

Firms, Politicians, and Capital Structure

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November 26, 2007

JOB MARKET PAPER

Abstract

The political environment in which a firm operates affects a firm's optimal capital structure. Politicians frequently derive a political benefit from imposing costs on firms. Nevertheless, politicians do not want firms to become financially distressed or enter bankruptcy as this affects their electoral prospects. Firms are therefore able to use debt to limit the impositions placed on them by politicians. As the marginal benefit that accrues to politicians of imposing costs on firms decreases, firms optimally decrease their debt levels. Using U.S. data, I show that large firms lower their debt levels on the order of 15-20% when friendly politicians chair senate committees that are relevant to their industry.

*Myers is a PhD student at the UCLA Anderson School of Management. I would like to thank Antonio Bernardo, John de Figueiredo, Mark Garmaise, Timothy Groseclose, and Francis Longstaff for valuable comments and feedback, seminar participants at the University of California, Los Angeles, and my fellow students for helpful discussions and insight. I welcome any and all comments at brett.myers@anderson.ucla.edu. All errors are my responsibility.

1 Introduction

Politicians are non-financial stakeholders (NFS) in firms. They do not want firms to enter bankruptcy or become financially distressed as this affects their election prospects. In particular, politicians do not want to be seen as harming the economy of their immediate constituency. Nevertheless, politicians frequently derive a political benefit from imposing costs on firms in the form of taxes, regulations, requirements for excess employment, etc. Firms are therefore in a position to use debt strategically. When firms face “hostile” politicians, or those who derive a high marginal political benefit from imposing costs on them, they optimally increase their debt levels in order to discourage politicians from doing so (“hostile” politicians nevertheless do not want firms to go bankrupt). Since the probability of financial distress increases with leverage, firms optimally increase their debt to discourage the implementation of costly regulation. Similarly, in the presence of “friendly” politicians, firms optimally lower their debt levels. I test this possibility by examining the debt policy of large firms whose state Senators chair committees that are “relevant” to the firm, with the idea that senators are more friendly to home state firms than they are to those in other states. I find that firms lower their debt levels when “friendly” politicians chair committees that are important to them.

Politicians are NFS in firms primarily because the state of the economy greatly affects the likelihood of their being elected. Researchers in political science have long documented that voter perception of the economy has a large impact on the electoral prospects of candidates for political office at all levels of government (for a thorough review of this literature, see Lewis-Beck and Stegmaier (2000)). So-called “pocketbook issues” are consistently at the top of the agenda of the typical voter and are a regular feature in determining the outcome of elections.¹ In particular, voter attitudes towards the economy are important in evaluating the reelection prospects of incumbents; citizen dissatisfaction with economic conditions significantly increases the likely percentage of votes that are awarded to challengers. Consequently, the economic health of firms that

¹The impact of economics on voter behavior has been shown to feature prominently in elections internationally as well as domestically, and in both developed and developing countries. For relevant examples involving a cross section of industrialized nations, see Powell and Whitten (1993) and Anderson (2000); for developing countries, see Pacek and Radcliff (1995)

operate among a politicians constituency is of great concern to the politician.

However, at the same time, politicians often exact political benefits from imposing costs on firms. Requiring firms to hire and retain excess labor in order to garner support from unions would be a classic example of this.² Other examples include taxes, health and safety regulations, environmental regulations, product liability rules, corporate accounting rules, etc. For this study, it is not important to determine precisely why politicians derive a political benefit from imposing costs on firms. For instance, these costs may be social-welfare maximizing, as the public-interest theory of regulation would predict (e.g., Feldstein (1972a, 1972b), and Joskow and Noll (1981)).³ Alternatively, they may also arise from what Stigler (1971) termed “the capture theory” in which regulation is primarily advanced by private interest groups seeking to extract rents from the public and/or other interest groups, presumably at a net social cost (see also McChesney (1997) Peltzman (1976, 1989), Becker (1983), and Benmelech and Moskowitz (2006)). Regardless as to which of these theories, if any, are dominant, for the purposes of this paper it is sufficient to note that politicians frequently derive a benefit from enacting policy that increases costs to firms, irrespective of how and why this is the case.

With the above in mind, it is clear that firms are in a position to use debt to credibly threaten financial distress and thereby limit the costs imposed by politicians. If firms optimally raise their debt levels in the presence of “hostile” politicians, then they should lower them in the presence of “friendly” politicians. I test this idea by examining the debt policy of large firms with operational headquarters in a state whose U.S. Senator is the chair of a Senate committee that is important to that firm (e.g., an aerospace firm headquartered in a state whose U.S. Senator chairs the Armed Services committee). Committee chairs are among the most coveted positions in the Senate and possess power and influence far beyond that which is enjoyed by regular committee members in acting within the jurisdiction of the particular committee. Further, Senators presumably derive a lower marginal benefit from imposing costs on home-state firms than they do on out-of-

²See Shleifer and Vishny (1994) for a theoretical treatment of the political benefits that accrue to politicians for imposing costs on firms.

³Though the cost of regulation can be very large indeed. For example, Gray (1987) estimates that 30 percent of the decline in productivity growth in manufacturing during the 1970’s may be attributed to environmental and worker safety regulation enacted during that period.

state firms. *Ceteris paribus*, when a firm has a home-state senator chairing a committee that is important to them, they operate in a more friendly political environment and should lower their debt levels. Using data from 1962-2004 I find that this appears to be the case; when large firms have a home-state Senator chairing a committee that is relevant to them, they lower their debt levels. These results are confirmed with a subsample centered around the 1994 midterm congressional elections in which the control of the Senate unexpectedly changed party hands which changed all Senate committee chairs. In the full sample, debt ratios are reduced on the order of 15% and debt levels are reduced on the order of 20%. The results are economically and statistically significant. The effect is pervasive and appears among nine different committees groups that are relevant to business interests. This effect is limited to large firms whose actions, presumably, are more visible to politicians. The debt levels of smaller firms are unaffected. Further, the effect is larger among firms with lower credit ratings; firms with high credit ratings are farther away from default and less able to used debt to affect their probability of financial distress.

The primary advantage of using Senate data in this way is that it represents an exogenous influence on firms capital structure decisions and is free of the endogeneity issues inherent in other measures of political connectedness (such as campaign finance data). Also, the motivation for politicians to promote home-state economic interests is direct and frequently independent of the professed ideology of the politician (or the politician's political party). This makes the task of identifying whether the interests of politicians and firms are aligned a straightforward one.

A large theoretical literature exists that seeks to understand the role NFS plays in a firms optimal capital structure.⁴ Typical categories of NFS include employees, suppliers, customers, competition, entrants, and governments. The essential idea of the existing literature is that firms can use leverage to change the negotiation power or competitive dynamic of the NFS vis-à-vis the firm. For example, the use of leverage can credibly commit a firm to aggressive behavior in the output market through a limited liability affect (see Brander and Lewis (1986)), change the firms bargaining position with unions

⁴See Titman (1984) and Maksimovic and Titman (1991) for representative examples; see Harris and Raviv (1991) and Franck and Huyghebaert (2004) for surveys

(see Bronars and Deere (1991)), affect the prices allowed by regulators (see Spiefel and Spulber (1994)), or affect employee behavior within the firm (see Bagwell and Zechner (1993)). Empirical work has lagged theory in this area, largely because of a lack of data.⁵ Work that has been performed includes Titman and Wessels (1988), Matsa (2006) and Istaitieh and Rodríguez-Fernández (2003), the latter being among the first to explicitly test stakeholder theory.

More generally, there is a great deal of debate within the literature as to whether or not firms have target debt ratios and, if they do, the speed with which they adjust their debt ratios in response to shocks. Welch (2004) argues that managers appear to be largely indifferent as to their debt ratios and that debt ratios (where market value of equity is in the denominator) are primarily determined by past stock returns. Other studies conclude that firms have target debt ratios and tend to move towards them in response to shocks to their capital structure (see Leary and Roberts (2005), Kayhan and Titman (2005), and Lemmon, Roberts, and Zender (2005)); some conclude that this adjustment is done quickly (see Altı (2004) and Flannery and Rangan (2005)). This study tangentially contributes to this literature by suggesting that firms do adjust their leverage in response changing political circumstances. Approximately 80% of committee chairs have a total tenure of 6 years or less and so it would appear that firms adjust their debt policy well within this time frame.

Numerous studies have shown that the political process impacts the behavior and value of firms in developing countries, countries with weak legal systems, or countries where corruption is widespread. However, recent work has also shown the political process has a large impact on firm values in developed countries with functioning legal systems, including the United States.⁶ This study contributes to the existing literature in that, to the best of my knowledge, it is the first to find evidence that the political process and

⁵See section IV of Franck and Huyghebaert (2004).

⁶Many of these studies focus on the 2000 or 2004 U.S. presidential election and find that the policy preferences of firms are reflected in firm values following the election, see Goldman, Rocholl, and So (2006), Knight (2006), and Cheng (2005) for examples. Ferguson and Witte (2006) find that returns of the DJIA are lower, and volatility is higher, when congress is in session. Santa-Clara and Valkanov (2003) find that returns tend to be higher under Democratic Presidential administrations than under Republican ones. Using U.S. data, Myers (2006) studies the implications of corporate political activity on asset pricing and finds that politically active firms tend to have higher returns. Jayachandran (2006) examines the impact of an unanticipated change in Senate control on asset prices.

political connections also affects the optimal capital structure of a firm, in addition to asset prices.

The remainder of the paper proceeds as follows. Section 2 outlines a theoretical model that captures the key intuition of the relationship that exists between politicians and firms inasmuch as capital structure is concerned. Section 3 contains a discussion of Senators and Senate committees. Section 4 contains empirical testing of the model. Section 5 concludes.

2 A Model

To illustrate the game between firms and politicians, I construct a three period model involving a firm and a politician. In the first period, the firm determines debt policy; debt is issued and the proceeds distributed to shareholders in the form of a dividend (alternatively this can be thought of as a share repurchase, undertaken to change the capital structure of the firm). In the second period, the politician observes the debt policy of the firm and determines a level of costs to impose on the firm, from which the politician derives a political benefit. Restraining the politician is the desire to not increase the probability the firm enters bankruptcy.⁷ In the third period, revenue and a revenue shock are realized and the debt repayed. If the shock is sufficiently low, the firm enters bankruptcy. The general flow of events in the model is illustrated in Figure 1.

In the model, the politician has incentive to capture some firm value for political benefit. Firms, on the other hand, can use debt strategically in order to preserve shareholder wealth. The question I am interested in is this: what happens to the optimal strategic debt policy when the marginal benefit to the politician of imposing costs on the firm changes?

⁷This is similar to the game involving regulators and regulated industries in which regulators fear the financial distress of the firms they regulate, see Owen and Braeutigam (1978) and Spiefel and Spulber (1994).

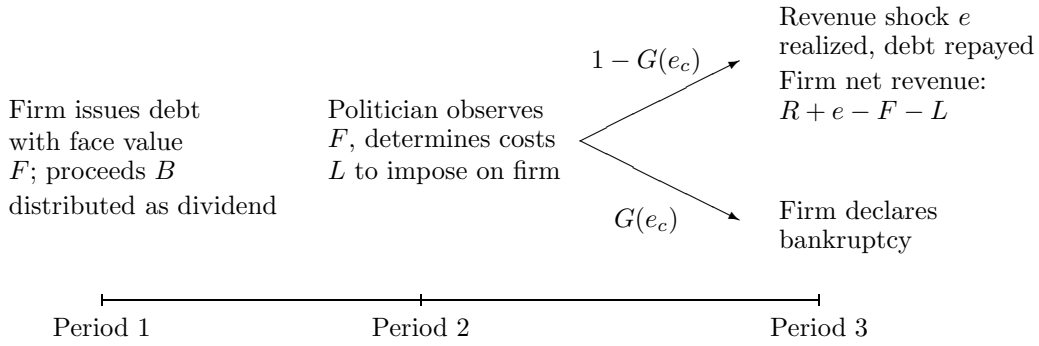


Figure 1. Model timing. The firm chooses to issue debt with face value F in period 1 and the proceeds are distributed to shareholders in as a dividend. The politician chooses to impose costs L on the firm in period 2. The firm may or may not enter bankruptcy in period 3, depending upon the level of the revenue shock e realized in that period. If $e < e_c$ then the firm enters bankruptcy, where $e_c \equiv F + L - R$.

