.152	0.148	0.148	0.158	0.163	0.161	0.182	0.182
+ Current assets - other	*#68*	0.038	0.037	0.037	0.036	0.038	0.037	0.037	0.023	0.027
= Current assets - total	***#4***	**0.495**	**0.478**	**0.460**	**0.432**	**0.427**	**0.495**	**0.419**	**0.558**	**0.560**
+ Net property plant and equipment	*#8*	0.308	0.319	0.328	0.354	0.348	0.318	0.350	0.331	0.311
+ Investments & advances - equity method	*#31*	0.014	0.014	0.017	0.020	0.017	0.014	0.018	0.013	0.010
+ Investments and advances – other	*#32*	0.027	0.029	0.031	0.026	0.021	0.025	0.023	0.033	0.029
+ Intangibles	*#33*	0.108	0.116	0.116	0.109	0.129	0.101	0.129	0.039	0.054
+ Assets - other	*#69*	0.065	0.072	0.074	0.074	0.078	0.063	0.075	0.038	0.049
= Total assets	***#6***	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**
Liabilities										
+ Debt in current liabilities	*#34*	0.041	0.039	0.041	0.045	0.050	0.041	0.050	0.077	0.084
+ Account payable	*#70*	0.088	0.089	0.090	0.090	0.094	0.090	0.087	0.104	0.108
+ Income taxes payable	*#71*	0.011	0.011	0.012	0.012	0.011	0.011	0.010	0.009	0.009
+ Current liabilities-other	*#72*	0.108	0.107	0.115	0.108	0.107	0.105	0.102	0.086	0.093
= Current liabilities - total	***#5***	**0.250**	**0.249**	**0.259**	**0.257**	**0.260**	**0.249**	**0.247**	**0.278**	**0.294**
+ Long-term debt - total	*#9*	0.194	0.199	0.215	0.216	0.224	0.201	0.233	0.180	0.185
+ Liabilities - other	*#75*	0.050	0.058	0.075	0.082	0.088	0.049	0.083	0.018	0.022
+ Deferred taxes and ITC	*#35*	0.026	0.028	0.028	0.030	0.030	0.027	0.032	0.023	0.021
+ Minority interest	*#38*	0.006	0.006	0.007	0.010	0.009	0.005	0.010	0.003	0.004
= Liabilities - total	***#181***	**0.527**	**0.541**	**0.582**	**0.594**	**0.609**	**0.531**	**0.604**	**0.512**	**0.536**
+ Preferred stock -carrying value	*#130*	0.006	0.006	0.006	0.006	0.005	0.005	0.006	0.009	0.009
+ Common equity - total	*#60*	0.466	0.452	0.411	0.401	0.385	0.463	0.389	0.476	0.451
= Total liability & stockholders' equity	*#216*	**0.489**	**0.475**	**0.431**	**0.418**	**0.400**	**0.484**	**0.403**	**0.345**	**0.367**
= Total assets	***#6***	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**
Book Leverage	$BL_{i,t}$	0.485	0.493	0.544	0.558	0.571	0.479	0.565	0.487	0.517
Market Leverage	$ML_{i,t}$	0.337	0.363	0.382	0.395	0.422	0.347	0.422	0.370	0.403
Net change in leverage, I	$\Delta L_{1,i,t}$	0.011	0.017	0.016	0.019	0.018	0.006	0.020	-0.073	-0.059
Net change in leverage, II	$\Delta L_{2,i,t}$	0.009	0.011	0.011	0.011	0.012	0.008	0.014	-0.015	-0.009
Profitability	$(EBITDA/A)_{i,t}$	0.135	0.135	0.135	0.147	0.140	0.138	0.134	0.054	0.057
Market-to-Book Ratio	$(M/B)_{i,t}$	2.082	1.890	1.880	1.847	1.593	2.006	1.512	1.881	1.834
Size (Logarithm of Total Assets)	$\log A_{i,t}$	6.734	6.834	7.069	7.402	7.416	6.648	7.353	4.231	4.295
Firm Age	$Age_{i,t}$	18.291	21.130	25.968	31.643	33.198	17.726	32.361	11.002	11.878
Cash Dividends	$DIV_{i,t}$	0.012	0.011	0.014	0.017	0.016	0.012	0.017	0.009	0.009
Investments	$I_{i,t}$	0.078	0.076	0.075	0.077	0.074	0.079	0.072	0.115	0.080
Change in working capital	$\Delta W_{i,t}$	0.014	0.014	0.012	0.016	0.013	0.016	0.012	0.012	0.008
Internal cash flow	$CFLOW_{i,t}$	0.098	0.098	0.099	0.110	0.098	0.097	0.097	0.055	0.033
Financial deficit	$DEF_{i,t}$	0.008	0.003	0.002	0.001	0.004	0.011	0.004	0.084	0.065
Net debt issues	$\Delta D_{i,t}$	0.009	0.010	0.008	0.011	0.011	0.009	0.011	0.015	0.008
Net equity issues	$\Delta E_{i,t}$	0.006	0.000	-0.002	-0.005	-0.003	0.006	-0.002	0.080	0.060

