The Decision to Go Private

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This version: June 2008

Abstract. Several theories have been proposed to explain the flow from public to private equity ownership. By studying the propensity of individual firms to become private during the previous few decades, we attempt to distinguish between the various theories. Firm size, risk, valuation, growth, and profitability all predict the decision to go private, consistent with many plausible theories. We find support for several specific explanations of buyout volumes, including the importance of junk bonds, the supply of private equity, the impact of Sarbanes-Oxley, and the risk-sharing benefits of public ownership. However, we do not find evidence that the break up of conglomerates was a motivation for buyouts, nor does corporate governance appear to play a role in this decision. (*JEL: G32, G34*)

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[**] We wish to thank Chris Leach, Timothy Johnson, David Matsa, Geoffrey Smith, René Stulz and Michael Weisbach, as well as seminar participants at UIUC, Ohio State, and the Stockholm Institute for Financial Research for helpful comments. We are especially grateful to Per Strömberg for fruitful suggestions and providing the data on private equity capital commitments.

1. Introduction

The flow of US firms from public to private ownership in the last decades has been volatile and at times very considerable (occasionally reaching close to a percent of aggregate market value). In the last few decades, there were two big US waves of buyouts, the first peaking in 1987-1988 and the second perhaps peaking in 2006-2007. The year-to-year variation is large (the dollar value of buyout transactions in 2006 was approximately 14 times the value in 1992). Similarly, variation in the flow across industries is considerable (see Figure 2). Which theories of the private-public choice can explain the patterns of this flow? In this paper, we examine empirically a wide set of theories and compare their ability to explain the choice of public firms to go private over the 1980-2006 period.

We first discuss a number of theories that relate to the choice between private and public ownership, and outline the time-series and cross-sectional predictions about the incidence of buyouts from each. These include a trade-off between risk sharing benefits of public ownership (see e.g. Leland and Pyle (1977)) and better control of agency problems in private firms (see e.g. Fama and Jensen (1983), Jensen (1986), Jensen (1989) and Kaplan (1989)). We discuss several reasons for risk-averse behavior beyond the utility functions of owners, such as bankruptcy costs, and what predictions these alternatives make regarding the private-public choice.[1] Agency problems related to free cash flow (Jensen (1986), Lehn and Poulsen (1989)) may be less severe in private firms. Debt overhang (Myers (1977)) may be more severe because firms that go private typically increase leverage considerably.

Another category of explanations is institutional in nature. This includes the claim that the development of junk bond markets in the first half of the 1980s allowed firms to raise more external finance without relying on equity markets (see Jensen 1989), facilitating private ownership of large firms. The recent buyout wave has been explained by Sarbanes-Oxley legislation (SOX), which allegedly has made listing less attractive (see Zingales 2006, Engel, Hayes and Wang (2007) and Leuz, Triantis and Wang (2008)). Yet another group of explanations can be summarized as "cheap debt". These theories suggest that when (long term) interest rates are low, it is "cheap" to finance a firm with public debt, relative to public equity, and that this allows firms to go private by exploiting the cheap debt financing (see e.g. Kaplan

[1] See Bodnaruk, Kandel, Massa and Simonov (forthcoming) as well as Aslan and Kumar (2007) for evidence that owners of firms may be risk averse.

and Stein (1993) and Axelson, Jenkinson, Strömberg and Weisbach (2007)). Beyond the cost of debt, the cost of private equity may potentially vary as well (see e.g. Kaplan and Strömberg (2008) for a discussion of the supply of private equity). What really matters for the decision to go private is the relative cost of public and private equity. The risk sharing and agency theories have direct implications for this relative cost, but other factors, such as regulation of institutional investors, can potentially drive these differences as well.

We attempt to evaluate the full set of theories and derive from each a set of predictions applicable to firm choices of public and private ownership. We test the various theories' predictions in panel data for US firms that could choose to switch from public to private ownership during the 1980-2006 period. We find that smaller firms, firms with low volatility, firms with low asset growth, firms with high book-to-market ratios, and firms with high profitability are likely to go private. The magnitudes of these effects are economically important. While the unconditional average annual probability of a firm in our sample going private is 0.56%, changing each of the five variables one standard deviation in the appropriate direction increase the probability to 2.24%. These five variables provide considerable predictive power for which firms go private, but they generally do not provide sharp tests of the alternative theories. In each case, the evidence is consistent with multiple explanations.[2]

Several sharper tests are provided by other variables. We find that conglomerates are not more likely to go private, neither during the 1980s nor at other times, which seems at odds with the conglomerate break-up theory of the 1980s buyout wave. On the other hand, we find that the junk bond wave of the 1980s coincides with a higher relative propensity of large firms to go private. This is consistent with the theory that the development of junk bonds was a key financial innovation allowing larger firms to switch to private status. It is also consistent with a more demand-driven view of the advent of junk bonds. We find no evidence that either economy-wide or firm-specific interest rates are determinants of going private volumes, in contrast to the predictions of cheap debt theories. We also examine the effect of the supply of equity, as opposed to debt. To address serious endogeneity concerns (the amount of financing raised by buyout funds reflects the future investment opportunities of such funds) we follow Gompers and Lerner (2000) and employ an instrument for the supply of capital for buyouts.

[2] For example, the finding that smaller firms are more likely to go private is consistent with any theory positing fixed costs of being public but benefits which scale. This set of theories includes, but is not limited to, the standard risk sharing argument.

We find considerable evidence that exogenous supply shifts are related to the decision to go private. We also find support for the argument that Sarbanes-Oxley forced smaller firms off the stock exchange. Examining firm-level corporate governance variation, we find no evidence that entrenched managers are able to reduce the probability of going-private transactions.

To summarize, our evidence points to the importance of many of the institutional explanations that have been advanced for going private waves, and suggests that the standard trade-offs (e.g. risk and agency problems) account for a substantial portion of the evidence at the firm-level. However, the evidence does not support some of the institutional explanations (e.g. cheap debt, the break-up of conglomerates, and corporate governance).

This paper is part of a literature, partially inspired by recent buyout volumes, that explores the role of public and private equity ownership, including Boot, Gopalan and Thakor (2006, forthcoming) and Axelson, Jenkinson, Strömberg and Weisbach (2007). In particular, our results are related to the recent empirical papers by Aslan and Kumar (2007), who study the decision to go public and go private in the UK and Ireland, and Bharath and Dittmar (2007), who compare private and public firms as well as considering the timing of going private decisions. Unlike these papers, we do not study IPOs, nor do we compare public firms to similar private peers. Instead we focus exclusively on the decision to go private. Also unlike both these papers, we consider several of the proposed institutional explanations for the recent buyout waves in detail. For example, we examine the cheap debt theory of buyouts, the theory that junk bonds constituted a key innovation which allowed a different set of firms to go private, as well as the theory that 1980s buyouts aimed to break up conglomerates. Finally, unlike both Aslan and Kumar (2007) and Bharath and Dittmar (2007), we study how governance issues at the firm level interact with the process of going private. Engel, Hayes and Wang (2007) examine the quarterly frequency of going private volumes as well as announcement returns before and after the passage of Sarbanes-Oxley, but do not apply our difference-in-difference method (i.e. using firm size). They do not consider other theories of going private.

There is a large literature on prices of going private transactions, the leverage before and after such deals, and performance changes around the event (see e.g. Kaplan and Strömberg (2008)). Since we are specifically interested in explaining the flow from public to private ownership, we do not consider these related questions.

2. Theories of the choice between private and public status

A number of theories and hypotheses involve predictions about which firms will be public and which will be private. Many of these theories are specifically related to the buyout decision, and some are of a more general nature. In this section, we outline a series of the most closely related arguments as well as a few arguments about the public-private choice that have not been codified but rely on standard arguments from the literature on corporate finance. We focus on the implications in terms of which public firms are most likely to go private, as opposed to how firm performance might change around a going private event or the price at which a transaction to go private takes place. Finally, we summarize the empirical predictions of all theories at the end of the section.

2.1 Risk aversion

The risk sharing benefits of public equity are lost when a firm goes private. The private firm will likely have fewer owners, and those owners will probably be less diversified than the typical owners of public equity. Hence, the cost of risk is higher for private firms. This impacts welfare directly, if agents are risk averse, but possibly also indirectly, if private firms are making investment, capital structure, and organizational choices to reduce risk in a manner that is not first best optimal.

Even with risk neutral owners, private firms may be effectively more risk averse if owners have limited capital and firms face bankruptcy costs or costs of financial distress.[3] Essentially, the limited capital of the owners forces private firms to be highly levered and face relatively high probabilities of financial distress and inefficient liquidation. In this situation private firms may also choose to forgo risky but otherwise valuable investment opportunities. Of course, these difficulties can be avoided by going (or remaining) public.

This argument for the benefits of ownership through the stock market does not provide a theory of private and public ownership choices without some countervailing benefit of private ownership (or, equivalently, some disadvantage of public ownership). An argument that involves an advantage of only one form of ownership is half a theory at most. One potential benefit to being private is that agency costs are lower for private firms (see also

[3] Costs of financial distress could be due to debt overhang problems (Myers (1977), see also the next section), or fire-sale discounts (Shleifer and Vishny (1992)).

section 2.3 below). However, there are many potential advantages and disadvantages to being private firm instead of publicly owned, and therefore, considering partial theories when they provide empirical predictions is useful. We must keep in mind that some countervailing force is implicitly assumed to exist, favoring the other form of ownership.

In the case of risk sharing, the main predictions are as follows; first, firms whose cash flows entail more risk will be less likely to go private than those with stable cash flows. Second, the limits to private risk sharing are likely more severe for large firms, and therefore, large firms are also less likely to become private. Third, firms with high cash flow and low growth prospects provide a cushion for their owners' consumption, thereby reducing the risk sharing problems for privately held firms.

2.2 Debt overhang

Myers (1977) suggests that leverage can distort investment incentives, causing debt overhang. Debt overhang refers to a situation where the cash flow generated by new investment is partially appropriated by existing debt holders, and hence positive net present value projects are not always be accepted by the owners. Firms for which debt overhang is likely to be important are those firms that have high investment needs, especially if the investment in question has volatile investment payoffs. Hence, to the extent that buyouts necessitate high leverage (to replace public equity), growth firms should be less likely to go private than more stable firms.

2.3 Free cash flow

Jensen (1986) suggests that managers will dislike paying out cash because it reduces the amount of resources under their control and increases the likelihood that they will have to raise external finance, incurring capital markets' scrutiny. Instead, managers prefer to grow their firms, creating substantial agency problems between management and owners. Jensen suggests that high leverage capital structures and the threat of takeovers can help remedy these agency problems. In particular, he indicates that going private transactions are useful because they result in increased leverage. He also suggests that going private is most useful for firms with "stable business histories and substantial free cash flow (i.e. low growth prospects and high potential for generating cash flows) – situations where agency costs of free cash flow are likely to be high." The free cash flow theory predicts that leveraged buyouts will occur for firms low

asset growth and high book-to-market (due to lower investment needs), low volatility (stability), and high cash flow.

