Managerial Entrenchment and Debt Maturity: Theory and Evidence*

Efraim Benmelech
Harvard University and NBER

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Correspondence to: Efraim Benmelech, Department of Economics, Harvard University, Littauer Center, Cambridge, MA 02138. E-mail: effi_benmelech@harvard.edu.

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Abstract

Debt maturity theories have emphasized the role of short-term debt in reducing the agency problem between managers and shareholders. In this paper I argue that the maturity structure choice itself is driven by the same agency problem. I develop a model that endogenizes debt maturity choice by self-interested managers given their private benefits of control and the liquidation value of the project. The manager chooses between financing with short-term or long-term debt. While short-term debt is cheaper since it provides the creditors with the option to redeploy the assets, shrot-term debt can also lead to early liquidation if the project goes awry. The agency problem is driven by the private benefits of control since the manager would prefer to continue the project even when early termination is efficient. The model predicts that entrenched managers will finance with long-term debt to avoid liquidation. I test this prediction using different measures of managerial entrenchment and find that the effect of managerial power on debt maturity is sizeable. My empirical results suggest that entrenchment and managerial private benefits of control are important determinants of debt maturity.

Introduction

This paper studies debt maturity choice by self-interested managers who fear the loss of their private benefits of control. A large capital structure literature emphasizes the role of debt in reducing agency conflicts between managers and shareholders (i.e. Grossman and Hart (1982), Jensen (1986), Stulz (1990), Hart (1995), Hart and Moore (1995)). Some of these theories emphasize the role of *debt maturity* structure, in addition to the level of debt, in mitigating agency problems.[1] These models study the *ex ante* optimal mix of short-term and long-term debt that reduces agency conflicts between managers and shareholders. By holding short-term claims on the project's cash flow, creditors get to decide whether the project continues or not. Short-term debt thus transfers control rights to the hands of the creditors earlier if the manager fails to pay. Hart (1995) uses this intuition to model a situation where the only role of debt is to prevent managers from 'empire-building'. He shows that short-term debt is of primary importance to trigger liquidation, and forcing firms to shrink.

However, as Novaes and Zingales (1995) argue, these theories do not specify who will choose such an optimal capital structure. While emphasizing the role of debt in reducing agency problems between managers and shareholders, the theory ignores that the choice of debt levels and maturity structure themselves are subject to an agency problem. After all, why should a manager pick a maturity structure that limits his discretion?

I study how managerial entrenchment shapes debt maturity structures of corporations. In my model, the manager has private benefits of control he cannot transfer to creditors. The manager chooses between financing with short-term or long-term debt. While short-term debt is cheaper since it provides the creditors with the option to redeploy the assets, shrot-term debt can also lead to early liquidation if the project goes awry. The agency problem is driven by the private benefits of control since the manager would prefer to continue the project even when early termination is efficient. The model predicts that entrenched managers will finance with long-term debt to avoid liquidation. I test this prediction using two different measures of managerial entrenchment and find that the effect of managerial power on debt maturity is sizeable. The first measure is the governance index used by Gompers, Ishii and Metrick (2003) (GIM). I find that after controlling for the known factors that explain debt maturity, moving from the highest decile of shareholder

[1] See for example: Hart (1993), Hart (1995), Hart and Moore (1995, 1998) and Shleifer and Vishny (1992).

rights to lowest decile of shareholder rights, increases the proportion of debt that matures in more than 5 years by 7 percentage points representing an increase of 18.5% relative to the mean. The second measure of managerial entrenchment is whether the firm has a controlling blockholder that holds at least 20% of the firm's equity. I find that a controlling shareholder decreases debt maturity by about 4.4 percentage points, corresponding to a decrease of 10.2% relative to the mean. The results are robust to different specifications that include both year and industry fixed effects.

This paper is related to the literature that analyzes financial decisions from an 'incomplete contracting' perspective, where debt is often analyzed in terms of the allocation of residual control rights over the debt's underlying assets. In particular, the maturity structure can serve as a mechanism to transfer control rights from debtors to creditors, (i.e. Berglöf and von Thadden (1994), Diamond (1991, 2004), Hart and Moore (1994, 1998), Rajan (1992), and Sharpe (1991)). Short-term debt brings the firm to the capital market when the firm needs to roll-over the debt. In contrast, long-term debt does not impose the same refinancing pressure, and thus is less effective in disciplining managers. While short-term debt is effective in transferring control rights it may also lead creditors to liquidate too often. This tension between short-term debt and long-term debt is described in Hart and Moore (1998):

> *We found that a key tension between short-term and long-term debt is the following. On one hand, short-term debt gives the creditor early leverage over the project's return stream, which is good because it can keep total indebtedness low. On the other hand, short-term debt may give too much control to the creditor in certain states and lead to premature liquidation; that is, the creditor may liquidate early because the debtor cannot credibly promise to repay later. In this sense, long-term debt contracts protect the debtor from the creditor.*

The risk of early liquidation and termination of both the project and managerial private benefits of control exaggerates the agency problem of the choice of debt maturity structure. I show that the manager may try to avoid liquidation and loss of control by issuing only long-term debt.

This paper departs from the security design approach to financial contracting, and the efficiency perspective of capital structure. Similar to the entrenchment approach advocated by Novaes and Zingales (1995), I endogenize the *managerial* choice of financing, instead of assuming that a disciplining capital structure will be adopted by the firm. Similar to Diamond (1991), I analyze an

agency driven *managerial* choice of debt maturity. My empirical results suggest that entrenchment and managerial private benefits of control are important determinants of debt maturity.

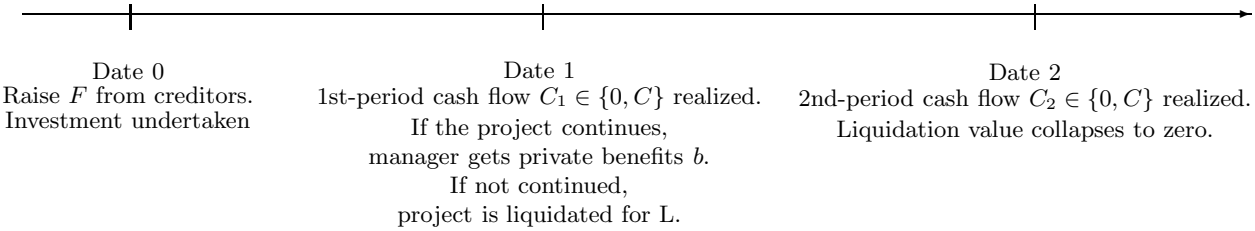
The rest of the paper is organized as follows. The next section presents the model. In Section II, I describe the data and the empirical strategy. Section III presents univariate analysis on the relation between managerial entrenchment and debt maturity. Regression analysis is conducted in Section IV. Section V concludes.

I. The Model

A. Overview

I develop a model in which returns on projects are stochastic but liquidation value is known with certainty. The model focuses on a trade-off between short-term and long-term debt. I assume that there is no private information about the project's returns, and that the manager has private benefits of control he cannot transfer to creditors or shareholders. The agency problem is driven by these private benefits of control since the manager would prefer to continue the project even when early termination is efficient. I study the relation between private benefits, liquidation values and debt maturity in a two-period model in which assets can be liquidated only at the end of the first period. In this case, only short-term debt can be collateralized since the assets collapse at the end of the second period. As a result, uncollateralized long-term debt carries a higher default-risk premium compared to short-term debt. While the manager is interested in his private benefits of control, shareholders are concerned about the higher cost of capital that is associated with inefficient continuation.

B. The Project Timeline and Assumptions



Consider a firm with dispersed ownership that has a profitable investment project, but cannot finance the project from its own funds. The project extends over two periods corresponding to three dates, t=0, 1, 2. In t=0 the firm undertakes the investment for which it has to raise the

amount F from outside investors to finance the project. For simplicity, I consider only standard debt contracts.

There is no private information. At $t = 0$ the manager and the market know that with probability $1 - p$ the project is *bad* and returns 0 in both periods, and with probability p the project is *good* and returns $C > 0$ with probability θ in every period. The project can be liquidated at the end of period 1 to yield $L > 0$ with certainty, where L is known at time 0. The liquidation value of the project at the end of period 2 is zero. At the end of period 1, publicly observable returns are realized. If continued, second period return $C_2 \in \{0, C\}$ is realized at the end of period 2, and the manager gets a private benefit b from continuation.

At the end of the first period, when first period cash flows are realized, both creditors and the manager observe the outcome. I assume that the conditional probability that the project is good given that it returns $C_1 = C > 0$ at the first period is 1: $Pr(good|C_1 = C) = 1$. However, when the first period cash flow is zero, creditors are not certain whether the project is bad and will return zero in the next period as well, or whether the project is good and will return $C > 0$ with some probability at the end of the next period. Since the manager is interested in maximizing his private benefits he prefers continuation rather than liquidation.