Table 3: Financing policy and managerial entrenchment. Estimates of equation (2) by entrenchment index quintiles, using the Fama-McBeth procedure in panel A; random year and industry effects with corrections for AR(1) autocorrelation and with Huber/White heteroscedasticity-robust standard errors in panel B; and fixed firm and year effects in panel C. I report the average of the effects as the intercept in panel B. The equation $\Delta D_{it} = a + bDEF_{it} + e_{it}$, is estimated for each quintile of the entrenchment index with the dependent variable being net debt issuance. Panel A presents the results for the entire sample, panel B presents the results only for the firms in the dictatorship and democracy portfolios defined as in Gompers et al. (2003). Refer to Table 1 for detailed variable definitions. Financing deficit components, equity issuance, and debt issuance are winsorized at 1% on each side of the distribution. Since the entrenchment index is a categorical variable, the quintiles based on it have uneven sizes. Entrenchment quintiles are based on index values as of the beginning of the year. The bottom quintile represents firms with the least-entrenched management ranking. The rank-sum test of equality of means of the top and bottom quintile is presented at the bottom of each panel.

	Entrenchment Quintile (t-1)						
	Panel A: Fama-McBeth Estimates, 1991-2003						
	1 (Low) $G \le 6$	2 $G = \{7,8\}$	3 $G = \{9,10\}$	4 $G = \{11,12\}$	5 (High) $G \ge 13$	Democracy $G \le 5$	Dictatorship $G \ge 14$
Intercept	0.0040	0.0065	0.0050	0.0090	0.0071	0.0026	0.0080
t-stat	(0.51)	(0.79)	(0.53)	(1.19)	(0.72)	(0.29)	(0.61)
Financing Deficit (t)	0.5110	0.6369	0.6301	0.6862	0.7182	0.5355	0.7338
t-stat	(3.09)	(5.56)	(6.78)	(6.60)	(6.25)	(2.55)	(4.54)
Observations (per year)	227	185	174	173	140	106	54
Average R-squared stat	50.0%	59.3%	61.1%	63.7%	70.0%	51.8%	70.5%
T-stat for [5]-[1]					*[3.03]*		*[2.39]*
	Panel B: Random Year and Company Effects with Robust Standard Errors & AR (1) Correlation Correction						
	1 (Low) $G \le 6$	2 $G = \{7,8\}$	3 $G = \{9,10\}$	4 $G = \{11,12\}$	5 (High) $G \ge 13$	Democracy $G \le 5$	Dictatorship $G \ge 14$
Intercept	0.0036	0.0049	0.0035	0.0089	0.0047	0.0019	0.0053
t-stat	(2.57)	(3.63)	(2.49)	(5.46)	(3.36)	(0.98)	(2.32)
Financing Deficit (t)	0.4491	0.611	0.6109	0.658	0.707	0.476	0.7296
t-stat	(8.75)	(14.29)	(14.66)	(14.59)	(13.7)	(5.83)	(14.63)
Observations	2,201	2,328	2,274	1,861	1,277	1,245	584
Chi-squared stat	76.6	204.3	214.8	212.9	187.7	33.9	213.9
T-stat for [5]-[1]					*[3.60]*		*[2.58]*
	Panel C: Fixed Year and Firm Effects						
	1 (Low) $G \le 6$	2 $G = \{7,8\}$	3 $G = \{9,10\}$	4 $G = \{11,12\}$	5 (High) $G \ge 13$	Democracy $G \le 5$	Dictatorship $G \ge 14$
Intercept	0.0029	0.0056	0.0053	0.009	0.0068	0.0005	0.007
t-stat	(2.62)	(5.93)	(6.13)	(10.21)	(6.91)	(0.32)	(4.58)
Financing Deficit (t)	0.5983	0.6813	0.6867	0.7296	0.751	0.6463	0.7634
t-stat	(45.49)	(57.19)	(64.2)	(60.64)	(58.88)	(35.7)	(39.12)
Observations	2,460	2,659	2,767	2,326	1,490	1,375	701
Chi-squared stat	43.6%	54.4%	56.8%	58.7%	69.2%	45.0%	68.7%
T-stat for [5]-[1]					*[7.67]*		*[3.91]*