2.1 The Firm

The utility function of the privately owned and controlled firm is given by

$$\begin{aligned}
 U_f &= CF_1 + E[CF_3] \\
 &= D + \int_{e_c}^{\bar{e}} (R + e - L - F) dG(e).
 \end{aligned} \tag{1}$$

I assume that there is no agency problems with management; management acts solely to maximize shareholder value. Here CF_1 is the cash flow to the firm in period 1 and CF_3 is the cash flow to the firm in period 3. We have $CF_1 = D$, the dividend resulting from the debt proceeds, and $E[CF_3] = \int_{e_c}^{\bar{e}} R + e + T - F dG(e)$. The expected revenue R is net of all investment costs, and e is a revenue shock where $e \sim G(e)$ on the support $[\underline{e}, \bar{e}]$ with $E[e] = 0$. In this study I will assume that e is uniformly distributed. L is a cost imposed on the firm by the politician (taxes, regulatory burdens, etc.). The term e_c is the critical value of the shock e for which the firm goes bankrupt, with $e_c \equiv F + L - R$, and so $G(e_c)$ is the probability that the firm enters bankruptcy. The risk free rate is assumed to be zero.

2.1.1 Credit Equilibrium

Credit equilibrium requires that the relationship between the debt proceeds B be related to the face payment F by

$$\begin{aligned} B &= E[\text{Repayment}] \\ &= [1 - G(e_c)]F + \int_{\underline{e}}^{e_c} (R + e - L - \delta F) dG(e) \end{aligned} \quad (2)$$

which implies an interest rate. In the above, the first term is the face payment of the bond multiplied by the probability the firm does not go bankrupt. The second term captures the expected value of the firm in the event of bankruptcy multiplied by the probability that the firm goes bankrupt. The term δF captures the cost of bankruptcy, which increases linearly in face value of the debt.⁸ The linear specification is done for tractability and can be changed to a concave function in F without affecting the results. I assume that $\delta \in (0, 1)$, i.e., bankruptcy is not costless, nor does it exceed the amount loaned by the bank.

Bondholders are protected by limited liability, of course, and this is not explicitly modeled in the above specification. In general we do not see firms taking on negative values and so I assume that \underline{e} is set so as to preclude the possibility of the firm taking a negative value. Alternatively, limited liability can be accounted for in the model (as in Spieffel and Spulber (1994), for instance), though with a loss of tractability.

2.1.2 Firm Utility Function Revisited

In this model I assume that the firm distributes all of the debt proceeds to shareholders in the form of a dividend, so $B = D$. Entering the expression for the credit equilibrium (2) into the utility function of the firm in (1) yields

$$\begin{aligned} U_f &= [1 - G(e_c)]F + \int_{\underline{e}}^{e_c} (R + e - L - \delta F) dG(e) + \int_{e_c}^{\bar{e}} (R + e - L - F) dG(e) \\ &= R - L - \delta FG(e_c). \end{aligned} \quad (3)$$

The utility function of the firm is here is not linear in F as $L^*(F, \cdot)$, the optimal level of costs imposed by the politician, is not linear in F . Also, it is clear that in the absence

⁸This is similar to Bronars and Deere (1991) which notes that as the total value of debt increases, so does the cost of bankruptcy; for instance, higher debt levels usually implies multiple creditors.

of bankruptcy costs and the politician, the capital structure of the firm is irrelevant and the Modigliani and Miller (1958) result holds.

2.2 The Politician

The utility function of the politician is given by

$$\begin{aligned} U_p &= B(L) - C(G(e_c)) \\ &= \alpha \ln(L) - \frac{1}{1 - G(e_c)}. \end{aligned} \tag{4}$$

The function $B(L)$ is the political benefit to the politician of imposing cost L on the firm (which I will specify as $B(L) = \alpha \ln(L)$) and $C(G(e_c))$ is the cost incurred by the politician for the firm having a probability of bankruptcy equal to $G(e_c)$, which I will specify as $C(G(e_c)) = 1/(1 - G(e_c))$. The parameter α captures the marginal political benefit to the politician of imposing a cost L on the firm.

Under this specification, as $L \rightarrow 0$, $U_p \rightarrow -\infty$. Also, as $G(e_c) \rightarrow 1$, $U_p \rightarrow -\infty$ so it is never optimal for the politician to impose zero cost on the firm, nor is it ever optimal for the politician to force the firm into bankruptcy. This feature is consistent with the observed behavior of politician with regards to firms. Importantly, the politicians utility function is not derived from taking expectations; if the firm goes bankrupt, the politician does not garner a utility of $-\infty$. Rather, what is important is that the politician is not seen as enacting policy that results in a high probability of the firm entering bankruptcy. Numerous studies in the political science literature conclude that voters do not blindly punish politicians for a poor economy, rather they do so when it is perceived that the politician is at least partially to blame for it. The above specification captures this intuition.

2.3 The Problem

The firm sets an optimal debt policy in the first period and the politician selects and optimal transfer of wealth in the second. There is no cooperative or noncooperative bargaining; the firm sets the debt policy independent of the wishes of the politician and, in that sense, holds the bargaining power. The maximization problem for the firm is then

$$F^* = \arg \max_F U_f(L^*(F), \cdot) \tag{5}$$

where $L^*(F)$ is the cost imposed on the firm by the politician in period 2 and is known with certainty in period 1. Taking first order conditions for the firm we have

$$\begin{aligned} \frac{\partial}{\partial F} \{R - L^* - \delta FG(e_c)\} &= 0 \\ &= -\frac{\partial L^*}{\partial F} - \delta G(e_c) - \delta Fg(e_c) \left(1 + \frac{\partial L^*}{\partial F}\right) \\ \implies \frac{\partial L^*}{\partial F} &= -\frac{\delta G(e_c) + \delta F^*g(e_c)}{1 + \delta F^*g(e_c)}. \end{aligned} \quad (6)$$

We are interested in $\partial F^*/\partial\alpha$; what happens to the optimal debt level of the firm as the marginal benefit to the politician of imposing cost L changes? By implicit differentiation of (6) we can arrive at this term as follows:

$$\begin{aligned} 0 &= \frac{\partial}{\partial\alpha} \left\{ \frac{\partial L^*}{\partial F} + \frac{\delta G(e_c) + \delta F^*g(e_c)}{1 + \delta F^*g(e_c)} \right\} \\ \implies \frac{\partial F^*}{\partial\alpha} &= -\frac{\frac{\partial L^*}{\partial\alpha} \delta \left(g(e_c) + \delta Fg(e_c)^2 \right) + \frac{\partial^2 L^*}{\partial\alpha\partial F} (1 + \delta Fg(e_c))^2}{\delta \left(2g(e_c) + \delta \left(Fg(e_c)^2 - G(e_c)g(e_c) \right) \right)}. \end{aligned} \quad (7)$$

It is immediately clear that all the terms in the above are positive with two exceptions: the signs of $\partial L^*/\partial\alpha$ and $\partial^2 L^*/\partial\alpha\partial F$, and hence $\partial F^*/\partial\alpha$, are not immediately clear. In order to determine the sign of these derivatives, we need to examine the politicians second period optimization problem wherein the politician selects his optimal cost imposition L on the firm. In the second period the politicians problem is

$$L^* = \arg \max_L U_p(F, \cdot). \quad (8)$$

The first order conditions for the politicians problem yield

$$\begin{aligned} \frac{\partial}{\partial L} U_p &= 0 \\ &= \frac{\alpha}{L^*} - \frac{g(e_c)}{(1 - G(e_c))^2}. \end{aligned} \quad (9)$$

From implicit differentiation we can calculate $\partial L^*/\partial\alpha$ as

$$\begin{aligned} \frac{\partial}{\partial\alpha} \left\{ \frac{\alpha}{L^*} - \frac{g(e_c)}{(1 - G(e_c))^2} \right\} &= 0 \\ \implies \frac{\partial L^*}{\partial\alpha} &= \frac{1}{\frac{\alpha}{L^*} + \frac{2L^*g(e_c)^2}{(1-G(e_c))^3}}. \end{aligned} \quad (10)$$

From equation (9) it can be shown that $L^* = \alpha(1 - G(e_c))^2/g(e_c)$. Substituting this into equation (10) we have

$$\frac{\partial L^*}{\partial \alpha} = \frac{(1 - G(e_c))^2}{g(e_c)[1 + 2\alpha(1 - G(e_c))]} \quad (11)$$

Similarly, we calculate $\partial L^*/\partial F$ as

$$\begin{aligned} \frac{\partial}{\partial F} \left\{ \frac{\alpha}{L^*} - \frac{g(e_c)}{(1 - G(e_c))^2} \right\} &= 0 \\ \implies \frac{\partial L^*}{\partial F} &= -\frac{2g(e_c)^2}{\frac{\alpha}{L^{*2}}(1 - G(e_c))^3 + 2g(e_c)^2} \\ &= -\frac{2\alpha(1 - G(e_c))}{1 + 2\alpha(1 - G(e_c))} \end{aligned} \quad (12)$$

From the above it is clear that $\partial L^*/\partial \alpha > 0$ and $\partial L^*/\partial F < 0$. Having solved $\partial L^*/\partial \alpha$, we continue our calculation of $\partial F^*/\partial \alpha$ in equation (7). Solving for $\partial^2 L^*/\partial \alpha \partial F$ we have

$$\begin{aligned} \frac{\partial^2 L^*}{\partial \alpha \partial F} &= \frac{\partial}{\partial F} \frac{\partial L^*}{\partial \alpha} \\ &= -2 \frac{(1 - G(e_c))[1 + \alpha(1 - G(e_c))]}{[1 + 2\alpha(1 - G(e_c))]^3}. \end{aligned} \quad (13)$$

I want to show that $\partial F^*/\partial \alpha \geq 0$. To determine the sign of this derivative, we need to determine the sign of the numerator in equation (7).

$$0 \geq \frac{\partial L^*}{\partial \alpha} \delta \left(g(e_c) + \delta F^* g(e_c)^2 \right) + \frac{\partial^2 L^*}{\partial \alpha \partial F} (1 + \delta F^* g(e_c))^2.$$

From equation (6) we have that can derive an expression for F^* . With this and terms (11) and (13) the above simplifies to

$$\begin{aligned} 0 \geq & \delta(1 - G(e_c))[1 + 2\alpha(1 - G(e_c))] \\ & - 2[1 + \alpha(1 - G(e_c))](1 - \delta G(e_c)). \end{aligned}$$

Since $(\delta - \delta G(e_c)) < (1 - \delta G(e_c))$ and $[1 + 2\alpha(1 - G(e_c))] < [2 + 2\alpha(1 - G(e_c))]$ we have that the above is less than zero so it is the case that

$$\frac{\partial F^*}{\partial \alpha} > 0. \quad (14)$$

This result predicts that as the marginal political benefit that accrues to the politician for imposing costs on the firm decreases (captured here by the parameter α), so should the optimal level of debt. Testing this prediction is the primary goal of this study.

