AGENCY PROBLEMS AND CASH SAVINGS FROM EQUITY ISSUANCE

by

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DISSERTATION ABSTRACT

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I examine the effect of ownership structure on firms' propensities to save the proceeds of a share issuance as cash. Specifically, I focus on changes in cash savings at the time of a seasoned equity offering (SEO), a moment at which the firm experiences a large inflow of cash, to determine whether ownership structures such as managerial blockholdings or the presence of institutional investors materially affect firms' decisions regarding their level of cash savings. I find that firms with managerial blockholders are more inclined to save share issuance proceeds as cash, relative to firms with outside blockholders or no blockholders present. This finding could be interpreted as consistent with either managerial entrenchment or incentive alignment, so I distinguish between these competing forces by examining SEO announcement returns. The market's reaction to SEO announcements when managerial blockholders are present is significantly worse on average when the firm has excess cash, lending support to the entrenchment explanation. I also find that firms with greater total institutional ownership save more cash from equity issuance, which is consistent with the theory that greater firm monitoring allows optimal corporate cash holdings to increase because shareholders are less concerned about potential misuses of cash.

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CHAPTER I

INTRODUCTION

Opler, Pinkowitz, Stulz, and Williamson (1999) argue that managers inherently wish to accumulate cash in excess of the level that maximizes firm value because they are risk averse or want flexibility to pursue personal objectives. Given this agency problem, the presence of external monitors of a firm could reduce agency costs and affect managers' flexibility and decisions related to corporate cash holdings. However, given this same agency problem, the presence of more insider blockholders could increase managerial entrenchment and add to this agency problem.

The holding of cash offers both benefits (e.g., financial flexibility) and costs to firms, as outlined in Jensen's (1986) free cash flow hypothesis. Jensen predicts that shareholders will choose to limit managers' access to free cash flow to mitigate agency conflicts over its deployment. The concern for shareholders is that it is very easy for managers to misuse cash holdings; at the same time, it is difficult for shareholders to assess the valid use of these cash holdings. Jensen contends that the optimal amount of cash holdings is driven by the tradeoff between having enough cash to finance profitable projects, but not so much cash that managers can easily waste it on unprofitable projects that benefit the manager at the expense of shareholders. Thus, the presence of external monitors could help mitigate these costs and increase shareholder confidence that the use of these funds will be enhance value, which would allow firms' optimal cash holdings levels to increase and lead to firms holding more cash.

In this paper, I study how agency problems affect firms' cash decisions. Specifically, I examine cash savings at the time of a seasoned equity offering (SEO),

which is a moment when firms experience large influxes in cash, to determine whether concentrated ownership of shares can provide monitoring benefits or add entrenchment costs. The free cash flow problem in firms that collect large windfalls of cash from asset sales (Lang, Poulsen, and Stulz, 1995) is similar to the potential free cash flow problem that firms experience following an equity issuance. Given that equity issues produce resources that are allocated at the manager's discretion, agency problems could develop at firms in which agency problems were latent prior to the SEO.

Public equity issues are some of the largest infusions of capital in a firms' lifecycle. Such issues can drastically increase cash reserves that could be potentially mismanaged. This factor makes equity issuance an especially interesting setting in which to study the relation between agency problems and cash holdings. Most prior studies, in the literature, concerning agency problems and cash, focus on the levels of firms' cash holdings. However, McLean (2011) demonstrates that equity issuance can induce large shifts in the level of cash holdings. Thus, understanding how ownership structure affects firms' propensities to save the proceeds from share issuance as cash can help us better understand corporate cash holdings. McLean reports that, since 1985, the average firm saved more cash from share issuance than from cash flow, which suggests that share issuance has been the primary source of increases in cash holdings for U.S. firms over the last two decades. He also finds that the savings rate of debt is virtually zero; therefore, debt proceeds are not used for cash savings. Thus, focusing on share issuance may be appropriate if we wish to understand how agency costs affect corporate cash holdings.

Blockholders, meaning those shareholders with at least 5% of the total shares outstanding in a firm, have more incentive to monitor than smaller shareholders, and thus

might influence the firm more reliably. To analyze the effect of agency problems on firms' propensities to save share issuance proceeds as cash, I first consider whether the presence of different types of blockholders correlates empirically with a firm's propensity to save share issuance proceeds as cash. I also examine whether insider and outsider blockholders are associated with different influences. Greater managerial entrenchment allows managers to more easily take actions that are self-serving. Thus, I hypothesize that greater insider block ownership, a proxy for managerial entrenchment, is associated with a greater propensity to save share issuance cash proceeds. However, an alternative hypothesis, resulting in the same greater propensity to save share issuance proceeds as cash, is that a greater block ownership by managers leads to a stronger alignment between the manager's goals and shareholder value.

To distinguish whether the presence of an insider blockholding is more strongly indicative of managerial entrenchment or incentive alignment, I estimate a target level of cash for each firm year and the valuation effect of SEO announcements. Based on evidence I report in more detail later, I interpret insider block ownership as more strongly indicative of managerial entrenchment, and thus utilize this explanation in the results that follow.

I next consider the effect of institutional investors as monitors. Harford, Kecskes, and Mansi (2012) reason that firms with greater external monitoring have lower agency costs of holding cash. Therefore, as external monitoring increases, the optimal amount of corporate cash holdings also increases, which allows firms with higher levels of external monitoring to save greater percentages of equity issuance proceeds as cash, assuming these firms were below their optimal cash level before the SEO. Absent this source of

monitoring, it would be value destroying for firms to keep the same amount of proceeds from the SEO unless other equally effective governance structures are in place to restrain them. Thus, increased monitoring allows managers to hold more cash because shareholders know that these managers are being watched. This hypothesis contrasts with Jensen's scenario wherein firm monitoring forces self-interested managers to pay out cash, which results in lower cash holdings. The testable prediction is that institutional ownership, a proxy for the level of external monitoring, will be positively related to the amount of cash savings from share issuance proceeds, because the optimal cash holdings are higher for those firms with higher levels of monitoring. However, this prediction is dependent on the distance from the target level of cash before issuing new shares.

It may seem counterintuitive that I expect higher propensities to save cash from share issuance both in the presence of external monitors and internal blockholders. However, the external monitor hypothesis results from the higher optimal level of cash holdings of the firm, thus allowing the firm to save more of the issuance proceeds as cash. In contrast, the insider blockholder hypothesis posits an increase in the non-value enhancing uses of cash proceeds, such as precautionary savings.

I find that the presence of insider blockholders in a firm, a proxy for managerial entrenchment, has a statistically significant positive effect on cash savings of share issuance proceeds whereas the presence of outsider blockholders does not yield a significant effect. Distinguishing between the different types of insider blockholders, specifically director non-officer and officer blockholders, I observe that firms with at least one officer blockholder are more inclined to save share issuance proceeds as cash. However, this effect of greater cash savings does not arise with the other types of

blockholders. These findings suggest that managerial entrenchment is positively correlated to firms' propensities to save share issuance proceeds as cash. These results support the more traditional view that managers are inherently reluctant to disburse excess cash, which results in greater propensities to save share issuance proceeds as cash at firms in which managers' self-interested behaviors are the least limited (Opler et al., 1999). Thus, when these managers hold blocks of shares, we see that firms' propensities to save share issuance proceeds as cash increase, at least relative to firms without insider blockholders.

I also find that firms with greater ownership by institutional investors are more likely to save cash from equity issuance. To the extent that firms hold less than their optimal levels of cash prior to issuance, this finding is consistent with the hypothesis that firms with greater external monitoring have lower agency costs associated with holding cash. As a result, the optimal level of corporate cash holdings for these firms will be higher and they are able to save more of their issuance proceeds as cash compared to other firms with less monitoring.

Harford et al. (2012) do not examine the effects of these monitors on changes in cash holdings as a result of share issuance; rather, they consider the effect of these monitors simply on the total level of corporate cash holdings. My results add to this literature by looking specifically at changes in corporate cash holdings. If firms are holding less cash than their optimal level before the SEO, the inflow of cash from an SEO could be used to rebalance the firm's portfolio closer to their target level of cash holdings. I estimate a target cash level for each firm, where excess cash is defined as the difference between actual cash and target cash. In results detailed later, I find evidence

that firms with institutional investor holdings between 5% and 20% have negative excess cash on average before the SEO and shift to positive levels following the SEO. The model for determining target cash does not take into account agency costs or mechanisms in place to mitigate them. So, empirically, a firm having excess cash can be reinterpreted as having a higher optimal level of cash. In support of this argument, I find that firms with greater than 20% institutional ownership have excess cash, both in the years before the SEO and in the years following the SEO.

To understand whether these propensities to save cash are the result of a change in optimal cash holdings or a non-optimal misuse of cash, it is essential to test whether increases in cash savings are value-enhancing or value-destroying. I propose that insider blockholders are more likely to be entrenched and the increased cash savings are value-decreasing, whereas institutional holdings have greater incentives to monitor and the increased cash savings are value-enhancing. As mentioned above, I find that the average abnormal return for a firm with excess cash is significantly more negative than for firms with no excess cash the year before the SEO when an officer blockholder is present. I do not find a significant difference between firms with and without excess cash before the SEO when an outside blockholder is present. If shareholders are concerned about the potential misuse of SEO funds, then the presence of strong monitors should partially mitigate the negative returns usually associated with an SEO announcement. Consistent with this idea, I find that greater institutional ownership is positively related to abnormal stock returns in the SEO announcement period, and even more so after controlling for excess cash both before and after the SEO.

In light of the evidence that equity issuance has been the primary source of increases in cash levels for U.S. firms over the last two decades, changes in cash surrounding an SEO are one of the main contributors to the subsequent level of corporate cash holdings. Therefore, changes in cash, rather than solely cash levels, are an intuitive avenue to explore when considering the effects of agency problems on cash. In this way, my findings broaden our understanding of the forces that drive McLean's (2011) and Kim and Weisbach's (2008) results that firms save a substantial fraction of the cash raised in SEOs.

This dissertation proceeds as follows. Chapter II includes a review of the related literature and presents the hypotheses tested. Chapter III presents the data used and the sampling procedure. Chapter IV summarizes the main findings. Chapter V concludes.

CHAPTER II

LITERATURE REVIEW AND HYPOTHESES

Jensen (1986) predicts that shareholders will choose to limit manager access to free cash flow to mitigate agency conflicts over its deployment. This conflict is especially pertinent in the use of corporate cash holdings. The concern for shareholders is that it is both very easy for managers to misuse cash holdings and, at the same time, very difficult for shareholders to assess the valid use of cash holdings.

The evidence varies on whether shareholders should be worried about cash stockpiles. Opler et al. (1999) form a measure of excess cash by calculating the difference between the actual cash level of the firm and a predicted level of cash by a static tradeoff model where managers maximize shareholder wealth. They find that the propensity to use excess cash on investments and acquisitions is very small. They show that, when given the opportunity, management will accumulate excess cash. This finding implies that managers hold cash based on precautionary motives. In support of this finding, Harford (1999) provides evidence that shareholders should worry about how managers spend large amounts of cash. He reports that firms with large cash reserves are more likely to make value-decreasing acquisitions.

Dittmar and Mahrt-Smith (2007) provide evidence that shareholders assign a lower value to an additional dollar of cash reserves when greater agency problems are likely within a firm. Finally, Gao, Harford, and Li (2013) study both private and public firms and show that agency problems increase the level of cash held by the firm as a consequence of managers who prefer more freedom from external monitoring and choose to hold more internal slack.

In contrast, Mikkelson and Partch (2003) show that the operating performance of high-cash firms is comparable to, or better than, the performance of lower-cash firms matched by size and industry over a five-year period. This finding suggests that higher cash reserves do not lead to value destruction caused by agency problems. Mikkelson and Partch also find that high cash holdings are associated with greater investment and greater growth in assets. More recently, Harford, Mansi, and Maxwell (2008) examine how agency problems relate to the propensity to stockpile cash. They show that better internal governance is correlated with higher cash holdings and a better use of excess cash holdings. They also find that firms with weaker shareholder rights and lower insider ownership have lower cash reserves than do firms with stronger shareholder rights and higher insider ownership. However, they do not find evidence that supports a significant correlation between manager pay sensitivity or institutional ownership and the level of cash holdings.

Harford et al. (2012) consider external governance mechanisms and contend that better external firm monitoring allows firms to hold more cash. These authors reason that investors with longer investment horizons monitor firms more intensively because their net benefit of monitoring is higher. As a result, the optimal amount of corporate cash holdings increases. Empirically, they find that firms with institutional holdings and longer investor horizons, measured by portfolio turnover, do hold more cash.