Table 4: Financing policy and managerial entrenchment: Robustness tests. Regressions of net equity, net debt issuance and change in long term-debt issuance versus financing deficit, entrenchment index, interaction of financing deficit and the entrenchment index, and control variables. The generic equation estimated and shown in this table is $F_{i,t} = \sum_i a_i + \sum_t b_t + cDEF_{i,t} + dG_{i,t-1} + eDEF_{i,t} \times G_{i,t-1} + fX_{i,t} + \varepsilon_{i,t}$, where the dependent variables $F_{i,t}$ are: net equity issues ($\Delta E_{i,t}$), net debt issues ($\Delta D_{i,t}$), and the change in long term debt ($\Delta LD_{i,t}$) and the control variables change in tangibility, $\Delta(PPE/A)_{t-1}$, change in size, $\Delta \log A_{t-1}$, change in profitability, $\Delta(EBITDA/A)_{t-1}$, change in market-to-book, $\Delta(M/B)_{t-1}$, and firm age. Refer to Table 1 for detailed variable definitions. Regressions are performed using fixed year and firm effects (not reported).

	Net Equity Issues		Net Debt Issues		Change in LT Debt	
Variable	(1)	(2)	(3)	(4)	(5)	(6)
Financing Deficit (t)	0.3548	0.3306	0.555	0.5821	0.2585	0.2753
	(23.18)	(21.58)	(32.81)	(34.15)	(9.32)	(9.95)
Entrenchment Index (t-1)	-0.0013	0.0001	0.0011	-0.0004	0.0012	0.0001
	(-2.38)	(0.26)	(1.97)	(-0.69)	(1.25)	(0.05)
Entrenchment Index (t-1)* Financing Deficit (t)	-0.0116	-0.0085	0.0136	0.0104	0.014	0.0132
	(-7.00)	(-5.15)	(7.43)	(5.67)	(4.68)	(4.43)
$\Delta(PPE/A)_{t-1}$		-0.0795		0.0641		0.1955
		(-8.47)		(6.18)		(11.51)
$\Delta \log A_{t-1}$		-0.0022		0.0046		-0.0068
		(-1.47)		(2.59)		(-2.47)
$\Delta(EBITDA/A)_{t-1}$		0.0831		-0.084		-0.0954
		(12.39)		(-11.11)		(-7.79)
$\Delta(M/B)_{t-1}$		0.0031		-0.0029		-0.0035
		(6.61)		(-5.55)		(-4.19)
$Age_{i,t}$		-0.0007		0.0009		0.0005
		(-5.61)		(6.22)		(2.01)
Observations	11,803	11,449	11,702	11,349	12,185	11,877
R-squared stat	35.38%	31.87%	54.38%	53.69%	13.47%	15.62%

Table 5: Levels of leverage and managerial entrenchment. Tabulations of market leverage (panel A) and book leverage (panel B) by size, firm age, and profitability quintiles. Tests for the significance of the difference between the leverage of firms in the first and last entrenchment quintile (and between dictatorship and democracy portfolios) within every size, firm age, and profitability quintile are shown in brackets. Refer to Table 1 for variable definitions.

Panel A: Market leverage tabulation (%)