Of course, it is impossible to model the entire dynamic between firms and politicians in a stylized model such as this. Additionally, since I specify the functional form of the benefit function for the politician of imposing costs on the firm, and make assumptions regarding the distribution of the revenue shock, I do not suggest that the main prediction of the model holds generally from a theoretical perspective. Nevertheless, while this model clearly represents a gross simplification of reality, the intuition illustrated is valuable and is consistent with the empirical evidence.

While I argue that this model captures the essence of the relationship between politicians and firms it is worth mentioning one (potentially) important omission. In my arrangement I allow politicians to impose costs on firms, but not transfer money to firms.⁹ I believe this realistically captures the dynamic in the U.S., where firms are by and large allowed to go bankrupt and where politicians do not regularly transfer cash to firms.¹⁰ However, this may not be true in countries where governments regularly subsidize their industry, such as is common in Europe. The distinction between politically imposed costs and government transfers of cash here is not innocuous inasmuch as the politician's utility function is concerned, and this impacts the optimal debt policy of the firm.¹¹ When politicians can actually transfer cash to firms and not just reduce costs, it may (or may not) not be optimal for firms to *raise* their debt levels in the presence of friendly politicians instead of lowering them, thus goading the politician to transfer more money to the firm. That is, instead of using debt “defensively” in order to resist costs imposed by government, firms may be able to use debt “offensively” to prompt the government to transfer cash. In the U.S., the ability of politicians to transfer money to firms is limited; consequently, I omit this possibility from consideration in the model.

⁹See Shleifer and Vishny (1994) for a model that allows politicians to both impose costs on firms as well as transfer money to firms.

¹⁰Exceptions to this are rare, but include the U.S. governments guaranteeing payment of loans made to Chrysler Corp. in the early 1980's and the bailout of the airlines after September 11, 2001. Firms that receive a large amount of government business, such as those in the defence industry, may also be exceptions to the general rule of firms not receiving government transfers of money in the U.S.

¹¹Namely, the benefit function of imposing costs is increasing and concave (and potentially bounded) while the political cost to the politician of transferring state money to a firm is decreasing and convex. Further, there is a limit to the extent to which costs can be reduced (to zero) while the ability of a politician to transfer money may not be as tightly bounded.

3 U.S. Senators and Senate Committees: When is α Low?

The model presented in the preceding section predicts that in the presence of a “friendly” politician (i.e., one who receives a small marginal benefit from imposing costs on the firm, or a politician with a small α) the optimal level of debt decreases. The key difficulty in testing this empirically is determining whether the aggregate α faced by the firm is high or low. With few exceptions, the cross-sectional dispositions of politicians towards firms is not obvious. The majority of studies wherein making this determination is at least implicitly important tend to use campaign finance data in the attempt to do so (in particular, spending from a firms affiliated political action committee, or PAC).

For example, a number of studies attempt to determine if a firm has Democratic or Republican policy preferences and then examine returns surrounding an event in which political power is transferred from one party to the other. Goldman, Rocholl, and So (2006), Knight (2006), and Cheng (2005) study returns surrounding the 2000 and 2004 presidential elections, both of which being close enough so as to render the outcome a surprise. Jayachandran (2006) examines the effect on asset prices of the unanticipated defection of Senator Jim Jeffords from the Republican party in 2001 which gave control of the Senate to the Democrats. All of the aforementioned studies make at least partial use of campaign finance data in making the determination as to whether a firm has Democratic or Republican policy preferences.¹² The rationale for doing so is straightforward: if a firm donates primarily to Democrats, that firm most likely prefers Democratic policies, with the same reasoning also applied to Republicans.

A similar approach could be employed here to identify the party preferences of firms and then examining their capital structure as political power changes from one party to the other. For instance, if a firm donates primarily to Republicans, then we might conclude that Republicans have a smaller α with respect to that particular firm and expect that firm to have lower leverage when Republicans are in power.

¹²In addition to the political spending of a firm Goldman, Rocholl, and So (2006) also examine the political connection of a firms board of directors when examining the asset pricing impact of the 2004 presidential election; Roberts (1990) considers geographic constituency and employment in addition to campaign spending in examining the impact of the unanticipated death of Senator Henry “Scoop” Jackson on relevant firms.

Instead of asking whether firms prefer Democrats or Republicans, a better question might involve asking whether or not a firm is important to politicians *in general*, that is, whether or not politicians have a high or low α with respect to a given firm *regardless* of the party affiliation of the politician. Since politicians are typically not ideologically dogmatic over issues involving the economic interests of their constituents, I may choose to examine total levels of political giving rather than the parties to which a firm gives in making a determination as to whether a firm faces a high or low α from politicians. The essential assumption here would be that the higher the levels of political giving, the lower the α faced by the firm.¹³

There is no doubt valuable information contained in corporate political spending (as the results from some of the aforementioned studies imply). Indeed, though I do not report the results in this study, I have found that firms with PACs tend to have lower debt levels; further, the more firms spend on politics through their affiliated PAC, the lower their debt levels tend to be (consistent with the intuition supplied in the preceding paragraph).¹⁴ However, there are problems with using campaign finance data in making assumptions about the political preferences of firms or the nature of the relationship that exists between firms and politicians. The foremost involves the interpretation of firm political spending and the endogeneity problems it raises. For example, does a firm spend money on Democrats because it prefers Democratic policies or is it simply the case that the firm operates in a geographical region dominated by Democrats and the firm is just being pragmatic? Or do firms spend a large amount of money on politics because they are politically sensitive or does some other, unrelated firm characteristic drive political spending (and debt)?¹⁵

For this study I propose a much cleaner, exogenous measure of the aggregate politi-

¹³Importantly, this argument does not depend upon the ability of firms to buy political influence and favors, an idea that has largely been discredited in the political science literature (see, for example, Ansolabehere, de Figueiredo, and Snyder (2003)). Information-based models predict a positive relationship between campaign contributions and the extent to which the interest groups and politicians interests are aligned (see Austen-Smith (1995)). Indeed, that this is the case is one of the more robust findings in the empirical campaign finance literature.

¹⁴This was accomplished by matching corporate campaign finance records available from the Federal Election Commission (FEC) from 1979-2002 to firms in the CRSP/COMPUSTAT database.

¹⁵For example, the firm may simply have excess managerial capital in which to spend on politics. Or, conversely, political activism may be a signal of a distracted management. Both of these competing stories may also help explain debt levels.

cians α with respect to a firm, namely whether or not the firm has operational headquarters in a state whose Senator chairs a Senate committee that is important to that firm. United States Senators reliably promote their home-state economic interests, even when doing so places them at odds with the priorities of the political parties to which they belong. Thus we see left-leaning, Democratic senators from Michigan vigorously opposed to raising the corporate average fuel efficiency (CAFE) requirements on automobiles, and right-leaning, Republican senators from South Carolina forcefully defending protectionist policies that benefit the domestic textile industry. While politicians are frequently ideologically motivated, they are also opportunistic in that they are greatly concerned about reelection. This almost always results in the political support of the economy of their constituents. Senators thus derive a smaller marginal political benefit from imposing costs on home-state firms relative to out-of-state firms (owing to the fact that they are not directly accountable to out-of-state voters).

The United States Senate delegates much of the work on specialized legislation to various senate committees. The chairs of these committees occupy the most coveted positions in the senate and are among the most powerful, with influence extending beyond that which is inherent in mere committee membership (see Roberts (1990)). Committee chairs affect the legislative process through enhanced influence on whether or not legislation gets to the floor and what it looks like when it does so. Lobbyists frequently strive to affect legislation while it sits in a committee as this is where it is most malleable, owing in large part to the fact that floor votes are more visible and scrutinized by the public than are committee proceedings. Committee chairs consistently attract the largest campaign contributions from various interest groups. Additionally, senate committee chairs are among the most senior in the senate, which further enhances their ability to affect the legislative process.¹⁶ For these reasons, the legislative ambitions of political interest groups are greatly enhanced when a friendly senator becomes the chair of a relevant committee.

A distribution of chair tenure for the committees in this study can be seen in Figure 2. Approximately 80% of the chairs serve in that position for a total of six years or less.

¹⁶By institutional norm, seniority is the largest single determinant of committee chairmanship; for other relevant factors, see Collie and Roberts (1992).

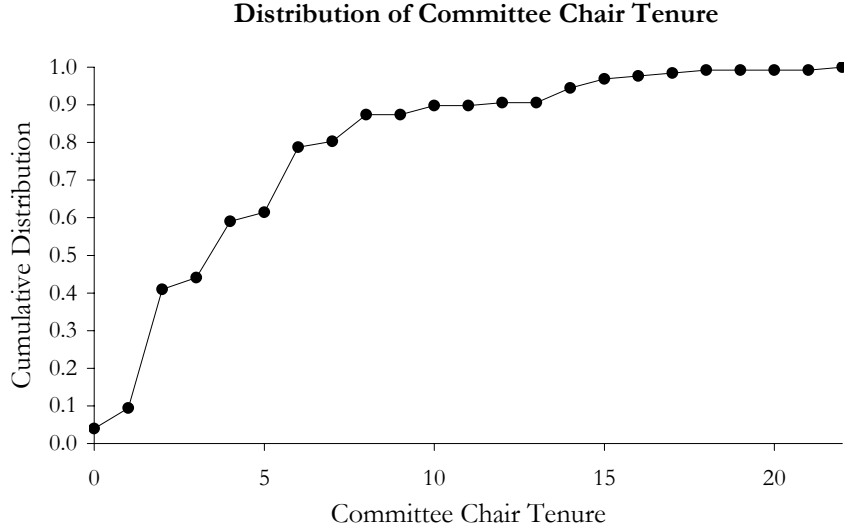


Figure 2. Distribution of Committee Chair Tenure. This figure contains the cumulative distribution of the total length of chair tenure for each of the senate committees under consideration (see Table I).

A natural test of the empirical model presented in the preceding section would be to examine the capital structure of large firms when the firms home-state senator becomes the chair of a committee that is “relevant” to that firms industry. That is to say α decreases when a firms senator occupies a position of power that is relevant to that firm (the senator does not get as large a benefit from imposing costs on the home-state firm), thus the optimal level of debt for the firm should also decrease.

For this study I collect data on the various senate committees that are relevant to business. For example, I count the Energy and Natural Resources Committee to be directly relevant to business interests whereas I do not count the Governmental Affairs Committee or the Judiciary Committee to be relevant. Senate committees can change their name, fracture or merge over time and so, for the purposes of analysis, I assign committees to groups, listed in Table I. An explanation of the jurisdiction of each committee grouping can found in Table A-1 in the Appendix. Finally, I match each committee to it’s “relevant” 2-digit SIC industry (see Table A-2 in the Appendix). This was done subjectively by examining the jurisdiction of each committee and subcommittee, sample legislation overseen by the committee, and the descriptions of each 2-digit SIC industry. For example, the Energy and Natural Resources Committee is deemed relevant to SIC industry

Table I
Senate Committee Groups

Senate committees often change their name, or, less often, fracture or merge. For this study, senate committees are grouped together to account for name changes and mergers of committees. The group ID is in the first column, the group name is in the second, and the component committees are in the third.