On the other hand, Brown, Chen, and Shekhar (2012) consider short and long-term institutional investors, and find that the positive relation between institutional ownership and firm cash holdings is driven mainly by short-term institutional investors. They also argue that short-term trading creates short-term price pressure for the stock,

which results in volatile stock prices. Herding behaviors of some active trading institutions intensify this effect. This stock volatility causes more costly external financing because of the higher direct costs and greater uncertainty in equity issuance. Thus, a greater precautionary stockpiling of cash results from external financial constraints. They reason that we should expect a positive association between short-term institutional holdings in a firm and the firm's cash holdings.

Bates, Kahle, and Stulz (2009) study the level of cash holdings in a firm, but do not look at cash savings that stem specifically from equity issuance. They consider four motives for firms to hold cash including a transaction motive, a precautionary motive, a tax motive, and an agency motive. They rule out an agency motive as the reason why these cash balances increased using the G-Index, the value of cash holdings, and firms' excess cash to proxy for agency problems. The G-Index is the governance index developed by Gompers, Ishii, and Metrick (2003) which uses the occurrence of 24 unique governance rules. They interpret the evidence as most consistent with a precautionary motive. Although Bates et al. do not look at cash savings that stem specifically from equity issuance, Kim and Weisbach (2008) consider cash savings from equity issuance and report that firms save a substantial fraction of the cash raised in SEOs. They estimate that each dollar of capital raised in an SEO is associated with a $0.58 higher cash balance the year after the SEO, and this greater level of cash savings is maintained even four years after the SEO.

Equity issuance is a juncture at which firms can considerably increase their cash reserves. This feature makes the event of equity issuance an interesting opportunity to

study the relation between agency problems and cash holdings.[1] Numerous studies document that SEO announcements generate negative stock price reactions. Kim and Purnanandam (2011) report evidence to suggest that weak governance is a primary driver for investors' negative reactions to equity issuance. They use the presence of business combination (BC) statutes, which create a legal environment that is less susceptible to governance mechanisms (e.g., takeovers) to estimate a firm's strength of governance. Kim and Purnanandam use a difference-in-differences approach to show that the stock price reaction to SEO announcements by firms in states with BC statutes in effect, a proxy for those with weaker governance, is significantly more negative than is the case for SEOs by firms in their control group. They maintain that investors become worried about the non-productive use of SEO proceeds when governance is poorer.

Saving SEO proceeds as cash could be considered a non-productive use of these proceeds. However, Kim and Purnanandam hypothesize that, even if a firm has low growth opportunities, if it has strong governance, investors will feel more confident that the proceeds will be used productively. Consistent with this hypothesis, Kim and Purnanandam show that investors' reactions to pure primary SEOs are non-negative if

[1] By issuing equity, the threat of agency conflict might change. Once new equity is issued, the fraction of votes controlled by management is reduced unless they increase their investment in the firm. As a result, equity issuance makes external intervention (e.g., hostile takeover) less difficult. However, just as the voting power of management decreases after an equity issuance, voting power also decreases for blockholders, institutional investors, and other monitors, which complicates this aspect of the agency conflict with new equity issuance. Jung, Kim, and Stulz (1996) point out that, if a firm does not have valuable investment opportunities, equity issuance causes agency costs of managerial discretion to increase. This event provides greater incentives for outsiders to attempt to influence the actions of management. As a result, control activities, such as monitoring by board members, active monitoring by shareholders, takeovers, and proxy fights, become more beneficial to shareholders and outside investors after an equity issuance. They also find that firms without valuable investment opportunities have more negative stock price reactions to equity issues than do firms with better investment opportunities. Jung et al. reason that, if management is not constrained by monitoring, an unexpected equity issuance will result in a negative effect on shareholder wealth because it is likely not in the interest of shareholders as the issuance funds are likely to be invested poorly.

issued by firms with stronger alignment of managerial incentives to shareholder value. Pure primary SEOs do not include secondary offerings in which blockholders and managers sell their own shares, a behavior that typically transmits a negative signal. Thus, if alignment of managerial incentives with shareholder value is strong (i.e., stronger governance), then pure primary SEOs should not cause investors any undue concern over the announcement of an equity issuance. Kim and Purnanandam do not consider whether the amount of cash saved is correlated with the negative stock price reactions they observe.

Institutional investor demand can also mitigate negative stock price reactions to seasoned equity issuance announcements. Alti and Sulaeman (2012) show that stock prices for issuing firms with low demand by institutional investors during the offer period continue to decline until the SEO offer date. However, stock prices completely recover from initial negative reactions, provided that the issuing firms have high demand by institutional investors. Thus, on average, these issuing firms are able to complete their offers at their pre-announcement stock price levels. Alti and Sulaeman interpret this result as indicating a positive effect of institutional demand on market reaction. Aggregate demand by institutional investors conveys information to the market because institutions are commonly considered to be sophisticated and better-informed investors. Strong institutional demand for a firm's stock discloses that a number of institutions have recently analyzed that firm and have chosen, subsequently, to buy its stock. The authors hypothesize that these decisions by institutions to buy the stock help alleviate market concerns about adverse selection and act as a certification concerning the market

valuation of the firm. Thus, the market is more amenable to an equity issue at the prevailing stock price.

McLean (2011) documents that firms' propensities to hold share issuance proceeds as cash, on average, increased significantly over a sample period between 1971 and 2008. During the 1970s, he reports that $1.00 of issuance resulted in $0.23 of cash savings, whereas during the most recent decade, $1.00 of issuance resulted in $0.60 of cash savings. His results suggest that cash savings are now the primary use of share issuance proceeds for U.S. firms. He interprets this evidence as support for the hypothesis that an increase in cash savings from the proceeds of share issuance is driven by an increase in the precautionary motive. He reasons that firms with valuable investment opportunities and volatile cash flow should accumulate precautionary cash balances to avoid having to forgo future profitable investment opportunities.

McLean also reasons that firms might choose to issue equity in good times because liquidity varies over time, and market conditions could later make equity issuance too costly. He employs R&D expenditure, industry cash flow volatility, dividends, and an index of all three to proxy for precautionary motives. McLean contends that firms with greater R&D spending tend to have more valuable investment opportunities and are more likely to experience financial distress. Thus, these firms have greater precautionary motives and hold more cash. I consider an alternative explanation wherein R&D depends on past cash flow due to market imperfections, which is perhaps why McLean (2011) finds a correlation, rather than as a result of a precautionary motive.

McLean (2011) considers only precautionary motives and market timing as possible drivers of the increase in share issuance cash savings. In this paper, I consider

whether agency costs contribute to firms' propensities to save the proceeds of share issuance as cash. I specifically consider two hypotheses related to monitoring and managerial entrenchment. I also investigate whether the monitoring and entrenchment hypotheses could explain McLean's findings with respect to his proxies for precautionary motives. McLean studies all issues grouped together, whereas I differentiate the effects of SEOs. I contend that the strength of monitoring affects share issuance cash savings from an SEO differently than other issues; McLean's tests do not differentiate among various forms of issuance.

I specifically investigate the effect of the presence of different types of blockholders, including all, officer, director non-officer, and outside blockholders, on cash changes following an SEO. Managers, many of whom are included as officer blockholders, might have economic interests other than simply that as shareholders. For example, officer blockholders might value their consumption of perquisites at the expense of other stakeholders, particularly shareholders. Jensen and Meckling (1976) suggest that ownership by managers can help align incentives and reduce agency costs. However, Morck, Shleifer, and Vishny (1988) show empirically that, while small levels of managerial ownership can reduce agency costs, high levels of managerial ownership can serve to entrench management and reduce firm value.

Competing arguments exist for the effect of outside blockholders as well. Although these blockholders are less likely to be subject to entrenchment concerns, Cronqvist and Fahlenbrach (2009) demonstrate that blockholders are not a homogeneous group. Some blockholders appear to influence corporate behavior, while others seem to prefer a passive role. Perhaps some blockholders, such as hedge funds, have few

restrictions and can pursue whatever policy their clients accept, while others might encounter significant institutional constraints. Some blockholders could also encounter numerous regulatory barriers and potential conflicts of interest that make active monitoring a challenge (Gerken, 2009). Thus, I expect inside blockholders will have different incentives and therefore, possibly, different influences on agency costs compared to outside blockholders.

Chen and Yur-Austin (2007) study the same classifications of blockholders and use the same data provided by Dlugosz, Fahlenbrach, Gompers, and Metrick (2006). They measure the effectiveness of blockholders in mitigating agency costs such as managerial extravagance, poor asset management, and underinvestment, and find that outside and inside blockholders exert their influence differently. They report that outside blockholders are more effective in mitigating managerial extravagance while inside blockholders, especially managerial blockholders, are more effective at improving the efficiency of firm asset utilization. Further, they report that all types of block ownership are significantly negatively related to managerial extravagance, except for officer blockholders. These officer blockholders are the only blockholders who do not significantly deter managerial extravagance. In addition, Dlugosz et al. report that only director non-officer blockholders significantly overcome underinvestment problems.

I also investigate the effects of the amount of institutional ownership on the level of cash savings from an equity issuance. Institutional monitoring could alleviate the potential mismanagement of cash after an SEO. Aggarwal, Erel, Ferreira, and Matos (2011) study portfolio holdings of institutions in companies from 23 countries from 2003–2008. They find evidence consistent with institutional ownership affecting

governance; however, they do not find evidence suggesting that governance affects institutional ownership. Specifically, firm-level governance improves after an increase in ownership by foreign institutions. These authors also show that firms with higher institutional ownership are more likely to terminate poorly performing Chief Executive Officers (CEOs). They further report that firms with greater institutional ownership exhibit an increase in value over time. Their results suggest that institutional investors do in fact monitor, and their investments strengthen the corporate governance of firms.

Chen, Harford, and Li (2007) show that, in the context of mergers, the presence of independent long-term institutional investors makes withdrawal of bad bids more likely. Demiralp, D'Mello, Schlingemann, and Subramaniam (2011) find that announcement returns of SEOs are positively correlated with institutional ownership levels and concentration, which suggests that the market believes there are monitoring benefits to such ownership. Post-issue stock returns are also positively correlated with contemporaneous post-issue changes in institutional ownership and the concentration of their shareholdings. Dlugosz et al. also find a positive relationship between post-issue operating performance and institutional ownership measures after controlling for the informational advantage of institutional investors. These findings, along with those of Chen et al., suggest that institutional monitoring can influence real firm performance.

CHAPTER III

DATA

Sample Construction

My measurement of blockholders is based on data provided by Dlugosz et al. (2006). Companies disclose their blockholders, defined as those with 5% or greater percentage of shares, in their proxy statements. Most prior studies use the Compact Disclosure database to identify large shareholders and their shareholdings because of the difficulty in collecting data independently directly from proxy statements. However, Dlugosz et al. report that the Compact Disclosure database fails to record footnotes for some corporate annual proxy statements.

The lack of footnotes in the Compact Disclosure database could lead to double counting of the same ownership or mislabeling preferred shares as common stockholdings. They reason that the measurement error in this database could be responsible for biased empirical results in prior studies of the effects of blockholders. As a result, Dlugosz et al. (2006) compare the Compact Disclosure database with original proxy statements and produce a more accurate data set for blockholders who own at least 5% of the firm's equity in a given year. These data are available from Andrew Metrick's website for the period 1996 to 2001 and cover the Standard and Poor's 500 and annual lists of the largest corporations in *Fortune*, *Forbes*, and *BusinessWeek*. Overall, the sample covers 7,649 firm-years, 1,913 unique firms, and about 90% of the value of the NYSE/AMEX/NASDAQ markets.

Based on analysis by Dlugosz et al. (2006), I classify blockholders into two types: inside and outside. Inside blockholders include officer, director non-officer, affiliated,

and those related to Employee Share Ownership Plans (ESOPs). Outside blockholders are those not defined in the above categories. Chen and Yur-Austin (2007) use the same approach to classification (insiders versus outsiders). Outsiders and insiders might have different incentives when it comes to cash holdings. Insiders might wish to accumulate cash for precautionary motives as well as perquisites, whereas outsiders might wish for firms to save as little cash as possible above the firms' optimal level, to reduce potential agency costs. Thus, the categorization outlined here will allow me to test these different incentives empirically.