The combination of short-term debt and high liquidation value may lead creditors to liquidate at the end of the first period, resulting in the loss of private benefits for the manager. I assume that $Pr(C_2 = C|bad) = 0$, but $Pr(good|C_1 = 0) > 0$. If first period cash flow is zero creditors should continue the project if and only if $Pr(good|C_1 = 0)\theta C > L$. Let $\bar{L} = Pr(good|C_1 = 0)\theta C$. For $L > \bar{L}$, creditors will prefer to liquidate the project and the manager will lose his private benefits.

I analyze the choice of maturity structure by either the manager or the shareholders. By choosing long-term debt the manager avoids liquidation, however long-term debt is more expensive than short-term debt since it does not enable early liquidation. Furthermore, some projects cannot be financed by issuing only long-term debt since their expected cash flows are not high enough. In this case the manager is being 'forced' to issue only short-term debt. In my analysis I focus on projects that are profitable *enough* that they can be financed solely by long-term debt. I make the following assumptions:

Assumption 1. *Self financing is not feasible at both dates 0 and 1, and only debt financing is available.*

Assumption 1 implies that the firm has to finance the project by issuing debt, and that there are no internal funds or external finance from outside shareholders to repay the debt at the end of the first period beside the cash flows that the project generates. The firm thus cannot avoid liquidation by drawing on retained earning or outside equity.

Assumption 2. $Pr(good|C_1 = C) = 1$.

Assumption 3. $\theta C > L$.

Assumptions 2 & 3 together imply that $Pr(good|C_1 = C)\theta C = \theta C > L$. It is efficient to continue the project when the project returns $C > 0$ in the first period.

Assumption 4. $Pr(good|C_1 = 0)\theta C > 0$.

Assumption 4 implies that the conditional expected return of the project when $C_1 = 0$, is positive and thus if L is small enough, such that $L < Pr(good|0)\theta C$, then it is efficient to roll over the debt.

Assumption 5. $L > \bar{L} = Pr(good|C_1 = 0)\theta C$.

Assumption 5 sets L high enough such that creditors should always liquidate when $C_1 = 0$, since the liquidation value exceeds the expected 'going concern' value of the project.

Assumption 6. $L \leq F$.

The liquidation value is assumed to be lower or equal to the investment cost, by high liquidation value I mean that $(F - L)$ is low. The idea behind this assumption is that sunk costs associated with installing the asset in place cannot be recovered by the creditor when he chooses to liquidate.

C. Short-Term and Long-Term Debt Contracts

Let β_{C_1} be the probability of refinancing at the end of period 1, where $\beta_{(C_1=C)} = 1$, and $\beta_{(C_1=0)} \leq \beta_{(C_1=C)}$. If private benefits of control are not transferable then $L > \bar{L}$, implies $\beta_0 = 0$, since short-term creditors will not roll over the debt. Let R_1 and R_2 be the face value of the debt, to be paid at the end of periods 1 and 2, respectively. Similar to the literature, I normalize the risk-free interest rate to zero, and assume competitive credit markets. Under these conditions the creditors' break even constraint is satisfied with equality:

$$p\{\theta[R_1 + \theta R_2] + (1 - \theta)[L(1 - \beta_0) + \beta_0(\theta R_2)]\} + (1 - p)(L(1 - \beta_0)) - F = 0 \tag{1}$$

C.1 Short-Term Debt Contract

The creditors' break even constraint in the case of a short-term debt contract is:

$$p\{\theta R_1 + (1-\theta)[L(1-\beta_0) + \beta_0(\theta R_{1,2}(0)]\} + (1-p)(L(1-\beta_0)) - F = 0 \tag{2}$$

Where $R_{1,2}(0)$ represents the maximum amount that the firm can borrow at the end of the first period conditional on $C_1 = 0$. Clearly the firm cannot pledge more than the expected payoff at the end of period 2. Thus, $R_{1,2}(0) \leq Pr(good|C_1 = 0)\theta C$. Using Assumption 5, since $L > \bar{L} = Pr(good|C_1 = 0)\theta C$, $\beta_0 = 0$, the creditors will not agree to exchange R_1 for $R_{1,2}(0)$, and short-term debt will be priced according to Equation 3:

$$R_1 = \frac{F - (1-\theta p)L}{p\theta} \tag{3}$$

It is easy to verify that if Assumption 6 holds with equality: $L = F$, then Equation 3 collapses to F, and short-term debt is riskless, since the collateral is valuable enough for the creditor.

C.2 Long-Term Debt Contract

At date 0 the firm sells a long-term claim: R_2. The creditors' break even constraint in the case of only long-term debt is:

$$p[\theta^2 R_2 + (1-\theta)\theta R_2] - F = 0.$$

Solving the creditors' break even constraint for R_2 yields:

$$\frac{F}{p\theta.} \tag{4}$$

The project has no value at the end of the second period, while its value at the end of the first period is $L > 0$. Short-term debt provides the creditors with the option to redeploy the asset while it still retains some value, but long-term debt does not. As a result, short-term debt is cheaper relative to long-term debt:

$$R_1 = \frac{F - (1-\theta p)L}{p\theta} < R_2 = \frac{F}{p\theta}. \tag{5}$$

D. The Basic Trade-Off

Assumptions 2-5 and Equation 5 illustrate the tention between short-term debt and managerial entrenchment. On one hand the project gets liquidated if the manager uses short-term debt and

first period cash flow is zero. On the other hand, the use of short-term debt may increase the *ex-post* value of the project to the shareholders since it transfers control rights from the manager to creditors, and enables efficient liquidation. As a result, the cost of capital is lower when short-term debt is used and shareholders are better off. However, if short-term debt is used when liquidation value is high then the likelihood of liquidation is higher and the manager might lose his private benefits.

High liquidation value is a double-edged sword. It is a plus for the borrower. When liquidation value is high, the manager can pledge a more valuable asset as a collateral and lower his cost of capital. However, high liquidation value also increases the likelihood of early termination and liquidation of the project. While efficient, early liquidation hurts a self-interested manager since he looses his private benefits.

E. The Manager's Problem

In this subsection I present the maximization problem of an entrenched manager who cares only about his private benefits of control. The manager promises to repay R_1 and R_2, and picks a maturity structure that maximizes his utility:

$$U^M = p[\theta b + (1-\theta)\beta_0 b] + (1-p)\beta_0 b$$

such that the creditors' break even constraint in Equation 1 is satisfied. Given the creditors' break even constraint from Equation 2, short-term debt R_1, will be priced according to Equation 3. If the manager finances only with short-term debt, his expected utility (denoted by U_S^M) is:

$$U_S^M = p\theta b$$

If the manager finances only with long-term debt R_2, then the creditors' break even constraint is:

$$p[\theta^2 R_2 + (1-\theta)\theta R_2] - F = 0$$

Solving the creditors' break even constraint for R_2 yields $\frac{F}{p\theta}$. The manager's expected utility (denoted by U_L^M) is:

$$U_L^M = p\{\theta b + (1-\theta)b\} + (1-p)b$$

Which can be expressed as:

$$U_L^M = b,$$

Since $p, \theta \in (0,1)$, $U_L^M = b > U_S^M = p\theta b$ which leads to Proposition 1:

Proposition 1. *An entrenched manager will always prefer to finance with long-term debt.*

F. The Shareholders Problem

I now turn to present the maximization problem of the shareholders who hold the residual claim on the cash flow from the project. If the shareholders had control rights they would have picked a maturity structure that maximizes their utility:

$$U^{SH} = p\{\theta[(C - R_1) + \theta(C - R_2)] + (1-\theta)\beta_0[\theta(C - R_2)]\}$$

such that the creditors' break even constraint in Equation 1 is satisfied.
Short-term debt R_1, will be priced according to Equation 3. and if the shareholders will finance only with short-term debt, their expected utility (denoted by U_S^{SH}) is:

$$U_S^{SH} = p\theta[(1+\theta)C - R_1]$$

Which can be rewritten as:

$$U_S^{SH} = p\theta(1+\theta)C - F + (1-\theta p)L$$

If shareholders finance only with long-term debt their expected utility (denoted by U_L^{SH}) is:

$$U_L^{SH} = p\{\theta[(C + \theta(C - \frac{F}{p\theta})] + (1-\theta)[\theta(C - \frac{F}{p\theta})]\} \tag{6}$$

Which can be expressed as:

$$U_L^{SH} = 2p\theta C - F,$$

The shareholders will always prefer to use short-term debt as long as $U_S^{SH} > U_L^{SH}$. This implies that:

$$p\theta(1+\theta)C - F + (1-\theta p)L > 2p\theta C - F \tag{7}$$

Proposition 2. *The shareholders will always prefer to finance with short-term debt if* $L > \bar{L} = Pr(good|C_1 = 0)\theta C$.

Proof. $U_S^{SH} > U_L^{SH} > 0$ implies that $L > \frac{p(1-\theta)}{1-\theta p}\theta C$, since $Pr(good|C_1 = 0) = \frac{p(1-\theta)}{1-\theta p}$, and $L > Pr(good|C_1 = 0)\theta C$ by assumption 5. □

The intuition behind Proposition 2 is that it is in the interest of the shareholders to have short-term creditors killing inefficient projects at the end of period 1. Even if they do not benefit directly from the liquidation value of the projects since creditors get paid first, they benefit indirectly from a lower cost of capital resulting in a larger expected residual cash flows if the project is good.