2.4 The supply of debt and equity

Several arguments for the benefits of going private are related to the considerable use of debt in going private transactions (see e.g. Kaplan (1989)). One obvious reason is that by leaving the public equity markets, the supply of equity financing becomes more limited for private firms. It has also been suggested that public firms take on too little debt because of managerial preferences (Jensen (1989)) and that privatized firms are closer to their optimal capital structure, fully exploiting tax and other advantages of debt. Whatever the reason, the high leverage suggests that private firms will benefit more from a reduction in the price of debt relative to the price of equity. In a Modigliani-Miller world, such relative price changes are impossible, but it has been argued that in practice, the relative price of debt and equity changes (Baker and Wurgler (2000)). In the context of buyouts, Axelson, Jenkinson, Strömberg and Weisbach (2007) find that prices paid in going private transactions are related to the economy-wide cost of borrowing, and interprets this as evidence that the "availability of financing impacts booms and busts in the private equity market". If the price of debt is an important driver of the decision to go private, we expect those firms that face low borrowing costs to be particularly likely to go private.

The cost of equity for privately held firms may vary, for example due to variation the assets available to buyout-oriented private equity firms (see e.g. Kaplan and Strömberg (2008) for a discussion of the supply of private equity). Periods of high supply private equity may reduce the cost of private equity relative to public equity, and thus encouraging firms to go private. As pointed out in the introduction, several theories, including risk sharing and agency theories, have implications for the relative prices. Kaplan and Strömberg (2008) and Gompers and Lerner (2000) argue that much of the variation in the amount of money committed to private equity funds is driven by institutional factors and long-term trends. If we can identify these factors, we can test whether the supply of private equity drives the frequency of going private transactions.

2.5 Breaking up conglomerates

One explanation of the breakups in the 1980s is that they represented the breakup of conglomerates largely formed in 1960s. This is suggested by Shleifer and Vishny (1990) both for

hostile takeovers (by listed acquirers) and for buyouts: "To a significant extent the 1980s reflect the deconglomeration of American business. Hostile takeovers and leveraged buyouts ... facilitated this process". If this theory is true for buyouts, multi-segment firms should be more likely to go private than single segment firms, at least during the 1980s.

2.6 Other institutional theories

Many attempts to explain the large and volatile buyout volumes have invoked institutional and legal factors.

The wave of going private activity in the 1980s followed on the heels of a vast increase in the availability of non-investment grade debt issues, also called junk bonds. Junk bonds were rarely issued prior to the 1980s, and the volumes grew very quickly until the late 1980s and then declined substantially (see Kaplan and Holmström (2003), who report that non-investment grade bond issuance peaked in 1986). Jensen (1989) suggests that this constituted a key financial innovation, allowing firms to go private which had previously been unable to. This interesting argument is difficult to test directly. However, there is an indirect implication that may be more amenable to econometric tests. Jensen (1989) emphasizes that the threat of buyouts increased especially for large firms. Presumably, funds for small transactions were available from lenders before the advent of junk bonds, but larger deals were facilitated by the large amounts of debt that could be issued after the advent of large scale junk bond issues. If this argument is true, the 1980s wave of buyouts would have been affected larger firms more than waves before and perhaps after. To the extent that size negatively impacts the probability of going private, this coefficient should have been less negative during the 1980s.[4]

The Sarbanes-Oxley Act of 2002 raised reporting and accounting standards for U.S. public companies. Therefore, SOX raised the costs of participating in public equity markets and it has been suggested that this makes public status less attractive (Zingales (2006), Engel, Hayes and Wang (2007) and Leuz, Triantis and Wang (2008)). This predicts a decrease in IPOs and an increase in buyouts. Because many of the costs imposed by SOX are independent of firm size, this effect is likely to be stronger for small firms.

[4] Institutional investors participated in buyouts during the 1980s as important buyers of junk bonds and sellers of large blocks of shares, something Donaldson (1994) ties to the LBO wave of that decade.

2.8 Summary of predictions

A large number of theories bear on the question of which and how many public firms are likely to go private and many implications differ between theories. Predictions vary regarding the variables that should be relevant, their relative importance, and the direction of influence. However, several firm-level variables are implied by many or even most of the theories. These variables do not allow sharp distinction between theories, but because they are strongly implied by the overall body of theory they constitute a useful empirical baseline. Initially, we discuss these variables.

First, the **valuation** of a firm in the public market is predicted to affect the going private decisions in many theories. We will use the book-to-market ratio to capture firm valuations, and this is measure that is likely to capture many things. Apart from valuations, the book-to-market ratio is probably correlated with a firm's growth opportunities and investment need. The book-to-market ratio is predicted to decrease the probability of going private under the free cash flow theory (if book-to-market is correlated with growth opportunities), the debt overhang theory (if distortions to investment incentives are more severe in firms with low book-to-market) and if there is the potential for market timing. Second, several theories predict that a firm's **growth rate** should affect the probability of it going private. Growth is predicted to have a negative effect on the probability of going private by the free cash flow theory, the risk aversion theory (because a high growth rate is likely to make limited access to outside capital more costly for private firms) and the debt overhang theory (if distortions to investment incentives are more severe in firms with high growth). We use the gross asset growth rate to capture firm-specific growth. The third variable is **risk**. Risk is predicted to have a negative effect on the probability of going private by the risk aversion and free cash flow theories. We use the volatility of stock returns to measure the riskiness of cash flows. The fourth variable is **firm size**. Firm size is predicted to affect the probability of going private whenever the benefits and costs of being public depend on firm size in different ways. For example, if being public entails fixed listing costs but produces benefits that increase in firm size, smaller firms will be more likely to go private. We capture firm size with normalized market capitalization. The fifth variable is **profitability**, which is important for exploiting the tax advantage of debt.[5] For each

[5] To the extent that profitability is correlated with free cash flow, the free cash flow theory also predicts that high profit firms should be more likely to go private. However, this is only true if we do not control for free cash flow itself. In section 4.9, we consider this issue in detail.

of these five variables, several theories make similar predictions. Theses variables are therefore unlikely to provide sharp test of which theories are more accurate. However, several of the theories also make more specific predictions, which allow us to make sharper distinctions between theories.

The free cash flow theory predicts that firms with high **free cash flow** will be more likely to go private. Similarly, risk aversion generated by financing constraints will be more severe for firms with low cash flow, suggesting that low cash flow firms be more likely to be (or remain) public.

The cheap debt theory predicts that firms with low **interest costs** (controlling for leverage) should be more likely to go private and that periods with low interest rates (either low long horizon risk free rates or low credit spreads) should see more buyouts.

The cost of private equity explanation suggests that when the **supply of capital for private equity funds** is high, there will be more buyouts.

The breaking up conglomerates theory predicts that **multi-segment firms** should be more likely to go private than single segment firms, particularly (or perhaps only) during the 1980s.

Firms vary considerably in their governance structure (see e.g. Gompers, Ishii and Metrick (2003)). If managers resist buyouts, measures of poor **governance** or CEO entrenchment may predict lower likelihood of takeovers. On the other hand, poor governance may increase the potential gains to going private transactions (e.g. under the free cash flow theory), and if managers have limited ability or motivation to resist, poor governance may increase the likelihood of going private.

Two theories predict that the relative size of firms that go private will vary over time. The junk bond theory predicts that the effect of size on the likelihood of going private should be more positive during the 1980s than at other times. On the other hand, the Sarbanes-Oxley theory of buyouts predicts that small firms, which were disproportionately affected by SOX, would see the largest response. Therefore, this theory predicts that firm size should have a stronger negative effect on going private probabilities in the period around and right after the passing of SOX in 2002 (if the relative propensity of small firms to go public increases, size will have a more negative coefficient during the period in question).

3. Data description

We analyze transactions involving the purchase of public companies listed in the United States from SDC Platinum between 1981 and 2006. We match firm characteristics for public companies listed in the United States every year and time-series variables capturing macroeconomic credit conditions to these going private transactions. The sample of public companies includes all firms with the accounting information from Compustat for the previous fiscal year and stock-specific information from CRSP as of December of the previous year.

3.1 SDC Platinum

A public company is deemed to have engaged in a transaction to go private in a particular year if more than 50% of its shares are owned by a private entity after the acquisition. We use the target's public status and target's ultimate parent's public status to classify the target as public or not public. The additional requirement that the target company be matched to stock performance information in CRSP ensures that the target is a public company listed in the United States. We match transaction information for each target other company characteristics using the first six digits of the target's CUSIP.

The acquirer of the public company is considered to be a private entity if it is not a public company or state-owned enterprise itself and is also not a direct or indirect subsidiary of a public company or state-owned enterprise. This classification utilizes the acquirer's public status and the acquirer's ultimate parent's public status as recorded by SDC Platinum. We only consider completed transactions where the variable, percentage owned after transaction, is greater than 50.

3.2 Compustat and CRSP variables

Since we attempt to explain the decision to go private in year t with firm characteristics known in year t-1, we consider a variety of firm-specific variables as proxies for different potential inputs into this choice.

The following accounting variables are constructed from the Compustat Industrial Annual database using information from the fiscal year ending in year t-1. The book value of equity is stock holder's equity (data item 216) plus deferred taxes (data item 35) minus preferred stock (data item 56). If stock holder's equity is missing we replace it with the sum of common equity (data item 60) and preferred stock (data item 56). The book-to-market ratio for

equity is the book value of equity divided by market capitalization from CRSP as of December of year t-1.

Asset growth is the annual growth rate of book value of assets (data item 6) measured between fiscal years. Return on assets is operating income (data item 13) divided by the lagged book value of assets. Book leverage is the one minus the ratio of the book value of assets to the book value of equity. Free cash flow is the quantity operating income minus total interest (data item 15) and taxes (data item 16) divided by lagged book value of assets. Investment is capital expenditures (data item 128) divided by lagged book value of assets. Depreciation (data item 14) is scaled by lagged book value of assets. Borrowing cost is total interest divided by the difference between the book value of assets and the book value of equity.

We also consider the organizational structure of the target using the Compustat Segments database as an additional aspect of the choice to become a private company. If the firm has more than one (two) business segments, then the firm is classified as multi-segment (tri-segment). We construct indicators for both classification schemes.

Market capitalization is calculated from CRSP in December. We logarithmically transform this variable and scale it to be distributed with a mean of zero and standard deviation of one for each year. This transformation is designed to remove time-series patterns from firm size. Stock return volatility is calculated from monthly data in CRSP using the previous 36 months ending in December.

3.2 Macroeconomic variables

It is also possible that macroeconomic credit conditions play an important role in the decision to go private. The credit spread is the average yield for BAA rated bonds according to Moody's ratings minus the average yield for US treasury bonds as of December of the previous year (data provided by the St. Louis Federal reserve bank). The US Treasury YTM is the yield to maturity for the 1-year and 10-year treasury securities, respectively, (data provided by the St. Louis Federal Reserve Bank) minus 1-year expected inflation (CPI) from the Survey of Professional Forecasters (data provided by the Philadelphia Federal Reserve Bank) as of December of the previous year. The first end-of-year forecast for expected inflation is available in the fourth quarter of 1981 for 1982.

3.3 Corporate governance indices

We analyze the impact of corporate governance on the decision of a public firm to become private. We focus on two measures for corporate governance. The governance index of Gompers et al. (2003) is constructed from 22 firm-specific provisions and 6 state provisions using data from the Investor Responsibility Research Center. This index is defined so that low values are associated with more rights for shareholders. The entrenchment index of Bebchuk et al. (2004) incorporates a subset of the governance provisions evaluated by Gompers et al. The entrenchment index specifically includes provisions that impede a majority shareholder from imposing decisions on management (e.g. supermajority requirements and limits to shareholder bylaw amendments) and anti-takeover provisions designed to block changes in corporate control that are not approved by management (e.g. poison pills and staggered boards).