My measurement of institutional ownership is based on data obtained from Thomson Financial CDA Spectrum database. The 1978 amendment to the Securities and Exchange Act of 1934 states that all institutional investors with holdings of $100 million or more under management are required to report their holdings quarterly using Form 13F of the Securities and Exchange Commission; common stock positions greater than 10,000 shares or $200,000 must be filed. Thomson Financial reports the quarterly holdings information for each institutional investor of each firm, beginning in the first quarter of 1980. Examples of such institutions include bank trusts, insurance companies, investment companies (mutual funds), independent investment advisors, employee stock ownership plans, foundations, university endowments, and pension funds (public and private).

Institutional ownership is defined as the fraction of a firm's shares held by institutional investors. To calculate this measure, I sum the shares held by all institutional investors for each firm in each quarter and then divide the sum by the number of total shares outstanding for each firm. Institutional ownership data has calendar-quarter

frequency; however, the financial information that is merged later has fiscal-year frequency. Thus, when merging these data sets, I match annual firm financial information with the percentage of institutional ownership recorded for the quarter immediately before the fiscal year-end. If a firm in my sample has no institutional ownership, I set its institutional ownership proportion to zero.

I start my sample construction with all U.S. firms included in the Compustat database. These data are merged with the institutional holdings data and Dlugosz et al.'s (2006) sample. Excluded from the data are firms with missing values for cash and marketable securities, book value of assets, book value of liabilities, or operating income. Firms with standard industrial classification (SIC) codes between 6000 and 6999 (financial companies) and those between 4900 and 4999 (utilities) are also excluded from the sample, which follows McLean (2011) and Bates et al. (2009).

Following McLean (2011), the source-of-cash variables include *Issue*, *Debt*, *Cash Flow*, and *Other* (see Appendix A). I measure equity issuance using SEO issuance data from the Thomson Financial Securities Data Company (SDC) database, which provides comprehensive information on U.S. domestic public offerings for all equity issues beginning in 1971. Thus the *Issue* variable is limited to only those proceeds from pure primary SEOs. The use of this issuance variable from the SDC contrasts with many previous papers that use annual total proceeds from the sale of stock, found in Compustat, to measure proceeds from issuance. The Compustat variable, *sstk*, is pulled from the statement of cash flows and includes all share issues that result in cash flow to the firm. These issues include not only SEOs but also proceeds from private placements; rights offerings; stock sales through direct purchase plans; preferred stock issues; conversions

of debt and preferred stocks; and employee option exercise and benefit plans. Share issues that are excluded from this Compustat measure are those that do not result in cash flow to the firm, such as stock-financed mergers and restricted share grants.

McKeon (2014) demonstrates that most observations of cash inflows from the sale of stock are not financing events triggered by the firm; rather, they are initiated by employees, primarily through exercise of stock options. His analysis suggests that, during the most recent decade, employee-initiated equity issues exceed inflows from SEOs, initial public offerings, and private placements combined. Therefore, I argue that my measure of issuance, using only those proceeds from seasoned equity issuance, is more appropriate in this setting than a consolidated measure from Compustat. This is because I am interested in how different governance mechanisms influence managers' decisions. Thus, I limit my proceeds measure to only those firms for which management controls the timing of the issuance.

My measure of change in cash, $\Delta Cash,$ is the difference between cash at the end of the year and cash at the beginning of the year, scaled by the book value of assets measured at the beginning of the year. All ratio variables are Winsorized at the 1st and 99th percentiles, with the exception of *Issue* where observations with *Issue* greater than ten are dropped. This restriction results in five observations dropped from the blockholder sample and 358 observations dropped from the institutional holdings sample. This process results in a final sample of approximately 6,000 firm-year observations over the period 1996 to 2001 for the blockholder sample and 128,000 firm-year observations over the period 1980 to 2008 for the institutional holdings sample.

Summary Statistics

Table 1 presents the mean, median, standard deviation, minimum, maximum, and number of observations of each variable of interest in the blockholder sample. I report results for two samples, as shown in Panel A and Panel B of Table 1. Panel A corresponds to the case where issuance is measured only from proceeds of SEOs using the SDC database. Panel A is the sample used in the rest of this paper. Panel B is the sample when all issues, not just SEOs, are used. Panel B is for comparison purposes only and is not used in the rest of the paper.

The mean value for $\Delta Cash$ is approximately .019, which reveals that firms increase their cash holdings, on average, each year. Table 1 confirms McLean's (2011) finding that, on average, external financing provides firms with more funds than does internally generated cash flow. While the mean for *Issue* (0.006) appears very small, it is dominated by observations of zero in the sample because most firm-years do not contain an SEO. Only approximately 3% of observations in the sample have positive issuance that year; therefore, it is best to consider Panel C of Table 1b, which shows that, when looking at only the positive observations, the mean of *Issue* is .209.

Table 1b also reports the number of positive, zero, and negative values for other variables in the blockholder sample. Table 1b Panel A shows that approximately 88% of all firm-years, or 5,435 firm-years of the 6,183 total firm-years, have at least one blockholder, and approximately 79% of all firm-years, or 4,860 firm-years of the 6,183 total firm-years, have an outside blockholder. Although it is common for a firm to have at least one outside blockholder in a year, it is relatively uncommon for a firm to have inside blockholders. In this sample, only 16% of firm-years have at least one officer

blockholder, and only 9% have at least one director non-officer blockholder. When comparing the SEO Issuance Only Sample to the All Issuance Sample, it is interesting to note that I have only 176 firm-years with a positive value for issuance in the SEO Only Sample whereas I have 4911 firm-years with a positive value for issuance when measured by all issues. This highlights how different my results on equity issuance might be when limiting my sample to only those issues from an SEO rather than using all issues combined.

Panel B of Table 1b reports the number of observations for the different possible combinations of blockholders present. The sample is strongly dominated by the presence of outsiders compared to insiders. I observe that outside blockholders are far more common than are other types of blockholders at the time of issuance. I report that the sample consists of 55 firm-year observations where there is an insider blockholder present and 133 where there is an outsider blockholder present during the year of an SEO. It is important to note that there can be both insider and outsider blocks present in the firm at once, thus twelve of these firm-years overlap.

Panel C of Table 1b reports the mean values of the variables during the years when an issuance occurs. The value of *Issue* is much larger (.209) in the SEO Only sample compared to that of the All Issuance sample (.03), due to the All Issuance sample containing a larger number of smaller issuance observations. This can also explain why the average Cash Change for a firm is much larger in the SEO Issuance Only Sample compared to the All Issuance Sample. The rest of the paper will only utilize the SEO Issuance Only Sample for reasons explained above in the Sample Construction section.

Descriptive statistics for variables related to the institutional ownership sample are presented in Table 2. Panel B reports the mean institutional ownership present in a firm for this sample to be 32%, and the median institutional ownership to be 26%,wow of total outstanding shares. The median total institutional ownership of the sample firms with non-zero institutional ownership is 26%. Of the 127,828 total firm-year observations in the sample, 66,640 of those firm-year observations occur when firms have institutional ownership of greater than 20%. Additionally, 8.78% of those firm-years with greater than 20% ownership coincide with an equity issuance. As shown in Panel C of Table 2, the average size of the issuance, scaled by total assets from the year below, decreases as the institutional ownership present in the firm increases. Thus, if I do find that institutional ownership is correlated with greater cash savings from equity issuance, it is not simply a mechanical result that institutional ownership is more often found in companies with larger issues.

CHAPTER IV

RESULTS

Following Harford et al. (2012), the first hypothesis considered here is that firms with greater external monitoring have lower agency costs of holding cash; therefore, their optimal corporate cash holdings levels are greater. Thus, there is a greater propensity to save share issuance proceeds as cash when outside blockholders are present to monitor the firm if the firm is cash-constrained prior to the issuance. Following Opler et al. (1999), the second hypothesis I consider is that, because of managers' self-interest, there is a greater propensity to save share issuance proceeds as cash when the potential for managerial entrenchment is greater, as proxied by greater block ownership by managers. However, as discussed earlier, an alternative hypothesis, resulting in a similar greater propensity to save share issuance proceeds as cash, is that greater block ownership by managers leads to a stronger alignment between the manager's goals and shareholder value. I will try to disentangle these two hypotheses later in the paper when I measure abnormal stock returns around SEO announcements.

Insider Blockholders as Entrenched Managers

I first test whether firm-level differences in the types of blockholders in a firm are related to higher firm-level cash savings following share issuance. With respect to blockholders, I define *D(Block)* as equal to one if a company has at least one shareholder who owns more than 5% of the equity in a given year; zero otherwise. The same procedure is used for the other indicator variables that capture the presence of any officer, director non-officer, and outside blockholder. I consider whether the presence of these

different types of blockholders, who have different incentives regarding cash holdings, results in firms exhibiting different propensities to save share issuance proceeds as cash.

I estimate the regression found in Eq. (1) below, and generalize the model to include dummy variables for the presence of each type of blockholder and interaction terms, between *Issue* and each type of blockholder. This process allows me to capture the effect of that blockholder type on the coefficients β_3 and β_5 that measure the propensity of firms to save share issuance proceeds as cash. In a panel regression, I estimate Eq. (1) with firm- and year-fixed effects and an *Issue*Block Dummy* interaction term. The regression equation is:

$$\begin{aligned}\Delta Cash_{i,t} = {} & \beta_1 Issue_{it} + \beta_2 (Insider\ Block\ Dummy_{it}) + \beta_3 (Issue_{it} * Insider\ Block\ Dummy_{it}) \\ & + \beta_4 (Outsider\ Block\ Dummy_{it}) + \beta_5 (Issue_{it} * Outsider\ Block\ Dummy_{it}) \\ & + \beta_6 Debt_{it} + \beta_7 Cash\ flow_{it} + \beta_8 Other_{it} + \beta_9 Assets_{it} + \alpha_i + \gamma_t + \varepsilon_{it} \end{aligned} \quad (1)$$

The source of cash coefficients from Eq. (1) can be interpreted as cents saved per dollar of cash proceeds. The firm-fixed effect gives each firm its own intercept (α_i), and this framework relies on within-firm changes over time in the right-hand-side variables to explain within-firm changes over time in the left-hand-side variable. As a result, the coefficients β_3, for *Issue*Insider Block Dummy,* and β_5, for *Issue*Outsider Block Dummy,* are tests of whether within-firm changes in share issuance, in the presence of each type of blockholder, cause within-firm changes in cash savings.

As explained, I classify blockholders into two types: inside and outside. Inside blockholders include officer, director non-officer, affiliated, and Employee Share Ownership Plan related blockholders. Outside blockholders are those not defined in the above categories. Table 3 reveals that insiders have a statistically significantly positive effect on cash savings from share issuance proceeds, whereas outsiders have no

statistically significant effect on cash savings from share issuance proceeds. This finding supports both the hypothesis that managerial entrenchment leads to a greater propensity for firms to save share issuance proceeds as cash as well as the hypothesis that greater incentive alignment by managers leads to a greater propensity for firms to save share issuance proceeds as cash.

When examining the influence of outside blockholders, I do not find that these blockholders have a significant effect on the propensity to save cash from equity issuance proceeds. Prior studies, specifically Dittmar and Mahrt-Smith (2007) and Cronqvist and Fahlenbrach (2007), find only a weak negative relationship between blockholders and corporate cash holdings; therefore, the smaller sample size (only equity issuance and fewer years of data), could explain why I do not find any significance.

In Table 4, I use the same basic specification as in Table 3, but differentiate the β_3 coefficient on the *Issue*Insider Block Dummy* interaction term using the different types of insider blockholders. I find that firms with at least one officer blockholder are more inclined to save share issuance proceeds as cash; however the coefficient is significant only at the 10% level. Column 3 of Table 4 shows that, once I add both officer blockholders and director blockholders to the same regression, the presence of officer blockholder is no longer statistically significantly correlated to cash savings that are a result of share issuance. In addition, there appears to be no correlation between changes in cash and the presence of a blockholder, director non-officer blockholder, or outside blockholder. My evidence on managerial entrenchment, as suggested by the correlation between the presence of an officer blockholder and increased share-issuance cash savings, supports Chen and Yur-Austin's (2007) finding that officer blockholders are the

only types that do not significantly deter managerial extravagance. Table 4 also reveals that the presence of director non-officer blockholders has a negative relationship to total cash savings, although not to cash savings that are specifically as a result of share issuance.