G. The Allocation of Control Between Managers and Shareholders and Debt Maturity

The analysis so far assumed that either shareholders or managers have control over the maturity structure. While this assumption is useful in highlighting the conflict of interests between managers and shareholders it seems unrealistic. I now turn to analyze the choice of debt maturity when both managers and shareholders have some control. To simplify this problem I assume that with probability $\alpha \in [0,1]$ the shareholders will get to choose the maturity structure of the debt and with probability $1-\alpha$ the manager picks debt maturity. It is useful to think about α as a proxy for the power of the shareholders. When $\alpha = 1$ shareholders control the firm and when $\alpha = 0$ the manager controls the firm. The expected weighted utility of both the manager and the shareholders is given by:

$$U = p\{\theta[\alpha(C-R_1)+(1-\alpha)b+\theta\alpha(C-R_2)]+(1-\theta)\beta_0[(1-\alpha)b+\theta\alpha(C-R_2)]\} \\ +(1-p)\beta_0(1-\alpha)b \qquad (8)$$

Comparing the weighted utility when the project is financed with either short-term or long-term debt, such that the creditors' break even constraint in Equation 1 is satisfied, reveals that it is efficient to finance with short-term debt if:

$$\alpha > \alpha^* = \frac{b(1-\theta p)}{b(1-\theta p)+(1-\theta p)L-\theta Cp(1-\theta)} \qquad (9)$$

It is easy to verify that $\alpha^* \in (0,1)$ since by Assumption 5: $L > Pr(good|C_1=0)\theta C = \theta C\frac{p(1-\theta)}{(1-\theta p)}$, which implies that $(1-\theta p)L > \theta Cp(1-\theta)$.

Proposition 3. *The threshold probability α^* for which short-term debt is preferred is:*

a) Increasing in the private benefits of the manager,

b) Decreasing in the liquidation value of the project.

Proposition 3a holds since by Assumption 5 $\frac{\partial \alpha^*}{\partial b} > 0$. This result is straightforward since it is more efficient to finance with long-term debt when managerial private benefits are higher. Proposition

3b follows directly from the fact that $\frac{\partial \alpha^*}{\partial L} < 0$, and it suggests that if liquidation value is high, the lower cost of capital leads to short-term borrowing even for lower levels of shareholders power. The intuition is that when liquidation value are high, collateralized short-term debt is much cheaper relative to long-term debt. Thus, it is efficient to use short-term debt when liquidation value is high even when shareholders have a lower share of the overall value of the firm.

II. Data and Empirical Strategy

I in this section I describe the data sources used in the paper, the characteristics of the maturity structure of the firms in the sample, and the proxies for managerial entrenchment.

A. Data Sources

To study the relation between managerial entrenchment and debt maturity, I obtain several samples of firms with available data from Compustat Annual Industrial Files, the Investor Responsibility Research Center (IRRC), WRDS blockholders database, and Standard and Poor's ExecuComp Databases.

Compustat reports the amount of long-term debt which is payable in more than one year through more than five years from the firm's fiscal year end. To measure the maturity structure of a firm's debt. I use the percentage of total debt (long-term debt plus debt in current liabilities), that has a maturity of more than three, four, or five years. My approach is similar to Titman and Wessels' (1988) measure (the proportion of short-term debt as a measure of debt maturity), Barclay and Smith (1995), Datta, Iskandar-Datta and Raman (2006), and Johnson (2003), (the proportion of short-term debt with maturities exceeding three years). In my analysis I also control for the known factors that affect capital structure and debt maturity: firm size, market to book, profitability, tangibility, asset maturity, long-term credit rating indicator, and an investment grade credit rating indicator.

My proxies for the level of entrenchment of the manager come from three different sources. The first source is the Investor Responsibility Research Center (IRRC) Governance database, which publishes detailed listings of corporate governance and anti takeover provisions for individual firms. The second source is the WRDS blockholders database used by Dlugosz, Fahlenbrach, Gompers and Metrick (2004). The third source is Standard and Poor's ExecuComp. Since each of these databases is being used to construct different measures of managerial entrenchment, matching Compustat to

each of these sources result in standalone samples with different samples size that are between 3,309 and 9,144 firm-year observations. Appendix A provides detailed definitions of the variables used in the paper.

B. Debt Maturity Structure

Table 1 reports descriptive statistics on debt maturity for a sample that matches financial data from Compustat to the IRRC anti takeover provisions database. The sample consists of 4,403 firm-year observations representing 1,459 unique firms. Since the IRRC database contains information only for selected years, the sample includes the years 1990, 1993, 1995, 1998, 2000 and 2002. Similar to Barclay and Smith (1995), the table reports the distribution of debt maturity in more than one through more than five years. On average 76.2% of the debt matures in more than one year, 61.1% in more than three years, and 44.4% in more than five years. The distribution of debt maturity structure is very similar to the results documented by Datta, Iskandar-Datta and Raman (2006) for the years 1992-1999.

C. Measures of Managerial Entrenchment

Similar to Berger, Ofek and Yermack (1997) I assume that entrenched managers do not experience discipline from: "the full range of corporate governance and control mechanisms, including monitoring by the board, the threat of dismissal or takeover." Entrenched managers, thus experience less pressures from internal and external corporate governance mechanisms. I use two different measures of managerial entrenchment. The first measure is the governance index used by Gompers, Ishii and Metrick (2003) (GIM). The GIM index is constructed using data from the IRRC Governance database: the index adds one point for every provision that restricts shareholder rights and thus increases managerial power. The GIM index measures the ability of managers to restrict different types of shareholder activism. There are 24 unique provisions the index. Firms with a GIM index smaller or equal to 5 are considered to be firms with high level of shareholder activism (democracies), while firms with a GIM larger or equal to 14 are firms with high level of managerial power (dictatorships). Detailed documentation of the IRRC database and description of the GIM index is available in Gompers, Ishii and Metrick (2003).

The second measure is whether the firm has a controlling blockholder that hold at least 20%

of the firm's equity.[2] Large shareholders are thought to be an effective governance mechanism of monitoring managers (Shleifer and Vishny 1986), and are an intuitive measure of shareholder activism. To obtain data on controlling blockholders I use the WRDS blockholders database used by Dlugosz, Fahlenbrach, Gompers and Metric (2004). The blockholders data is available for the years 1996 to 2001.

As the 'control-rights' approach to debt maturity suggests (Diamnond 1991, 2004 and Hart and Moore 1994, 1995) short-term debt serves as a governance mechanism - since creditors are less likely to roll-over the debt when firm performance is weak. In contrast, long-term debt insulates the manager from credit markets pressures in the short-run. It seems reasonable that an entrenched manager who is being insulated from the market for corporate control or from internal pressures will also seek to insulate himself from credit market pressures by using long-term debt.

III. Univariate Analysis

Panel A of Table 2 provides summary statistics of the GIM index for a sample constructed by matching the IRRC data for industrial firms (SIC codes 2000 to 5999) with available information on debt maturity and the control variables in Compustat. The sample spans the years 1990, 1993, 1995, 1998, 2000, and 2002 with 4,403 firm-year observations representing 1,457 firms. Panel A also reports the frequency of the GIM index by, year and sub-groups of the index. I use the same partition of deciles as in Gompers, Ishii and Metrick (2003). The number of firms in every year in the sample is smaller than the frequency reported by Gompers, Ishii and Metrick (2003), since data on debt maturity is not available for all firms in Compustat. However, the summary statistics are almost identical to those in Gompers, Ishii and Metrick (2003), suggesting that matching the IRRC data to firms with available information on debt maturity does not lead to a selection bias in the GIM index.

Panel B of Table 2 compares the proportion of long-term debt between the extreme deciles: dictatorships: firms with the weakest shareholder rights ($G \geq 14$), and democracies: firms with the strongest shareholder rights ($G \leq 5$). Panel B reports the mean (median) percentage of debt maturing in more than three, four, and five years, for firms in the weakest and strongest shareholder rights, respectively. The mean [median] percentage of long-term debt, as well as $t-statistics$ for a

[2]For robustness I also use blockholders that hold 10%, 15%, 25% or 50%. The results are not sensitive to the alternative definitions.

two-sample equal means test, [$z-values$ for a Wilcoxon rank-sum of equal population medians], are provided for each of the years in the sample and for the entire sample. As Table 2 documents, firms in the decile of the weakest shareholder rights have higher proportion of long-term debt than firms in the decile of the strongest shareholder rights. The average mean long-term debt (maturing in more than 3 years) of firms classified as dictatorships is 11.1 percentage points higher than the mean of 'democratic' firms and is significant at the 1% level. This increase is also economically meaningful and represents an increase of 20.2% from the mean of firms with the strongest shareholder rights. The difference between firms with the weakest shareholder rights and firms with the strongest shareholder rights is even larger for long-term debt that matures in more than 4 or 5 years. Moving from 'democracies' to 'dictatorships' increases the mean long-term debt that matures in more than 4 and 5 years by 13.2 and 12.9 percentage points, representing an increase of 29.0% and 34.2%, respectively. As before, the difference in the means of both long-term debt that matures in more than 4 or 5 years is statistically is significant at the 1% level. Panel B of Table 2 also demonstrates that the effect is not driven by outliers as can be seen from the large and significant differences between the medians of long-term debt of firms in the highest and lowest deciles of shareholder rights. Finally Panel B also shows that the difference in the means/medians is significant for most of the years in the sample.