3.4 Supply of private equity

We also consider link between the supply of capital for private equity activities and the decision of a public firm to become private. We define buyout inflow as capital commitments to US buyout funds normalized by the market capitalization of listed companies at the end of the previous year and venture capital inflow as capital commitments to US venture capital funds similarly normalized (data provided by Per Strömberg).

4. Results

4.1 Baseline logistic regressions

In Table 2 we consider a series of logistic specifications predicting the decision of a public company to become a private company using assorted firm characteristics. The variables of interest include the book-to-market ratio for equity, asset growth, stock return volatility, market capitalization (normalized), and profitability (return on assets). Columns one through five of the table present specifications for each of these five variables separately with year and industry fixed effects. Only book-to-market, asset growth and market capitalization have significant explanatory power for the decision to go private. The coefficient estimates for these three variables are of the predicted sign (see theoretical predictions above). The sign of the coefficient estimate for stock return volatility is consistent with explanations involving risk aversion or debt overhang, although the relationship is not statistically significant. The coefficient estimate for profitability is positive but insignificant.

Column six of Table 2 presents a specification with all five variables as well as year and industry fixed effects. All five variables are statistically significant and of the expected sign. The negative coefficient on stock return volatility indicates that risky firms are less likely to go private. Since there is a strong negative relation between firm size and volatility, it is critical to control for firm size when investigating the role of volatility on the decision to go private. The impact of volatility also suggests that theories of involving cheap debt, junk bonds, and conglomerate break-ups are not sufficient on their own to fully explain the cross-sectional variation in the decision to go private (since these theories make no prediction about risk). Also, profitability is now significantly positively related to the likelihood of going private.

Table 3 presents various permutations of the baseline logistic specification. Columns one and two present coefficient estimates with no fixed effects, columns three and four present estimates with year fixed effects only, and columns five and six present estimates with industry fixed effects only. For each pair of columns in this table, the first column provides standard errors clustered by firm while the second column provides standard errors clustered by year. The coefficient magnitudes and pattern of statistical significance are stable across the three different specifications. In addition, the decision to cluster by firm or by year does not alter any statistical inferences.[6]

4.2 Comparison of leverage changes and buyouts

Going private transactions tend to involve large increases in leverage (see e.g. Axelson, Jenkins, Strömberg and Weisbach (2007) or Jensen (1989)). Is it possible that our logistic regressions identify the firms which decide to increase leverage, but not specifically the decision to go private? If this were the case, inferences about the public/private choice would be misguided. To address this concern we examine public firms that increase leverage substantially while *remaining* public. To this end, we employ two alternative definitions of an indicator for increasing leverage. The first indicator, called large increase in book leverage, is equal to one for any firm increasing book leverage next year compared to this year by at least 0.45. This cut-off is selected to make the frequency of the event similar to the frequency of going private transactions (i.e. the indicator is equal to one for about 0.56% of firm-year observations). The second indicator, called pseudo going private leverage change, is assigned

[6] We have also included fixed effects for the industry-year interaction with very similar results.

the value one if a firm has leverage of no more than 0.30 the current year and at least 0.7 the next year (these cut-offs are based on typical values before and after going private transactions according to Axelson et al (2007)). The probability of this type of leverage change is about half as likely as the decision to go private.

Table 4 presents results from logistic regressions with these two leverage increase indicators and the going private indicator as dependent variables. The standard controls are included, as well as current leverage. For each dependent variable one specification also includes the lagged change in leverage. The results in Table 4 provide forceful evidence that going private transactions are different from large leverage increases for public firms. First, the book-to-market ratio and firm size (market capitalization) are unimportant as determinants of leverage increases, whereas they predict going private events. Second, volatility and profitability both have opposite effects on leverage and going private: high volatility firms are more likely to have a large leverage increase, but less likely to go private, and profitable firms are less likely to increase leverage substantially, but more prone to go private. Third, leverage, a key determinant of leverage changes, is unrelated to going private events.

The results in Table 4 indicate that going private is not a side effect of increasing leverage. Compared to firms that increase leverage, firms going private are smaller and have lower valuations, less volatile stock returns, and higher profitability. These differences suggest that theories based on aspects of going private other than leverage changes (e.g. risk sharing) may be important. This finding is less supportive of theories focusing on leverage, such as debt overhang, cheap debt, or free cash flow. This is very indirect evidence, however, and some of these theories can be tested more directly.

4.3 Cheap debt theories

We consider the time-series implications of cheap debt theories. A typical version of a theory involving cheap debt suggests that the price of debt should predict going private transactions negatively, because such transactions usually involve a large an increase in leverage. Therefore, we analyze the relationship between macroeconomic credit conditions and the decision to go private (we investigate the cross-sectional predictions of cheap debt theories in the next subsection). We consider the impact of the credit spread, short-term interest rate, and the long-term interest rate on the decision to go private. All three of these variables should be negatively related to the decision to go private if cheap debt theories are correct.

In Table 5, we include the macroeconomic variables together with the firm level variables from the baseline specifications of Table 2 and Table 3 as well as industry fixed effects. Since we are investigating the impact of macroeconomic phenomena, we cannot include year fixed effects. We also include leverage. The results in Table 4 suggest that leverage is in itself not an important determinant of going private decisions. However, we might need to control for leverage to make inferences about a firm's cost of borrowing, so we include it as a control. In all six specifications, the estimates for the five baseline variables are quite similar to the estimates of the analogous specification in column six of Table 3. Book leverage has no explanatory power in any of the specifications. The coefficient for the credit spread is always positive and statistically insignificant. The coefficient on the short-term treasury yield is of inconsistent sign across regressions, and is never statistically significant. The coefficient on the long-term bond yield has a negative sign but is not statistically significant.

The results in Table 5 provide suggestive evidence that is inconsistent with the cheap debt story, since there is no statistically significant relation between any of the three macroeconomic credit variables and the decision to go private. The fact that we only use time-series variation limits the power of the tests in Table 5 considerably (since the variables of interest vary by year, we cluster all standard errors by year in this table), so this table presents weak evidence against the cheap debt story. In the next section, we consider cross-sectional predictions of cheap debt theories, where identification is easier.

We also investigate the cross-sectional predictions of cheap debt. In Table 6 we focus on the firm-specific borrowing cost for debt. This variable reflects the firm's average interest rate on its debt obligations and should capture the ease with which a firm can borrow to increase leverage. As in the preceding section, we control for leverage. Column one indicates that borrowing cost is positively related to the decision to go private, but the coefficient is quite small and not statistically significant. This result is inconsistent with the main prediction of cheap debt theories because a high cost of borrowing should make it more difficult to lever up. The coefficient estimates for the other firm characteristics are similar to the estimates for the baseline specification in columns 5 and 6 of Table 2. In column two, the errors are clustered by year instead of firm, with little impact on the pattern of statistical significance.

The next four columns present permutations of the specification in column two. Columns three and four present coefficient estimates with year fixed effects and columns five and six present estimates with year and industry fixed effects. For each pair of columns, the

first column provides standard errors clustered by firm while the second column provides standard errors clustered by year. In columns three and four, year fixed effects appear to strengthen the significance of the relationship between borrowing cost and the decision to go private compared to column two, but the sign of the estimated coefficient is inconsistent with cheap debt. Once we add industry fixed effects in columns five and six, leverage loses what little explanatory power it possesses in other specifications. The coefficient on borrowing cost remains positive but is only marginally insignificant in both column five and in column six. To summarize, the results in this table are largely inconsistent with cheap debt theories, and may suggest that borrowing costs are unrelated to the public-private choice. The most conservative interpretation of these results is that the firm-specific borrowing cost is unrelated to the decision to go private.

4.4 The supply of private equity

While there is no evidence that the cost of debt drives the decision to go private, there are other channels through which the supply of capital could be related to buyouts. For example, if buyout funds raise large amounts of additional capital, then we expect these funds to participate in a greater number of transactions. To identify the impact of the supply of capital for buyouts on the decision to go private, we must first disentangle the role of exogenous supply shifts from increased funding for buyouts induced by particularly favorable investment opportunities for this activity. Clearly, favorable investment opportunities for buyouts would lead to a positive relationship between the supply of capital for buyouts and the volume of going private transactions even in the absence of an exogenous supply shift.

We identify exogenous supply shifts for buyouts in an instrumental variables approach using the inflow to a different class of private equity, namely venture capital funds. This approach is analogous to the identification strategy used by Gompers and Lerner (2000) to estimate the relationship between the price of venture capital transactions and the supply of venture capital using the inflow to buyout funds as an instrument. According to Gompers and Lerner, changes in the supply of capital for buyouts and venture capital are correlated for institutional reasons (e.g. both are considered alternative investments), while the investment opportunities for these two investment classes are plausibly unrelated.

In Table 7 we use normalized capital commitments to venture capital funds (venture capital inflow) as an instrument for normalized capital commitments to buyout funds (buyout

inflow). The R^2 for the first stage regression of buyout inflow on venture capital inflow is 0.13 with an F-statistic of 5.71. In column one, we find a positive and significant relationship between the decision to go private and exogenous inflows to buyout funds in the absence of firm-specific controls or industry fixed effects.[7] The magnitude of this estimate indicates that a one standard deviation increase from the sample mean for the inflow to buyout funds increases the probability of going private from 0.0056 to 0.0096. While the significance of most estimates are weaker when clustering by year rather than by firm, the coefficient for buyout inflow remains statistically significant in column two. The remaining columns of Table 7 indicate that firm level controls as well as industry fixed effects do not alter this finding. In these specifications all of the firm-specific controls are of the expected sign and, with the exception of stock return volatility, statistically significant.

4.5 The 1980s - junk bonds and conglomerates

We consider theories related to the buyout wave of the 1980s. First, we assess the idea that junk bonds constituted an innovation that increased the availability of financing for large buyout deals. If true, we expect the coefficient on size to be greater during the 1980s than at other times.

In Table 8, column one, we test if the estimated coefficient on size varies between the 1980s and later times by including both size and size multiplied with a 1980s indicator (the specification includes year fixed effects, so the 1980s indicator itself is superfluous). As predicted by the junk bond theory, size has a significantly less positive effect on the probability of going private during the 1980s. Indeed, the net effect of size during this period is very close to zero and insignificant, a finding in stark contrast to the pattern at other times (when smaller firms are much more likely to go private). The comparison here is with the role of size in later periods, not earlier (due to data limitations).

Figure 3 plots the coefficient estimate and associated confidence interval for firm size interacted with an indicator variable for each year. In the figure firm size is virtually unrelated to the decision to go private in the 1980s. Beginning in 1990 and continuing until 2005, firm size

[7] Since we implement a two stage least squares estimation procedure, the coefficient magnitudes are not directly comparable to the magnitudes in other tables. The second stage is a linear probability model rather than a logistic specification.

is negatively related to the probability of becoming private. This figure provides additional evidence regarding the impact of firm size.

What explains the increased role of size after the 1980s? It is possible that the end of the 1980s junk bond era reduced the availability of financing for large deals, and that this availability never recovered. Alternatively, after a period of more frequent large deals, the supply of suitable large candidates was exhausted. Or, as a third possibility, the development of junk bonds reflected an underlying demand for large scale debt financing which was temporary. Once the conditions of the 1980s had passed, there were fewer large firms that made good targets, and junk bond volumes declined.