I next examine whether my finding of a positive association between managerial blockholders and share issuance-cash savings could explain McLean's (2011) findings that R&D, a proxy for precautionary motives, is related to the systematic increase in cash savings from share issuance over time. Harford et al. (2008) find that R&D is generally unrelated to the cash position of a firm and negatively related to its G-Index, thus stronger shareholder rights are correlated with higher R&D. Firms with weaker shareholder rights and high cash tend to invest less in R&D. In Table 5, I show that my finding related to the presence of officer blockholders is robust to controlling for R&D, in fact in Column 6 of Table 5, the effect is shown to be stronger statistically, as it is significant at the 5% level.[2]

I then test whether my results concerning the relationship between managerial blockholders and share issuance-cash savings remain statistically significant after controlling for a number of other determinants, which Dittmar and Duchin (2011) show are also significantly correlated with changes in the cash holdings of firms. These controls include the *financing deficit,* capturing the flow-of-funds deficit, defined as cash dividends plus capital expenditures; changes in net working capital (less cash); and the

[2] In unreported results, I also run the same tests as reported in Tables 4 and 5, but use the sample containing all issues rather than only secondary equity offerings. Here, the estimated coefficient on officer blocks is no longer statistically different from zero when looking at all issues. However, a statistically significantly negative effect occurs on share issuance cash savings by director non-officer blockholders.

current portion of long-term debt due, less operating cash flow, in which all variables are scaled by the total assets from the previous year. Dittmar and Duchin also used the following controls: *Age*, *Net Working Capital*, *Capital Expenditures, R&D, Acquisitions*, and *Payout* (see Appendix A). All ratio variables are Winsorized at the 1st and 99th percentiles. In Table 6, I report that a positive significant relation between the presence of an officer blockholder and cash savings is still present after controlling for these additional variables. I also find a significant negative relation between the presence of a director non-officer blockholder on cash savings, which suggests that these types of blockholders can help reduce managerial entrenchment.

Institutional Investors as Monitors

As an alternative to the types of blockholders I have studied so far, I examine the effects that different levels of holdings by institutional owners may have on propensities of firms to save share issuance proceeds as cash. I assert that this alternative measure of concentrated ownership, while it arguably does not capture the degree of direct involvement often ascribed to outside blockholders, can nevertheless proxy for the monitoring component of corporate governance within a firm. Here, the interest is in indicator variables for the presence of different intervals of total percentage holdings by institutional owners for a given firm in a given year. Accordingly, I define D (20% or greater holdings) equal to one if the total institutional ownership in the firm is more than 20% of firm equity in a given year, and equal to zero otherwise. The same procedure is used for the other indicator variables to capture the different amounts of institutional ownership.

For these new institutional holdings regressions, I employ the same dependent variable (*ΔCash*) and independent variables (*Issue, Debt Proceeds, Cash Flow, Other,* and *Assets*) used in the blockholder regressions. Initially, I specify a continuous variable for the percentage of total shares held by institutional owners of a firm as well as an interaction term between the total institutional ownership percentage and *Issue* to capture the effect of the institutional ownership percentage on the estimated coefficient that measures the propensities of firms to save share issuance proceeds as cash. In Table 7 Column 2, I find that firms with greater amounts of total institutional ownership are more inclined to save share issuance proceeds as cash. This finding supports the hypothesis that firms with greater external monitoring have lower agency costs of holding cash; and thus their optimal amount of corporate cash holdings is higher. If this is the case, they are inclined to save more issuance proceeds as cash compared to other firms. It is important to note that I interpret a similar coefficient differently with institutional holdings than I do for the results on officer blockholders. I argue that higher cash savings by firms with officer blocks is more likely a non-optimal result of managerial entrenchment whereas higher cash savings by firms with greater institutional ownership is a result of the optimal level of cash being higher for those firms. I continue to further strengthen the results in support of these hypotheses later in the paper.

In Columns 3, 4, and 5 of Table 7, I introduce dummy variables for the presence of different levels of total institutional ownership in a firm as well as an interaction term between *Issue* and each indicator dummy variable to capture the effect of the proportion of institutional investor holdings on the estimated propensities of a firm to save share issuance proceeds as cash. I find that firms with 5%-20% and those with 20% or more

total institutional ownership have significantly greater cash savings from equity issuance compared to other firms. However, firms with 0% to 5% total institutional ownership have significantly less cash savings from equity issuance. I cannot include all types of institutional investment in one regression, in order to invert the matrix. However in Columns 6, 7, and 8 of Table 7, I run the model with different combinations of two of the three sub-groups. The results are materially the same as reported above except when running a model with both a dummy for greater than 20% institutional ownership and a dummy for less than 5% institutional ownership, as shown in Column 8 of Table 7. In this case, the coefficient for cash savings from share issuance with greater than 20% institutional ownership is no longer significant. However, this same coefficient is significant when including both a dummy for greater than 20% institutional ownership and a dummy for between 5% and 20% institutional ownership in the model. The coefficient on the interaction between the dummy for less than 5% institutional ownership and cash savings from share issuance is negative and significant across all these models. This suggests that the significant difference in cash savings from equity issuance is found when comparing firms with greater than 5% institutional ownership to those with less than 5% institutional ownership.

The findings from Table 7 suggest that, if the monitoring hypothesis is true, a substantial proportion of institutional investors must be present in the firm for the monitoring to be sufficient to enable these firms to save more cash from share issuance. One possible explanation is that firms with only small amounts of institutional ownership face greater asymmetric information costs. Under this premise, it may be more difficult for these firms to issue SEOs because shareholders may demand that they provide more

information about exactly what they plan to do with the issuance proceeds. Thus, firms with low institutional ownership might be constrained to issue equity only at the time they are ready to invest.

If the level of institutional ownership is low, these institutions may understand that monitoring is too costly. These institutions may pressure firms to invest the cash quickly after an equity issuance, rather than save it, to avoid the free cash flow problem. However, low levels of institutional ownership also likely result in less ability by these monitors to place pressure on a firm. Perhaps, as total institutional ownership in a firm increases, the issuance size (dollars raised) increases as well, which could be why I find greater cash savings with the presence of these types of investors. However, as reported in Table 2 Panel C, it seems that issuance size does not increase with total institutional ownership in a firm on average. In fact, I find that it actually decreases.[3] To reconcile the resulting significantly higher levels of cash savings among firms with higher levels of institutional ownership, and the lack of significant results when looking at outside blockholders in my Dlugosz et al. data set, reported in Table 3, it is important to note that these two samples are very different. Outside blockholders from Dlugosz et al. must hold at least 5% of firm shares to be included in this sample. The institutional ownership

[3] It is also important to consider that institutional investors are not all the same. One clear difference across these types of investors is their investment strategies, specifically seen in their portfolio turnover rates. Harford et al. (2012) argue that investors with longer investment horizons have stronger incentives to monitor than do those with shorter investment horizons. Given that long-term investors can credibly threaten to sell their shares, costs of monitoring are lower and benefits are greater compared to short-term investors. Harford et al. find that firms with institutional shareholders who have longer investment horizons, measured by portfolio turnover, do in fact hold more cash. They do not look at the effect of this assumed monitoring on cash changes as a result of share issuance; rather they consider the effect of this monitoring simply on the total level of corporate cash holdings. However, in unreported tests I find that indicators for the presence of long- and short-term institutional investors in firms are both only weakly positively correlated with cash savings from equity issuance. It also appears that firms with short-term institutional investors save more cash from equity issuance compared to firms with long-term institutional investors.

sample examines all combined holdings by institutions, not just by those who own 5% or more of the firm. Also, it could be that the manner in which these outside blockholders monitor firms is different from the way institutions monitor management. Brickley, Lease, and Smith (1988) show that voting on governance increases with institutional ownership. Institutional investors have long been associated with shareholder activism and are required to participate in proxy votes as part of their fiduciary duty. Alexander, Chen, Seppi, and Spatt (2010) find that institutions often vote based on the recommendations of proxy advisers such as Institutional Shareholder Services (ISS). This activity can intensify coordinated voting, which can be critical in votes against management. It could be the case that this coordination, combined with lower costs to monitoring, can lead to more persuasive monitoring by institutions compared to simply outside blockholders when it comes to a firm's cash decisions.

Permanent or Transitory Cash Change after SEO

Next, I investigate whether these cash increases after equity issuance are permanent or transitory. Jensen (1986) contends that the optimal amount of cash holdings is driven by the tradeoff between having enough cash to finance profitable projects, but not so much cash that managers can easily waste it on unprofitable projects that benefit the manager at the expense of shareholders. A degree of financial slack is useful for future financial flexibility as cash security nets allow firms to invest in the future without having to access external capital markets. In so doing, firms avert transaction costs, on either debt or equity issuance, and information asymmetry costs that are often coupled with equity issues. If the increase in cash savings when insider blockholders are present is

sub-optimal because of increased agency conflicts, I expect that any cash increase will be transitory because managers will waste it quickly. It is possible that a transitory cash change is simply a result of these firms investing quickly in positive NPV projects. However, I have no reason to believe that these firms would be able to identify positive NPV projects any more readily than those firms without insider blockholders. Even if a firm does not waste the proceeds quickly, holding cash can also be sub-optimal if shareholders would rather have the cash savings disbursed back to them because interest earned on corporate cash reserves is double-taxed at both the corporate and individual levels. Thus, it is unclear whether to expect permanent or transitory increases in cash from equity issuance with the presence of inside blockholders.

To better understand this setting, I examine whether insider and outsider blockholders are associated with different influences on the level of cash in the years following SEOs. I find that firms without any blockholders have the least amount of change in their cash holdings over a five-year period following an SEO, with a decrease in cash by a little less than 1%. Firms having at least one officer blockholder experience a decrease in cash by approximately 24% in the five years after an SEO compared to 12% for firms with at least one outside blockholder. This finding that firms with a least one officer blockholder disgorge cash more quickly after an SEO supports the hypothesis that cash increases from SEOs when insiders are present are more transitory compared to those for firms with other types of blockholders.

In Figure 1, I display a bar graph of the average change in cash for each year following the year-end after equity issuance (first through fifth year). Cash is scaled by total assets and Winsorized at the 1st and 99th percentiles. Cash in year t is scaled by

total assets in year t. Firms with no blockholders decrease cash on average by more than 4% initially, and gradually reduce this percentage over time until it is only at -0.8% by year five. Those firms with one officer blockholder present decrease their cash, on average, by 12.5% in the first fiscal year following the year that the SEO occurred. To put this finding in perspective, a 12.5% decrease in the first year is larger than the average for all other firms after five years; almost the entire decrease in cash occurs within two years of the SEO. For example, firms with at least one officer blockholder quickly decrease their average cash by almost 23% in two years with a final change in cash of 24% by year five. This is double the decrease compared to all other types of blockholders.

In Panel A of Table 8, I separate firms into groups (outside and officer blockholders) and report their four-year change in cash. The four-year mean and median of the cash change for the two groups differ largely; the cash change for officer directors decreases the most. However, I conclude that the cash change after SEOs for these two groups is not significantly different. Specifically, I find that the two groups are significantly different when using the two-sample *t*-test; however, significance is not reached when using the Wilcoxon test. This discrepancy might be explained by the fact that my sample of officer blockholders is small and contains a few outliers; the Wilcoxon test is less sensitive to outliers than is the two-sample *t*-test. Lastly in Panel A of Table 8, I find a statistically significant difference between the average four-year cash change for firms with at least one officer blockholder and those with no officer blockholder.

Next, I estimate a target cash level for each firm following the methodology described in Appendix B. Excess cash is defined as the difference between actual cash

and predicted cash. In Figure 2, I report the estimated excess cash for firms by year, beginning four years prior to the SEO and ending five years after the SEO. I report estimated excess cash for firms with at least one outside blockholder and separately for firms with at least one officer blockholder. According to my excess cash calculation, firms with at least one officer blockholder yield higher excess cash during the year of the SEO (14.45%) on average, whereas firms with at least one outside blockholder yield only 9.75% excess cash on average.

Firms with at least one officer blockholder appear to revert to their estimated target level of cash much more quickly following the SEO, reaching 2.75% excess cash five years after the SEO. In contrast, firms with at least one outside blockholder maintain almost the same level of positive excess cash even five years after the SEO. In Panel B of Table 8, I show that the mean and median of estimated excess cash, four years after the SEO, is higher for firms with at least one outside blockholder compared to those with at least one officer blockholder. However, the excess cash for these two groups is not significantly different.

I next consider the change in operating income over the four-year period following the SEO for each of the four subsamples. In Panel C of Table 8, I report that firms with at least one officer blockholder have the largest decrease in operating income in the four years following the SEO, with an average decrease in operating income of 8.63%. However, this decrease is not significantly different from that for firms with at least one outside blockholder. These firms, on average, decrease operating income by 8.06% over four years.