	Size Rank					Firm IPO Age Rank					Profitability Rank				
Entrenchment Index	1 (Low)	2	3	4	5 (High)	1 (Low)	2	3	4	5 (High)	1 (Low)	2	3	4	5 (High)
1 (Low), $G \leq 6$	30.2	37.3	37.6	42.2	45.6	36.7	34.7	36.5	40.5	46.8	51.0	49.1	39.7	28.9	16.8
2, $G = \{7,8\}$	33.9	37.5	41.3	41.2	46.6	42.2	34.7	38.2	39.4	45.5	52.7	51.3	44.7	32.8	17.7
3, $G = \{9,10\}$	34.8	39.0	44.3	48.8	45.7	38.9	36.0	43.6	45.8	48.5	56.0	52.0	44.3	33.6	19.6
4, $G = \{11,12\}$	36.3	40.2	38.1	43.6	43.2	40.6	34.5	37.3	36.0	45.4	58.0	52.7	46.5	34.3	22.2
5 (High), $G \geq 13$	40.1	40.5	43.0	46.7	47.0	43.6	37.8	42.8	43.8	49.6	61.7	53.6	46.3	35.6	22.3
t-stat (Quintile 1 - Quintile 5)	*[6.73]*	*[3.03]*	*[4.95]*	*[4.10]*	*[1.43]*	*[5.74]*	*[2.57]*	*[5.73]*	*[3.16]*	*[2.14]*	*[5.56]*	*[3.05]*	*[6.09]*	*[8.87]*	*[10.07]*
Democracy Firms ($G \leq 5$)	30.6	37.6	40.7	41.9	47.5	35.7	37.2	38.9	39.6	46.9	53.7	49.9	38.1	28.7	16.7
Dictatorship Firms ($G \geq 14$)	39.5	44.2	45.5	46.6	47.3	43.5	43.9	42.9	44.5	49.3	63.2	52.3	48.0	35.9	27.0
t-stat (Dictatorship - Democracy):	*[3.63]*	*[2.52]*	*[2.68]*	*[2.69]*	*[0.36]*	*[2.52]*	*[2.16]*	*[2.12]*	*[2.56]*	*[1.41]*	*[3.13]*	*[1.11]*	*[5.79]*	*[5.58]*	*[8.61]*

Panel B: Book leverage tabulation (%)

	Size Rank					Firm IPO Age Rank					Profitability Rank				
Entrenchment Index	1 (Low)	2	3	4	5 (High)	1 (Low)	2	3	4	5 (High)	1 (Low)	2	3	4	5 (High)
1 (Low), $G \leq 6$	41.9	49.3	51.2	55.9	63.2	51.9	47.5	48.7	50.3	59.6	59.3	55.2	50.0	47.4	40.4
2, $G = \{7,8\}$	43.0	49.1	52.6	55.6	63.8	55.2	46.3	51.2	53.0	62.3	57.9	56.9	53.9	51.0	40.8
3, $G = \{9,10\}$	45.4	51.8	58.8	60.7	65.1	52.4	49.5	55.4	59.8	63.5	63.6	59.6	55.9	52.1	47.9
4, $G = \{11,12\}$	47.9	52.2	53.9	61.1	63.1	57.1	49.7	51.1	52.8	62.1	64.2	59.9	58.0	54.3	50.3
5 (High), $G \geq 13$	48.7	51.9	55.2	60.6	65.8	58.4	52.1	53.6	58.0	64.8	67.2	61.0	58.4	54.6	49.3
t-stat (Quintile 1 - Quintile 5)	*[6.05]*	*[2.83]*	*[5.40]*	*[4.42]*	*[2.54]*	*[6.36]*	*[4.59]*	*[4.44]*	*[7.97]*	*[4.46]*	*[5.19]*	*[4.81]*	*[7.72]*	*[7.85]*	*[10.65]*
Democracy Firms ($G \leq 5$)	41.1	50.0	52.4	56.0	63.9	49.0%	49.2%	51.3%	52.3%	58.0%	61.1	56.4	48.5	47.3	37.8
Dictatorship Firms ($G \geq 14$)	48.7	53.9	57.0	61.2	63.6	58.4%	56.8%	53.0%	58.5%	64.0%	68.2	58.4	59.3	54.2	51.8
t-stat (Dictatorship - Democracy):	*[3.20]*	*[0.55]*	*[3.22]*	*[2.29]*	*[0.14]*	*[3.20]*	*[3.20]*	*[1.42]*	*[3.21]*	*[1.97]*	*[2.90]*	*[1.01]*	*[5.99]*	*[4.31]*	*[7.14]*

Table 6: Levels of leverage, changes in leverage and managerial entrenchment. Regressions of book leverage, market leverage, and measures of changes in leverage on the entrenchment index and control variables. Refer to Table 1 for variable definitions. Panel A uses the control variables in Rajan and Zingales (1995). Panel B uses the control variables in Fama and French (2002). All variables are winsorized at the 1% level in both tails. Regressions in both panels use random firm and year effects.