GID	Committee Group Name	Senate Committee Name
SC01	Agriculture, Nutrition, and Forestry	Agriculture, Nutrition, and Forestry (1977 - Present) Agriculture and Forestry (1884 - 1977)
SC02	Appropriations	Appropriations (1867 - Present)
SC03	Armed Services	Armed Services (1947 - Present)
SC04	Banking, Housing, and Urban Affairs	Banking, Housing, and Urban Affairs (1970 - Present) Banking and Currency (1913 - 1970)
SC05	Commerce, Science, and Transportation	Commerce, Science, and Transportation (1977 - Present) Commerce (1961 - 1977) Aeronautical and Space Sciences (1958 - 1977) Interstate and Foreign Commerce (1947 - 1961)
SC06	Energy and Natural Resources	Energy and Natural Resources (1997 - Present) Interior and Insular Affairs (1948 - 1977)
SC07	Environment and Public Works	Environment and Public Works (1977 - Present) Public Works (1947 - 1977)
SC08	Health, Education, Labor, and Pensions	Health, Education, Labor, and Pensions (1999 - Present) Labor and Human Resources (1979 - 1999) Human Resources (1977 - 1979) Labor and Public Welfare (1947 - 1977)
SC09	Small Business	Small Business (1981 - Present)

10, Metal Mining; it is not deemed relevant to SIC industry 48, Communications.

Finally, I do not consider the chairs of House committees. Although committees in the House are in many respects as powerful as those in the Senate, congressional districts for Representatives in the House are usually significantly smaller than those in the Senate, making it difficult to determine whether or not a firm falls into a chairs constituency. Since there are only two Senators in each state, they tend to be much more concerned about statewide issues than Representatives in the House.

4 Empirical Results

To test the idea that firms lower their leverage in the presence of “friendly” politicians, I conduct a series of tests involving all firms between 1962-2004, and a those in a subsample centered around the 1994 midterm election. Senate Committee chair assignments are exogenous to most factors that affect leverage; this is the primary motivation for using this data. However, the 1994 election presents a special case of this in that control of both the House of Representatives and the Senate switched from the Democratic Party to the Republicans in a dramatic and unanticipated electoral outcome. This particular subsample presents an opportunity to test the theory outlined in this study of an exogenous shock to the chairmanship of Senate committees (the election outcome), which itself represents an exogenous shock to firms insofar as leverage is concerned.

4.1 Data

All financial data was gathered from the merged CRSP/COMPUSTAT database. The full sample considered includes all firms between 1962 and 2004. Prior to 1962, data on comparatively few firms are available and the data that does exist is often not sufficient to allow the calculation of some of the financial control variables used in some of the leverage regressions to follow, so the years 1950-1962 are excluded from the analysis. Data on Senate Committee chairs was gathered from the U.S. Senate website.

Data on where a firm is operationally headquartered is from COMPUSTAT. There is at least one problem with this: COMPUSTAT only records headquarters information based upon the last reported location. For example, Boeing only recently moved its corporate headquarters from Washington to Illinois. However, COMPUSTAT data on Boeing from the 1960’s will report the headquarters as being in Illinois. While this may add noise to my estimates, there is no reason to believe that this would bias the results. A similar problem exists with the SIC industry to which a firm belongs in COMPUSTAT: only the latest industry is recorded. However, historical information on SIC codes is contained in CRSP which is therefore the source for industry information used in the analysis.

Only large firms are considered, specifically firms with greater than \$1 billion or \$2

billion in sales in 2002 dollars (for the 1994 election and full sample tests, respectively). I only expect to see a capital structure effect in large firms because presumably only the behavior of large firms is effectual in drawing firm-specific attention from politicians. The capital structure of smaller firms is “below the radar” of politicians. This is not to say that small firm concerns are ignored by politicians. If anything, politicians are sensitive to the fact that small firms employ a large number of voters and smaller firms are often excluded from regulation. However, smaller firms are atomistic and even if it were first best for all of them to collectively adopt a certain debt policy a free-rider problem would prevent them from doing so. Indeed, I find that there is no Senate chair effect on small firms.

4.2 Methodology

I want to test if firms lower their debt levels when a Senator from the state in which they are operationally headquartered is the chair of a committee that is important to them. To do this I employ a linear fixed effect model of both debt ratios and debt levels. The debt ratio model is outlined below:

$$\text{DebtRatio}_{it} = \phi_i + \tau_t + \delta IDR_{it} + \sum_{k=1}^K \gamma^k Ctl_{it}^k + \sum_{j=1}^J \beta^j SC_{it}^j + \epsilon_{it}. \quad (15)$$

The LHS is a debt ratio where short-term (debt in current liabilities), long term, or total debt levels are in the numerator and a measure of total assets is in the denominator (either book value of total assets or the market value of assets, which includes the market capitalization of the firm and the book value of the firms total debt). The RHS includes firm-fixed effects (ϕ_i), year dummies (τ_t), senate committee dummies (SC_{it}), and financial control variables (Ctl_{it}).

The value of the senate committee dummy variables are determined by whether or not the firm is headquartered in a state which has a Senator that is chair of a committee that influences the firm. If this is the case, the dummy variable takes a value of one, and is zero otherwise. Both an aggregate senate committee effect and individual committee effects are considered. For example, if a senator from Ohio is the chair of the Agriculture, Nutrition, and Forestry committee (SC01, see Table I for committee ID’s) in 1990, then value of

the aggregate committee dummy variable for any firm in Ohio with SIC code 20 (Food and Kindred Products) will be one for the same period. In the regression where Senate committee effects are broken out by committee, only the committee dummy variable for Senate committee group SC01 will be one.

Financial control variables include profitability, collateral, market-to-book ratio (growth options), Altman's modified Z-score (probability of bankruptcy), and size ($\ln(\text{Sales})$).¹⁷ These control variables are typical in studies of this type. Also, if the LHS is a debt ratio where the market value of assets is in the denominator, an implied debt ratio (*IDR*) is included in the RHS (similar to Welch (2004)) and is based on the stock returns (ex-dividend) over the prior fiscal year.¹⁸ The inclusion of the *IDR* is necessary to control for the drift of the market-based debt ratio that occurs due to changes in the stock price. *IDR* is not included when the book value of assets is in the denominator of the dependent variable (though its inclusion in this instance does not change the results).

¹⁷Control variables are calculated using COMPUSTAT data as follows:

$$\begin{aligned}
 \text{Profitability} &= \frac{\text{Income Before Depreciation (DATA13)}}{\text{Book Value of Assets (DATA6)}} \\
 \text{Collateral} &= \frac{\text{Inventory (DATA3) + Net PP\&E (DATA8)}}{\text{Book Value of Assets (DATA6)}} \\
 \text{Market-to-Book Ratio} &= \frac{\text{Market Value of Assets}}{\text{Book Value of Assets (DATA6)}} \\
 \text{Modified Z-Score} &= 6.72 \frac{\text{Pretax Income (DATA170)}}{\text{Book Value of Assets}} + 3.62 \frac{\text{Retained Earnings (DATA36)}}{\text{Book Value of Assets}} \\
 &+ 6.56 \frac{\text{Current Assets (DATA4) - Current Liabilities (DATA5)}}{\text{Book Value of Assets}} \\
 &+ 1.05 \frac{\text{Book Equity (DATA60)}}{\text{Total Liabilities (DATA181)}}
 \end{aligned}$$

The market value of assets used above is calculated as

$$\begin{aligned}
 MVA &= [\text{Shares (DATA199)} \times \text{Share Price (DATA54)}] + \text{Debt in Current Liabilities (DATA34)} \\
 &+ \text{Long Term Debt (DATA9)} + \text{Pref Stock Liquidating Value (DATA10)} \\
 &- \text{Deferred Taxes (DATA35)}
 \end{aligned}$$

¹⁸The implied debt ratio used here is calculated by

$$IDR_t = \frac{\text{Debt}_{t-1}}{\text{MktCap}_{t-1} \times (1 + r_t) + \text{DATA34}_{t-1} + \text{DATA9}_{t-1} + \text{DATA10}_{t-1} - \text{DATA35}_{t-1}}$$

and is similar to Welch (2004). Here r_t is the stock return over the prior fiscal year, ex-dividend.

The model that considers debt levels is specified as

$$\ln(\text{DebtLevel}_{it}) = \phi_i + \tau_t + \gamma \ln(\text{Size}_{it}) + \sum_{j=1}^J \beta^j SC_{it}^j + \epsilon_{it} \quad (16)$$

where Size_{it} on the RHS is taken to be either sales (COMPUSTAT DATA12) or the total book value of assets (COMPUSTAT DATA6). Debt ratios are affected by changes in debt as well as a changes in equity values, and when a factor is found to have an impact on debt ratios, it is not immediately clear as to whether the debt or equity values (or both) have been affected. The above specification is more appropriate for isolating effects on debt.

The use of a fixed effects model allows for individual firm effects while consistently estimating β . While the firm-specific effect is modeled as being fixed, in fact this approach allows us to be agnostic as to what the individual firm effects are (whether they are truly constant or a random variable) or what their relationship is with the other regressors (e.g., whether the individual firm effect is correlated with other LHS independent variables or the error term ϵ_{it}). Consistently estimating β while making no assumptions about individual effects is the primary objective of using a fixed-effects model. The inclusion of time-period dummy variables is done for similar reasons and allows for unspecified time effects.

4.2.1 Calculation of Standard Errors

The empirical capital structure literature has occasionally made use of methodology that results in standard error estimates that are biased downward, sometimes significantly. In particular, the panel data used in corporate finance applications typically exhibit little cross-sectional correlation, but a high degree of serial correlation. As Peterson (2006) points out, the use of standard OLS errors in this application greatly underestimates the true standard errors of the coefficient estimates, resulting in artificially high test statistics. Not only that, but several approaches that ostensibly correct for this serial correlation also result in standard error estimates that are biased downwards, including Newey-West standard errors that are adopted to panel applications and the Fama-MacBeth standard

errors that ostensibly correct for autocorrelation in a panel.¹⁹

In this study, I calculate standard errors that are clustered at the firm level. This allows for any firm-level correlation within the cluster, serial or otherwise, and is shown in Peterson (2006) to produce unbiased estimates of the standard errors in applications such as this. The use of clustering and firm-fixed effects together produces by far the largest standard error estimates compared to other approaches tested and I consider this approach to be conservative (see Kezdi (2004) for an examples of fixed-effects models where clustering produces standard errors that are too large).

4.3 Empirical Results: The 1994 Midterm Elections

A useful starting point in the testing of the theory outlined in this study is the 1994 midterm congressional elections in which the Republicans unexpectedly won control of both the House and the Senate, with gains of 52 seats and eight seats, respectively. Almost no one had predicted this outcome; average predictions from pollsters and political scientists had forecasted the Democrats losing 25 to 30 seats in the House and around two in the Senate. Virtually nobody predicted the Republicans taking control of the Congress which changed the chairs of every senate committee (see Brady, Cogan, Gaines, and Rivers (1996)). Consequently, the 1994 election represents an exogenous shock on Senate committee chairs which themselves represent an exogenous shock to corporate debt policy.

Using the models in equations (15) and (16) for debt ratios and debt levels, respectively, I focus on the years 1992–1997, inclusive (three years before and three years after the election). Some of the committees change their chairs outside of this period for reasons unrelated to the 1994 election and I want to restrict my attention to changes that are solely impacted by the 1994 election. Also, I only focus on larger firms, specifically firms whose sales in 2002 inflation-adjusted dollars are greater than \$1 billion. Using this criteria I identify 13 firms (45 firm-year observations) that are affected by the changes

¹⁹The Fama-MacBeth approach was originally intended to account for correlation in the cross section, not the time dimension, of a panel data set and results in unbiased standard error estimates when this is the defining characteristic of the panel (such as in asset pricing data). The autocorrelation “corrected” Fama-MacBeth approach adjusts the standard errors using the time series properties of the estimated coefficients. However, this does not correct for autocorrelation in the residuals.