I next broaden my comparison to include the effect of outside directors on cash savings over time following the SEO by examining blockholdings of firms by institutional investors. When considering holdings by institutional investors, my hypothesis is that the optimal cash holdings of firms will be higher when greater levels of monitoring are present, due to decreased agency costs. However, I am not certain how to predict whether the cash increase following an SEO will be more or less permanent for firms with greater monitoring. As shown in Panel A of Table 9, when the combined institutional investor ownership exceeds 20% of the value of a firm, the average cash decrease is 41% in the four years after the SEO. This decrease is much greater than are the values reported for outside versus inside blockholdings. Additionally, this change in cash falls even more when looking at the average for firms with 5% to 20% institutional investor holdings, with an average cash decrease of 57% over four years; those with less than 5% institutional ownership experience an average cash decrease of 61% over four years. Figure 3 shows that these changes in cash stay fairly consistent over the entire five-year period.

Panel A of Table 9 also breaks out three different comparisons of firms. First, it reports the difference in changes of cash for firms with and without institutional ownership. Second, it reports the difference in changes of cash for firms with institutional ownership below 5% and those with greater than 5%. Lastly, it reports the difference in changes of cash for firms with institutional ownership between 5% and 20% to those with greater than 20%. All of these groups yield significantly different changes in cash over four years; those firms with the highest level of institutional ownership have the smallest change in cash following the SEO. Panel C of Table 9 also shows that those firms with

greater than 5% institutional ownership have significantly lower operating incomes than do those firms with less than 5%.

It is clear from these results that the presence of institutional investor holdings is correlated with a large decrease in cash following an SEO; however the decrease in cash is statistically significantly less for firms with higher institutional ownership levels. This finding could be the result of pressure on firms from institutions to pay out, invest faster, or institutional investors' abilities to recognize firms with greater investment opportunities. I do not attempt to distinguish between these possibilities in this paper.

As reported in Panel D of Table 9, the median total assets increased by close to 60% for all samples. To investigate whether acquisitions drive (a) these large increases in total assets and (b) the resulting cash changes, I remove firms with acquisitions of greater than $10 million during the five-year period following the SEO from the sample. The magnitude of these cash decreases is even greater after these firms are removed. Thus, I conclude it is not merely firm acquisitions that drive these large increases in total assets during the period following an SEO.

To explore whether this change in cash is a result of changing fundamentals of the firm, it would be more interesting to consider how far firms are from an estimated target level of cash in these years. I use the same estimated excess cash calculations mentioned above with subsamples of firms having different levels of institutional ownership. As shown in Figure 4, it is clear that firms with different levels of institutional ownership hold unique levels of estimated excess cash. For example, firms with less than 5% institutional ownership have, on average, negative estimated excess cash throughout the entire sample period surrounding the SEO; although the magnitude of the negative

estimated excess cash is substantially smaller and stays at a consistent level following the SEO. Firms with between 5% and 20% institutional ownership have, on average, negative excess cash for the years prior to the SEO and positive estimated excess cash for the years subsequent to the SEO. This is evidence suggesting that these firms are below their optimal level of cash holdings before the SEO and re-adjust their overall level of cash holdings closer to their target using proceeds from the SEO. Firms with greater than 20% institutional ownership have, on average, positive estimated excess cash for the entire sample period surrounding the SEO; however, these firms experience a large jump up following the SEO.

The magnitude of the estimated excess cash is greater across the board in Figure 4 for firms with over 20% institutional ownership. If firms are behaving well, i.e. making value-enhancing decisions, then the movement in excess cash around the SEO for these firms with higher levels of monitoring could support the hypothesis that firms with greater outside monitoring will have a higher optimal level of cash. If this hypothesis is true, then the estimated target level of cash that I measure using the Opler et al. (1999) methodology is not reflecting this additional increase to the target level, found with higher levels of monitoring. It would make sense then, assuming that this story is true, that firms with greater monitoring would seem to hold more cash, on average, than the level that the target model predicts. Thus I might observe a firm, with high levels of institutional ownership, that appears to be already over the optimal level of cash according to the Opler et al. model just before the SEO, but in reality, it is below its true unobserved optimal level before the SEO and the issuance helps it to rebalance its portfolio to a mix that is more consistent with its true unobserved target.

Panel B of Table 9 compares the same three groups discussed in relation to Panel A of Table 9. Both the mean and median estimated excess cash, four years after the SEO for firms with less than 5% institutional ownership, are significantly lower than are those for firms with greater than 5% institutional ownership. In addition, both the mean and median estimated excess cash, four years after the SEO for firms with between 5% and 20% institutional ownership, are significantly lower than are the analogous mean and median for firms with greater than 20% institutional ownership. For the same reasons given above, I interpret these results to support the hypothesis that firms with greater outside monitoring will have a higher optimal level of cash than what my model implies.

Market Reaction to SEO

Next, I investigate the stock market reaction to SEO announcements in my blockholder sample. I calculate cumulative abnormal returns following the method used in Fama and French (2003) and measure them over a seven-day interval centered around the event's announcement date. As a robustness check, I also run the same (unreported) tests using the three-day interval centered around the event's announcement date, as well as tests which add a momentum factor to the model, as discussed in Carhart (1997). In these (unreported) tests, I find that the regression results pertaining to the announcement period abnormal returns were qualitatively similar across the alternative methods. To identify the announcement date of the SEO, I follow Clarke, Dunbar, and Kahle (2004) and Jegadeesh, Weinstein, and Welch (1993), where the filing date provided by SDC is used as the announcement date for the equity issues. If a firm has more than one SEO in the same fiscal year, I drop all observations in that year after the first occurrence.

In Table 10, I break out the average returns for my blockholder sample for two cases: (a) when a firm has excess cash and (b) when a firm does not have excess cash. Panel A of Table 10 measures excess cash at the year-end prior to the SEO. Panel B of Table 10 measures excess cash at year-end for the year when the SEO takes place. I also break out cases where firms have an outside blockholder compared to cases where firms have an officer blockholder. Approximately 55% of the firms (94 of 171) with an outside blockholder present have estimated excess cash at the year-end prior to the SEO, whereas 59% of these firms (101 of 171) have estimated excess cash by the year-end following the SEO. Approximately 50% of the firms (16 of 32) with an officer blockholder present have excess cash at the year-end prior to the SEO, whereas 59% of these firms (19 of 32) have excess cash by the year-end following the SEO. Thus the percentage of firms with an outside blockholder that have excess cash before the SEO is greater than the percentage of firms with an officer blockholder that have excess cash before the SEO; however the percentage with excess after the SEO is approximately the same for both groups.

When an outside blockholder is present, abnormal returns surrounding the SEO announcement are not significantly different whether the firm falls below or above the target cash estimation. This evidence suggests that the market is not overly concerned with excess cash at the time of an SEO if outside blockholders are present to monitor the firm. However, when an officer blockholder is present, the market reacts significantly more negatively if the firm has estimated excess cash before an SEO compared to its reaction if the firm does not have estimated excess cash before the SEO. Given the presence of an officer blockholder, the average abnormal return for a firm with excess

cash is approximately -5%, whereas when there is no excess cash the year before the SEO the average return is approximately -1%. Among firms with excess cash, the median abnormal return for firms with both officer blockholders before the SEO is -5.46% whereas the median return for firms with both outside blockholders is -2.26%. However these two groups are not statistically significantly different, possibly due to the smaller sample size for the subset with officer directors compared to the rest of the sample.

These results for firms with officer blockholders helps to disentangle the competing hypotheses about why I observe firms save more cash from equity issuance when officer blockholders are present, as noted in Tables 4, 5, and 6. Insider blockholdings can lead to greater managerial entrenchment and the potential for non-value-enhancing uses of cash proceeds. However, insider blockholdings can also lead to stronger incentive alignment between managers and shareholder value, reducing incentives that lead to value destruction. Herein lies the significance of the result that, when an officer blockholder is present, the average return for a firm is significantly more negative when that firm has excess cash than the average return for firms with no excess cash the year before the SEO. This suggests that investors are worried about the potential misuse of issuance proceeds when officer blockholders are present. Thus the evidence seems to suggest that managerial entrenchment is the dominant influence governing the effect of officer blockholdings.

In Table 11, I report estimates from a regression relating announcement period returns to the presence of these different types of blockholders. I do not find a significant relation between the different types of blockholdings nor do I find a significant relation when I include in the model the level of excess cash both for the year before, and the year

of, an SEO. This unfortunately does not help to disentangle the two competing hypotheses concerning officer directors discussed above.

Next, I consider the market reaction to the SEO announcements in my institutional ownership sample. In Table 12, I break out the average returns in three different categories of institutional ownership for both when a firm has estimated excess cash and when a firm does not have estimated excess cash. Analogous to Table 10, Panel A of Table 12 measures estimated excess cash at year-end prior to the SEO. Panel B of Table 12 measures estimated excess cash at year-end for the year in which the SEO takes place. Approximately 80% of firms with less than 5% institutional ownership have estimated excess cash at year-end prior to the SEO, whereas approximately 73% of these same firms have estimated excess cash by the year-end following the SEO. Approximately 68% of firms with between 5% and 20% institutional ownership have excess cash at year-end prior to the SEO. This percentage drops only a tiny amount, to 67%, by the year-end following the SEO. Lastly, approximately 55% of the firms with greater than 20% institutional ownership present have estimated excess cash at year-end prior to the SEO, whereas more of these firms, approximately 61%, have estimated excess cash by the year-end following the SEO. Thus it seems that firms with greater levels institutional ownership are less likely to have excess cash, both before and after an SEO.

Whether a firm is above or below the estimated cash target does not seem to significantly affect market returns on average, no matter how much institutional ownership is present in the firm. I find that when firms do not have excess cash before or after the SEO, their returns are basically very similar (i.e. approximately -4%), regardless

of how much institutional ownership is present in the firm. I do see some variation in returns across different levels of institutional ownership according to whether the firm does or does not have excess cash both the year before, and the year of, an SEO. Returns are the least negative when there is less than 5% institutional ownership present in the firm. If greater institutional ownership leads to greater monitoring, then investors should be less worried about the use of the issuance proceeds if the institutional ownership is higher. However my results in Table 10 seem not to support this hypothesis. I am not sure how to interpret these split-sample comparisons; so I next estimate some regressions to see whether additional controls might add further clarity.

Numerous studies document that SEO announcements generate negative stock price reactions. However, Demiralp et al. (2011) find that announcement returns surrounding SEOs are positively correlated with overall institutional ownership levels and concentration, which suggests that the market believes there are monitoring benefits to such ownership. In Table 13, I find consistently higher announcement returns with greater institutional ownership, across all eight alternative specifications. In model 2 of Table 13, I add to the literature by controlling for the level of excess cash for both the year before and the year of SEO to the regressions. I find that the level of excess cash in the year before SEO is weakly negatively related to returns, whereas the level of excess cash at the year-end after the SEO is strongly positively related to returns. This seems to support the idea that investors are nervous if a firm that already has excess cash, before the SEO, decides to issue more equity. However, if investors expect that the firm will not spend new cash quickly after the SEO (as proxied by higher excess cash by the year-end following the SEO), then they are less concerned about the issuance. However, once I

control for other governance measures using the G-Index and E-Index, as in models 7 and 8 in Table 13, I find that the previously significant coefficients on excess cash become insignificant, suggesting that once governance is controlled for in the regression to explain announcement period returns, investors may not be as worried about the level of excess cash held by the firm.

Future Work on Endogeneity

I have demonstrated that greater institutional investment in a firm is correlated with higher savings of cash from equity issuance. However, it is challenging to establish an unambiguous causal relation between institutional ownership and these cash decisions. I am concerned that while institutional ownership may lead to differences in cash savings after equity issuance, institutional investors may also choose stocks because of unobservable firm characteristics that also drive differences in cash savings from equity issuance. If these unobservable firm-specific characteristics are time-invariant, the firm-level fixed effects included in my regression analysis should capture this effect and mitigate any concerns about heterogeneity bias. Table 7 revealed that the relationship between institutional ownership and propensity to save cash from equity issuances is positive and significant despite the inclusion of firm fixed effects.