Panel A of Table 3 provides summary statistics on the distribution of firms that have a large controlling shareholder. Concentrated ownership of blockholders can mitigate the collective action problem of disperse ownership. The existence of a large shareholder who has an interest in monitoring the firm and power to replace management reduces the level of managerial entrenchment. I use a dummy variable that takes the value of one and zero otherwise, if the firm has a controlling blockholder that holds at least 20% of the firm's equity as an inverse proxy for managerial entrenchment. The WRDS blockholders database is available for the years 1996 to 2001, with 3,375 firm-year observations representing 1,060 firms. There is a 20% controlling blockholder in 51% pf the firms in the sample.

Panel B of Table 3 compares proportion of long-term debt for firms with and without a 20% controlling blockholder. Panel B reports the mean (median) percentage of debt maturing in more than three, four, and five years, respectively. Panel B also reports $t-statistics$ for a two-sample equal means test, [$z-values$ for a Wilcoxon rank-sum of equal population medians], between firms with and without a 20% controlling blockholder. As Table 3 documents, firms with a controlling

blockholder have statistically significant shorter-term debt. As before the effect is considerably large; for example, the percentage of debt maturing in more than 5 years in firms with a controlling blockholder is about 3 percentage points lower than firms without a controlling blockholder, representing a decrease of 9.3% relative to the mean. Similar to the results in Table 2, Panel B of Table 3 also shows that the difference in the means/medians is significant for most of the years in the sample.

IV. Regression Analysis

According to my model it is more efficient to finance with long-term debt when managerial private benefits are higher:

$$\frac{Long\,term\,debt}{Total\,debt} = \psi(b)$$

Where $\psi(b)$=1 if $\alpha > \alpha^*$ and zero otherwise, and the ratio of long-term debt to total debt can take the values of zero or one. Since private benefits of control are typically unobservable I conduct my analysis using proxies for managerial entrenchment. Furthermore, firms do not choose to finance with either only short-term or long-term debt but usually use some mix of short and long-term debt. In my empirical strategy I test whether proxies for entrenchment are correlated with more long-term debt as a fraction of total debt. The baseline regression in this case is:

$$\frac{Long\,term\,debt_{it}}{Total\,debt_{it}} = \beta \times Entrenchment_{it} + X'\Gamma + \epsilon_{it} \tag{10}$$

Where X' is a vector of control variables that affect debt maturity for reasons that are different than managerial entrenchment. The model predicts that $\beta > 0$.

To estimate Equation 10, I regress the proportion of debt that matures in more than three, four or five years on proxies for managerial entrenchment and control variables. I control for size, market to book, profitability, tangibility, asset maturity, credit rating dummy, and investment grade dummy. Size, market to book, profitability, and tangibility have been documented to be the most important determinants of capital structure and debt maturity.[3] Moreover, Barclay and Smith (1995), Benmelech (2005), and Guedes and Opler (1996) have found that a proxy for asset maturity is an important determinant of debt maturity and consistent with the theory (Myers (1977) and Hart and Moore (1994)), longer lived assets support longer term debt. I also include

[3]See Barclay and Smith (1995), Harris and Raviv (1991), and Rajan and Zingales (1995).

credit rating and an investment grade rating since debt rating affects the access that firms have to the long-term bond market (Faulkender and Petersen (2006)). Similar to Barclay and Smith (1995) I do not include leverage as a control in my baseline specification. However, my results are robust to a two-stages estimation where the predicted values of leverage from the first stage are used to explain maturity in the second stage. For brevity, I will focus my analysis on the relation between managerial entrenchment and debt maturity. The role that the control variables play in determining capital structure and debt maturity has been studied previously by Barclay and Smith (1995), Faulkender and Petersen (2006), Guedes and Opler (1996), Johnson (2003), and Rajan and Zingales (1995).

A. Shareholder-Rights and Debt Maturity

Table 4 reports the results from running OLS pooled regressions of debt maturity on the control variables and the GIM index as a proxy for managerial entrenchment. I estimate the regressions for 3 different definitions of long-term debt: the proportion of debt maturing in more than three (first column), four (second column) and five years (third column). The last three columns of Table 4 also include year fixed effects to address general time-series variation in maturity structure (that may be caused by the shape of the yield curve for example), and 4-digit SIC code industry fixed-effects. Since there is almost no variation during the period 1990-2002 in the GIM index at the firm level firm fixed-effects cannot be identified. All the regressions include an intercept which is not reported, and standard errors are clustered by firm to address potential within-firm serial correlation of the error term. After controlling for size, market to book, tangibility, profitability, asset maturity, credit rating dummy, and an investment grade dummy, the GIM index is positive and statistically significant, suggesting that powerful managers (high score in the GIM index) use higher proportion of long-term debt. The coefficient of the GIM index β is higher for debt that matures in more than 4 years (0.005) compared to debt maturing in more than 3 years (0.004). Likewise β is higher for debt maturing in more than 5 years (0.006) compared to debt that matures in more than 4 years (0.005). Similar to the results in the univariate analysis in Table 2, the effect of managerial power on debt maturity is sizeable. For example, moving from the highest decile of shareholder rights to lowest decile of shareholder rights, increases the proportion of debt that matures in more than 5 years by 7 percentage points representing an increase of 18.5%. After adding year and firm fixed-effects, the relation between managerial power and debt maturity is still

statistically significant and its economic significance is even higher for debt that matures in more than 3 or 4 years. For example, moving from the highest decile of shareholder rights to lowest decile of shareholder rights increases the proportion of debt that matures in more than 4 years by 7 percentage points representing an increase of 15.4% relative to the mean. The GIM index is significant at the 1% level for debt that matures in more than 4 or 5 years. Furthermore, as before the coefficient of the GIM index β is higher for debt that matures in more than 4 years (0.007) compared to debt maturing in more than 3 years (0.005), and is the same for debt maturing in more than 5 years and debt that matures in more than 4 years.

Table 5 adds leverage to the base line specification that relates debt maturity to the GIM index and control variables. Since leverage is obviously endogenous, the regressions in Table 5 estimate instrumental variables regressions using two-stage least squares (2SLS). Johnson (2003) and Datta, Iskandar-Datta and Raman (2006) used a 2SLS estimation procedure in which they exclude tangibility and profitability from the maturity regression, and exclude asset maturity from the leverage regression. Yet, it is not clear that omitting profitability and tangibility meets the exclusion restriction for debt maturity and that excluding asset maturity meets the exclusion restriction for leverage. According to the theory profitability is potentially correlated with debt maturity if current profitability is related to growth opportunities (Diamond (1991)). Likewise, since tangibility and asset maturity are highly correlated, they affect both leverage and debt maturity. While there is no 'natural instrument' that drives leverage but not maturity, profitability is among the strongest determinants of leverage (Rajan and Zingales (1995)), but is either not correlated or only weakly correlated with debt maturity.[4] I estimate the following 2SLS regressions:

$$\frac{Long\,term\,debt_{it}}{Total\,debt_{it}} = \beta \times Entrenchment_{it} + \gamma \times Leverage_{it} + X'\Gamma + \epsilon_{it}$$

and

$$Leverage_{it} = \delta \times Entrenchment_{it} + \psi \times Profitability_{it} + X'\Lambda + \psi_{it}$$

The equation with *Leverage* as the dependent variable is the first stage, and it includes profitability that is excluded from the debt maturity regression.

Table 5 presents the results of the second stage in which debt maturity is the dependent variable. As before, I estimate the regressions with and without year and industry fixed effects for 3 different

[4]Both the conditional and unconditional correlation of profitability and debt maturity in my sample are either insignificant, or only marginally significant.

definitions of long-term debt: the proportion of debt maturing in more than three, four and five years. The regressions include an intercept which is not reported, and standard errors are clustered by firm to address potential within-firm serial correlation of the error term. After controlling for the endogeneity of leverage in addition to size, market to book, tangibility, profitability, asset maturity, credit rating dummy, and an investment grade dummy, the coefficients of the GIM index become slightly stronger economically and statistically.