Table II
Summary Statistics: 1994 Midterm Election

This table contains summary statistics of a panel of large firms (2002 sales > \$1 Billion) centered around the 1994 midterm election (1992-1997). The second column contains the total count of observations in the panel where a firm is operationally headquartered in a state whose Senator chairs a committee that is important to that firm; the third and fourth columns contains the number of unique firms and 2-digit SIC industries represented within those observations, respectively. *SCAgg* contains aggregate committee information and *SCXX* contains information on individual committees (see Table I).

	Count	Unique Firms	Unique Industries
SCAgg	45	13	8
SC01	3	1	1
SC04	3	1	1
SC05	4	1	1
SC06	8	2	2
SC08	24	7	3
SC09	3	1	1
Full Sample	5,653	1,466	48

to six committee chairs, spanning eight unique 2-digit SIC industries (see Table II for summary statistics). Seven of these 13 firms are impacted by a single committee: the Health, Education, Labor, and Pensions Committee (SC08).

In this series of tests I consider only measures involving total debt on the LHS. Prior research has indicated that debt seniority may matter in affecting the dynamic between firms and NFS (see Glazer (1994), Hart and Moore (1995), and Kanatas and Qi (2001)), however short-term debt (specifically debt in current liabilities) displays more idiosyncratic variance and the sample here is small so I will examine only total debt in the tests on surrounding the events of the 1994 election. Specifically, I consider both total debt divided by the book value of assets and total debt divided by market value of assets. There is some concern that financial control variables of the type used here may in fact distort the relationship between the Senate chair effect being investigated and the debt measure on the LHS as this effect may be endogenous to the control variables used (e.g.,

if there is a debt effect then operating income and Z-Score will also be affected due to a change in interest expense and in the probability of default, respectively). For this reason I run the debt ratio regressions with and without financial control variables. I also consider regressions involving the total debt on the LHS scaled by book value of assets or sales on the RHS. The results are summarized in Table III.

Panel A in Table III contains results for the aggregate senate committee dummy variable (which is a 1 if the firm is affected by a chair of *any* relevant committee). It can be seen that the effects of committee chairmanship are negative and significant, both economically and statistically, for four of the six tests that are considered. The coefficient estimates are not statistically significant for debt ratios where financial controls are used, but remain negative and economically significant. The average debt-to-asset ratios for firms in this subsample (market or book) is approximately 0.27; thus the coefficient estimates for regressions involving a debt ratio imply that debt ratios are reduced between 7% and 13% when a “home-state” senator chairs a committee that is relevant to the firm. When debt levels are considered (in the last two columns of Table III), the economic significance is even more pronounced, with coefficient estimates implying a reduction of debt between 20% and 23%.

Panel B in Table III contains results for individual committee coefficient estimates.²⁰ Of the 34 coefficient estimates of committee effects from the six regressions considered, 28 are negative, 14 are negative and significant, and only 2 are positive and significant.

Table III provides evidence that firms lower their debt levels when a friendly politician chairs a committee that is relevant to the firm (which, presumably, lowers the α faced by the firm) and supports the central argument of this paper. Further, this effect does not appear to be driven by observations within single or a few committees; firms appear to lower their debt when a friendly politician chairs *any* of the committees considered. That the results are significant is all the more remarkable considering that the loss in degrees of freedom from using fixed effects for a short time series (six years) potentially increased the standard errors.

However, some words of caution are in order. First, the sample here considered is

²⁰Note that committee effects are dropped for the Banking Housing and Urban Affairs committee group (SC04) due to missing financial control data for the affected firm when controls are considered.

Table III
Senate Committee Effects on Debt Policy: 1994 Midterm Election

This table contains effects of senate committee chairs on the debt ratios and levels of large (2002 sales > \$1 Billion) “home-state” firms from between 1992–1997 (centered around the 1994 elections). Ratios of total debt to book value (TDA) and market value (TDM) of assets are considered, along with total debt levels (ln(DebtLevel)). A pooled regression is run with the following general forms:

$$\text{DebtRatio}_{it} = \phi_i + \tau_t + \delta IDR_{it} + \sum_{k=1}^K \gamma^k Ctl_{it}^k + \sum_{j=1}^J \beta^j SC_{it}^j + \epsilon_{it}$$

$$\ln(\text{DebtLevel}_{it}) = \phi_i + \tau_t + \gamma \ln(\text{Size}_{it}) + \sum_{j=1}^J \beta^j SC_{it}^j + \epsilon_{it}$$

The RHS of the first model includes firm-fixed effects (ϕ_i), year dummies (τ_t), senate committee dummies (SC_{it}), financial control variables (Ctl_{it}), whose inclusion is noted with an “X” below, and the implied debt ratio (IDR_{it}), which is only included when debt ratio on the LHS involves the market value of assets. The RHS of the second model includes an adjustment for firm size (either book value of total assets or sales). Coefficient estimates of β are reported with ***, **, and * denoting significance levels of 1%, 5%, and 10%, respectively (Huber-White robust standard errors, clustered at the firm level, in parenthesis).

<i>PANEL A: Aggregate Senate Committee Dummy</i>						
RHS Variable	TDA	TDA	TDM	TDM	ln(TD)	ln(TD)
SCAgg	-0.034 ** (0.015)	-0.029 (0.019)	-0.028 ** (0.013)	-0.019 (0.014)	-0.255 ** (0.126)	-0.221 ** (0.103)
Control Vars		X		X		
ln(Assets)					X	
ln(Sales)						X
<i>PANEL B: Committee Specific Dummy Variables</i>						
RHS Variable	TDA	TDA	TDM	TDM	ln(TD)	ln(TD)
SC01	0.001 (0.003)	-0.002 (0.003)	0.006 ** (0.002)	-0.002 (0.003)	0.006 (0.020)	-0.047 ** (0.021)
SC04	-0.081 *** (0.003)		-0.138 *** (0.005)		-0.970 *** (0.018)	-0.953 *** (0.020)
SC05	-0.008 ** (0.003)	0.018 *** (0.007)	-0.063 *** (0.002)	-0.036 *** (0.004)	-0.025 (0.018)	-0.015 (0.020)
SC06	-0.006 (0.012)	-0.008 (0.013)	-0.017 (0.012)	-0.019 (0.014)	0.018 (0.045)	0.093 (0.071)
SC08	-0.025 (0.018)	-0.022 (0.021)	-0.007 (0.011)	-0.005 (0.020)	-0.202 (0.175)	-0.196 (0.124)
SC09	-0.154 *** (0.003)	-0.169 *** (0.011)	-0.056 *** (0.007)	-0.099 *** (0.011)	-0.802 *** (0.049)	-0.546 *** (0.050)
Control Vars		X		X		
ln(Assets)					X	
ln(Sales)						X

small so the interpretation of the results is tenuous (only 13 firms are affected by committee chairs using the criteria outlined previously). Further, the individual committee effects contained in Panel B are for the most part measured by the effects on a single firm. Nevertheless, regressions that consider smaller firms do not typically yield significant results (even when the firm size is chosen so as to yield a similar number of observations for affected firms), nor do regressions which consider other firm characteristics on the LHS, such as the financial control variables (e.g., the market-to-book ratio which may be a proxy for growth options).

4.4 Empirical Results: Full Sample (1962–2004)

While the the 1994 election is a unique opportunity to examine the effect of an exogenous shock (the election outcome) on an exogenous factor to a firms capital structure (Senate committee chairs), the resulting small sample size makes statistical inference difficult. To address this, I now consider the full sample which dates from 1962–2004 and whose sales in 2002 dollars is greater than \$2 billion. Using this criteria I identify 111 firms (340 firm-year observations) that are affected by nine committee chairs spanning 23 unique 2-digit SIC industries (see Panel A in Table IV for summary statistics involving firms affected by Senate committee chairs). The Appropriations committee group (SC02) impacts the smallest number of firms (two) while the Health, Education, Labor, and Pensions committee group impacts the largest (39) over this time period. Panel B in Table IV contains summary statistics for the debt ratios in the full sample under consideration.

In this series of tests I consider the impact of Senate committee chairs on short-term (debt in current liabilities), long term, and total debt ratios and levels as outlined in equations (15) and (16).²¹ To save space, I only report results for debt ratios where book value of assets is in the denominator, though results for debt ratios involving the market value of assets are similar.

The results for tests involving debt ratios is shown in Table V. Panel A contains results for the aggregate senate committee dummy and it can be seen that coefficient estimates of

²¹Prior research has indicated that debt seniority may matter in affecting the dynamic between firms and NFS (see Glazer (1994), Hart and Moore (1995), and Kanatas and Qi (2001)) and while debt maturity is not included in the model currently under consideration, it may nevertheless play a role.

Table IV
Full Sample Summary Statistics (1962-2004)

This table contains summary statistics of a panel of large firms (2002 sales > \$2 Billion) between 1962-2004. The second column in Panel A contains the total count of observations in the panel where a firm is operationally headquartered in a state whose Senator chairs a committee that is important to that firm; the third and fourth columns contains the number of unique firms and 2-digit SIC industries represented within those observations, respectively. *SCAgg* contains aggregate committee information and *SCXX* contains information on individual committees. Panel B contains the mean and standard deviation for various debt ratios within the panel.

<i>PANEL A: Committee Summary Statistics</i>			
	Count	Unique Firms	Unique Industries
SCAgg	340	111	23
SC01	27	3	3
SC02	7	2	2
SC03	30	19	2
SC04	15	8	3
SC05	27	12	9
SC06	29	6	4
SC07	43	22	8
SC08	135	39	8
SC09	9	3	2
Full Sample	22,148	3,619	51
<i>PANEL B: Debt Ratio Summary Statistics</i>			
	Mean	Std Dev	
ST Debt / Assets	0.053	0.070	
LT Debt / Assets	0.218	0.140	
Tot Debt / Assets	0.271	0.152	

senate chair effects are negative and significant in all cases considered (though short term debt ratios are not as significant). Unlike the tests centered around the 1994 election, the inclusion of financial control variables does not appear to impact the senate committee effect on aggregate. The coefficients imply a reduction in the debt ratios on the order of 15% when a friendly politician chairs a relevant senate committee. Panel B contains

Table V
Senate Committee Effects on Debt Ratios (1962-2004)

This table contains effects of senate committee chairs on the debt ratios of large (2002 sales > \$2 Billion) “home-state” firms. Short term, long term, and total debt ratios are considered and labeled SDA, LDA, and TDA respectively. A pooled regression is run with the following general form:

$$\text{DebtRatio}_{it} = \phi_i + \tau_t + \sum_{k=1}^K \gamma^k \text{Ctl}_{it}^k + \sum_{j=1}^J \beta^j \text{SC}_{it}^j + \epsilon_{it}$$

The RHS includes firm-fixed effects (ϕ_i), year dummies (τ_t), senate committee dummies (SC_{it}), and financial control variables (Ctl_{it}), whose inclusion is noted with an “X” below. Coefficient estimates of β are reported with ***, **, and * denoting significance levels of 1%, 5%, and 10%, respectively (Huber-White robust standard errors, clustered at the firm level, in parenthesis).