Another empirical strategy to address these endogeneity concerns is to utilize a regression discontinuity design (RDD) across the cutoff based on size that distinguishes firms in the Russell 1000 index and the Russell 2000 index. The RDD strategy requires an exogenous discontinuous variable that drives selection of observations into a treatment or control group in the neighborhood of the discontinuity. The Russell 1000 and Russell

2000 indices are constructed based on firms' market capitalizations. The 1000 largest stocks will be included in the Russell 1000 index, and stocks ranked from 1001th to 3000th will be included in the Russell 2000 index. Mechanically, those just-included stocks for the Russell 1000 based on rank and those just-excluded stocks based on rank in the Russell 1000 index are very similar in terms of size; however, since both the Russell 1000 and Russell 2000 indices are market value weighted, the stocks just-included and just-excluded will receive very different weights in the index respectively. The weights will be different because the smallest firms in the Russell 1000 are a very small fraction of the total index and thus not as important for index funds to purchase if fund managers are attempting to successfully track the index; whereas the largest firms in the Russell 2000 are the largest weighted firms in this index and thus the most important firms for indexers to purchase to successfully track the Russell 2000 index. As a result of both (a) this value weighted issue and (b) the popularity of funds tracking the Russell 2000 over the Russell 1000, there is a significant jump in institutional ownership just after the cutoff that defines inclusion in the Russell 1000 index. Firms at the top of the Russell 2000 will have noticeably greater institutional ownership than firms at the bottom of the Russell 1000. I propose to investigate whether this relatively exogenous positive shock in institutional ownership of a stock stemming from inclusion in the Russell 2000 index affects the propensities of firms to save share issuance proceeds as cash.

This RDD strategy has the benefit of not relying on institutional ownership changes for identification. Changes in ownership are not random. It is possible that changes in institutional ownership are caused by unobservable determinants related to cash decisions. This proposed strategy of using the Russell 1000 and Russell 2000 indices

also has the advantage of being able to observe both the firms included in the index and just barely excluded, rather than only those firms that are included, as would be the case for the S&P 500 index. Another problem with the S&P 500 index, specifically, is that firms might be included in this index because of some expected change in corporate policy or performance. Inclusion in the S&P 500 index has been shown to increase investor recognition rather than solely increasing benchmarking done by index trackers, such as institutional investors. Chen, Noronha, and Singal (2004) show that stocks which are deleted from the S&P 500 index suffer no permanent negative price effect. If the observed positive price effect of inclusion in the index is due primarily to indexing by institutional investors, then one would expect a negative price effect for deletion when institutional demand is decreased. Chang, Hong, and Liskovich (2013) find price effects for firms that are added to, and deleted from, the Russell 1000 index. This finding is consistent with institutional benchmarking significantly changing at those moments.

My goal is to understand the relationship between greater monitoring and higher levels of cash savings following an SEO. Thus, it is imperative that this proposed RDD specification captures a discontinuity in monitoring by institutions. One might be concerned that these institutions are simply passive and will not influence corporate decisions; however, Edmans (2009) finds that even passive investors help discipline managers through the threat of exit. Crane, Michenaud, and Weston (2013) utilize this same regression discontinuity around the Russell 1000/2000 indices and find that proxy-voting participation increases by 55 percentage points for firms randomly exposed to higher institutional ownership, consistent with monitoring activity by institutional investors. Although institutional investors are required to participate in proxy votes by

law, Alexander et al. (2010) report that institutions often vote based on the recommendations of proxy advisers such as ISS. This activity can intensify coordinated voting, which can be critical in votes against management. Thus, even if the increase around the discontinuity is of passive institutions, these firms at the top of the Russell 2000 will still benefit from greater monitoring. Consistent with this idea, Crane et al. (2013) also show that when randomly exposed to 9% higher institutional ownership using this RDD design, firms pay 13% more dividends and repurchase 22% more of their shares.

Unfortunately, I do not yet have access to all of the data needed to complete this proposed RDD specification. Russell does not publish historical lists of the firms comprising each year's index, only the current constituent list today. I have replicated the Russell index employing CRSP market capitalizations using the May 31st calculation date each year. However there are limitations to this method as Russell itself makes adjustments to this list each year. First, Russell has had a policy since 2007 called "banding" where they try to maintain consistency for firms in their two indices if these firms are very close to the border between the two indices. The second adjustment is associated with the public float. Once each firm is assigned to an index, Russell then assigns index weights based on market capitalization adjusted for investible shares (e.g. treasury stock, blockholders etc.). However, the investible shares data are considered proprietary by Russell and are not made available to the public. Crane et al. (2013) report that this adjustment can be large in some cases. The other studies that use this RDD approach around the boundary between the Russell 1000 and the Russell 2000 have managed to acquire the actual index constituents for each historical year as released by

Russell to try to estimate these changes made by Russell. One option I have is to contact the authors of these studies or Russell Investments to see if they might share this historical list of firms. In summary, I propose to complete this RDD analysis if I am able to obtain the full dataset required in the future.

CHAPTER V

CONCLUSION

I examine the effect of ownership structure on firms' propensities to save the proceeds of a share issuance as cash. Specifically, I focus on changes in cash savings at the time of an SEO, a moment at which the firm experiences a large inflow of cash, to determine whether ownership structures such as managerial blockholdings or the presence of institutional investors materially affect firms' decisions regarding their level of cash savings. This large inflow of cash makes the aftermath of an equity issuance an attractive opportunity to explore the relationship between agency problems and cash holdings. I venture two hypotheses, based on the current literature that concern the possible influences of ownership structure and the resulting agency problems, concerning what firms do with issuance proceeds after an SEO.

I first consider Opler et al. (1999) who reason that managers inherently wish to accumulate cash in excess of the level that maximizes firm value because they are risk averse or they want flexibility to pursue personal objectives or perquisites. This desire for excess cash would lead to greater cash savings for firms with managers who are more likely to be entrenched. Thus, firms with greater insider blockholdings should have a greater propensity to hold share issuance proceeds as cash.

I then consider Harford et al. (2012), who reason that firms with greater external monitoring have lower agency costs of holding cash and, thus, the optimal level of corporate cash holdings is greater. Higher institutional ownership and outsider blockholdings will arguably increase monitoring and lessen the extent of agency costs, which will increase the optimal level of cash holdings for a firm. Thus, firms with greater

external monitoring would be inclined to save a greater share of their issuance proceeds as cash.

I find that firms with managerial blockholders are more inclined to save share issuance proceeds as cash, relative to firms with outside blockholders or no blockholders present. This finding could be interpreted as consistent with either managerial entrenchment or incentive alignment, so I distinguish between these competing forces by examining SEO announcement returns. The market's reaction to SEO announcements when managerial blockholders are present is significantly worse on average when the firm has excess cash, lending support to the entrenchment explanation.

I also find that firms with greater total institutional ownership save more cash from equity issuance. In addition, I show that firms with high levels of institutional ownership have higher levels of cash than what is predicted by a standard cash target model. These results are consistent with the theory that greater firm monitoring allows optimal corporate cash holdings to increase because shareholders are less concerned about potential misuses of cash.

This paper emphasizes that examination of changes in cash, rather than solely levels of cash, is an insightful opportunity to investigate when considering the effects of ownership structure, specifically when considering agency problems, on cash decisions made by firms. In addition, this paper furthers our understanding of the forces that drive McLean's (2011) and Kim and Weisbach's (2008) results that firms save a substantial fraction of the cash raised in SEOs.

APPENDIX A

VARIABLE DEFINITIONS

(Compustat codes in parentheses)

Cash:	Cash and equivalents scaled by the book value of assets measured at the beginning of the year. (che_t / at_{t-1})
ΔCash:	Cash and equivalents minus previous cash and equivalents scaled by the book value of assets measured at the beginning of the year. ((che_t - che_{t-1}) / at_{t-1})
Issue:	Cash proceeds from seasoned equity offerings, measured using SDC, scaled by the book value of assets measured at the beginning of the year.
Debt:	Cash proceeds from debt sales scaled by the book value of assets measured at the beginning of the year. ($dltis_t$ / at_{t-1})
Cash flow:	Net income plus amortization and depreciation scaled by the book value of assets measured at the beginning of the year. (($ni+dp)_t$ / at_{t-1})
Other:	The sum of other cash sources; sale of investments; and sale of property, plant, and equipment scaled by the book value of assets measured at the beginning of the year. (($sppe + siv + fsrco)_t$ / at_{t-1})
Assets:	Natural log of total assets. ($\log(at_t)$)
R&D:	Research and development expense scaled by the book value of assets measured at the beginning of the year. (xrd_t / at_{t-1})
Insiders:	Officer blockholders, director non-officer blockholders, affiliated blockholders, and Employee Share Ownership Plan related blockholders.
Finance Deficit:	The sum of cash dividends, capital expenditures, changes in net working capital (less cash) and current portion of long-term debt due, less operating cash flow, in which all variables are scaled by the book value of assets measured at the beginning of the year. ($dvt_t + capx_t + wcapch_t + dd1_t - ni_t - dp_t$) / at_{t-1})
Age:	The number of years since the firm's IPO.

Net Working Capital: Net working capital minus cash and equivalents scaled by the book value of assets measured at the beginning of the year. $((wcap - che)_t / at_{t-1})$

Capital Expenditure: Capital expenditures scaled by the book value of assets measured at the beginning of the year. $(capx_t / at_{t-1})$

Acquisitions: Acquisitions scaled by the book value of assets measured at the beginning of the year. (aqc_t / at_{t-1})

Payout: The sum of preferred dividends, common dividends, and share repurchases scaled by the book value of assets measured at the beginning of the year. $(dvp_t + dvc_t + prstkc_t) / at_{t-1})$

APPENDIX B

MEASURING EXCESS CASH

This section of the appendix describes the methodology used to estimate excess cash holdings. The excess cash estimation is based on Opler et al. (1999) and Dittmar and Mahrt-Smith (2007), who documented how best to control for the main motivations for a firm to hold cash. Following these studies, I first estimate a regression to measure a predicted, normal level of cash holdings of a firm. I then calculate the difference between actual and predicted cash of the firm to find the excess cash. The following regression equation represents my main specification:

$$Ln\left(1+\frac{Cash_{i,t}}{NA_{i,t}}\right)=\beta_0+\beta_1 Ln\left(NA_{i,t}\right)+\beta_2\left(\frac{FCF_{i,t}}{NA_{i,t}}\right)+\beta_3\left(\frac{NWC_{i,t}}{NA_{i,t}}\right)+\beta_4(\text{Industry Sigma})_{i,t}$$
$$+\beta_5\left(\frac{MV_{i,t}}{NA_{i,t}}\right)+\beta_6\left(\frac{RD_{i,t}}{NA_{i,t}}\right)+\text{Year Dummies}+\text{Firm Fixed Effects}+\varepsilon_{i,t}, \qquad \text{(B1)}$$

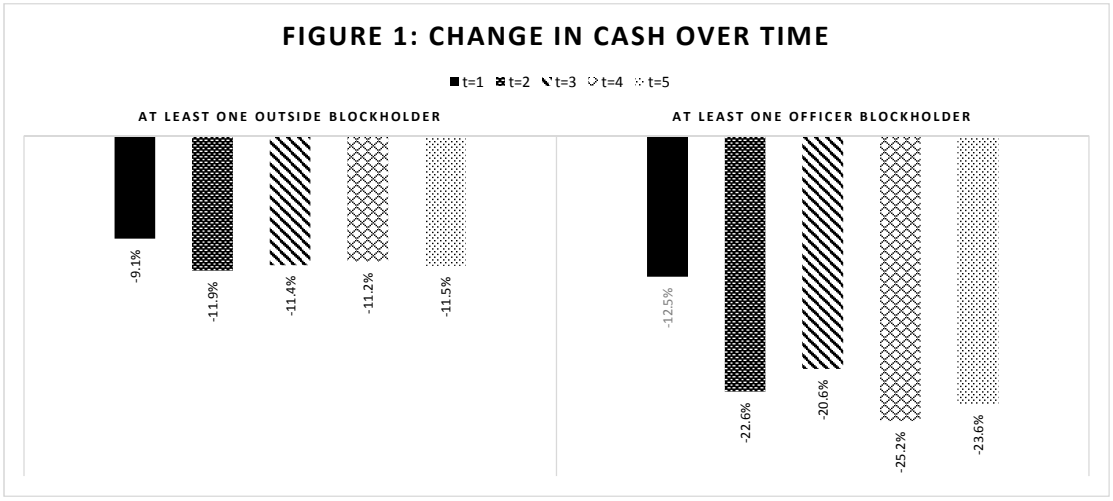
where (Compustat codes in parentheses): *Cash* is cash and equivalents (che); *NA* is net assets (at-che), *FCF* is earnings after interest, dividends, and taxes, but before depreciation (ni+dp); *NWC* is current assets minus current liabilities minus cash (act-lct-che); *Industry Sigma* is the industry average of the prior 10-year standard deviation of FCF/NA; *MV* is total assets minus stockholders equity minus deferred taxes plus preferred stock plus common shares times price (at-seq-txdb+pstkl)+(csho*prcc_f); and *RD* is R&D expenditures (xrd), set to zero if missing. All assets are adjusted for inflation. The residuals from the regression, including firm-fixed effects, are used to compute excess cash.