Next, we examine the idea that a main motivation for the 1980s going private-wave was the breakup of inefficient conglomerates. We us two measures of whether a firms is a conglomerate, an indicator for whether a firm reports two or more segments in a given year (multi-segment) and an indicator for whether a firm reports three or more segments in a given year (tri-segment). In Table 8, column two, we find that the multi-segment indicator has a coefficient insignificantly different from zero. In column three, the same result holds for the tri-segment indicator. This suggests that over our full sample period, there is no significant difference in the incidence of going private transactions for firms with and without multiple segments, once you control for other important determinants. Is it possible that the differential role of size during the 1980s can be misinterpreted as a sign of conglomerate breakups (multi-segment firms are probably larger than single segment firms)? We test this by allowing the coefficient on the multi-segment to be different during the 1980s, and simultaneously excluding size from the set of controls. Results are reported in Table 8, column four. The coefficient on the multi-segment indicator is now significantly negative outside the 1980s, presumably because it proxies for size, but the net effect during the 1980s is zero. Apart from emphasizing the importance of properly controlling for size in going private regressions, this result suggests why the reduced impact of size during the 1980s could have been misinterpreted as reflecting conglomerates.

Finally, we allow the coefficient on the multi-segment indicator as well as size to vary between the 1980s and other times. Results are presented in column five. The results for size remain the same (zero net effect during the 1980s, large negative effect at other times). The estimated coefficient for conglomerates is insignificant in all periods. In column six, we repeat this test with the alternative measure of conglomerates, with identical conclusions. Figure 4

plots the coefficient estimate and associated confidence interval for multi-segment interacted with an indicator variable for each year, while controlling for the interaction of firm size with the indicator variables for each year. In the figure multi-segment is never significantly related to the decision to go private and the coefficient estimates oscillate around zero. In contrast to the plot for firm size in Figure 3, the coefficient for multi-segment does not appear to change in a particular way over time. This figure provides additional evidence that conglomerates were not an important factor in general or during any specific time period.

Our finding of a very limited role of conglomerate breakups during the 1980s is consistent with several pieces of indirect evidence from the 1980s. Montgomery (1994) points out that the typical S&P 500 firm had the same number of segments in 1991 as in 1981. Mitchell and Mulherin (1996) conclude that takeovers in the 1980s were concentrated in certain industries rather than to conglomerates. Also, comparing diversifying and related acquisitions, Kaplan and Weisbach (1992) find that during the 1980s, there was no difference in success.

4.6 Sarbanes-Oxley

We also evaluate the argument that the Sarbanes-Oxley act of 2002 drove smaller firms away from the stock market. The prediction for our going private regressions is that the effect of size should be more negative during the period when firms respond to SOX (i.e. smaller firms became relatively more likely to go private than large firms during this period). Unlike tests of the aggregate frequency (e.g. Engel et al (2007)), this method differences out any aggregate time series changes that affect firms equally across sizes.

We use two definitions of the relevant time period for SOX: a narrow and a wide definition. The narrow definition is 2003 and 2004, the two years immediately following the act's passing, when any SOX-induced activity is most likely to have occurred. The wider definition includes 2002 and 2005, on the basis that the act was passed in July of 2002, allowing some response to occur that year, and that going private takes time, which suggests that some transactions might be expected after 2004.

In Table 9 firm size is interacted with one of the SOX indicators and we consider various controls and error structures. We also allow the coefficient on size to differ in the 1980s (see the previous section). In columns one and two, we use the two different indicators, controlling for our baseline firm level controls and year, but not industry, fixed effects, clustering errors by firm. The result strongly suggests that smaller firms went private in response to SOX. The

coefficient estimates is negative and statistically significant, and implies that the coefficient on size was about two thirds larger during the immediate aftermath of SOX. To get a sense of the economic magnitude, consider the effect of a one standard deviation decrease in the size of a firm which would otherwise have a 1% probability of going private. Outside the 1980s and 2003-2004, according to coefficients estimates in column one, the size reduction would increase the probability of going private to 1.6%. During the 2003-2004 period, the same size reduction would increase the probability of going private from 1% to 2.5% (using the estimates in for the wider window of 2002-2005, used in column three, the probability would become 2.1%). This result provides fairly strong evidence supporting the hypothesis that SOX pushed smaller firms to leave the stock market, consistent with evidence from voluntary delistings (see Leuz et al (2008)).

4.7 Corporate governance

There are several reasons why corporate governance may be important for the public-private choice. If there is managerial resistance to buyouts, and poor governance makes such resistance more effective, features of a firm's corporate governance will affect the likelihood of going private. Alternatively, poor governance may increase the potential gains to going private transactions. We test these theories by including some measure of firm level governance in the regressions. The power of these tests declines because the sample size is severely limited by the lack of governance data for most firms and years.

In Table 10, columns one to three, the measure is the entrenchment index of Bebchuk, Cohen and Ferrell (2004), with no fixed effects, year fixed effects, and year as well as industry fixed effects, respectively. The estimated coefficient on the entrenchment variable is negative and of similar magnitude in all three specifications, but not significant. In columns four to six, the same regression specifications are repeated with the governance index of Gompers, Ishii and Metrick (2003). The estimated coefficient is also negative in all three regressions and remains statistically insignificant.

4.8 Free cash flow

As argued above, Jensen's (1986) free cash flow theory predicts that leveraged buyouts will occur for firms with low asset growth and high book-to-market (due to lower investment needs), low volatility (stability), and high cash flow. The first three predictions hold in our data

set, but are not unique predictions of the free cash flow theory. In this section, we therefore concentrate on the effect of free cash flow.

Jensen's definition of free cash flow is *"cash flow in excess of that required to fund all projects that have positive net present value"*. This quantity is unobservable, since the amount of positive-NPV investments available is unknown. A simple idea is to use some measure of cash flow which does not deduct investment, instead. This is equivalent to using Jensen's free cash flow if other controls in the regression, including industry fixed effects, perfectly explain the amount of positive NPV investment available. Other possibilities for addressing this issue include controlling for actual investment or depreciation, under the assumption that these variables capture the variation in positive-NPV investment opportunities. We follow both of these approaches, recognizing that neither is perfectly satisfactory.

Table 11 presents results of logistic regressions including our approximation of free cash flow as an independent variable. In column one, the main controls except profitability are included. Free cash flow is positively related to going private events, as predicted by the theory. Since they only differ by interest and taxes, profitability and cash flow are highly correlated (the correlation coefficient is 0.9275). In column two, we control for profitability. In this specification free cash flow loses significance, while profitability is significant. Controlling for investment or depreciation, columns three and four, respectively, does not change this conclusion: profitability, but not cash flow, predicts going private. In column five, we again exclude profitability, and find that free cash flow is highly significant in the presence of both investment and depreciation. Finally, in column six, we compare profitability and cash flow while including investment and depreciation. This specification suffers from severe multicollinearity, but nonetheless it agrees with the previous specifications in rejecting cash flow as a predictor of going private events. The results in Table 11 consistently reject free cash flow as a determinant of the decision to go private in the presence of profitability as a control. This does not mean free cash flow concerns are not important in other contexts, but it does suggest that the correlation between going private and profitability reflects something other than Jensen's (1986) free cash flow-related agency problem.[8]

[8] Lehn and Poulsen (1989) provide some evidence on the free cash flow theory of going private transactions, and show that high cash flow firms were more likely to go private during the 1980-1987 period. However, they do not control for profitability.

5. Conclusions

We test several theories have been proposed to explain the flow from public to private equity ownership. We attempt to distinguish between the various theories by analyzing the decision of individual firms to become private. Firm size, risk, valuation, growth, and profitability all predict the decision to go private, consistent with many plausible theories. For example, the finding that the book-to-market ratio positively predicts the probability of a firm going private is consistent with market timing by private buyers as well as firms with high investment opportunities preferring the improved access to capital for public firms.

We find support for several specific explanations of buyout volumes, including the importance of junk bonds, the supply of private equity, and the impact of Sarbanes-Oxley. However, we do not find evidence that the break up of conglomerates was a motivation for buyouts, nor does corporate governance appear to play a role in this decision. We also find no support in our sample for cheap debt theories.

6. References

Aslan, Hadiye and Praveen Kumar, 2007, "Going Public and Going Private: What Determines the Choice of Ownership Structure?", working paper.

Amihud, Yakov, editor, 1989, *Leveraged management buyouts: causes and consequences*, Homewood, Ill.: Dow Jones-Irwin.

Axelson, Ulf, Tim Jenkinson, Per Strömberg and Michael Weisbach, 2007, "Leverage and pricing in buyouts: An empirical analysis", Working Paper, SIFR.

Baker, Malcolm, and Jeffrey Wurgler, 2000, "The Equity Share in New Issues and Aggregate Stock Returns", *The Journal of Finance* 55(5) , 2219–2257.

Bebchuk, Lucian Arye, Alma Cohen and Allen Ferrell, 2004, "What Matters in Corporate Governance?", Harvard Law School John M. Olin Center Discussion Paper No. 491.

Bharath, Sreedhar, and Amy Dittmar, 2007, "Why Do Firms Use Private Equity to Opt Out of Public Markets?", working paper, University of Michigan.

Bodnaruk, Andriy, Eugene Kandel, Massimo Massa and Andrei Simonov, forthcoming," Shareholder Diversification and the Decision to Go Public", *Review of Financial Studies*.

Boot, Arnoud, Radhakrishnan Gopalan, and Anjan Thakor, 2006, "The Entrepreneur's Choice between Private and Public Ownership", *Journal of Finance*, 61(2), 803-836.

Boot, Arnoud, Radhakrishnan Gopalan, and Anjan Thakor, forthcoming, "Market Liquidity, Investor Participation and Managerial Autonomy: Why do Firms Go Private?", *Journal of Finance*.

Demers, Elizabeth and Katharina Lewellen, 2003, "The marketing role of IPOs: evidence from internet stocks", *Journal of Financial Economics*, 68, 413-437.

Engel, Ellen, Rachel Hayes and Xue Wang, 2007, "The Sarbanes-Oxley Act and firms' going-private decisions", *Journal of Accounting and Economics*, 44, 116-145.

Fama, Eugene and Michael, Jensen, 1983, "Separation of Ownership and Control", *Journal of Law and Economics,* 26, June.

Gompers, Paul, Joy Ishii, and Andrew Metrick, 2003, "Corporate Governance and Equity Prices", *Quarterly Journal of Economics*, 118(1), 107-155.

Gompers, Paul, Anna Kovner, Josh Lerner and David Scharfstein, forthcoming, "Venture capital investment cycles: The impact of public markets", *Journal of Financial Economics*.

Gompers, Paul, and Josh Lerner, 2000, "Money chasing deals? The impact of inflows on private equity valuations?", *Journal of Financial Economics*, 55, 281-325.

Holmström, Bengt, and Steven Kaplan, 2003, "The State of U.S. Corporate Governance: What's Right and What's Wrong?", NBER Working Paper No. 9613.

Holmström, Bengt, and Steven Kaplan, 2001, "Corporate Governance and Merger Activity in the United States: Making Sense of the 1980s and 1990s", *Journal of Economic Perspectives*, 15(2), Spring, 121-144.

Ibbotson, Roger, Jody Sindelar and Jay Ritter, 1994, "The Market's Problems with the Pricing of Initial Public Offerings", *Journal of Applied Corporate Finance*, Spring, 66-74.

Jensen, Michael, 1986, "Agency Costs of Free Cash Flow", *American Economic Review*, 76(2), 323-329.

Jensen, Michael, 1989, "The Eclipse of the Public Corporation", *Harvard Business Review*, September-October, 61-73.

Kaplan, Steven, 1989, "The Effects of Management Buyouts on Operations and Value," *Journal of Financial Economics*, 217-254.

Kaplan, Steven and Jeremy Stein, 1993, "The Evolution of Buyout Pricing and Financial Structure in the 1980s," *Quarterly Journal of Economics*, 108, 313-357.