Another concern is the potential endogeneity of the GIM index. Since firms adopted takeover defenses and other restriction of shareholders rights as a reaction to the hostile-takeover wave of the 1980s, it is possible that a takeover threat drives both the GIM index and debt maturity, where risky debt is used as an anti-takeover defense (Billett (1996)). It is important to note that the takeover argument is consistent with the intuition that long-term debt can be used to insulate the manager from the pressure of the market for corporate control. However, since the hostile-takeover wave ended during the early 1990s (Holmstrom and Kaplan (2001)), I estimate the regressions in Tables 4 & 5 for the years 1995, 1998, 2000, 2002. The results (not reported) on the GIM index remain economically and statistically significant, suggesting that they are not driven by to the hostile-takeover wave of the 1980s.

B. Blockholders and Debt Maturity

I now turn to analyze the relation between having a controlling blockholder and debt maturity. Table 6 presents results from running OLS pooled regressions of debt maturity on the control variables and a dummy variable that equals one if the firm has a controlling blockholder that holds at least 20% of the firm's equity as an inverse proxy for managerial entrenchment. I estimate the regressions for the 3 different definitions of long-term debt. As in Table 4, the last three columns of Table 6 also include year fixed effects and industry fixed-effects.[5] All the regressions include an intercept which is not reported, and standard errors are clustered by firm to address potential within-firm serial correlation of the error term.

Consistent with results in Tables 4 & 5, I find that a controlling shareholder decreases debt maturity by about 4.4 percentage points, corresponding to a decrease of 10.2% relative to the mean. Including year and firm fixed-effects, hardly affects the relation between managerial power

[5] As in the case of the GIM index there is not enough within-firm variation during the period 1996-2001 in the blockholders data set to include firm fixed-effects.

and debt maturity. The coefficients on the blockholder dummy are all statistically significant at the 1% level, and their magnitudes are very similar to their counterparts in the first three columns.

Table 7 reports the results of a second stage in which debt maturity is the dependent variable. As before, leverage is the dependent variable in the first stage which includes profitability that is excluded from the debt maturity regression. Controlling for the endogeneity of leverage in addition to size, market to book, tangibility, profitability, asset maturity, credit rating dummy, and an investment grade dummy, leads to slightly lower coefficients of the blockholder dummy, yet they remain significant both economically and statistically.

C. Managerial Stock Ownership and Debt Maturity

In an influential paper, Berger, Ofek, and Yermack (1997) used managerial stock ownership as a proxy for managerial entrenchment. They show that entrenched managers (proxied by direct stock ownership, vested option holdings, CEO tenure, board composition, excess compensation, and the presence of a blockholder) use less debt in their capital structure, consistent with entrenchment models of leverage. In a recent paper, Datta, Iskandar-Datta and Raman study the link between managerial stock ownership and debt maturity, and find that managers who own more stock use more short-term debt. According to Datta, Iskandar-Datta and Raman (2006), high managerial stock ownership aligns manager-shareholder interest leading to the use of short-term debt. While theoretically, managerial ownership may work to solve the agency problem, there is a body of empirical literature that questions the empirical validity of the relation between pay and performance. For example, Jensen and Murphy (1990), and Murphy (1999) have found that the sensitivity of pay for performance is low (between 0.325% and 0.6%) and that a large gap between the interests of managers and shareholders remains even when managers hold substantial stock ownership. While there is some evidence for the 1970s and 1980s that managers who own more equity tend to generate more shareholder value (e.g. McConnel and Servaes (1990) and Morck, Shleifer and Vishny (1988)), there is also evidence that option plans are not always value maximizing (e.g. Bebchuk and Fried (2004), Habib and Ljungqvist (2006)). Furthermore, managerial stock ownership also makes the manager more powerful and might limit his incentive to use short-term debt. Whether higher managerial stock ownership is associated with short-term debt is an empirical question, however, that is addressed in Table 8.

Similar to Datta, Iskandar-Datta and Raman (2006), I define managerial stock ownership as

the sum of common and restricted stock owned by the top executives of the firm divided by shares outstanding. Matching firms with available information on firm characteristics and debt maturity from Compustat to the ExecuComp database yields a sample of 9,144 observations, representing 1,460 unique firms over the period 1992-2004.

Table 8 reports the results from running OLS pooled regressions of debt maturity on the control variables and managerial ownership. I estimate the regressions for the 3 different definitions of long-term debt with and without year and industry fixed-effects. All the regressions include an intercept which is not reported, and standard errors are clustered by firm to address potential within-firm serial correlation of the error term. The managerial ownership variable, however, is not statistically significant in any of the regressions. While some of the standard errors of managerial ownership are marginally significant before correcting for within-firm serial correlation of the error term, none of them survive clustering by firm. The evidence in Table 8 suggests that the results in Datta, Iskandar-Datta and Raman (2006) are not statistically robust. Shareholders rights and blockholders have been found to be important determinants of debt maturity in a direction that is consistent with the theory. However, managerial stock ownership, while having the right sign in the regressions does not appear to influence the maturity structure in a statistically significant way.

V. Conclusion

I have studied the role of managerial entrenchment in determining the maturity structure of corporate debt. I have analyzed the trade-off that self-interested managers face between lower borrowing costs associated with higher liquidation values and the higher likelihood of involuntary liquidation. Assuming that managers seek to avoid liquidation even at the cost of shareholder's value, I find that entrenched managers are less likely to finance with short-term debt. The marginal effect of managerial entrenchment on debt maturity appears to be large, suggesting that managerial concerns are very important in shaping a firm's debt maturity structure. The results also shed some light on the existing proxies for managerial power and entrenchment. Consistent with studies of managerial power (e.g. Berger, Ofek, and Yermack (1997), Gompers, Ishi, and Metrick (2003), Shielfer and Vishny (1986)), I find that controlling shareholders and provisions that limit shareholder rights perform well as measures of managerial power. However, managerial stock holding as a proxy for

managerial entrenchment does not appear to be an important determinant of debt maturity.

The results in this paper support the entrenchment approach to capital structure. Berger, Ofek, and Yermack (1997) find that leverage levels are lower when CEOs do not face pressure from either ownership, compensation incentives or active monitoring. Furthermore, they find that leverage increases following entrenchment-reducing shocks to managerial security such as unsuccessful tender offers, involuntary CEO replacements, and the addition to the board of major stockholders. Berger, Ofek, and Yermack (1997) conclusions that entrenched managers seek to avoid debt and the findings of Bertrand and Schoar (2003) on the importance of manager fixed effects, are consistent with the empirical evidence provided in this paper. Berger, Ofek, and Yermack (1997) and most of the literature focus on the relation between managerial entrenchment and leverage. My analysis, however, demonstrates that the level of debt is not the only dimension of capital structure that is affected by managerial entrenchment. Self interested managers might not only seek to avoid debt, but they also seem to be reluctant to use short-term debt.

References

Barclay, M. J., and C. W. Smith Jr., "The Maturity Structure of Corporate Debt," *Journal of Finance* 50 (1995) 609-631.

Bebchuk, Lucian A., and Jesse Fried, Pay without Performance: The Unfulfilled Promise of Executive Compensation, Harvard University Press (2004).

Benmelech, Efraim, "Asset Salability and Debt Maturity: Evidence from 19th Century American Railroads," *Working paper, Department of Economics, Harvard University* (2005)

Berger, Philip G., Ofek, Eli, and David L. Yermack, "Managerial Entrenchment and Capital Structure Decisions," *Journal of Finance* 52 (1997) 1411-1438.

Berglöf, Eric, and Ernst-Ludwig von Thadden, "Short-Term versus Long-Term Interests: Capital Structure with Multiple Investors," *Quarterly Journal of Economics* 109 (1994), 1055-1084.

Bertrand, Marianne, and Antoinette Schoar , "Managing with Style: The Effect of of Managers on Corporate Policy," *Quarterly Journal of Economics* 118 (2003), 1169-1208.

Billett, Matthew T., "Targeting Capital Structure: The Relationship Between Risky Debt and the Firms Likelihood of Being Acquired," *Journal of Business*, 69 (1996), 173-192.

Datta, Sudip, Iskandar-Datta, Mai, and Kartik Raman, "Managerial Stock Ownership and the Maturity Structure of Corporate Debt," *Journal of Finance* Forthcoming.

Diamond, Douglas, "Debt Maturity Structure and Liquidity Risk," *Quarterly Journal of Economics*, 106 (1991), 709-737.

Diamond, Douglas W., "Presidential Address, Committing to Commit: Short-term Debt When Enforcement is Costly," *Journal of Finance*, 59 (2004), 1447-1479.

Dlugosz, Jennifer, Rudiger Fahlenbrach, Paul Gompers, and Andrew Metrick, "Large Blocks of Stock: Prevalence, Size, and Measurement," *Working paper, Harvard Business School* (2004)

Faulkender, Michael, and Mitchell Petersen, "Does the Source of Capital Affect Capital Structure?," *Review of Financial Studies*, 19 (2006) 45-69.

Gompers, Paul., Joy L. Ishii, and Andrew Metrick, "Corporate Governance and Equity Prices," *Quarterly Journal of Economics* 118(1) (2003), 107-55.