APPENDIX C

FIGURES AND TABLES

Figure 1 displays the average change in cash for each year after equity issuance (first through fifth year) given the presence of different types of blockholders. t=1 is the change in cash from the year of the SEO to the year following the SEO. t=1 is the change in cash over 1 year from time of SEO, t=2 is the change in cash over 2 years from time of SEO, etc. Cash is scaled by total assets and Winsorized at the 1st and 99th percentiles. Cash in year t is scaled by total assets in year t.

Figure 2 displays the estimated excess cash for firms by year, beginning four years prior to the SEO and ending five years after the SEO, given the presence of different types of blockholders. t=0 is the excess cash at the year-end of the year that the SEO was issued. t=1 is the excess cash at the year-end of the year after the SEO, etc. A predicted cash level is estimated for each firm following the methodology described in Appendix B. Excess cash is defined as the difference between actual cash and predicted cash.



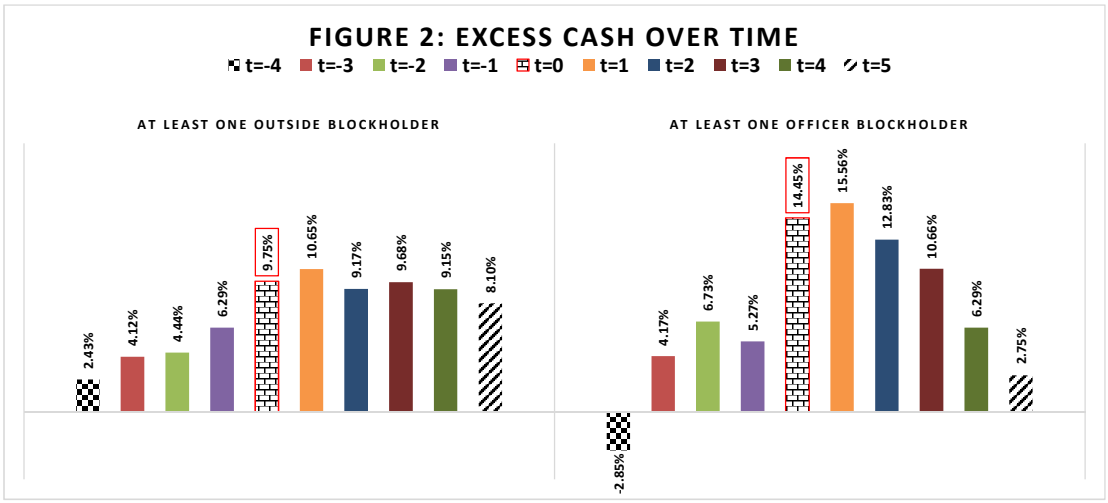
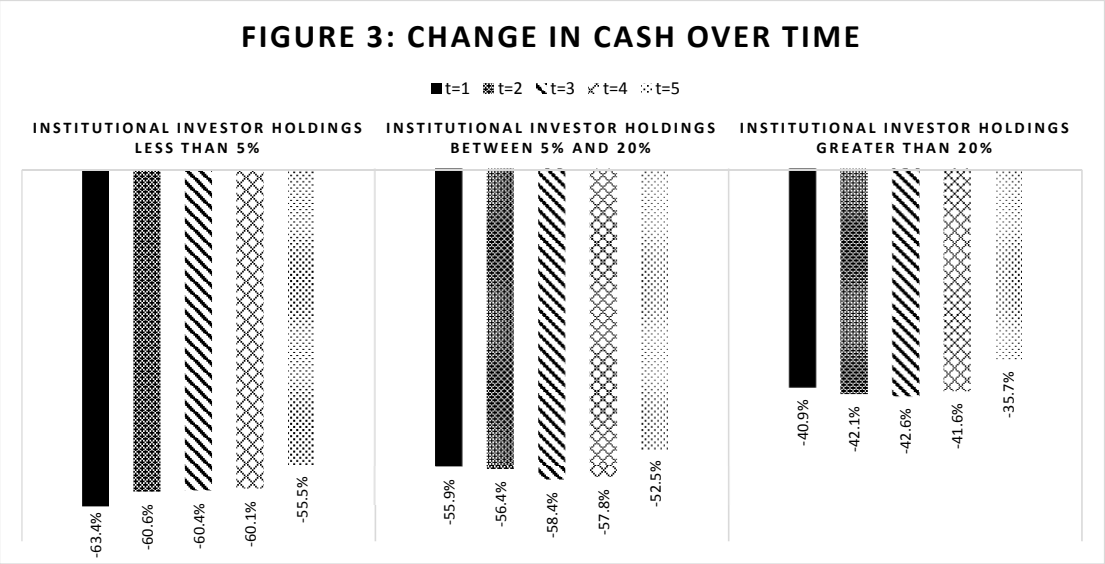


Figure 3 displays the average change in cash for each year after equity issuance (first through fifth year) given the presence of different levels of institutional holdings. t=1 is the change in cash from the year of the SEO to the year following the SEO. t=1 is the change in cash over 1 year from time of SEO, t=2 is the change in cash over 2 years from time of SEO, etc. Cash is scaled by total assets and Winsorized at the 1st and 99th percentiles. Cash in year t is scaled by total assets in year t.

Figure 4 displays the estimated excess cash for firms by year, beginning four years prior to the SEO and ending five years after the SEO, given the presence of different levels of institutional holdings. t=0 is the excess cash at the year-end of the year that the SEO was issued. t=1 is the excess cash at the year-end of the year after the SEO, etc. A predicted cash level is estimated for each firm following the methodology described in Appendix B. Excess cash is defined as the difference between actual cash and predicted cash.



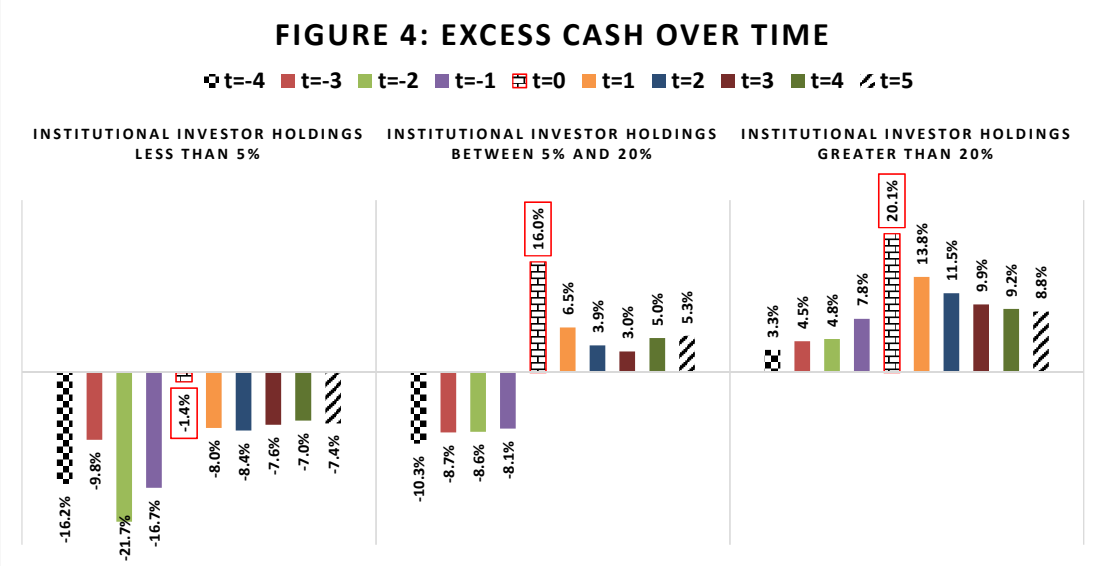


Table 1
Descriptive Statistics - Blockholders

This table displays summary statistics for the primary variables that are used in this study regarding the blockholder sample. ΔCash is the difference between cash at the end of the year and cash at the beginning of the year. Issue is the cash proceeds from share issuance. Debt is the proceeds from debt sales. Cash flow is cash flow from operations. Other is all other cash sources, which include the sales of assets and investments. These measures are scaled by total assets measured at the beginning of the year. Assets is the log of total assets. Blockholders are those who own at least 5% of the firm's equity in a given year. # Block is the number of all blockholders for that firm-year. # Officer Block is the number of officer director blockholders. # Non-Officer Dir Block is the number of non-officer director blockholders. # Outside Block is the number of outside blockholders. % Officer Block is the percentage held by officer director blockholders. % Non-Officer Dir Block is the percentage held by non-officer director blockholders. % Outside Block is the percentage held by outside blockholders. All ratio variables are winsorized at the 1st and 99th percentiles, with the exception of Issue for the SEO Sample Only. Observations with Issue greater than 10 are dropped for the SEO Only sample. Panel A consists of only measuring issuance from proceeds of SEOs using the SDC database. Panel A is the sample used in the rest of this paper. Panel B is the sample when all issuances, not just SEOs, are used. Panel B is for comparison purposes only and is not used in the rest of the paper. The sample consists of 6,183 firm-year observations during the period 1996–2001.

	Panel A: SEO Issuance Only Sample						**Panel B: All Issuance Sample**					
	Median	**Mean**	**Std. Dev.**	**Min**	**Max**	**Obs**	**Median**	**Mean**	**Std. Dev.**	**Min**	**Max**	**Obs**
Cash Change (ΔCash)	0.00	0.02	0.11	-0.46	1.42	6183	0.00	0.02	0.12	-0.46	1.42	5952
Issue	0.00	0.01	0.06	0.00	1.73	6183	0.00	0.03	0.10	0.00	1.83	5952
Debt Proceeds	0.03	0.12	0.23	0.00	1.70	6183	0.03	0.12	0.23	0.00	1.84	5952
Cash Flow	0.10	0.10	0.12	-1.14	0.65	6183	0.10	0.10	0.12	-1.14	0.66	5952
Other	0.00	0.04	0.11	0.00	0.78	6183	0.00	0.04	0.11	0.00	0.79	5952
Assets	7.13	7.27	1.41	1.84	10.19	6183	7.13	7.25	1.41	1.84	10.22	5952
R&D	0.00	70.92	203.48	0.00	1181.19	6183	0.00	70.63	206.04	0.00	1181.19	5952
# Block	2.00	2.40	1.61	0.00	11.00	6183	2.00	2.41	1.61	0.00	11.00	5952
# Officer Block	0.00	0.19	0.47	0.00	4.00	6183	0.00	0.19	0.47	0.00	4.00	5952
# Director Non-Officer Block	0.00	0.11	0.37	0.00	4.00	6183	0.00	0.11	0.37	0.00	4.00	5952
# Outside Block	2.00	1.87	1.51	0.00	9.00	6183	2.00	1.88	1.51	0.00	9.00	5952
% Block	21.40	23.82	17.49	0.00	92.00	6183	21.40	23.87	17.44	0.00	92.00	5952
% Officer Block	0.00	2.53	7.49	0.00	67.20	6183	0.00	2.53	7.52	0.00	67.20	5952
% Director Non-Officer Block	0.00	1.27	5.19	0.00	83.70	6183	0.00	1.28	5.14	0.00	62.50	5952
% Outside Block	14.40	16.80	14.67	0.00	82.20	6183	14.40	16.87	14.70	0.00	82.20	5952
All SEO Proceeds	0.00	7.44	77.99	0.00	3645.45	6183						
All Issuance Proceeds							5.00	49.42	229.31	-1.44	9204.00	5952
Total Assets	1252.35	4241.49	7912.17	78.68	46408.00	6183	1243.25	4083.06	7426.25	77.77	42343.00	5952
Acquisitions	0.00	121.29	625.37	-4507.00	18610.00	5715	0.00	110.91	517.25	-2145.00	15576.00	5514
Capital Exp.	70.11	316.59	952.43	0.00	17633.00	6096	69.87	295.87	846.77	0.00	17633.00	5872
Cash and Short Term Invest.	56.80	287.29	980.57	-0.16	31600.00	6183	56.39	275.37	944.50	-0.16	31600.00	5952
Long Term Debt Issuance	35.79	399.67	1733.57	0.00	48158.00	6183	35.00	365.27	1426.12	0.00	47645.00	5952
Depreciation	55.00	222.44	637.82	0.00	13657.00	6183	54.39	209.78	592.64	0.03	13657.00	5952
Net Income	52.36	219.66	1192.09	-56121.90	17720.00	6183	51.57	202.27	1150.92	-56121.90	17720.00	5952
R&D	14.80	141.54	464.76	0.00	5094.00	4335	14.55	133.70	438.77	0.00	5094.00	4114
Purchase of C. and Prf. Stock	4.75	112.42	406.80	-0.10	6785.00	4777	4.74	112.53	407.60	-0.10	6785.00	4757
Stockholders Equity - Parent	506.00	1651.59	4438.89	-3768.70	152027.00	6183	498.22	1571.65	4139.07	-3768.70	152027.00	5952
Sale of Investments	0.00	151.96	1287.78	0.00	58715.00	6183	0.00	150.82	1309.11	0.00	58715.00	5952
Sale of Property	0.00	22.42	217.68	-51.94	7345.00	6183	0.00	17.59	159.19	-51.94	6767.00	5952
Sale of Common and Prefer Stock	5.00	49.30	228.95	-1.44	9204.00	5971	5.00	49.42	229.31	-1.44	9204.00	5952