Kaplan, Steven and Per Strömberg, 2008, "Leveraged Buyouts and Private Equity", working paper.

Lehn, Kenneth and Anette Poulsen, 1989, "Free Cash Flow and Stockholder Gains in Going Private Transactions", *Journal of Finance*, 44(3), 771-787.

Leland, Hayne and David Pyle, 1977, "Informational Asymmetries, Financial Structure, and Financial Intermediation", *Journal of Finance*, 32(2).

Leuz, Christian, Alexander Triantis and Tracy Wang, 2008, "Why do firms go dark? Causes and economic consequences of voluntary SEC deregistrations", *Journal of Accounting and Economics*, forthcoming.

Mitchell, Mark and Harold Mulherin, 1996, "The Impact of Industry Shocks on Takeover and Restructuring Activity", *Journal of Financial Economics*, 193-229.

Montgomery, Cynthia, 1994, "Corporate Diversification", *Journal of Economic Perspectives*, 8, 163-178.

Myers, Stewart, 1977, "Determinants of Corporate Borrowing", *Journal of Financial Economics*, October, 5(2) , 147-75.

Shleifer, Andrei and Robert Vishny, 1990, "The Takeover Wave of the 1980s", *Science*, August 17, 249, 745-749.

Shleifer, Andrei and Robert Vishny, 1992, "Liquidation Values and Debt Capacity: A Market Equilibrium Approach", *Journal of Finance*, September 47(4), 1343-1366.

Zingales, Luigi, forthcoming, "Is The U.S. Capital Market losing Its Edge?", *Journal of Economic Perspectives*.