Guedes, J., and T. Opler, "The Determinants of The Maturity of Corporate Debt Issues," *Journal of Finance*, 51 (1996) 1809-1833.

Grossman, S., and Hart, O., "Corporate Financial Structure and Managerial Incentives," In: J. J. McCall. (Ed.), The Economics of Information and Uncertainty, University of Chicago Press, Chicago: IL, pp. 107-40 (1982).

Habib, Michel A., and Alexander P. Ljungqvist, "Firm Value and Managerial Incentives: A Stochastic Frontier Approach," *Journal of Business* 78 Forthcoming, (2006).

Harris, Milton and Artur Raviv, "The Theory of capital Structure," *Journal of Finance* 46 (1991), 297-355.

Hart, O., "Theories of optimal capital Structure: A Managerial Discretion Perspective," In: Blair, M. (Ed.), The Deal Decade: What Takeovers and Leveraged Buyouts Mean for Corporate Governance, Brookings Institution, Washington: D.C, pp. 19-53 (1993).

Hart, Oliver and John Moore, "A Theory of Debt Based on the Inalienability of Human capital," *Quarterly Journal of Economics* 109 (1994), 841-79.

Hart, O. and J., Moore, "Debt and Seniority: An Analysis of the Role of Hard Claims in Constraining Management," *American Economic Review* 85 (1995) 567-585.

Hart, Oliver and John Moore, "Default and Renegotiation: A Dynamic Model of Debt," *Quarterly Journal of Economics* 113(1) (1998), 1-41.

Holmström Bengt, and Steven N. Kaplan, "Corporate Governance and Merger Activity in the U.S," *Journal of Economic Perspectives* (2001), 121-144.

Jensen, Michael C., "Agency Costs of Free cash Flow, Corporate Finance and Takeovers," *American Economic Review* 76 (1986) 323-339.

Jensen, Michael C., and Kevin J. Murphy, "Performance, Pay and Top-Management Incentives," *Journal of Political Economy* 98 (1990) 225-264.

Johnson, Shane A., "Debt Maturity and the Effects of Growth Opportunities and Liquidity Risk on Leverage," *The Review of Financial Studies* 16 (2003) 203-236.

McConnell, John J., and Henri Servaes, "Additional Evidence on Equity Ownership and Corporate Value," *Journal of Financial Economics* 27 (1990) 595-612.

Morck, Randell, Shleifer, Andrei, and Robert W. Vishny, "Managerial Ownership and Market Valuation," *Journal of Financial Economics* 20(1988), 293-315.

Murphy, Kevin J., "Executive Compensation," In *Handbook of Labor Economics* edited by Orley Ashenfelter and David Card. Vol. 3, bk. 2. New York: Elsevier (1999).

Myers, Stewart C., "Determinants of Corporate Borrowing," *Journal of Financial Economics* 5 (1977) 147-175.

Novaes, Walter, and Luigi Zingales, "Capital Structure Choice When Managers Are in Control: Entrenchment Versus Efficiency," NBER Working Paper 5384 (1995).

Rajan, Raghuram G., "Insiders and Outsiders: The Choice Between Informed and Arm's Length Debt," *Journal of Finance* 47 (1992), 1367-1400.

Rajan, Raghuram G., and Luigi Zingales, "What Do We Know about capital Structure? Some Evidence from International Data," *Journal of Finance* 50 (1995), 1421-60.

Sharpe, Steven A., "Credit Rationing, Concessionary Lending, and Debt Maturity," *Journal of Banking and Finance* 15 (1991), 581-604.

Shleifer, Andrei, and Robert W. Vishny, "Large Shareholders and Corporate Control," *Journal of Political Economy* 94(1986), 461-88.

Stohs, M. H., and D. C., Mauer, "The Determinants of Corporate Debt Maturity Structure," *Journal of Business* 69 (1996) 279-312.

Stulz, R., "Managerial Discretion and Optimal Financing Policies," *Journal of Financial Economics* 26 (1990) 3-27.

Titman, S., and Wessels, R., "The Determinants of Capital Structure Choice," *Journal of Finance* 43 (1988), 1-19.

Appendix A: Variable description and construction

For reference, the following is a list of the variables used in the paper and their sources.

Long-term debt: the percentage of debt that matures in more than 3,4, and 5 years. (source: Compustat).

GIM index: adds one point for every provision that restricts shareholder rights on a scale of 0 to 24. (source: IRRC and Gompers, Ishi, and Metrick (2003)).

Blockholder: A dummy variable that takes the value of one and zero otherwise, if the firm has a controlling blockholder that holds at least 20% of the firm's equity. (source: Compustat blockholders database and Dlugosz, Fahlenbrach, Gompers and Metric (2004))

Managerial stock ownership: The sum of common and restricted stock owned by the top executives of the firm divided by shares outstanding. (source: ExecuComp).

Size: Either the dollar book value or the natural logarithm of the book value of the assets [Compustat Annual Item 6] (Source: Compustat).

Market to Book: The market value of equity [Compustat Annual Items 24*25]+book value of assets [Compustat Annual Item 6] minus the book value of equity [Compustat Annual Items 60] all over the book value of assets [Compustat Annual Item 6] (Source: Compustat).

Profitability: EBITDA [Compustat Annual Item 13] over assets [Compustat Annual Item 6] (Source: Compustat).

Tangibility: The ratio between net fixed assets [Compustat Annual Item 8] and total assets [Compustat Annual Item 6] (Source: Compustat).

Leverage: Total debt [Compustat Annual Items 9+34+84] divided by total assets [Compustat Annual Item 6] (Source: Compustat).

Asset maturity: the value-weighted average of the maturities of current assets [Compustat Annual Items 4/6] and net property, plant, and equipment [Compustat Annual Items 8/6]*[Compustat Annual Items 8/14]. (I set the maturity of current assets to be one year, and the maturity of net property, plant, and equipment is that amount divided by annual depreciation expenses.) (Source: Compustat).

Rating Dummy: A dummy variable that takes the value of one and zero otherwise, if the firm has an S&P Long-Term Domestic Issuer Credit Rating. (Source: Compustat).

Investment Grade Dummy: A dummy variable that takes the value of one and zero otherwise, if the firm's S&P Long-Term Domestic Issuer Credit Rating is BBB+ or higher. (Source: Compustat).

Table 1:
Summary Statistics of Corporate Debt Maturity

This table reports summary statistics for the percentage of total debt maturing: one year, two years, three years, four years and five years, from the fiscal year-end, for a sample of 4,403 firm-year observations during the years 1990, 1993, 1995, 1998, 2000, and 2002.

Percentage of Debt That Matures in More Than	Mean	25th Percentile	Median	75th Percentile	Standard Deviation
One Year	76.20	67.65	85.03	94.94	25.87
Two Years	70.25	57.50	79.22	91.15	27.75
Three Years	61.14	42.91	68.43	82.25	29.40
Four Years	52.61	30.23	57.45	76.04	29.79
Five Years	44.37	18.08	46.70	66.84	29.38

Table 2:
The GIM Index and Debt Maturity

This table provides descriptive statistics on the distribution of the GIM index, and performs t-tests on the difference between debt maturity of firms in the highest and lowest decile shareholder rights. The democracy decile is defined as all firms where $GIM \leq 5$, the dictatorship decile is defined as all firms where $GIM \geq 14$. Panel A presents descriptive statistics of the GIM index for every year in the sample. Panel B performs two-sample means t-test [$z - values$ for a Wilcoxon rank-sum of equal population medians] on the percentage of debt that matures in more than three, four, and five years, across firms in the highest and lowest deciles of shareholder rights.