Panel A: Rajan and Zingales (1995) control variables

	$BL_{i,t}$	$ML_{i,t}$	$\Delta L_{1,i,t}$	$\Delta L_{2,i,t}$
Variable	(1)	(2)	(3)	(4)
Entrenchment Index (t-1)	0.0059	0.003	0.0018	0.0008
	(4.98)	(2.95)	(2.40)	(2.20)
$(M/B)_{t-1}$	-0.0024	-0.0300	0.0010	0.0030
	(-1.90)	(-25.93)	(0.90)	(5.50)
$(PPE/A)_{t-1}$	0.041	0.0784	-0.0011	0.0056
	(2.53)	(5.72)	(-0.10)	(1.10)
$(EBITDA/A)_{t-1}$	-0.387	-0.4282	0.3065	0.1210
	(-21.47)	(-26.12)	(18.20)	(14.70)
$\log(A)_{t-1}$	0.0216	0.0398	0.0050	0.0010
	(8.58)	(18.75)	(3.20)	(1.40)
$(D/A)_{t-1}$			-0.0657	-0.0248
			(-7.80)	(-6.10)
Observations	11,907	11,902	5,994	5,994
Chi-squared stat	671.1	2,305.5	521.2	423.6

Panel B: Fama and French (2002) control variables

	$BL_{i,t}$	$ML_{i,t}$	$\Delta L_{1,i,t}$	$\Delta L_{2,i,t}$
Variable	(1)	(2)	(3)	(4)
Entrenchment Index (t-1)	0.0052	0.0031	0.0019	0.0008
	(4.51)	(3.19)	(2.62)	(2.32)
$(M/B)_{t-1}$	-0.0048	-0.0265	0.0028	0.0033
	(-3.75)	(-22.49)	(2.28)	(5.53)
$(ET/A)_{t-1}$	-0.339	-0.3198	0.1633	0.0658
	(-27.96)	(-28.44)	(12.53)	(10.25)
$(Div/BE)_{t-1}$	0.8751	-0.2795	0.2502	0.1404
	(17.71)	(-6.09)	(5.82)	(6.69)
$(Div/ME)_{t-1}$	-0.9228	1.4423	-0.5981	-0.2813
	(-9.00)	(14.91)	(-5.62)	(-5.35)
$(Dp/A)_{t-1}$	0.0346	-0.5399	0.199	0.0902
	(0.43)	(-7.59)	(2.92)	(2.76)
$(RD/A)_{t-1}$	-0.2921	-0.5167	-0.2702	-0.0892
	(-5.80)	(-11.80)	(-7.13)	(-4.93)
$\log(A)_{t-1}$	0.0234	0.0338	0.0036	0.0006
	(9.39)	(16.18)	(2.36)	(0.87)
$(D/A)_{t-1}$			-0.0691	-0.0271
			(-7.73)	(-6.29)
Observations	11,914	11,909	5,990	5,990
Chi-squared stat	1408.1	2832.7	577.8	472.6

Table 7: Levels of leverage, changes in leverage and managerial entrenchment. Regressions of book leverage, market leverage, and measures of changes in leverage on the entrenchment index and control variables. LAW_i is a dummy effect equal to 1 if the firm is incorporated in a state passing anti-takeover law, and zero otherwise. $AFTER_{i,t}$ is a dummy variable that equals 1 for the years *after* the introduction of the SGAT, and zero otherwise. Panel A uses the control variables in Rajan and Zingales (1995). Panel B uses the control variables in Fama and French (2002). All variables are winsorized at the 1% level in both tails. Regressions in both panels use fixed firm and year effects.

Panel A: Rajan and Zingales (1995) control variables

	$BL_{i,t}$	$ML_{i,t}$	$\Delta L_{1,i,t}$	$\Delta L_{2,i,t}$
Variable	All firms	All firms	All firms	All firms
$LAW_i * AFTER_{i,t}$	0.0539	0.0486	0.0079	0.0062
	(22.0)	(25.55)	(1.75)	(2.96)
$(M/B)_{t-1}$	-0.008	-0.0235	-0.0095	-0.0046
	(-7.54)	(-28.32)	(-5.15)	(-5.42)
$(PPE/A)_{t-1}$	0.1216	0.1162	-0.1401	-0.0708
	(9.91)	(12.17)	(-6.09)	(-6.65)
$(EBITDA/A)_{t-1}$	-0.2805	-0.2151	0.0604	0.0319
	(-31.13)	(-30.6)	(3.93)	(4.49)
$\log(A)_{t-1}$	0.0173	0.0648	-0.0083	0.0068
	(6.93)	(33.32)	(-1.73)	(3.07)
$(D/A)_{t-1}$			-0.1997	-0.1458
			(-16.15)	(-25.47)
Observations	31,518	31,396	17,972	17,972
R-squared stat	6.8%	16.1%	3.1%	6.5%