Figure 1: U.S. Going Private Volume 1981-2006

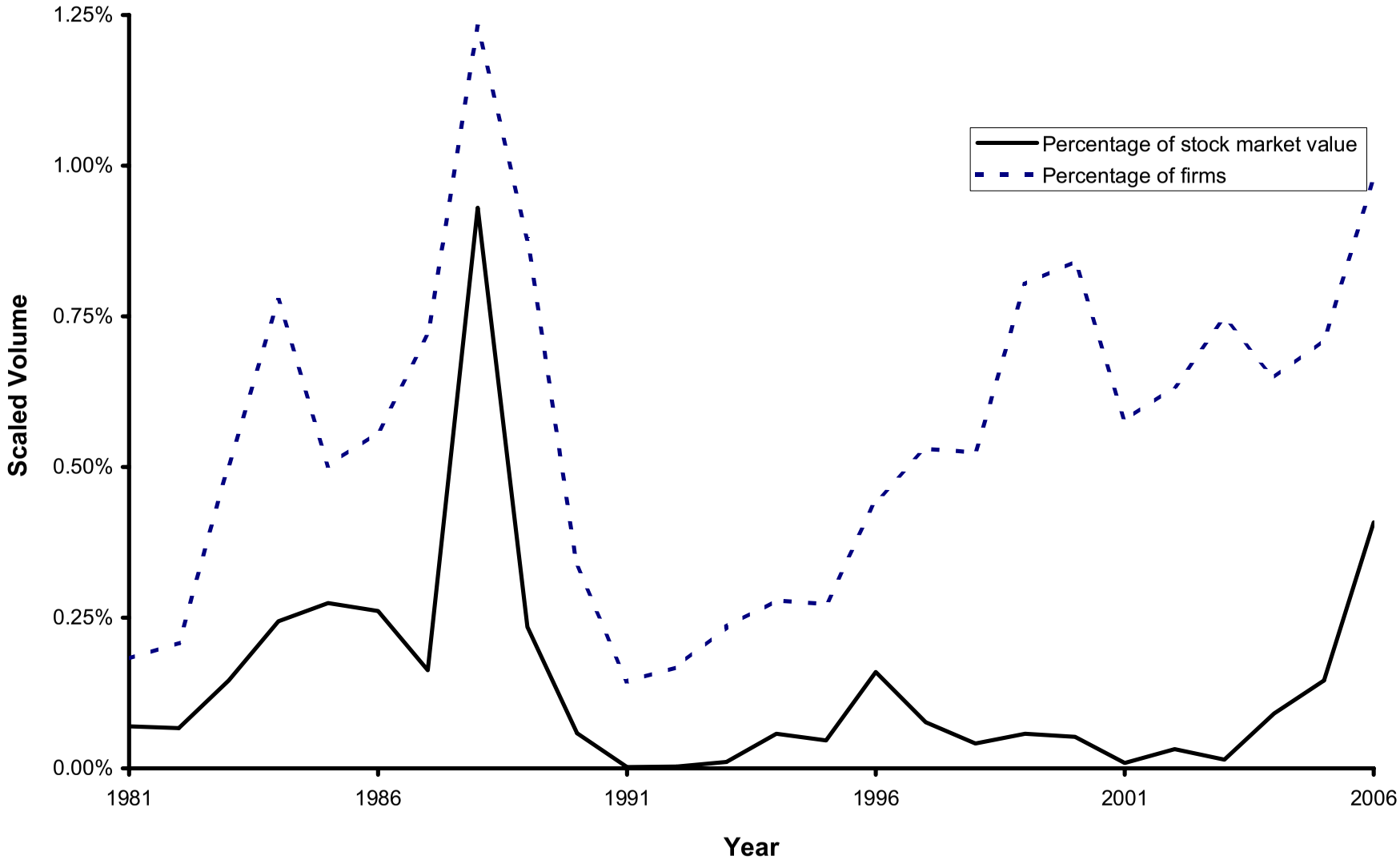

Figure 2: U.S. going private volume by industry

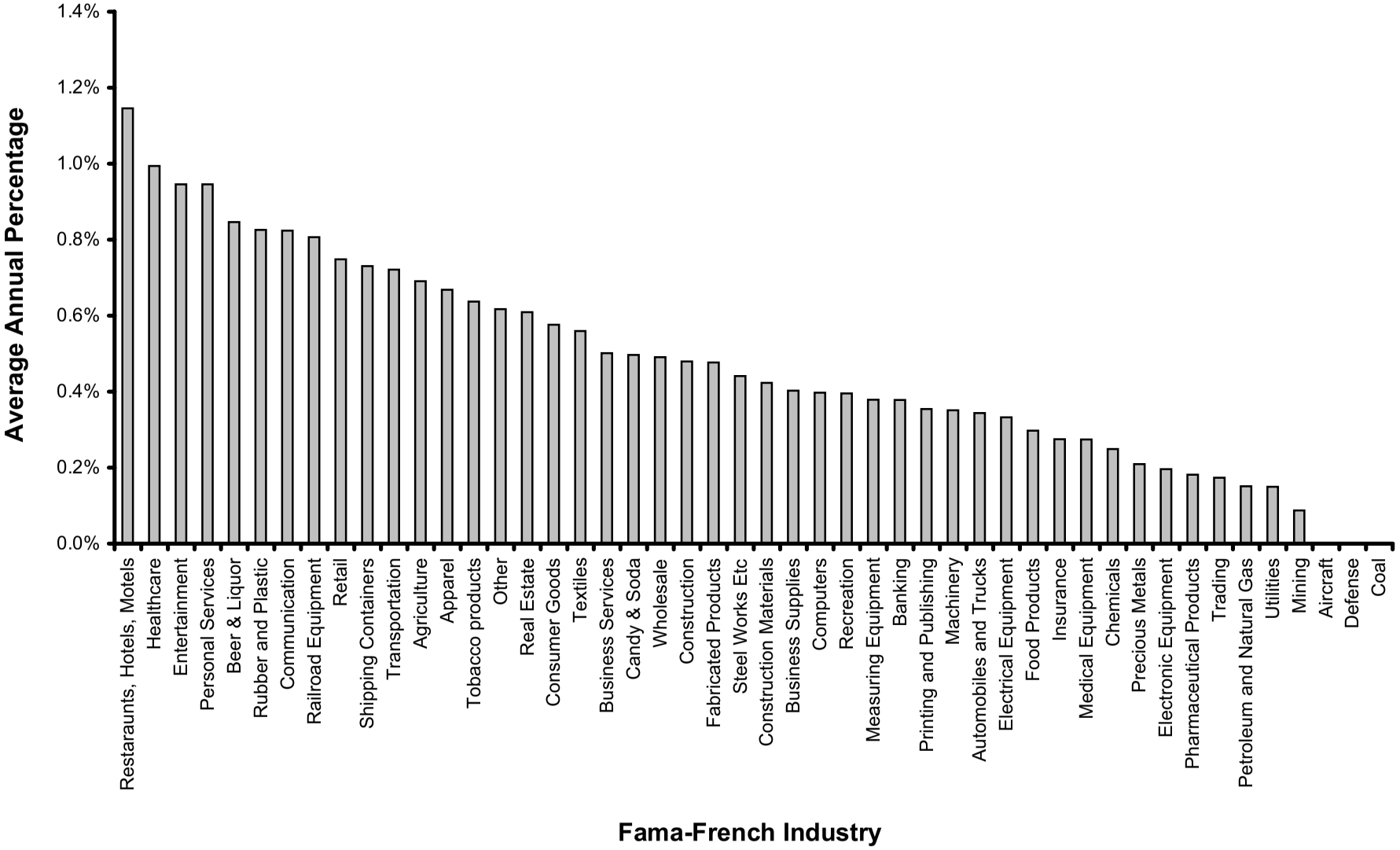

Figure 3: Time-series For Market Capitalization Coefficient Estimates

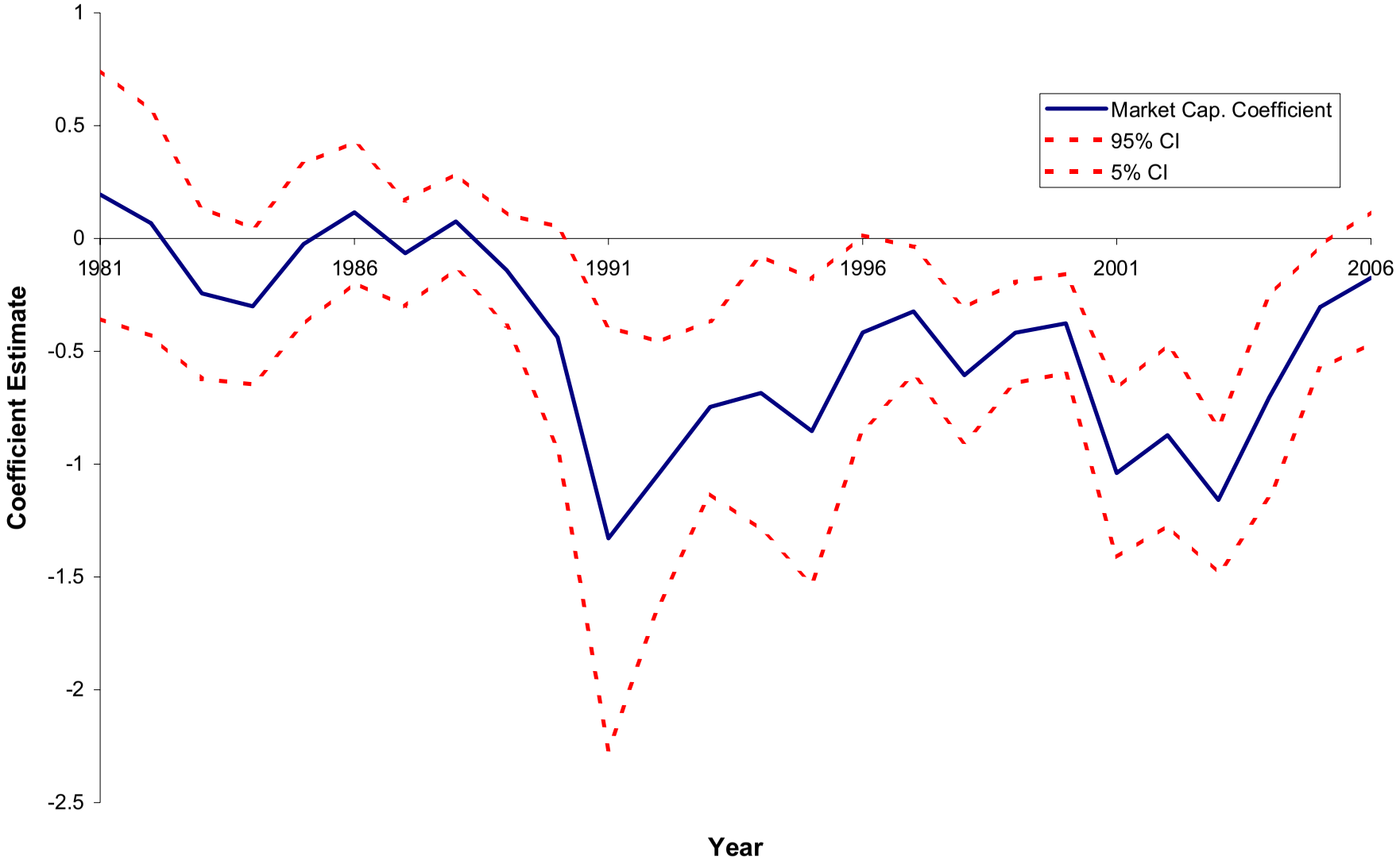

Table 1: Summary statistics

	Going Private	Book-To-Market Ratio	Asset Growth	Stock Return Volatility	Market Cap. (Normalized)	Return On Assets	Book Leverage
Mean	0.0056	0.8380	1.1074	0.1412	0.1412	0.1002	0.5267
Standard Deviation	0.0746	0.7860	0.2340	0.0759	1.0271	0.1688	0.2464
Correlation Matrix							
Going Private	1.000	0.028	-0.021	0.001	-0.026	0.007	-0.005
Book-To-Market Ratio For Equity		1.000	-0.201	-0.020	-0.285	-0.112	0.028
Asset Growth			1.000	-0.064	0.164	0.354	0.003
Stock Return Volatility				1.000	-0.422	-0.288	-0.176
Market Capitalization (Normalized)					1.000	0.321	0.066
Return On Assets						1.000	-0.114
Book Leverage							1.000

Notes: Going private is an indicator variable equal to one if more than 50% of a public firm's shares are purchased by a private entity, the ultimate parent of the private entity (if it has an ultimate parent company) is also private, and the public firm delists within two years of the effective date for the transaction. Firm charateristics are measured at the end of the previous fiscal year for accounting data from Compustat. The book-to-market ratio for equity is the ratio of the book value of equity to the market value of equity where the market value of equity is measured as of December of the previous year. Asset growth is the annual growth rate of the book value of assets between fiscal years. Stock return volatility is calculated from monthly data in CRSP using the previous 36 months ending in December. Market capitalization (normalized) is measured as of December of the previous year, log transformed, and scaled to be distributed with a mean of zero and standard deviation of one for each year. Return on assets is annual operating income scaled by lagged book assets. Book leverage is the quantity book assets minus book equity scaled by book assets.

Table 2. Firm Characteristics and the Decision to Go Private

	Dependent Variable: If a going private transaction occurs y=1; otherwise, y=0					
	(1)	(2)	(3)	(4)	(5)	(6)
Book-To-Market Ratio For Equity	0.2873 (0.0243)***					0.1840 (0.0314)***
Asset Growth		-1.4555 (0.1910)***				-1.6806 (0.2449)***
Stock Return Volatility			-0.6573 (0.5978)			-2.1116 (0.6687)***
Market Capitalization (Normalized)				-0.3372 (0.0394)***		-0.3436 (0.0461)***
Return On Assets					0.1662 (0.2170)	2.0773 (0.3217)***
Year Fixed Effects	X	X	X	X	X	X
Industry Fixed Effects	X	X	X	X	X	X
Cluster By Firm	X	X	X	X	X	X
Pseudo R^2	0.0535	0.0534	0.0458	0.0538	0.0461	0.0685
N	*N* = 114,262	*N* = 114,262	*N* = 114,262	*N* = 114,262	*N* = 114,262	*N* = 114,262

Notes: Each column presents the coefficient estimates from a logistic specification. The sample period is from 1981 until 2006. A public firm is deemed to have been taken private if more than 50% of a public firm's shares are purchased by a private entity, the ultimate parent of the private entity (if it has an ultimate parent company) is also private, and the public firm delists within two years of the effective date for the transaction. The industry fixed effects are defined using the 48 industry classification scheme available on Kenneth French's website. The standard errors for the coefficient estimates are in parentheses and are clustered by firm.

Firm charateristics are measured at the end of the previous fiscal year for accounting data from Compustat. The market value of equity is measured as of December of the previous year for the book-to-market ratio for equity. Asset growth is the annual growth rate of the book value of assets between fiscal years. Stock return volatility is calculated from monthly data in CRSP using the previous 36 months ending in December. Market capitalization (normalized) is measured as of December of the previous year, log transformed, and scaled to be distributed with a mean of zero and standard deviation of one for each year. Return on assets is operating income divided by lagged assets.

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 3. Firm Characteristics, Alternative Standard Errors, and the Decision to Go Private

	Dependent Variable: If a going private transaction occurs y=1; otherwise, y=0					
	(1)	(2)	(3)	(4)	(5)	(6)
Book-To-Market Ratio For Equity	0.1756 (0.0299)***	0.1756 (0.0300)***	0.2161 (0.0289)***	0.2161 (0.0245)***	0.1480 (0.0321)***	0.1480 (0.0311)***
Asset Growth	-1.7348 (0.2452)***	-1.7348 (0.2882)***	-1.7682 (0.2452)***	-1.7682 (0.28549)***	-1.6665 (0.2438)***	-1.6665 (0.2828)***
Stock Return Volatility	-1.4725 (0.5706)***	-1.4725 (0.8717)*	-1.6673 (.0.5649)***	-1.6673 (.0.8363)**	-1.8324 (0.6542)***	-1.8324 (0.9979)*
Market Capitalization (Normalized)	-0.3850 (0.0435)***	-0.3850 (0.0728)***	-0.3788 (0.0436)***	-0.3788 (0.0680)***	-0.3447 (0.0457)***	-0.3447 (0.0729)***
Return On Assets	2.5799 (0.2898)***	2.5799 (0.3192)***	2.8027 (0.2911)***	2.8027 (0.3163)***	1.9332 (0.3151)***	1.9332 (0.3303)***
Year Fixed Effects			X	X		
Industry Fixed Effects					X	X
Cluster By Firm	X		X		X	
Cluster By Year		X		X		X
Pseudo R^2	0.0269	0.0269	0.0488	0.0488	0.0470	0.0470
N	*N* = 115,455	*N* = 115,455	*N* = 115,455	*N* = 115,455	*N* = 114,262	*N* = 114,262

Notes: Each column presents the coefficient estimates from a logistic specification. The sample period is from 1981 until 2006. A public firm is deemed to have been taken private if more than 50% of a public firm's shares are purchased by a private entity, the ultimate parent of the private entity (if it has an ultimate parent company) is also private, and the public firm delists within two years of the effective date for the transaction. The industry fixed effects are defined using the 48 industry classification scheme available on Kenneth French's website. The standard errors for the coefficient estimates are in parentheses and are clustered by firm (or year).

Firm charateristics are measured at the end of the previous fiscal year for accounting data from Compustat. The market value of equity is measured as of December of the previous year for the book-to-market ratio for equity. Asset growth is the annual growth rate of the book value of assets between fiscal years. Stock return volatility is calculated from monthly data in CRSP using the previous 36 months ending in December. Market capitalization (normalized) is measured as of December of the previous year, log transformed, and scaled to be distributed with a mean of zero and standard deviation of one for each year. Return on assets is operating income divided by lagged assets.

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4. Comparison of the Leverage Choice and the Decision To Go Private

Dependent Variable:	Large Increase in Book Leverage		Psuedo Going Private Leverage Change		Going Private	
	(1)	(2)	(3)	(4)	(5)	(6)
Book-To-Market Ratio For Equity	-0.1017 (0.0941)	-0.1019 (0.0944)	-0.1396 (0.1415)	-0.1388 (0.1420)	0.1781 (0.0322)***	0.1783 (0.0322)***
Asset Growth	-0.2777 (0.1897)	-0.3137 (0.1905)*	-0.7449 (0.3018)**	-0.8357 (0.3031)***	-1.7463 (0.2483)***	-1.7593 (0.2477)***
Stock Return Volatility	4.1934 (0.5916)***	4.1539 (0.5931)***	2.9084 (0.9462)***	2.8153 (0.9456)***	-2.0851 (0.6740)***	-2.0776 (0.6759)***
Market Capitalization (Normalized)	-0.1139 (0.0722)	-0.1131 (0.0722)	-0.1656 (0.1125)	-0.1608 (0.1122)	-0.3475 (0.0463)***	-0.3473 (0.0463)***
Return On Assets	-2.6688 (0.2080)***	-2.6882 (0.2073)***	-2.8535 (0.3326)***	-2.8752 (0.3268)***	2.1855 (0.3286)***	2.2239 (0.3330)***
Book Leverage	-5.2200 (0.2174)***	-5.1486 (0.2207)***	-6.9942 (0.2754)***	-6.8384 (0.2871)***	0.0093 (0.1982)	-0.0098 (0.2029)
Change in Book Leverage		-0.4239 (0.4028)		-0.9966 (0.5706)*		0.1756 (0.4104)
Year Fixed Effects	X	X	X	X	X	X
Industry Fixed Effects	X	X	X	X	X	X
Pseudo R^2	0.2149	0.2152	0.2436	0.2447	0.0691	0.0691
N	*N* = 104,760	*N* = 104,760	*N* = 94,514	*N* = 94,514	*N* = 112,968	*N* = 112,968

Notes: Each column presents the coefficient estimates from a logistic specification. The sample period is from 1981 until 2006. In columns 1 and 2 the dependent variable is a large increase in book leverage, i.e., an indicator variable equal to 1 if the change in book leverage for year t+1 is greater than 0.45. In columns 3 and 4 the dependent variable is a psuedo going private leverage change, i.e., an indicator variable equal to 1 if book leverage is less than 0.3 for year t and greater than 0.7 for year t+1. In columns 5 and 6 the dependent variable is the decision to go private. A public firm is deemed to have been taken private if more than 50% of a public firm's shares are purchased by a private entity, the ultimate parent of the private entity (if it has an ultimate parent company) is also private, and the public firm delists within two years of the effective date for the transaction. The industry fixed effects are defined using the 48 industry classification scheme available on Kenneth French's website. The standard errors for the coefficient estimates are in parentheses and are clustered by firm.

Firm charateristics are measured at the end of the previous fiscal year for accounting data from Compustat. The market value of equity is measured as of December of the previous year for the book-to-market ratio for equity. Asset growth is the annual growth rate of the book value of assets between fiscal years. Stock return volatility is calculated from monthly data in CRSP using the previous 36 months ending in December of the previous year. Market capitalization (normalized) is measured as of December of the previous year, log transformed, and scaled to be distributed with a mean of zero and standard deviation of one for each year. Return on assets is operating income scaled by lagged assets. Book leverage is the quantity book assets minus book equity scaled by book assets.