<i>PANEL A: Aggregate Senate Committee Dummy</i>						
RHS Variable	SDA	LDA	TDA	SDA	LDA	TDA
SCAgg	-0.012 ** (0.006)	-0.024 *** (0.009)	-0.036 *** (0.011)	-0.008 * (0.005)	-0.031 *** (0.010)	-0.039 *** (0.011)
Control Vars				X	X	X
<i>PANEL B: Committee Specific Dummy Variables</i>						
RHS Variable	SDA	LDA	TDA	SDA	LDA	TDA
SC01	-0.032 (0.027)	-0.048 *** (0.007)	-0.079 *** (0.030)	-0.021 (0.022)	-0.034 *** (0.006)	-0.056 *** (0.018)
SC02	-0.079 (0.055)	0.006 (0.040)	-0.073 (0.095)	0.002 (0.003)	0.048 *** (0.014)	0.050 *** (0.012)
SC03	0.002 (0.009)	-0.026 (0.040)	-0.024 (0.047)	0.003 (0.006)	-0.056 ** (0.028)	-0.053 * (0.030)
SC04	-0.028 *** (0.010)	0.009 (0.012)	-0.019 (0.019)	-0.009 *** (0.003)	-0.017 *** (0.005)	-0.027 *** (0.006)
SC05	-0.031 * (0.018)	-0.018 (0.027)	-0.050 (0.030)	0.001 (0.008)	0.016 (0.026)	0.017 (0.021)
SC06	-0.008 (0.010)	-0.014 (0.031)	-0.023 (0.040)	-0.003 (0.007)	0.001 (0.019)	-0.001 (0.024)
SC07	-0.012 *** (0.004)	-0.001 (0.015)	-0.017 (0.014)	-0.015 ** (0.007)	-0.018 (0.014)	-0.033 * (0.017)
SC08	-0.001 (0.006)	-0.035 ** (0.017)	-0.036 ** (0.016)	-0.007 (0.008)	-0.046 ** (0.018)	-0.053 *** (0.020)
SC09	0.017 (0.023)	-0.082 *** (0.006)	-0.065 *** (0.019)	0.013 (0.024)	-0.072 *** (0.004)	-0.059 ** (0.026)
Control Vars				X	X	X

Table VI
Senate Committee Effects on Debt Levels (1962-2004)

This table contains effects of senate committee chairs on the debt ratios of levels (2002 sales > \$2 Billion) “home-state” firms. Short term, long term, and total debt ratios are considered and labeled SDA, LDA, and TDA respectively. A pooled regression is run with the following general form:

$$\ln(\text{DebtLevel}_{it}) = \phi_i + \tau_t + \gamma \ln(\text{Size}_{it}) + \sum_{j=1}^J \beta^j SC_{it}^j + \epsilon_{it}$$

The RHS includes firm-fixed effects (ϕ_i), year dummies (τ_t), senate committee dummies (SC_{it}), and an adjustment for firm size (either book value of total assets or sales). Coefficient estimates of β are reported with ***, **, and * denoting significance levels of 1%, 5%, and 10%, respectively (Huber-White robust standard errors, clustered at the firm level, in parenthesis).

<i>PANEL A: Aggregate Senate Committee Dummy</i>						
RHS Variable	ln(SD)	ln(LD)	ln(TD)	ln(SD)	ln(LD)	ln(TD)
SCAgg	-0.302 ** (0.132)	-0.266 *** (0.103)	-0.236 *** (0.086)	-0.342 ** (0.143)	-0.310 *** (0.120)	-0.279 *** (0.105)
ln(Assets)	X	X	X			
ln(Sales)				X	X	X
<i>PANEL B: Committee Specific Dummy Variables</i>						
RHS Variable	ln(SD)	ln(LD)	ln(TD)	ln(SD)	ln(LD)	ln(TD)
SC01	-0.425 (0.385)	-0.740 (0.460)	-0.608 (0.387)	-0.558 (0.444)	-0.890 * (0.540)	-0.759 (0.464)
SC02	-0.674 (0.639)	-0.240 (0.452)	-0.449 (0.571)	-0.882 (0.811)	-0.479 (0.605)	-0.687 (0.723)
SC03	-0.278 (0.305)	-0.340 (0.353)	-0.163 (0.214)	-0.224 (0.404)	-0.299 (0.403)	-0.124 (0.293)
SC04	-0.919 ** (0.380)	-0.104 (0.165)	-0.211 (0.133)	-0.974 *** (0.372)	-0.199 (0.197)	-0.268 * (0.143)
SC05	-0.472 ** (0.229)	-0.246 (0.166)	-0.372 *** (0.110)	-0.427 (0.297)	-0.188 (0.151)	-0.310 (0.200)
SC06	0.063 (0.287)	0.037 (0.160)	0.022 (0.181)	0.052 (0.187)	0.025 (0.064)	0.010 (0.081)
SC07	-0.260 (0.234)	0.050 (0.090)	-0.013 (0.081)	-0.245 (0.248)	0.050 (0.110)	-0.020 (0.107)
SC08	-0.266 (0.245)	-0.335 ** (0.164)	-0.264 * (0.136)	-0.334 (0.254)	-0.396 ** (0.187)	-0.322 ** (0.159)
SC09	1.035 (0.976)	-0.504 *** (0.086)	-0.321 *** (0.076)	1.145 (0.952)	-0.358 *** (0.107)	-0.171 *** (0.060)
ln(Assets)	X	X	X			
ln(Sales)				X	X	X

results for individual senate committee effects. Of the 54 coefficients estimated, 41 are negative, 22 are negative and significant (11 at the 1% level), and only two are positive and significant. The economic effects of individual committees imply a reduction of the debt ratio of up to 30% when a home-state politician chairs the committee (though the estimated reduction is typically less).

It is of interest that the two estimates that are positive and significant are for the Appropriations committee group (SC02). Recall that in the model considered politicians only impose costs on firms, they do not transfer money to firms. As previously discussed, if politicians can actually transfer money *to* firms, it may be optimal for firms to *increase* their debt levels in the presence of friendly politicians, thus motivating the politicians to transfer money to them. By and large Senate committees do not perform this function; they do not transfer money to firms per se, but are rather primarily involved in affecting regulation and other factors that involve costs to firms. The Senate Appropriations committee is a possible exception to this, having a reputation for being used by committee members to funnel “pork” back to home state interests.²² Thus it may not be surprising for the Appropriations committee to have this impact, though this committee is linked to only two unique firms in the sample so this explanation is tenuous.

The results for tests involving debt levels is shown in Table VI. Panel A shows that the aggregate Senate chair effect is highly significant across debt levels, whether scaled by assets or sales. In Panel B, of the 54 coefficient estimates, 44 are negative, and 14 are negative and significant. None are positive and significant. The aggregated results in this table imply that debt is reduced by 25% when a home-state politician chairs a relevant committee, with similar results for individual committees. None of the coefficient estimates are positive for the Appropriations committee group (SC02) as was the case in the regressions involving debt ratios.

All of the standard errors are large. This is partially due to the loss of degrees of freedom in a fixed effects model (there are only around 7 firm-year observations for each unique firm) and I suspect that the Senate chair effect to be a noisy proxy for α in any

²²For example, the Alaskan Senator Ted Stevens used his position as chair of the Appropriations committee in 2005 to approve funding for the Gravina Island Bridge project in Alaska (better known as the notorious “Bridge to Nowhere”), a \$230 million structure designed to connect Gravina Island (population 50) to the town of Ketchikan (population 8,000). Funding for the project was later pulled.

case. Further, the methods used to calculate the standard error (clustering and firm-fixed effects) are very conservative and may actually be overstating the standard error (see Kezdi (2004) for examples of how this combination may result in standard error estimates that are biased upwards). Nevertheless, the overall character of the results is statistically significant.

4.5 Debt Ratings and Committee Chair Effects

Important supportive evidence for firms using debt strategically to discourage politicians from imposing costs on them arises in the interaction between the rating of a firms debt and whether or not the firms state Senator chairs a committee that is relevant to them. Firms do not have equal access to capital markets. For instance, firms with high credit rating have comparatively greater access to debt financing than do firms with lower credit ratings. If firms use debt to discourage politicians from imposing costs, I might expect firms with higher credit ratings to be more active in doing so than ones with lower credit ratings. However, firms whose debt is highly rated are far away from bankruptcy and only a dramatic change in debt policy is likely to garner the attention of politicians, a consideration which makes highly rated firms less likely to use debt strategically. Firms whose debt has a lower rating, and are therefore closer to default to begin with, are better able to use debt policy to discourage politicians from imposing costs on them. Thus, I expect this Senate chair effect to be pronounced for firms with lower credit ratings.

To test whether or not there are interactions between the Senate committee effect and the debt rating of a firm, I run two general categories of pooled regressions which consider the S&P debt rating of a firms long term debt (available in COMPUSTAT starting in 1985). In the first case I examine the debt of the entire sample with tests similar (15) and (16), but I also include the rating of the firms long term debt and an interaction term between the Senate chair dummy variable and the debt rating. In the second category, I divide the sample into two subsamples: those with investment grade debt (BBB- or higher), and those whose debt is rated as speculative (BB+ or lower). I then test using models (15) and (16).

Table VII
Interaction of Credit Grade and Senate Committee Effects (1985-2004)

This table contains interaction between the Senate committee chair effect and S&P debt ratings for large firms (2002 sales > \$2 Billion). Ratios of total debt to book value (TDA) and market value (TDM) of assets are considered, along with total debt levels (ln(DebtLevel)). Panel A contains relevant results of pooled regressions with the following general forms:

$$\begin{aligned} \text{DebtRatio}_{it} &= \phi_i + \tau_t + \delta IDR_{it} + \sum_{k=1}^K \gamma^k Ctl_{it}^k + \beta_1 R_{it} + \beta_2 R_{it} \cdot SC_{it} + \beta_3 SC_{it} + \epsilon_{it} \\ \ln(\text{DebtLevel}_{it}) &= \phi_i + \tau_t + \gamma \ln(\text{Size}_{it}) + \beta_1 R_{it} + \beta_2 R_{it} \cdot SC_{it} + \beta_3 SC_{it} + \epsilon_{it} \end{aligned}$$

The RHS of the first model includes firm-fixed effects (ϕ_i), year dummies (τ_t), financial control variables (Ctl_{it}), whose inclusion is noted with an “X” below, and the implied debt ratio (IDR_{it}), which is only included when debt ratio on the LHS involves the market value of assets. The S&P long-term debt rating of the firm (R_{it} , COMPUSTAT DATA280), senate committee dummies (SC_{it}), and an interaction term between them are also included. The RHS of the second model includes an adjustment for firm size (either book value of total assets or sales). Panels B and C contain regression results for subsamples that have been divided between firms with investment and speculative grade debt, and where the interaction related terms have been omitted as follows:

$$\begin{aligned} \text{DebtRatio}_{it} &= \phi_i + \tau_t + \delta IDR_{it} + \sum_{k=1}^K \gamma^k Ctl_{it}^k + \beta SC_{it} + \epsilon_{it} \\ \ln(\text{DebtLevel}_{it}) &= \phi_i + \tau_t + \gamma \ln(\text{Size}_{it}) + \beta SC_{it} + \epsilon_{it} \end{aligned}$$

Coefficient estimates of β are reported with ***, **, and * denoting significance levels of 1%, 5%, and 10%, respectively (Huber-White robust standard errors, clustered at the firm level, in parenthesis).