	1990	1993	1995	1998	2000	2002	Full Sample
GIM Index			**Panel A: The Distribution of the GIM index**				
Minimum	2	2	2	3	2	3	2
Mean	9.1	9.3	9.4	8.9	9.2	9.3	9.2
Median	9	9	9	9	9	9	9
Maximum	17	17	17	18	19	18	19
Standard deviation	2.85	2.86	2.79	2.83	2.70	2.70	2.80
Number of firms							
$G \leq 5$ (Democracy)	71	75	65	106	63	54	434
$G = 6$	65	46	53	70	63	61	358
$G = 7$	88	86	73	85	67	82	481
$G = 8$	80	82	95	102	87	101	547
$G = 9$	72	93	109	112	102	92	580
$G = 10$	94	93	79	96	91	102	555
$G = 11$	78	70	84	87	79	102	509
$G = 12$	61	65	78	62	54	44	364
$G = 13$	39	47	55	51	53	45	290
$G \geq 14$ (Dictatorship)	46	54	51	42	38	54	285
Total	694	720	742	813	697	737	4,403
			Panel B: Debt maturity in Democracy and Dictatorship Firms				
			Percentage of Debt Maturing in more than 3 years				
Democracy	59.95	55.82	58.48	53.03	48.52	53.64	54.88
	[66.03]	[59.32]	[67.42]	[59.47]	[53.07]	[65.75]	[62.68]
Dictatorship	66.67	62.78	71.37	67.80	60.86	65.74	65.99
	[72.12]	[66.72]	[75.30]	[70.09]	[64.71]	[70.32]	[69.76]
Dictatorship - Democracy	6.72	6.96	12.89***	14.77***	12.34**	12.10**	11.11***
	[6.09]	[7.40]	[7.88*]	[10.62**]	[11.64]	[4.57]	[7.08***]
			Percentage of Debt Maturing in more than 4 years				
Democracy	51.19	47.62	51.00	43.56	38.08	41.99	45.61
	[51.08]	[50.33]	[56.11]	[46.52]	[39.20]	[48.07]	[48.56]
Dictatorship	58.95	56.58	63.45	59.96	54.40	58.86	58.83
	[63.22]	[59.45]	[65.21]	[62.69]	[56.28]	[59.92]	[61.50]
Dictatorship - Democracy	7.76	8.96*	12.45**	16.50***	16.31***	16.87***	13.22***
	[12.14]	[9.12*]	[9.1**]	[16.17***]	[17.08**]	[11.85**]	[12.95***]
			Percentage of Debt Maturing in more than 5 years				
Democracy	45.28	41.31	41.21	33.72	31.56	34.23	37.79
	[41.54]	[37.66]	[39.59]	[30.73]	[34.12]	[36.95]	[36.57]
Dictatorship	52.66	50.32	51.61	51.38	43.30	53.29	50.71
	[55.71]	[51.06]	[55.16]	[53.31]	[43.55]	[54.98]	[53.62]
Dictatorship - Democracy	7.38	9.00*	10.41**	17.66***	11.74**	19.06***	12.92***
	[14.17]	[13.40*]	[15.57*]	[22.58***]	[9.43**]	[18.03***]	[17.05***]

*,**,and *** denote significance at the 10, 5, and 1 percent levels, respectively.

Table 3:
Blockholders and Debt Maturity

This table provides descriptive statistics on the distribution of firms that have a large controlling shareholder. Blockholder is a dummy variable that takes the value of one and zero otherwise, if the firm has a controlling blockholder that holds at least 20% of the firm's equity. Panel B performs two-sample means t-test [$z-values$ for a Wilcoxon rank-sum of equal population medians] on the percentage of debt that matures in more than three, four, and five years, across firms with and without blockholder, for a sample of 3,375 firm-year observations during the period 1996-2001.

	1996	1997	1998	1999	2000	2001	Full Sample
Panel A: The Distribution of 20% Blockholder							
Mean	0.62	0.62	0.41	0.59	0.40	0.54	0.51
Median	1	1	1	1	1	1	1
Standard deviation	0.49	0.49	0.49	0.49	0.50	0.50	0.50
Number of firms	426	410	831	507	705	496	3,375
Panel B: Debt maturity in firms with a 20% Blockholder							
Percentage of Debt Maturing in more than 3 years							
No Blockholder	64.56	65.35	64.53	61.58	56.45	60.38	61.64
	[70.85]	[74.79]	[73.20]	[67.43]	[61.83]	[68.30]	[68.45]
Blockholder	61.65	61.18	59.39	56.03	53.98	58.96	58.45
	[68.05]	[67.58]	[67.14]	[62.60]	[58.53]	[64.87]	[65.18]
Difference	2.91	4.17	5.14**	5.56**	2.47	1.43	3.19 ***
	[2.80]	[7.21**]	[6.06***]	[4.83*]	[3.30]	[3.43]	[3.27***]
Percentage of Debt Maturing in more than 4 years							
No Blockholder	56.21	56.48	54.50	50.95	49.35	50.91	52.62
	[58.15]	[62.63]	[59.72]	[54.55]	[52.60]	[53.09]	[55.81]
Blockholder	52.98	52.96	49.83	46.20	44.92	49.67	49.30
	[56.78]	[58.51]	[55.19]	[51.34]	[48.22]	[53.72]	[53.76]
Difference	3.23	3.52	4.67**	4.75**	4.43 **	1.24	3.32 ***
	[1.37]	[4.12]	[4.53**]	[3.21]	[4.38*]	[-0.63]	[2.05***]
Percentage of Debt Maturing in more than 5 years							
No Blockholder	45.32	44.43	45.58	43.55	40.79	39.78	43.19
	[45.45]	[45.76]	[47.39]	[43.33]	[41.34]	[38.78]	[43.56]
Blockholder	43.89	43.99	39.47	38.15	35.66	41.03	40.20
	[44.13]	[46.18]	[40.19]	[38.98]	[36.34]	[43.98]	[41.58]
Difference	1.43	0.45	6.11***	5.39**	5.13**	-1.25	2.99 ***
	[1.32]	[-0.42]	[7.20***]	[4.35**]	[5.00**]	[-5.20]	[1.98***]

*,**,and *** denote significance at the 10, 5, and 1 percent levels, respectively.

Table 4:
Debt Maturity and Managerial Entrenchment

The dependent variable in the regressions is the percentage of debt maturing in either more than three, four and five years. size, market to book, profitability, asset maturity, rating dummy and investment grade dummy are all defined in Appedix A. The GIM Index is the Gompers, Ishii and Metrick (2003) governance index. All regressions include an intercept (not reported). t-statistics are calculated using standard-errors that are clustered by firm and reported in parenthesis.

Depdndent Variable= % of Debt Maturing in more than:	3 years	4 years	5 years	3 years	4 years	5 years
Size	0.028 ***	0.030 ***	0.028 ***	0.015 **	0.020 ***	0.019 ***
	(6.30)	(6.85)	(6.68)	(2.94)	(3.91)	(3.71)
Market to Book	-0.01 ***	-0.021 *	-0.017	-0.020	-0.006	0.007
	(-2.64)	(-1.84)	(-1.58)	(-1.53)	(-0.45)	(0.58)
Profitability	-0.067	-0.121 *	-0.130 **	-0.005	-0.066	-0.095
	(-0.95)	(-1.73)	(-2.04)	(-0.06)	(-0.83)	(-1.33)
Tangibility	0.140 ***	0.135 ***	0.155 ***	-0.009	0.011	0.074
	(3.14)	(2.94)	(3.44)	(-0.17)	(0.19)	(1.33)
Asset Maturity	0.005 ***	0.008 ***	0.009 ***	0.005 ***	0.005 ***	0.004 *
	(3.50)	(4.98)	(5.69)	(2.63)	(2.58)	(1.88)
Rating Dummy	0.080 ***	0.063 ***	0.048 ***	0.091 ***	0.070 ***	0.052 ***
	(5.80)	(4.25)	(3.28)	(6.23)	(4.59)	(3.51)
Investment Grade Dummy	-0.065 ***	-0.039 **	-0.023	-0.056 ***	-0.035 **	-0.018
	(-4.24)	(-2.49)	(-1.44)	(-3.32)	(-2.03)	(-1.05)
GIM Index	0.004 *	0.005 ***	0.006 ***	0.005 **	0.007 ***	0.007 ***
	(1.86)	(2.67)	(2.91)	(2.33)	(3.22)	(3.46)
Year Fixed Effects	No	No	No	Yes	Yes	Yes
Industry Fixed Effects	No	No	No	Yes	Yes	Yes
Adjusted R^2	0.11	0.13	0.14	0.21	0.22	0.23
Observations	4,403	4,403	4,403	4,403	4,403	4,403

*,**,and *** denote significance at the 10, 5, and 1 percent levels, respectively.

Table 5:
2SLS Estimates of the Relation between Debt Maturity and Managerial Entrenchment

The dependent variable in the regressions is the percentage of debt maturing in either more than three, four and five years. size, market to book, profitability, asset maturity, investment dummy and investment grade dummy are all defined in Appedix A. The GIM Index is the Gompers, Ishii and Metrick (2003) governance index. All regressions are a second stage from 2SLS estimation and include an intercept (not reported). *t*-statistics are calculated using standard-errors that are clustered by firm and reported in parenthesis.

Depdndent Variable= % of Debt Maturing in more than:	3 years	4 years	5 years	3 years	4 years	5 years
Leverage instrumented with profitability:						
Leverage	0.167	0.300 *	0.323 **	0.011	0.148	0.214
	(0.99)	(1.83)	(2.11)	(0.06)	(0.85)	(1.34)
Non-instrumented variables						
Size	0.025 ***	0.026 ***	0.024 ***	0.015 **	0.019 ***	0.017 ***
	(5.11)	(5.33)	(5.06)	(2.85)	(3.67)	(3.37)
Market to Book	-0.029 **	-0.018	-0.014	-0.020	-0.007	0.006
	(-2.46)	(-1.58)	(-1.26)	(-1.58)	(-0.54)	(0.53)
Tangibility	0.118 ***	0.096 **	0.113 **	-0.010	0.009	0.071
	(2.60)	(2.03)	(2.42)	(-0.17)	(0.15)	(1.28)
Asset Maturity	0.005 ***	0.008 ***	0.009 ***	0.005 ***	0.005 **	0.004 *
	(3.32)	(4.66)	(5.37)	(2.62)	(2.53)	(1.81)
Rating Dummy	0.071 ***	0.047 ***	0.030 *	0.090 ***	0.062 ***	0.040 **
	(4.56)	(2.85)	(1.91)	(5.32)	(3.64)	(2.48)
Investment Grade Dummy	-0.054 ***	-0.019	-0.011	-0.055 **	-0.023	-0.001
	(-2.80)	(-0.87)	(-0.06)	(-2.46)	(-1.06)	(-0.02)
GIM Index	0.004 **	0.006 ***	0.006 ***	0.005 **	0.007 ***	0.007 ***
	(1.96)	(2.83)	(3.04)	(2.33)	(3.26)	(3.50)
Year Fixed Effects	No	No	No	Yes	Yes	Yes
Industry Fixed Effects	No	No	No	Yes	Yes	Yes
Adjusted R^2	0.15	0.15	0.15	0.26	0.28	0.29
Observations	4,403	4,403	4,403	4,403	4,403	4,403

*,**,and *** denote significance at the 10, 5, and 1 percent levels, respectively.