Panel B: Fama and French (2002) control variables

	$BL_{i,t}$	$ML_{i,t}$	$\Delta L_{1,i,t}$	$\Delta L_{2,i,t}$
Variable	All firms	All firms	All firms	All firms
$LAW_i * AFTER_{i,t}$	0.0446	0.0442	0.0109	0.0071
	(18.29)	(23.21)	(2.42)	(3.39)
$(M/B)_{t-1}$	-0.0059	-0.0211	-0.0087	-0.0042
	(-5.52)	(-25.26)	(-4.65)	(-4.84)
$(ET/A)_{t-1}$	-0.2632	-0.1931	0.039	0.0253
	(-34.19)	(-31.93)	(2.85)	(3.98)
$(Div/BE)_{t-1}$	-0.0706	-0.5158	0.2674	-0.0169
	(-0.87)	(-8.18)	(1.73)	(-0.23)
$(Div/ME)_{t-1}$	0.0012	0.9763	-0.5412	-0.0463
	(0.01)	(10.81)	(-2.32)	(-0.43)
$(Dp/A)_{t-1}$	0.7008	0.4508	-0.0291	0.0966
	(12.78)	(10.47)	(-0.28)	(2.03)
$(RD/A)_{t-1}$	-0.0766	-0.1523	-0.4644	-0.0961
	(-1.92)	(-4.85)	(-6.71)	(-2.99)
$\log(A)_{t-1}$	0.0273	0.07	-0.0128	0.0062
	(11.01)	(36.06)	(-2.63)	(2.73)
$(D/A)_{t-1}$			-0.2028	-0.1489
			(-15.8)	(-24.93)
Observations	31,503	31,381	17,956	17,956
R-squared stat	9.79%	18.01%	3.30%	6.16%

Table 8: Cost of debt capital and managerial entrenchment. Regressions of gross underwriting spread and offer yield on the entrenchment index. See Table 1 for detailed variable definitions. Control variables include the log of firm size, book leverage, the return on assets, S&P bond rating, Moody's bond rating, and bond maturity in years. The regressions include random year and industry effects (industry at 3-digit SIC code level) (not reported).

Variable	Gross Underwriting Spread				Offer Yield			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Entrenchment index (t-1)	-0.009	-0.007	-0.008		-0.032	-0.030	-0.031	
	(-2.88)	(-2.18)	(-2.50)		(-3.25)	(-2.96)	(-3.02)	
Lowest entrenchment quintile (t-1)				-0.015				0.164
				(-0.63)				(2.33)
Highest entrenchment quintile (t-1)				-0.073				-0.074
				(-3.02)				(-1.00)
$\log A_{i,t-1}$	0.004	0.010	-0.045	-0.041	-0.249	-0.245	-0.331	-0.331
	(0.44)	(1.12)	(-4.71)	(-4.26)	(-8.77)	(-8.44)	(-11.74)	(-11.69)
$(D/A)_{t-1}$	0.375	0.384	0.819	0.824	0.962	0.973	1.663	1.655
	(5.92)	(6.08)	(12.96)	(13.03)	(4.86)	(4.86)	(8.69)	(8.62)
ROA_{t-1}	-0.733	-0.748	-1.406	-1.360	-2.994	-2.986	-4.237	-4.203
	(-4.67)	(-4.78)	(-8.61)	(-8.30)	(-5.92)	(-5.88)	(-8.49)	(-8.41)
Relative size of proceeds (t)	1.812	1.831	2.213	2.264	2.057	2.052	2.676	2.708
	(11.33)	(11.45)	(13.05)	(13.39)	(4.04)	(4.01)	(5.19)	(5.26)
S&P rating code (t)	0.220				0.353			
	(19.57)				(10.12)			
Moody's rating code (t)		0.214				0.343		
		(19.23)				(9.66)		
Maturity length in years (t)	0.015	0.015	0.014	0.014	0.039	0.039	0.037	0.037
	(22.54)	(22.57)	(19.08)	(19.08)	(16.50)	(16.42)	(15.31)	(15.26)
Observations	2,678	2,678	2,681	2,681	2,696	2,697	2,700	2,700
R-squared stat	38.8%	39.1%	31.4%	31.3%	30.1%	29.7%	26.0%	25.9%