<i>PANEL A: Committee/Debt Rating Interaction Terms</i>						
RHS Variable	TDA	TDA	TDM	TDM	ln(TD)	ln(TD)
SCAgg	0.031 (0.060)	0.047 (0.045)	0.015 (0.020)	0.020 (0.013)	-0.224 (0.424)	-0.115 (0.366)
SCAgg · Rating	-0.006 (0.006)	-0.008 * (0.004)	-0.003 (0.002)	-0.004 *** (0.001)	0.004 (0.042)	-0.002 (0.036)
Rating	0.015 *** (0.003)	0.002 (0.002)	0.000 (0.001)	-0.003 ** (0.001)	0.028 (0.018)	0.028 (0.018)
Control Vars		X		X		
ln(Assets)					X	
ln(Sales)						X

CONTINUED

TABLE VII CONTINUED

<i>PANEL B: Subsample: Investment Grade (BBB- and Above)</i>						
RHS Variable	TDA	TDA	TDM	TDM	ln(TD)	ln(TD)
SCAgg	-0.024 *	-0.038 ***	-0.003	-0.015 *	-0.139	-0.067
	(0.012)	(0.012)	(0.006)	(0.009)	(0.091)	(0.092)
Control Vars		X		X		
ln(Assets)					X	
ln(Sales)						X
<i>PANEL C: Subsample: Speculative Grade (BB+ and Below)</i>						
RHS Variable	TDA	TDA	TDM	TDM	ln(TD)	ln(TD)
SCAgg	-0.030 ***	-0.037 ***	-0.013 *	-0.014 *	-0.212 ***	-0.248 ***
	(0.010)	(0.014)	(0.007)	(0.007)	(0.075)	(0.092)
Control Vars		X		X		
ln(Assets)					X	
ln(Sales)						X

The regression results can be seen in Table VII to be generally supportive of the idea that the Senate chair effect is more pronounced for firms with lower credit ratings. Panel A contains tests involving an interaction term between the Senate committee dummy and credit rating. For debt ratios, the coefficient estimates are economically significant and negative, and are statistically significant when financial control variables are considered. S&P debt ratings contained in COMPUSTAT DATA280 range from 2 for AAA rated debt to 24 for C rated debt; the higher the number, the lower the credit rating. A negative coefficient therefore indicates that the lower the credit rating, the greater the reduction in debt. The regressions involving debt levels do not produce coefficient estimates that are significant.

The results contained in Panels B and C in Table VII are for subsamples of firms based on whether or not their debt is rated as investment grade. In the case of debt ratios, and in contrast to the results in Panel A, there appears to be little difference in the Senate committee effect between these two subsamples. However, also in contrast to the results in Panel A, there appears to be a large difference between the subsamples when debt levels are considered; when scaled by either assets or sales, the Senate chair effect appears to be much more pronounced for firms with speculative grade debt than for firms with investment grade debt; in the case where total debt is scaled by sales, the coefficient estimate is approximately 4 times as large for speculative grade firms.

Taken together, these tests support the idea that firms with lower credit ratings are more likely to use debt strategically than are firms with higher credit ratings.

4.6 Other Explanations: Growth Options

In this study I argue that firms adjust their debt ratios to the changing political climate in order to influence politicians, who are NFS in firms. This is not the only story that is consistent with the results presented above. An alternative explanation includes firms receiving growth options from friendly politicians in positions of power, and their debt policy adjustments owe more to financing decisions than to the firm-politician relationship as outlined. I reject this possible explanation for two reasons. First, there is little or no movement in the market-to-book ratio for firms whose state Senators chair committees that are important to the firm (the market-to-book ratio is considered to be positively correlated with growth options). Second, I only see this Senate chair effect on large firms, not small firms. I have conducted extensive testing on smaller firms using various cutoffs and of differing sample sizes. By and large, I see no aggregate affect on the debt of smaller firms. If growth options were the primary benefit to firms of a friendly politician, then I would expect to see the effect on both large and small firms (government largesse is not exclusively directed at large firms). The fact that the effect is limited to large firms is more supportive of a strategic use of debt story.

Finally, tests for a senate effect on other measures of firm performance have yielded few results. The only notable exception involves operating profit: it tends to increase when a home-state Senator chairs a relevant committee. However, this owes partly to the decreased interest payments associated with lower debt.

5 Conclusion

Firms use debt strategically in order to discourage politicians from placing costs on them. While politicians frequently derive a political benefit from placing costs on firms, they do not want firms to enter bankruptcy or become financially distressed as this affects the probability they will be elected. I argue that as the marginal benefit that accrues to politicians of imposing costs on firms (captured by α) decreases, firms optimally decrease

their debt levels.

Using data on Senate committee chairs, I find that firms whose state Senators chair a committee that is relevant to them appear to reduce their debt levels. The results are significant, both economically and statistically, are pervasive across nine different Senate committee groups. This result appears in tests that consider debt ratios (where book value of assets and market value of assets are alternatively in the denominator) and debt levels (scaled by either the book value of assets or sales) for the years 1962-2004 and for the subsample centered around the surprise outcome of the 1994 midterm election, which caused the Senate committee chairs to change. The results are more pronounced for larger firms with lower credit ratings.

A large number of recent work has concluded that the political process has an effect on asset prices, even in developed countries such as the U.S. To my knowledge, this is the first study that provides evidence of a link between a firms optimal capital structure and the political environment in which the firm operates. Clearly, there is a great deal of room for more research in this area.

References

- Alti, Aydogan, 2004, How persistent is the impact of market timing on capital structure?, *Working Paper*.
- Anderson, Christopher J., 2000, Economic voting and political context: A comparative perspective, *Electoral Studies* 19, 151–170.
- Ansolabehere, Stephen, John M. de Figueiredo, and James M. Snyder, 2003, Why is there so little money in u.s. politics?, *The Journal of Economic Perspectives* 417, 105–130.
- Austen-Smith, David, 1995, Campaign contributions and access, *American Political Science Review* 89, 566–581.
- Bagwell, Laurie Simon, and Josef Zechner, 1993, Influence costs and capital structure, *Journal of Finance* 48, 975–1008.
- Becker, Gary S., 1983, A theory of competition among pressure groups for political influence, *The Quarterly Journal of Economics* 98, 371–400.
- Benmelech, Efraim, and Tobias J. Moskowitz, 2006, The political economy of financial regulation: Evidence from u.s. state usury laws in the 18th and 19th century, *Working Paper*.
- Brady, David W., John F. Cogan, Brian J. Gaines, and Douglas Rivers, 1996, The perils of presidential support: How the republicans took the house in the 1994 midterm elections, *Political Behavior* 18, 345–367.
- Brander, James A., and Tracy R. Lewis, 1986, Oligopoly and financial structure: The limited liability effect, *The American Economic Review* 76, 956–970.
- Bronars, Stephen G., and Donald R. Deere, 1991, The threat of unionization, the use of debt, and the preservation of shareholder wealth, *The Quarterly Journal of Economics* 106, 231–254.
- Cheng, Yingmei, 2005, Portfolios and politics: The 2004 presidential election, *SSRN Working Paper*.
- Collie, Melissa P., and Brian E. Roberts, 1992, Trading places: Choice and committee chairs in the u.s. senate, 1950-1986, *The Journal of Politics* 54, 231–245.
- Feldstein, Martin, 1972a, Distributional equity and the optimal structure of public prices, *American Economic Review* 62.
- Ferguson, Michael F., and Hugh Douglas Witte, 2006, Congress and the stock market, *SSRN Working Paper*.
- Flannery, Mark J., and Kasturi P. Rangan, 2005, Partial adjustment toward target capital structures, *Journal of Financial Economics* Forthcoming.

- Franck, Tom, and Nancy Huyghebaert, 2004, On the interactions between capital structure and product markets: A survey of the literature, *Tijdschrift voor Economie en Management* 49.
- Glazer, Jacob, 1994, The strategic effects of long-term debt in imperfect competition, *Journal of Economic Theory* 62, 428–443.
- Goldman, Eitan, Jörg Rocholl, and Jongil So, 2006, Does political connectedness affect firm value?, *Working Paper*.
- Gray, Wayne B., 1987, The cost of regulation: Osha, epa, and the productivity slowdown, *American Economic Review* 77, 998–1006.
- Harris, Milton, and Artur Raviv, 1991, The theory of capital structure, *The Journal of Finance* 46, 297–355.
- Hart, Oliver D., and John Moore, 1995, Debt and seniority: an analysis of the rolde of hard claims in constraining management, *American Economic Review* 85, 567–585.
- Istaitieh, Abdulaziz, and José Miguel Rodríguez-Fernández, 2003, Stakeholder theory, market structure, and the firm’s capital structure: An empirical evidence, *SSRN Working Paper*.
- Jayachandran, Seema, 2006, The jeffords effect, *Journal of Law and Economics* Forthcoming.
- Joskow, Paul, and Roger Noll, 1981, Regulation in theory and practice: An overview, in *Studies in Public Regulation* pp. 1–65 Cambridge, MA. MIT Press.
- Kanatas, George, and Jianping Qi, 2001, Imperfect competition, agency , and financing decisions, *Journal of Business* 74, 307–338.
- Kayhan, Ayla, and Sheridan Titman, 2005, Firms’ histories and their capital structures, *Journal of Financial Economics* Forthcoming.
- Kezdi, Gabor, 2004, Robust standard error estimation in fixed-effects panel models, *Hungarian Statistical Review* Special Number 9, 95–116.
- Knight, Brian, 2006, Are policy platforms capitalized into equity prices? evidence from the bush/gore 2000 presidential election, *Journal of Public Economics* Forthcoming.
- Leary, Mark T., and Michael R. Roberts, 2005, Do firms rebalance their capital structures?, *Journal of Finance* 60, 2575–2619.
- Lemmon, Michael L., Michael R. Roberts, and Jamie F. Zender, 2005, Back to the beginning: Persistence and the cross-section of corporate capital structure, *Working Paper*.
- Lewis-Beck, Michael S., and Mary Stegmaier, 2000, Economic determinants of electoral outcomes, *Annual Review of Political Science* 3, 183–219.

- Maksimovic, Vojislav, and Sheridan Titman, 1991, Financial policy and reputation for product quality, *The Review of Financial Studies* 4, 175–200.
- Matsa, David A., 2006, Capital structure as a strategic variable: Evidence from collective bargaining, *Working Paper*.
- McChesney, Fred S., 1997, *Money for Nothing: Politicians, Rent Extraction, and Political Extortion* (Harvard University Press: Cambridge, MA).
- Modigliani, Franco, and Merton Miller, 1958, The cost of capital, corporation finance, and the theory of investment, *American Economic Review* 48, 261–297.
- Myers, Brett W., 2006, Corporate political activity and asset pricing, *Working Paper*.
- Owen, Bruce M., and Ronald R. Braeutigam, 1978, *The Regulation Game: Strategic Use of the Administrative Process* (Cambridge, Mass: Ballinger Publishing Co.).
- Pacek, Alexander, and Benjamin Radcliff, 1995, The political economy of competitive elections in the developing world, *American Journal of Political Science* 39, 745–759.
- Peltzman, Sam, 1976, Toward a more general theory of regulation, *Journal of Law and Economics* 19, 109–158.
- Peterson, Mitchell A., 2006, Estimating standard errors in finance panel data sets: Comparing approaches, *Working Paper*.
- Powell, G. Bingham, and Guy D. Whitten, 1993, A cross-national analysis of economic voting: Taking account of the political context, *American Journal of Political Science* 37, 391–414.
- Roberts, Brian E., 1990, A dead senator tells no lies: Seniority and the distribution of federal benefits, *American Journal of Political Science* 34, 31–58.
- Santa-Clara, Pedro, and Rossen Valkanov, 2003, The presidential puzzle: Political cycles and the stock market, *Journal of Finance* 58, 1841–1872.
- Shleifer, Andrei, and Robert W. Vishny, 1994, Politicians and firms, *The Quarterly Journal of Economics* 109, 995–1025.
- Spiefel, Yossef, and Daniel F. Spulber, 1994, The capital structure of a regulated firm, *RAND Journal of Economics* 25, 424–440.
- Stigler, George J., 1971, The theory of economic regulation, *Bell Journal of Economics and Management Science* 2, 3–21.
- Titman, Sheridan, 1984, The effect of capital structure on a firm’s liquidation decision, *Journal of Financial Economics* 13.
- , and Roberto Wessels, 1988, The determinants of capital structure choice, *Journal of Finance* 43, 1–19.
- Welch, Ivo, 2004, Capital structure and stock returns, *Journal of Political Economy* 112.