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 5. The Impact of Macroeconomic Credit Conditions on the Decision To Go Private

	Dependent Variable: If a going private transaction occurs y=1; otherwise, y=0					
	(1)	(2)	(3)	(4)	(5)	(6)
Book-To-Market Ratio For Equity	0.1500 (0.0305)***	0.1550 (0.0293)***	0.1566 (0.0292)***	0.1551 (0.0295)***	0.1574 (0.0287)***	0.1557 (0.0291)***
Asset Growth	-1.6289 (0.2773)***	-1.6431 (0.2779)***	-1.6315 (0.2839)***	-1.6277 (0.2779)***	-1.6075 (0.2778)***	-1.6553 (0.2728)***
Stock Return Volatility	-2.0068 (0.9498)**	-1.9184 (0.9992)*	-1.9868 (0.9982)**	-2.0143 (0.9852)**	-2.1087 (0.9719)**	-1.8946 (1.0056)*
Market Capitalization (Normalized)	-0.3516 (0.0731)***	-0.3579 (0.0736)***	-0.3580 (0.0740)***	-0.3636 (0.0730)***	-0.3629 (0.0739)***	-0.3538 (0.0736)***
Return On Assets	1.9171 (0.3199)***	1.9599 (0.3166)***	1.9665 (0.3154)***	1.9586 (0.3224)***	1.9650 (0.3201)***	1.9710 (0.3130)***
Book Leverage	-0.1058 (0.1734)	-0.1111 (0.1741)	-0.1056 (0.1757)	-0.0982 (0.1736)	-0.0945 (0.1744)	-0.1120 (0.1754)
Credit Spread	0.1110 (0.0717)			0.1790 (0.1282)	0.0790 (0.0787)	
US Treasury YTM (1-year)		-0.0037 (0.0493)		0.0636 (0.0705)		0.0630 (0.0799)
US Treasury YTM (10-year)			-0.4836 (0.6631)		-0.0353 (0.0689)	-0.1072 (0.1073)
Pseudo R^2	0.0478	0.0482	0.0485	0.0491	0.0488	0.0488
N	*N* = 114,262	*N* = 111,015	*N* = 111,015	*N* = 111,015	*N* = 111,015	*N* = 111,015

Notes: Each column presents the coefficient estimates from a logistic specification. The sample period is from 1981 until 2006. A public firm is deemed to have been taken private if more than 50% of a public firm's shares are purchased by a private entity, the ultimate parent of the private entity (if it has an ultimate parent company) is also private, and the public firm delists within two years of the effective date for the transaction. The credit spread is the average yield for BAA rated bonds according to Moody's ratings minus the average yield for US treasury bonds as of December of the previous year (data from St. Louis FRB). The US Treasury YTM is the yield to maturity for the 1-year and 10-year treasury securities (respectively) minus 1-year expected inflation (CPI) from the Survey of Professional Forecasters (data from Philadelphia FRB) as of December of the previous year. The first end-of-year forecast for expected inflation is available in the fourth quarter of 1981 for 1982. All specification include industry fixed effects which are defined using the 48 industry classification scheme available on Kenneth French's website. The standard errors for the coefficient estimates are in parentheses and are clustered by year.

Firm charateristics are measured at the end of the previous fiscal year for accounting data from Compustat. The market value of equity is measured as of December of the previous year for the book-to-market ratio for equity. Asset growth is the annual growth rate of the book value of assets between fiscal years. Stock return volatility is calculated from monthly data in CRSP using the previous 36 months ending in December of the previous year. Market capitalization (normalized) is measured as of December of the previous year, log transformed, and scaled to be distributed with a mean of zero and standard deviation of one for each year. Return on assets is operating income scaled by lagged assets. Book leverage is the quantity book assets minus book equity scaled by book assets.

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 6. Borrowing Costs and the Decision to Go Private

	Dependent Variable: If a going private transaction occurs y=1; otherwise, y=0					
	(1)	(2)	(3)	(4)	(5)	(6)
Book-To-Market Ratio For Equity	0.1719 (0.0325)***	0.1719 (0.0278)***	0.2009 (0.0320)***	0.2028 (0.0279)***	0.1797 (0.0343)***	0.1797 (0.0302)***
Asset Growth	-1.5774 (0.2621)***	-1.5774 (0.3358)***	-1.5046 (0.2605)***	-1.5046 (0.3303)***	-1.5212 (0.2588)***	-1.5212 (0.3204)***
Stock Return Volatility	-1.8024 (0.6710)***	-1.8024 (0.9003)**	-2.2422 (0.6808)***	-2.2422 (0.8849)**	-2.3864 (0.7558)***	-2.3864 (1.0699)**
Market Capitalization (Normalized)	-0.3697 (0.0485)***	-0.3697 (0.0485)***	-0.3676 (0.0487)***	-0.3676 (0.0709)***	-0.3148 (0.0509)***	-0.3148 (0.0695)***
Return On Assets	2.4049 (0.3402)***	2.4049 (0.3389)***	2.5345 (0.3494)***	2.5345 (0.3421)***	1.9110 (0.3614)***	1.9110 (0.3302)***
Book Leverage	0.1156 (0.2128)	0.1156 (0.1613)	0.0823 (0.2133)	0.0823 (0.1620)	-0.1150 (0.2261)	-0.1150 (0.1682)
Borrowing Cost	0.0464 (1.4762)	0.0464 (2.0742)	2.7123 (1.5677)*	2.7123 (1.8475)	2.2146 (1.5946)	2.2146 (1.8158)
Year Fixed Effects			X	X	X	X
Industry Fixed Effects					X	X
Cluster By Firm	X		X		X	
Cluster By Year		X		X		X
Pseudo R^2	0.0244	0.0244	0.0496	0.0496	0.0700	0.0700
N	*N* = 93,209	*N* = 93,209	*N* = 93,209	*N* = 93,209	*N* = 92,133	*N* = 92,133

Notes: Each column presents the coefficient estimates from a logistic specification. The sample period is from 1981 until 2006. A public firm is deemed to have been taken private if more than 50% of a public firm's shares are purchased by a private entity, the ultimate parent of the private entity (if it has an ultimate parent company) is also private, and the public firm delists within two years of the effective date for the transaction. The industry fixed effects are defined using the 48 industry classification scheme available on Kenneth French's website. The standard errors for the coefficient estimates are in parentheses and are clustered by firm (or year).

Firm charateristics are measured at the end of the previous fiscal year for accounting data from Compustat. The market value of equity is measured as of December of the previous year for the book-to-market ratio for equity. Asset growth is the annual growth rate of the book value of assets between fiscal years. Stock return volatility is calculated from monthly data in CRSP using the previous 36 months ending in December. Market capitalization (normalized) is measured as of December of the previous year, log transformed, and scaled to be distributed with a mean of zero and standard deviation of one for each year. Return on assets is operating income scaled by lagged assets. Book leverage is the quantity book assets minus book equity scaled by book assets. Borrowing cost is total interest expense scaled by total liabilities.

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 7. The Supply of Private Equity and the Decision to Go Private (IV Approach)

Dependent Variable: If a going private transaction occurs y=1; otherwise, y=0						
	(1)	(2)	(3)	(4)	(5)	(6)
Book-To-Market Ratio For Equity			0.0022	0.0022	0.0022	0.0022
			(0.0004)***	(0.0004)***	(0.0004)***	(0.0004)***
Asset Growth			-0.0073	-0.0073	-0.0070	-0.0070
			(0.0009)***	(0.0011)***	(0.0009)***	(0.0011)***
Stock Return Volatility			-0.0038	-0.0038	-0.0074	-0.0074
			(0.0031)	(0.0047)	(0.0035)***	(0.0054)
Market Capitalization (Normalized)			-0.0018	-0.0018	-0.0015	-0.0015
			(0.0002)***	(0.0003)***	(0.0002)***	(0.0003)***
Return On Assets			0.0122	0.0122	0.0088	0.0088
			(0.0013)***	(0.0017)***	(0.0013)***	(0.0017)***
Buyout Inflow (Instrument w/ VC Inflow)	1.6548	1.6548	1.7580	1.7580	1.7858	1.7858
	(0.3607)***	(0.7426)**	(0.3617)***	(0.8154)**	(0.3738)***	(0.8228)**
Industry Fixed Effects					X	X
Cluster By Firm	X		X		X	
Cluster By Year		X		X		X
R^2	0.0002	0.0002	0.0023	0.0023	0.0038	0.0038
N	*N* = 115,455	*N* = 115,455	*N* = 115,455	*N* = 115,455	*N* = 115,455	*N* = 115,455

Notes: Each column presents the coefficient estimates from a two stage least squares (2SLS) specification. The sample period is from 1981 until 2006. A public firm is deemed to have been taken private if more than 50% of a public firm's shares are purchased by a private entity, the ultimate parent of the private entity (if it has an ultimate parent company) is also private, and the public firm delists within two years of the effective date for the transaction. The buyout (venture capital) inflow is the amount of money for new buyout (venture capital) funds normalized by the market capitalization of all listed companies as of December of the previous year (data provided by Per Stromberg). The industry fixed effects are defined using the 48 industry classification scheme available on Kenneth French's website. All specifications include industry and year fixed effects. The standard errors for the coefficient estimates are in parentheses and are clustered by firm (or year).

Firm charateristics are measured at the end of the previous fiscal year for accounting data from Compustat. The market value of equity is measured as of December of the previous year for the book-to-market ratio for equity. Asset growth is the annual growth rate of the book value of assets between fiscal years. Stock return volatility is calculated from monthly data in CRSP using the previous 36 months ending in December of the previous year. Market capitalization (normalized) is measured as of December of the previous year, log transformed, and scaled to be distributed with a mean of zero and standard deviation of one for each year. Return on assets is operating income scaled by lagged assets.

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 8. Diversity and the Decision to Go Private

	Dependent Variable: If a going private transaction occurs y=1; otherwise, y=0					
	(1)	(2)	(3)	(4)	(5)	(6)
Book-To-Market Ratio For Equity	0.1627 (0.0323)***	0.1827 (0.0326)***	0.1835 (0.0327)***	0.1801 (0.0328)***	0.1605 (0.0336)***	0.1614 (0.0337)***
Asset Growth	-1.6756 (0.2475)***	-1.6572 (0.2460)***	-1.6581 (0.2457)***	-1.6555 (0.2465)***	-1.6460 (0.2482)***	-1.6469 (0.2479)***
Stock Return Volatility	-2.2665 (0.6718)***	-2.2964 (0.6857)***	-2.3102 (0.6904)***	-2.3436 (0.6891)***	-2.5010 (0.6905)***	-2.5180 (0.6947)***
Market Capitalization (Normalized)	-0.5470 (0.0558)***	-0.3131 (0.0492)***	-0.3086 (0.0492)***	-0.3190 (0.3257)***	-0.5199 (0.0589)***	-0.5150 (0.0587)***
Return On Assets	2.0575 (0.3229)***	1.8895 (0.3257)***	1.8809 (0.3259)***	1.8920 (0.3257)***	1.8707 (0.3256)***	1.8592 (0.3258)***
(Market Cap.)* (Ind_{1980s})	0.5069 (0.0704)***				0.4925 (0.0747)***	0.4938 (0.0764)***
Multi-segment		-0.0426 (0.0943)		-0.1562 (0.1162)	-0.0933 (0.1163)	
(Multi-segment)*(Ind_{1980s})				0.3070 (0.1803)*	0.0757 (0.1882)	
Tri-segment			-0.0831 (0.1093)			-0.1470 (0.1341)
(Tri-segment)*(Ind_{1980s})						0.0867 (0.2212)
Pseudo R^2	0.0731	0.0679	0.0679	0.0683	0.0679	0.0726
N	*N* = 114,262	*N* = 101,574	*N* = 101,574	*N* = 101,574	*N* = 101,574	*N* = 101,574

Notes: Each column presents the coefficient estimates from a logistic specification. The sample period is from 1981 until 2006. A public firm is deemed to have been taken private if more than 50% of a public firm's shares are purchased by a private entity, the ultimate parent of the private entity (if it has an ultimate parent company) is also private, and the public firm delists within two years of the effective date for the transaction. Ind_{1980s} is an indicator equal to 1 if the observation is between 1980 and 1989. The industry fixed effects are defined using the 48 industry classification scheme available on Kenneth French's website. All specifications include industry and year fixed effects. The standard errors for the coefficient estimates are in parentheses and are clustered by firm.