Table 6:
Debt Maturity and Blockholders

The dependent variable in the regressions is the percentage of debt maturing in either more than three, four and five years. size, market to book, profitability, asset maturity, investment dummy and investment grade dummy are all defined in Appedix A. Blockholder is a dummy variables that equals 1 if a blockholder that hold at least 20% of the shares exists. All regressions include an intercept (not reported). Regressions in Panel B also include 4-digit SIC code industry fixed effects and year fixed effects. t-statistics are calculated using clustered standard-errors and reported in parenthesis.

Depdndent Variable= % of Debt Maturing in more than:	3 years	4 years	5 years	3 years	4 years	5 years
Size	0.024 ***	0.027 ***	0.030 ***	0.018 ***	0.019 ***	0.023 ***
	(4.10)	(4.61)	(5.32)	(2.75)	(2.97)	(3.62)
Market to Book	-0.022 *	-0.013	-0.013	-0.007	0.008	0.003
	(-1.77)	(-1.02)	(-1.14)	(-0.44)	(0.53)	(0.24)
Profitability	-0.092	-0.163 *	-0.187 **	-0.095	-0.104	-0.101
	(-1.08)	(-1.90)	(-2.42)	(-0.93)	(-1.06)	(-1.16)
Tangibility	0.169 ***	0.125 **	0.146 **	0.080	0.016	0.111
	(3.00)	(2.18)	(2.55)	(0.99)	(0.19)	(1.52)
Asset Maturity	0.004 **	0.008 ***	0.008 ***	0.004	0.005 *	0.001
	(2.01)	(3.43)	(3.32)	(1.52)	(1.70)	(0.38)
Rating Dummy	0.099 ***	0.096 ***	0.070 ***	0.099 ***	0.091 ***	0.065 ***
	(5.18)	(4.81)	(3.45)	(4.81)	(4.26)	(3.12)
Investment Grade Dummy	-0.053 ***	-0.035 *	-0.013	-0.044 **	-0.026 **	-0.010
	(-2.98)	(-1.91)	(-0.70)	(-2.16)	(-1.23)	(-0.34)
Blockholder Dummy	-0.043 ***	-0.046 ***	-0.044 ***	-0.042 **	-0.044 ***	-0.044 ***
	(-3.17)	(-3.41)	(-4.40)	(-3.24)	(-3.26)	(-3.33)
Year Fixed Effects	No	No	No	Yes	Yes	Yes
Industry Fixed Effects	No	No	No	Yes	Yes	Yes
Adjusted R^2	0.11	0.12	0.13	0.24	0.24	0.27
Observations	3,309	3,309	3,309	3,309	3,309	3,309

*,**,and *** denote significance at the 10, 5, and 1 percent levels, respectively.

Table 7:
2SLS Estimates of the Relation between Debt Maturity and Blockholders

The dependent variable in the regressions is the percentage of debt maturing in either more than three, four and five years. size, market to book, profitability, asset maturity, investment dummy and investment grade dummy are all defined in Appedix A. Blockholder is a dummy variables that equals 1 if a blockholder that hold at least 20% of the shares exists. All regressions are a second stage from 2SLS estimation and include an intercept (not reported). t-statistics are calculated using standard-errors that are clustered by firm and reported in parenthesis.

Depdndent Variable= % of Debt Maturing in more than:	3 years	4 years	5 years	3 years	4 years	5 years
Leverage instrumented with profitability:						
Leverage	0.266	0.472 **	0.54 **	0.187	0.203	0.205
	(1.17)	(2.13)	(2.55)	(0.83)	(0.95)	(1.06)
Non-instrumented variables						
Size	0.019 ***	0.019 ***	0.022 ***	0.013 *	0.014 **	0.018 ***
	(2.94)	(2.91)	(3.32)	(1.92)	(2.08)	(2.73)
Market to Book	-0.015	0.0002	0.001	-0.006	0.008	0.004
	(-1.05)	(0.02)	(0.10)	(-0.39)	(0.60)	(0.33)
Tangibility	0.146 ***	0.083	0.098 *	0.091	0.028	0.122 *
	(2.59)	(1.43)	(1.67)	(1.14)	(0.35)	(1.68)
Asset Maturity	0.004 *	0.007 ***	0.007 ***	0.005	0.006 *	0.001
	(1.73)	(2.93)	(2.89)	(1.63)	(1.82)	0.47)
Rating Dummy	0.079 ***	0.060 **	0.029	0.086 ***	0.077 ***	0.051 **
	(3.29)	(2.40)	(1.15)	(3.45)	(3.05)	(2.09)
Investment Grade Dummy	-0.039 *	-0.011	0.014	-0.027	-0.008	0.010
	(-1.81)	(-0.48)	(0.62)	(-1.01)	(-0.30)	(0.38)
Blockholder Dummy	-0.034 ***	-0.039 ***	-0.037 **	-0.038 ***	-0.039 ***	-0.040 ***
	(-2.81)	(-2.76)	(-2.53)	(3.45)	(-2.76)	(-2.83)
Year Fixed Effects	No	No	No	Yes	Yes	Yes
Industry Fixed Effects	No	No	No	Yes	Yes	Yes
Adjusted R^2	0.14	0.13	0.11	0.32	0.31	0.34
Observations	3,309	3,309	3,309	3,309	3,309	3,309

*,**,and *** denote significance at the 10, 5, and 1 percent levels, respectively.

Table 8:
Debt Maturity and Managerial Stock Ownership

The dependent variable in the regressions is the percentage of debt maturing in either more than three, four and five years.size, market to book, profitability, asset maturity, investment dummy and investment grade dummy are all defined in Appedix A. Managerial ownership is the sum of common and restricted stock owned by the top executives of the firm divided by shares outstanding. All regressions include an intercept (not reported). t-statistics are calculated using standard-errors that are clustered by firm and reported in parenthesis.

Depdndent Variable= % of Debt Maturing in more than:	3 years	4 years	5 years	3 years	4 years	5 years
Size	0.032 ***	0.034 ***	0.034 ***	0.024 ***	0.026 ***	0.025 ***
	(7.64)	(8.30)	(8.37)	(5.22)	(5.87)	(5.81)
Market to Book	-0.039 ***	-0.031 ***	-0.028 ***	-0.038 ***	-0.026 ***	-0.021 ***
	(4.81)	(-3.94)	(-3.76)	(-4.62)	(-3.42)	(-2.93)
Profitability	-0.068	-0.082	-0.089 *	-0.043	-0.051	-0.047
	(-1.38)	(-1.59)	(-1.81)	(-1.26)	(-1.44)	(-1.50)
Tangibility	0.160 ***	0.135 ***	0.146 **	0.116 **	0.095 *	0.121 **
	(3.89)	(3.25)	(2.55)	(2.25)	(1.83)	(2.44)
Asset Maturity	0.003 **	0.006 ***	0.007 ***	0.003 *	0.003 *	0.001
	(2.33)	(3.95)	(4.45)	(1.74)	(1.65)	(0.80)
Rating Dummy	0.080 ***	0.078 ***	0.056 ***	0.079 ***	0.074 ***	0.049 ***
	(5.99)	(5.69)	(4.02)	(5.89)	(5.44)	(3.61)
Investment Grade Dummy	-0.064 ***	-0.050 *	-0.024	-0.051 **	-0.033 **	-0.010
	(-4.50)	(-3.41)	(-1.57)	(-3.30)	(-2.08)	(-0.39)
Managerial Ownership	-0.001	-0.001	-0.001	-0.0004	-0.0003	-0.0003
	(-1.24)	(-.125)	(-1.60)	(-0.87)	(-0.69)	(-0.63)
Year Fixed Effects	No	No	No	Yes	Yes	Yes
Industry Fixed Effects	No	No	No	Yes	Yes	Yes
Adjusted R^2	0.13	0.14	0.15	0.23	0.25	0.24
Observations	9,144	9,144	9,144	9,144	9,144	9,144

*,**,and *** denote significance at the 10, 5, and 1 percent levels, respectively.