APPENDIX

Table A-1
Senate Committee Jurisdictions

Senate committees vary in their jurisdictions and there is some overlap. This table contains an entry for each committee group and the brief overview of the jurisdiction of the component committees.

GID	Committee Group Name	Jurisdiction
SC01	Agriculture, Nutrition, and Forestry	Agricultural commodities; price and income support programs foreign agriculture trade, foreign market development, international commodity agreements, inspection and certification of foods, forestry in general and forest reserves, soil conservation, watershed and flood control.
SC02	Appropriations	Jurisdiction over all discretionary spending legislation in the Senate, including that which involves agriculture and rural development, commerce, justice, science, defence and military construction, energy, water, interior and related industries, labor, health and human services, transportation, housing and urban development.
SC03	Armed Services	Military research and development, aeronautical and space activities associated with the development of weapon systems or military operations, nuclear energy, naval petroleum reserves.
SC04	Banking, Housing, and Urban Affairs	Jurisdiction over banks and financial institutions, control of prices of commodities, economic stabilization and defense production, export and foreign trade and controls, federal monetary policy, financial aid to commerce and industry, public and private housing, urban development and mass transit.
SC05	Commerce, Science, and Transportation	Legislation involving coastal zone management, communications, highways, inland waterways, interstate commerce, deepwater ports, marine fisheries, nonmilitary aeronautical and space sciences, regulation of consumer products, interstate common carriers including railroads, buses, trucks, vessels, and pipelines; science, engineering, and technology research and development policy.
SC06	Energy and Natural Resources	Oversight and legislative responsibilities fore national energy policy, nuclear waste policy, privatization of federal assets; nuclear, coal, and synthetic fuels research and development, nuclear and non-nuclear energy commercialization projects, oil and gas regulation; national parks and river systems, national trails and recreation areas, forestry, farming and grazing, national mining and minerals policy, irrigation, groundwater, energy developments that impact water.

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TABLE A-1 CONTINUED

GID	Committee Group Name	Jurisdiction
SC07	Environment and Public Works	Transportation and infrastructure, Corps of Engineers, Economic Development Administration, Federal Highway Administration, transportation (bridges, highways, environmental streamlining), water resources, oversight of air quality and clean air act, Nuclear Regulatory Commission; fish, wildlife, and water; superfund and waste management.
SC08	Health, Education, Labor, and Pensions	Broad jurisdiction over the operation of health care, schools, employment and retirement programs. Food and Drug Administration, Centers for Disease Control and Prevention, public health and health insurance, all federal agencies charged with enforcing laws related to health care; most federal labor and employment laws, including health and safety, discrimination, union and management relations; all federal agencies charged with enforcing federal labor, employment, and retirement law.
SC09	Small Business	Jurisdiction over Small Business Administration and charged with researching and investigating all problems of American small business enterprises.

Table A-2
2-Digit SIC Industries and Relevant Committees

Senate committees vary in their influence on various industries. This table contains a mapping of 2-digit SIC industries to “relevant” senate committees. The dates for which each particular Senate committee was active are included in parenthesis after the committee name.

SIC Code	2-Digit SIC Name	Relevant Senate Committees
10	Metal Mining	Energy and Natural Resources (1997 - Present) Environment and Public Works (1977 - Present) Interior and Insular Affairs (1948 - 1977) Public Works (1947 - 1977)
12	Bituminous Coal and Lignite Mining	Energy and Natural Resources (1997 - Present) Environment and Public Works (1977 - Present) Interior and Insular Affairs (1948 - 1977) Public Works (1947 - 1977)
13	Oil and Gas Extraction	Energy and Natural Resources (1997 - Present) Environment and Public Works (1977 - Present) Interior and Insular Affairs (1948 - 1977) Public Works (1947 - 1977)
14	Nonmetallic Minerals, Except Fuels	Energy and Natural Resources (1997 - Present) Environment and Public Works (1977 - Present) Interior and Insular Affairs (1948 - 1977) Public Works (1947 - 1977)
15	General Building Contractors	Appropriations (1867 - Present) Banking, Housing, and Urban Affairs (1970 - Present) Health, Education, Labor, and Pensions (1999 - Present) Human Resources (1977 - 1979) Labor and Human Resources (1979 - 1999) Labor and Public Welfare (1947 - 1977)
16	Heavy Construction Contractors	Appropriations (1867 - Present) Banking, Housing, and Urban Affairs (1970 - Present) Health, Education, Labor, and Pensions (1999 - Present) Human Resources (1977 - 1979) Labor and Human Resources (1979 - 1999) Labor and Public Welfare (1947 - 1977)
20	Food and Kindred Products	Agriculture and Forestry (1884 - 1977) Agriculture, Nutrition, and Forestry (1977 - Present)
23	Apparel and Other Textile Products	Health, Education, Labor, and Pensions (1999 - Present) Human Resources (1977 - 1979) Labor and Human Resources (1979 - 1999) Labor and Public Welfare (1947 - 1977)
24	Lumber and Wood Products	Agriculture and Forestry (1884 - 1977) Agriculture, Nutrition, and Forestry (1977 - Present) Environment and Public Works (1977 - Present) Health, Education, Labor, and Pensions (1999 - Present) Human Resources (1977 - 1979) Labor and Human Resources (1979 - 1999) Labor and Public Welfare (1947 - 1977) Public Works (1947 - 1977)

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TABLE A-2 CONTINUED

SIC Code	2-Digit SIC Name	Relevant Senate Committees
25	Furniture and Fixtures	Health, Education, Labor, and Pensions (1999 - Present) Human Resources (1977 - 1979) Labor and Human Resources (1979 - 1999) Labor and Public Welfare (1947 - 1977)
26	Paper and Allied Products	Agriculture and Forestry (1884 - 1977) Agriculture, Nutrition, and Forestry (1977 - Present)
28	Chemicals and Allied Products	Aeronautical and Space Sciences (1958 - 1977) Commerce, Science, and Transportation (1977 - Present) Environment and Public Works (1977 - Present) Public Works (1947 - 1977)
29	Petroleum and Coal Products	Energy and Natural Resources (1997 - Present) Environment and Public Works (1977 - Present) Interior and Insular Affairs (1948 - 1977) Public Works (1947 - 1977)
30	Rubber and Plastics Products	Commerce, Science, and Transportation (1977 - Present) Environment and Public Works (1977 - Present) Public Works (1947 - 1977)
33	Primary Metal Industries	Energy and Natural Resources (1997 - Present) Health, Education, Labor, and Pensions (1999 - Present) Human Resources (1977 - 1979) Interior and Insular Affairs (1948 - 1977) Labor and Human Resources (1979 - 1999) Labor and Public Welfare (1947 - 1977)
35	Machinery, Except Electrical	Commerce, Science, and Transportation (1977 - Present) Health, Education, Labor, and Pensions (1999 - Present) Human Resources (1977 - 1979) Labor and Human Resources (1979 - 1999) Labor and Public Welfare (1947 - 1977)
36	Electrical and Electronic Equipment	Aeronautical and Space Sciences (1958 - 1977)
37	Transportation Equipment	Aeronautical and Space Sciences (1958 - 1977) Appropriations (1867 - Present) Armed Services (1947 - Present) Commerce, Science, and Transportation (1977 - Present)
38	Instruments and Related Products	Aeronautical and Space Sciences (1958 - 1977) Armed Services (1947 - Present) Commerce, Science, and Transportation (1977 - Present)
40	Railroad Transportation	Appropriations (1867 - Present) Banking, Housing, and Urban Affairs (1970 - Present) Commerce (1961 - 1977) Commerce, Science, and Transportation (1977 - Present) Environment and Public Works (1977 - Present) Interstate and Foreign Commerce (1947 - 1961) Public Works (1947 - 1977)

CONTINUED

TABLE A-2 CONTINUED

SIC Code	2-Digit SIC Name	Relevant Senate Committees
42	Trucking and Warehousing	Commerce (1961 - 1977) Commerce, Science, and Transportation (1977 - Present) Environment and Public Works (1977 - Present) Interstate and Foreign Commerce (1947 - 1961) Public Works (1947 - 1977)
44	Water Transportation	Commerce (1961 - 1977) Commerce, Science, and Transportation (1977 - Present) Interstate and Foreign Commerce (1947 - 1961)
45	Air Transportation	Aeronautical and Space Sciences (1958 - 1977) Appropriations (1867 - Present) Commerce (1961 - 1977) Commerce, Science, and Transportation (1977 - Present) Health, Education, Labor, and Pensions (1999 - Present) Human Resources (1977 - 1979) Interstate and Foreign Commerce (1947 - 1961) Labor and Human Resources (1979 - 1999) Labor and Public Welfare (1947 - 1977)
46	Pipeline (Except Natural Gas)	Appropriations (1867 - Present) Environment and Public Works (1977 - Present) Health, Education, Labor, and Pensions (1999 - Present) Human Resources (1977 - 1979) Labor and Human Resources (1979 - 1999) Labor and Public Welfare (1947 - 1977) Public Works (1947 - 1977)
48	Communication	Commerce, Science, and Transportation (1977 - Present)
49	Electric, Gas, and Sanitary Services	Energy and Natural Resources (1997 - Present) Environment and Public Works (1977 - Present) Interior and Insular Affairs (1948 - 1977) Public Works (1947 - 1977)
50	Wholesale Trade (Durable Goods)	Commerce (1961 - 1977) Commerce, Science, and Transportation (1977 - Present) Health, Education, Labor, and Pensions (1999 - Present) Human Resources (1977 - 1979) Interstate and Foreign Commerce (1947 - 1961) Labor and Human Resources (1979 - 1999) Labor and Public Welfare (1947 - 1977)
51	Wholesale Trade (Nondurable Goods)	Commerce (1961 - 1977) Commerce, Science, and Transportation (1977 - Present) Health, Education, Labor, and Pensions (1999 - Present) Human Resources (1977 - 1979) Interstate and Foreign Commerce (1947 - 1961) Labor and Human Resources (1979 - 1999) Labor and Public Welfare (1947 - 1977)
54	Food Stores	Agriculture and Forestry (1884 - 1977) Agriculture, Nutrition, and Forestry (1977 - Present) Health, Education, Labor, and Pensions (1999 - Present) Human Resources (1977 - 1979) Labor and Human Resources (1979 - 1999) Labor and Public Welfare (1947 - 1977) Small Business (1981 - Present)

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TABLE A-2 CONTINUED

SIC Code	2-Digit SIC Name	Relevant Senate Committees
55	Automotive Dealers and Service Stations	Small Business (1981 - Present)
58	Eating and Drinking Places	Health, Education, Labor, and Pensions (1999 - Present) Human Resources (1977 - 1979) Labor and Human Resources (1979 - 1999) Labor and Public Welfare (1947 - 1977)
59	Miscellaneous Retail	Small Business (1981 - Present)
60	Banking	Banking and Currency (1913 - 1970) Banking, Housing, and Urban Affairs (1970 - Present)
61	Credit Agencies other than Banks	Banking and Currency (1913 - 1970) Banking, Housing, and Urban Affairs (1970 - Present) Small Business (1981 - Present)
62	Security, Commodity Brokers	Banking and Currency (1913 - 1970) Banking, Housing, and Urban Affairs (1970 - Present)
63	Insurance Carriers	Banking and Currency (1913 - 1970) Banking, Housing, and Urban Affairs (1970 - Present)
65	Real Estate	Appropriations (1867 - Present)
67	Holding and Other Investment Offices	Banking and Currency (1913 - 1970) Banking, Housing, and Urban Affairs (1970 - Present)
75	Auto Repair, Services, and Garages	Small Business (1981 - Present)