Table 9: Credit ratings and managerial entrenchment. Panel A presents an ordered probit for the S&P long-term issuer credit ratings on the entrenchment index and control variables. The ratings are coded from 1 through 6, with 1 being the lowest credit rating; these correspond to S&P's bond ratings closest to B or below, BB, BBB, A, AA, and AAA. The control variables are profitability, leverage, and log of firm size (all lagged; not shown). The second part of panel A reports the estimates of the ordered probit regression of S&P credit rating on the difference between the dictatorship and democracy dummy, and the same controls. Panel B reports an OLS regression of the spread above treasury notes with corresponding maturity of bonds with credit ratings closest to B or below, BB, BBB, A, AA, and AAA. The t-statistics are based on Huber/White heteroscedasticity consistent standard errors. The last row presents the Fama-MacBeth estimates as the estimates of an OLS regression of the individual annual coefficients on a constant. The t-statistics is the t-statistic on the constant in that regression.

	Panel A: Six-way classification of bond ratings				**Panel B:** Ratings spread differences			
	Entrenchment Index (t-1)		Dictatorship (t-1) – Democracy (t-1)		Entrenchment Index (t-1)		Dictatorship (t-1) - Democracy (t-1)	
	Coefficient	T-stat	Coefficient	T-stat	Coefficient	T-stat	Coefficient	T-stat
1991-2003	0.0392	(8.56)	0.1310	(6.46)	-0.0468	(-4.72)	-0.1631	(-3.78)
1991	0.0214	(1.14)	0.0239	(0.29)	-0.1348	(-2.66)	-0.5267	(-2.06)
1992	0.0232	(1.32)	0.02	(0.25)	-0.0772	(-2.61)	-0.288	(-1.95)
1993	0.0117	(0.65)	-0.0164	(-0.20)	-0.0451	(-2.49)	-0.1487	(-1.80)
1994	0.0263	(1.52)	0.0253	(0.33)	-0.0356	(-2.90)	-0.0999	(-1.91)
1995	0.0311	(1.82)	0.0507	(0.66)	-0.0377	(-3.14)	-0.1105	(-2.15)
1996	0.0241	(1.44)	0.0215	(0.28)	-0.0111	(-0.56)	0.004	(0.05)
1997	0.0169	(1.00)	0.0099	(0.13)	-0.0203	(-1.66)	-0.061	(-1.18)
1998	0.0237	(1.42)	0.0184	(0.25)	-0.0267	(-2.10)	-0.0863	(-1.62)
1999	0.0394	(2.70)	0.1923	(2.91)	-0.0226	(-1.11)	-0.1632	(-2.37)
2000	0.0512	(3.35)	0.2234	(3.28)	-0.0349	(-2.80)	-0.1579	(-3.13)
2001	0.0686	(4.42)	0.274	(4.03)	-0.1199	(-3.46)	-0.5092	(-3.57)
2002	0.0691	(4.18)	0.3048	(4.19)	0.0202	(1.14)	0.0782	(1.12)
2003	0.0742	(4.39)	0.3193	(4.72)	-0.1061	(-4.99)	-0.4386	(-5.03)
Least Squares Mean	0.04		0.11		-0.05		-0.19	
Least Squares T-stat	(6.18)		(3.18)		(-3.95)		(-3.63)	

Table 10. Choice of investment risk and managerial entrenchment. The likelihood of related and diversifying mergers by entrenchment. In the left columns, the acquisition count is related to the entrenchment index for the entire sample, and for the sub-samples with diversifying acquisitions, and the sub-sample with focusing acquisitions. A merger is focusing if both acquirer and target belong to the same Fama-French (1997) industry. The results are the coefficient estimates from a Poisson regression including random year and industry effects (not shown). In the right columns, I present coefficient estimates from tobit regressions with fixed year and industry effects (not shown) across the entire sample, and the sample of diversifying acquisitions and synergistic acquisitions.