Firm charateristics are measured at the end of the previous fiscal year for accounting data from Compustat. The market value of equity is measured as of December of the previous year for the book-to-market ratio for equity. Asset growth is the annual growth rate of the book value of assets between fiscal years. Stock return volatility is calculated from monthly data in CRSP using the previous 36 months ending in December of the previous year. Market capitalization (normalized) is measured as of December of the previous year, log transformed, and scaled to be distributed with a mean of zero and standard deviation of one for each year. Return on assets is operating income scaled by lagged assets. If the firm has more than one (two) business segments then the firm is classified as multi-segment (tri-segment).

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 9. The Sarbanes-Oxley Act and the Decision to Go Private

	Dependent Variable: If a going private transaction occurs y=1; otherwise, y=0					
	(1)	(2)	(3)	(4)	(5)	(6)
Book-To-Market Ratio For Equity	0.1566 (0.0328)***	0.1566 (0.0330)***	0.1386 (0.0348)***	0.1594 (0.0326)***	0.1594 (0.0304)***	0.1413 (0.0347)***
Asset Growth	-1.6648 (0.2471)***	-1.6648 (0.2781)***	-1.6524 (0.2458)***	-1.6694 (0.2470)***	-1.6694 (0.2781)***	-1.6566 (0.2458)***
Stock Return Volatility	-2.2768 (0.6702)***	-2.2768 (0.9751)**	-2.0905 (0.70339)**	-2.2460 (0.6711)***	-2.2460 (0.9761)**	-2.0579 (0.7048)***
Market Capitalization (Normalized)	-0.4934 (0.0571)***	-0.4934 (0.0673)***	-0.4819 (0.0577)***	-0.4814 (0.0614)***	-0.4814 (0.0752)***	-0.4674 (0.0624)***
Return On Assets	2.0374 (0.3228)***	2.0374 (0.3340)***	2.1160 (0.3167)***	2.0398 (0.3227)***	2.0398 (0.3332)***	2.1182 (0.3167)***
(Market Cap.)* (Ind_{1980s})	0.4520 (0.0716)***	0.4520 (0.0883)***	0.4493 (0.0711)**	0.4419 (0.0746)***	0.4419 (0.0902)***	0.4368 (0.0742)***
(Market Cap.)* (Ind_{SOX-N})	-0.4149 (0.1480)***	-0.4149 (0.1724)**	-0.4300 (0.1479)***			
(Market Cap.)* (Ind_{SOX-W})				-0.2378 (0.1062)**	-0.2378 (0.1750)	-0.2539 (0.1065)**
Average Stock Return			-1.6480 (1.0151)*			-1.6562 (1.0198)
Cluster By Firm	X		X	X		X
Cluster By Year		X			X	
Pseudo R^2	0.0739	0.0739	0.0743	0.0739	0.0736	0.0739
N	*N* = 114,262	*N* = 114,262	*N* = 114,255	*N* = 114,262	*N* = 114,262	*N* = 114,255

Notes: Each column presents the coefficient estimates from a logistic specification. The sample period is from 1981 until 2006. A public firm is deemed to have been taken private if more than 50% of a public firm's shares are purchased by a private entity, the ultimate parent of the private entity (if it has an ultimate parent company) is also private, and the public firm delists within two years of the effective date for the transaction. Ind_{1980s} is an indicator equal to 1 if the observation is between 1980 and 1989. Ind_{SOX-W} (Ind_{SOX-N}) is an indicator equal to 1 if the observation is between 2002 and 2005 (2003 and 2004). The industry fixed effects are defined using the 48 industry classification scheme available on Kenneth French's website. All specifications include industry and year fixed effects. The standard errors for the coefficient estimates are in parentheses and are clustered by firm (or year).

Firm charateristics are measured at the end of the previous fiscal year for accounting data from Compustat. The market value of equity is measured as of December of the previous year for the book-to-market ratio for equity. Asset growth is the annual growth rate of the book value of assets between fiscal years. Stock return volatility is calculated from monthly data in CRSP using the previous 36 months ending in December of the previous year. Market capitalization (normalized) is measured as of December of the previous year, log transformed, and scaled to be distributed with a mean of zero and standard deviation of one for each year. Return on assets is operating income scaled by lagged assets. Average stock return is the average monthly stock return during the previous calendar year.

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 10. Corporate Governance and the Decision to Go Private

	Dependent Variable: If a going private transaction occurs y=1; otherwise, y=0					
	(1)	(2)	(3)	(4)	(5)	(6)
Book-To-Market Ratio For Equity	0.1420 (0.0726)**	0.2521 (0.0713)***	0.2739 (0.0779)***	0.1432 (0.0730)**	0.2576 (0.0704)***	0.2779 (0.0762)***
Asset Growth	-2.1302 (0.6479)***	-2.3423 (0.6647)***	-2.0636 (0.66344)***	-2.1505 (0.6496)***	-2.3722 (0.6672)***	-2.0755 (0.6642)***
Stock Return Volatility	0.2516 (1.0964)	1.1487 (1.1720)	-1.1485 (1.4949)	0.1720 (1.0923)	1.0747 (1.1727)	-1.1796 (1.4967)
Market Capitalization (Normalized)	-0.9014 (0.0948)***	-0.7433 (0.1040)***	-0.7645 (0.1104)***	-0.8842 (0.0963)***	-0.7230 (0.1049)***	-0.7498 (0.1118)***
Return On Assets	3.4098 (0.7055)***	3.5063 (0.7009)***	2.7190 (0.8204)***	3.3889 (0.7055)***	3.4985 (0.7008)***	2.6987 (0.8217)***
Entrenchment Index	-0.0499 (0.0713)	-0.0671 (0.0729)	-0.0511 (0.0752)			
Governance Index				-0.0446 (0.0378)	-0.0513 (0.0389)	-0.0393 (0.0399)
Year Fixed Effects		X	X		X	X
Industry Fixed Effects			X			X
Pseudo R^2	0.0709	0.0982	0.1332	0.0716	0.0990	0.1336
N	*N* = 27,078	*N* = 25,790	*N* = 23,347	*N* = 27,078	*N* = 25,790	*N* = 23,347

Notes: Each column presents the coefficient estimates from a logistic specification. The sample period is from 1981 until 2006. A public firm is deemed to have been taken private if more than 50% of a public firm's shares are purchased by a private entity, the ultimate parent of the private entity (if it has an ultimate parent company) is also private, and the public firm delists within two years of the effective date for the transaction. The industry fixed effects are defined using the 48 industry classification scheme available on Kenneth French's website. The standard errors for the coefficient estimates are in parentheses and are clustered by firm.

Firm charateristics are measured at the end of the previous fiscal year for accounting data from Compustat. The market value of equity is measured as of December of the previous year for the book-to-market ratio for equity. Asset growth is the annual growth rate of the book value of assets between fiscal years. Stock return volatility is calculated from monthly data in CRSP using the previous 36 months ending in December of the previous year. Market capitalization (normalized) is measured as of December of the previous year, log transformed, and scaled to be distributed with a mean of zero and standard deviation of one for each year. Return on assets is operating income scaled by lagged assets. The Entrenchment Index is described by Bebchuk et al. (2004) and the Governance Index is described by Gompers et al. (2003).

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 11. Free Cash Flow, Profitability, and the Decision to Go Private

	Dependent Variable: If a going private transaction occurs y=1; otherwise, y=0					
	(1)	(2)	(3)	(4)	(5)	(6)
Book-To-Market Ratio For Equity	0.1785 (0.0320)***	0.1878 (0.0313)***	0.1766 (0.0328)***	0.1861 (0.0316)***	0.1805 (0.0327)***	0.1717 (0.0328)***
Asset Growth	-1.6082 (0.2508)***	-1.7286 (0.2538)***	-1.4186 (0.2608)***	-1.6587 (0.2551)***	-1.4304 (0.2633)***	-1.3360 (0.2644)***
Stock Return Volatility	-2.0144 (0.6757)***	-2.0935 (0.6744)***	-2.4257 (0.7017)***	-2.1319 (0.6832)***	-1.6324 (0.6738)**	-2.5735 (0.7155)***
Market Capitalization (Normalized)	-0.3424 (0.0464)***	-0.3517 (0.0466)***	-0.3301 (0.0483)***	-0.3434 (0.0477)***	-0.3609 (0.0496)***	-0.3271 (0.04905)***
Return On Assets		2.4538 (0.9699)***	1.7709 (0.9947)*	2.2451 (1.0014)**		1.7991 (1.0206) *
Free Cash Flow	2.7254 (0.4694)***	-0.0630 (1.2108)	0.4739 (1.2394)	0.0443 (1.2816)	2.2907 (0.5080)***	0.2152 (1.2874)
Investment			-1.1454 (0.6224)*		-1.3407 (0.7409)*	-1.3579 (0.7419)*
Depreciation				0.7763 (1.3347)	1.4544 (1.4831)	1.7267 (1.4835)
Pseudo R^2	0.0681	0.0688	0.0673	0.0677	0.0672	0.0676
N	*N* = 112,668	*N* = 112,668	*N* = 99,141	*N* = 107,737	*N* = 97,999	*N* = 97,999

Notes: Each column presents the coefficient estimates from a logistic specification. The sample period is from 1981 until 2006. A public firm is deemed to have been taken private if more than 50% of a public firm's shares are purchased by a private entity, the ultimate parent of the private entity (if it has an ultimate parent company) is also private, and the public firm delists within two years of the effective date for the transaction. The industry fixed effects are defined using the 48 industry classification scheme available on Kenneth French's website. All specifications include industry and year fixed effects. The standard errors for the coefficient estimates are in parentheses and are clustered by firm.

Firm charateristics are measured at the end of the previous fiscal year for accounting data from Compustat. The market value of equity is measured as of December of the previous year for the book-to-market ratio for equity. Asset growth is the annual growth rate of the book value of assets between fiscal years. Stock return volatility is calculated from monthly data in CRSP using the previous 36 months ending in December of the previous year. Market capitalization (normalized) is measured as of December of the previous year, log transformed, and scaled to be distributed with a mean of zero and standard deviation of one for each year. Return on assets is operating income divided by lagged assets. Free cash flow is the quantity operating income minus interest and taxes divided by lagged assets. Investment is capital expenditures divided by lagged assets. Depreciation is scaled by lagged assets.

* significant at 10%; ** significant at 5%; *** significant at 1%