	Panel A: Acquisition Count			**Panel B:** Acquisition Ratio		
	All Acquisitions	*Diversifying Acquisitions*	*Non-Diversifying Acquisitions*	*All Acquisitions*	*Diversifying Acquisitions*	*Non-Diversifying Acquisitions*
	(1)	(2)	(3)	(4)	(5)	(6)
Entrenchment index$_{t-1}$	0.0067	0.0207	-0.0066	-0.0001	0.004	-0.0081
	(1.65)	(3.59)	(-1.15)	(-0.04)	(2.49)	(-2.99)
$\log A_{i,t-1}$	0.2792	0.3186	0.2399	0.0468	0.0323	0.0562
	(38.39)	(31.29)	(23.02)	(12.85)	(9.95)	(11.11)
ROA_{t-1}	1.5093	1.9423	1.1992	-0.1007	0.0493	-0.1613
	(12.88)	(10.68)	(7.98)	(-3.25)	(1.8)	(-3.98)
$(B/M)_{t-1}$	-0.0001	-0.0002	-0.0001	-0.0023	-0.0013	-0.0026
	(-0.71)	(-0.69)	(-0.25)	(-1.23)	(-0.85)	(-1.05)
Observations	16,040	16,040	16,040	13,806	13,806	13,806
Chi-square stat	1736.2	1151.6	630.5	174.1	122.9	133.7

Appendix Table 1: Components of the Investor Research Responsibility Sub-Indices and Gompers et at. (2003) index. The latter has 24 provisions. These include 22 firm-level provisions and six state laws (four of the laws are equivalent to four of the firm-level provisions). To conserve space, Appendix Table 1 reports solely the six state laws (it does not report the four firm-level provisions which are analogous to the corresponding four laws: anti-greenmail, fair price, supermajority approval for mergers, director duties).

Provisions				
Delay	Protection	Voting	Other	State Laws
Blank Check Preferred Stock	Compensation Plan	Limits to Amend Bylaws	Pension Parachute	Recapture of Profits Laws
Staggered Board	(Director) Indemnification contracts	Limits to Amend Charter	Silver Parachute	Business Combination Laws
Limits to Call Special Meetings	Golden parachute	Cumulative Voting	Poison Pill	Cash Out Laws
Limits for Written Consent	Severance	Secret Ballot		Fair Price Laws
	Director Indemnification	Unequal Voting		Control Share Acquisition Laws
	Director Liability			Director Duties Laws

Appendix Table 2: Alternative proxies for managerial entrenchment. Regressions are as in Table 6 with random industry and year effects. The control variables are included, but not shown here.

	$BL_{i,t}$	$ML_{i,t}$	$\Delta L_{1,i,t}$	$\Delta L_{2,i,t}$
Variable	(1)	(2)	(3)	(4)
Sub-Index "Protection" (t-1)	0.0117	0.005	0.0023	0.001
	(3.32)	(1.80)	(1.96)	(1.70)
Sub-Index Index "Delay" (t-1)	0.0115	0.0046	0.002	0.0011
	(2.58)	(1.37)	(1.57)	(1.71)
Sub-Index Index "State Laws" (t-1)	0.003	0.0019	-0.0014	-0.0007
	(0.85)	(0.66)	(-1.42)	(-1.35)
Sub-Index "Voting" (t-1)	0.0001	0.012	0.0005	0.0004
	(0.02)	(1.98)	(0.22)	(0.40)
Bebchuk et al. Entrenchment Index (t-1)	0.0113	0.0095	0.0009	0.0008
	(3.22)	(3.47)	(0.79)	(1.49)

Appendix Table 3: Alternative proxies for entrenched management and the cost of debt issuance. The results presented in Tables 8 and 9 for various proxies for entrenchment. The regressions include random year and 3-digit SIC code effects.

	Underwriting Spread	Offer Yield	Credit Ratings Spread
Variable	(1)	(2)	(3)
Sub-Index "Protection" (t-1)	-0.0146	-0.0676	-0.084
	(-2.18)	(-3.18)	(-4.03)
Sub-Index Index "Delay" (t-1)	-0.012	-0.0868	0.0001
	(-1.68)	(-4.00)	(0.01)
Sub-Index Index "State Laws" (t-1)	-0.0112	-0.0382	-0.0772
	(-1.59)	(-1.74)	(-3.43)
Sub-Index "Voting" (t-1)	-0.0234	0.0141	0.0473
	(-2.08)	(0.39)	(1.20)
Bebchuk *et al* Entrenchment Index (t-1)	-0.0213	-0.0633	-0.027
	(-3.25)	(-3.13)	(-1.39)