Table1b
Descriptive Statistics - Blockholders

This table displays summary statistics for the primary variables that are used in this study regarding the blockholder sample. Cash Change (ΔCash) is the difference between cash at the end of the year and cash at the beginning of the year. Issue is the cash proceeds from share issuance. Debt is the proceeds from debt sales. Cash flow is cash flow from operations. Other is all other cash sources, which include the sales of assets and investments. These measures are scaled by total assets measured at the beginning of the year. Assets is the log of total assets. Blockholders are those who own at least 5% of the firm's equity in a given year. # Block is the number of all blockholders for that firm-year. # Officer Block is the number of officer director blockholders. # Non-Officer Dir Block is the number of non-officer director blockholders. # Outside Block is the number of outside blockholders. % Officer Block is the percentage held by officer director blockholders. % Non-Officer Dir Block is the percentage held by non-officer director blockholders. % Outside Block is the percentage held by outside blockholders. All ratio variables are winsorized at the 1st and 99th percentiles, with the exception of Issue for the SEO Sample Only. Observations with Issue greater than 10 are dropped for the SEO Only sample. The SEO Issuance Only Sample consists of only measuring issuance from proceeds of SEOs using the SDC database. SEO Issuance Only Sample is the sample used in the rest of this paper. The All Issuance Sample, the sample when all issuances, not just SEOs, are used, is reported here for comparison purposes only and is not used in the rest of the paper. The sample consists of 6,183 firm-year observations during the period 1996–2001

Panel A: Number of observations with positive versus negative values

	SEO Issuance Only Sample			All Issuance Sample		
	# Positive	***# Zero***	***# Negative***	***# Positive***	***# Zero***	***# Negative***
Cash Change (ΔCash)	3502	35	2646	3372	32	2548
Issue	176	6007	0	4911	1041	0
Debt Proceeds	4148	2035	0	3977	1975	0
Cash Flow	5642	0	541	5428	0	524
Other	3442	2741	0	3315	2637	0
Assets	6183	0	0	5952	0	0
R&D	2818	3365	0	2686	3266	0
# Block	5435	748	0	5250	702	0
# Officer Block	995	5188	0	960	4992	0
# Director Non-Officer Block	574	5609	0	553	5399	0
# Outside Block	4860	1323	0	4696	1256	0
% Block	5435	748	0	5250	702	0
% Officer Block	995	5188	0	960	4992	0
% Director Non-Officer Block	574	5609	0	553	5399	0
% Outside Block	4860	1323	0	4696	1256	0

Panel B: Total number of observations in the sample versus number of observations the year of an issuance

	Total Sample	**SEO Only, Issue>0**	**Issuance, Issue>0**
1: Officer Block Only	156	6	124
1: Director Non-Officer Block Only	124	2	105
1: Outside Block Only	3727	102	2968
2: Director Non-Officer Block and Outsider Block Only	316	5	254
2: Officer Block and Outsider Block Only	705	18	592
2: Officer Block and Director Non-Officer Block Only	22	0	20
3: All Three Present	112	8	100
None	1021	35	748
Insiders	2420	55	1939
Outsiders	4860	133	3914

Panel C: Break out to compare mean values when Issue is positive

	Means:			
	SEO Issuance Only		**All Issuance Sample**	
	Issue > 0	***Issue = 0***	***Issue > 0***	***Issue = 0***
Cash Change (ΔCash)	0.115	0.016	0.023	0.003
Issue	0.209	0.000	0.030	0.000
Debt Proceeds	0.211	0.113	0.119	0.098
Cash Flow	0.094	0.101	0.105	0.080
Other	0.049	0.037	0.039	0.025
Assets	7.531	7.259	7.205	7.476
R&D	58.051	71.293	77.990	35.893
# Block	2.102	2.407	2.425	2.329
# Officer Block	0.216	0.189	0.200	0.148
# Director Non-Officer Block	0.097	0.109	0.114	0.088
# Outside Block	1.659	1.879	1.898	1.810
% Block	20.062	23.929	23.738	24.504
% Officer Block	2.149	2.540	2.589	2.247
% Director Non-Officer Block	1.129	1.279	1.345	0.947
% Outside Block	14.681	16.860	16.910	16.687
SEO Proceeds	261.339	0.000		
All Issuance Proceeds			59.890	-0.002

Table 2
Descriptive Statistics - Institutional Ownership

This table displays summary statistics regarding the institutional ownership sample. Panel A reports the number observations in the sample when different percentage totals of firm shares are held by institutions in that year for a firm. Panel B reports the median level of institutional ownership for the sample, given that the level is above zero. Panel C reports the mean SEO issuance size. The variable Issue is the SEO issuance proceeds this year scaled by total assets from the prior year-end. The sample consists of 127,828 firm-year observations during the period 1980–2008.

Panel A:

	# of firm years		
	Total Sample	***Issue>0***	***Percentage of sample where Issue >0***
20% <= Institutional Ownership	66,640	5,853	8.78%
5% <= Institutional Ownership < 20%	28,775	2,367	8.23%
0% <=Institutional Ownership < 5%	32,413	1,525	4.70%
Total	**127,828**	**9,745**	**7.62%**
Ownership = 0%	10,568	605	5.72%

Panel B: Summary statistics when institutional ownership is greater than zero

	Obs	**Median**	**Mean**	**Std. Dev.**
Total Institutional Ownership (%)	117,260	26.0%	32.2%	27%

Panel C: Mean size of SEO issuance when the issuance is greater than zero.

The variable Issue is the SEO issuance proceeds this year scaled by total assets from the year before.

	Issue
Institutional Ownership Ratio > 0	1.050
20% <= Institutional Ownership	0.866
5% <= Institutional Ownership < 20%	1.296
0% <=Institutional Ownership < 5%	1.830

Table 3
Effect of presence of insiders versus outsiders on cash savings after share issuance (Using only SEOs)

This table reports the results from panel regressions that contain both firm- and year fixed effects. The dependent variable is ΔCash, which is the difference between cash at the end of the year and cash at the beginning of the year. Issue is the cash proceeds from share issuance. Debt is the proceeds from debt sales. Cash flow is cash flow from operations. Other is all other cash sources, which include the sales of assets and investments. These measures are scaled by total assets measured at the beginning of the year. Assets is the log of total assets. This model is then augmented with interaction terms and a control variable. The interaction terms are the product of Issue and the monitoring proxies # Insider Block and # Outsider Block. Each monitoring proxy is also included in the regression as a control. D(# Insider Block) is a dummy for the presence of an insider blockholder for that firm-year. D(# Outsider Block) is a dummy for the presence of outsider blockholders. Standard errors are estimated by clustering on both firm and year. t-Statistics are reported in parentheses. * = significant at 10%; ** = significant at 5%; *** = significant at 1%. The sample consists of 6,183 firm-year observations during the period 1996–2001. All ratio variables are winsorized at the 1st and 99th percentiles, with the exception of Issue. Observations with Issue greater than 10 are dropped.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent Variable	ΔCash	ΔCash	ΔCash	ΔCash	ΔCash	ΔCash	ΔCash
Issue	0.486***	0.417***	0.589***	0.318**	0.522***	0.491***	0.407***
	(4.04)	*(3.51)*	*(5.80)*	*(2.12)*	*(6.46)*	*(3.14)*	*(4.14)*
D(Insider Block)		-0.0067		-0.00673		-0.00636	-0.00622
		(-1.55)		*(-1.57)*		*(-1.49)*	*(-1.48)*
D(Insider Block)*Issue		0.292**		0.323**		0.281**	0.310***
		(2.19)		*(2.28)*		*(2.44)*	*(2.65)*
D(Outsider Block)			0.00522*		0.00732**	0.00453	0.00663**
			(1.71)		*(2.43)*	*(1.44)*	*(2.19)*
D(Outsider Block)*Issue			-0.129		-0.151	-0.0891	-0.109
			(-0.54)		*(-0.69)*	*(-0.36)*	*(-0.51)*
Debt Proceeds	0.0604***	0.0597***	0.0596***	0.0617***	0.0616***	0.0592***	0.0610***
	(2.86)	*(2.84)*	*(2.84)*	*(2.91)*	*(2.91)*	*(2.82)*	*(2.88)*
Cash flow	0.143***	0.144***	0.145***	0.145***	0.146***	0.145***	0.147***
	(6.89)	*(6.48)*	*(7.41)*	*(7.31)*	*(8.01)*	*(7.14)*	*(7.84)*
Other	0.107***	0.106***	0.105***	0.0993***	0.0981***	0.104***	0.0972***
	(3.38)	*(3.45)*	*(3.25)*	*(3.49)*	*(3.29)*	*(3.25)*	*(3.30)*
Assets	-9.15E-04	-1.31E-03	-5.62E-04	-0.00323**	-0.00245**	-9.82E-04	-0.00287**
	(-1.28)	*(-1.43)*	*(-0.83)*	*(-2.43)*	*(-2.16)*	*(-1.10)*	*(-2.17)*
R&D				2.88e-05**	3.10e-05***		3.07e-05***
				(2.41)	*(2.75)*		*(2.68)*
R&D*Issue				0.0008	0.000739*		0.000820*
				(1.63)	*(1.66)*		*(1.65)*
Constant	-0.00241	0.00298	-0.00871***	0.0153***	0.00164	-0.00276	0.00757
	(.)	*(0.95)*	*(-2.59)*	*(2.60)*	*(0.29)*	*(-0.58)*	*(1.04)*
Observations	6,183	6,183	6,183	6,183	6,183	6,183	6,183
R-squared	0.108	0.113	0.109	0.119	0.115	0.113	0.120

Table 4
Effect of the presence of blockholders on cash savings after share issuance (Using only SEOs)

This table reports the results from panel regressions that contain both firm- and year fixed effects. The dependent variable is ΔCash, which is the difference between cash at the end of the year and cash at the beginning of the year. Issue is the cash proceeds from share issuance. Debt is the proceeds from debt sales. Cash flow is cash flow from operations. Other is all other cash sources, which include the sales of assets and investments. These measures are scaled by total assets measured at the beginning of the year. Assets is the log of total assets. This model is then augmented with interaction terms and a control variable. The interaction terms are the product of Issue and the monitoring proxies # Officer Block and Director Non-Officer Block. Each monitoring proxy is also included in the regression as a control. D(# Officer Block) is a dummy for the presence of officer director blockholders. D(# Director Non-Officer Block) is a dummy for the presence of non-officer director blockholders. Standard errors are estimated by clustering on both firm and year. t-Statistics are reported in parentheses. * = significant at 10%; ** = significant at 5%; *** = significant at 1%. The sample consists of 6,183 firm-year observations during the period 1996–2001. All ratio variables are winsorized at the 1st and 99th percentiles, with the exception of Issue. Observations with Issue greater than 10 are dropped.

	(1)	(2)	(3)
Dependent Variable	ΔCash	ΔCash	ΔCash
Issue	0.433***	0.479***	0.429***
	(3.62)	*(4.00)*	*(3.69)*
D(# Officer Block)	0.00247		0.00254
	(0.46)		*(0.47)*
D(# Officer Block)*Issue	0.251*		0.245
	(1.72)		*(1.63)*
D(# Director Non-Officer Block)		-0.00751**	-0.00757**
		(-2.31)	*(-2.30)*
D(# Director Non-Officer Block)*Issue		0.2670	0.2100
		(1.17)	*(0.75)*
Debt Proceeds	0.0595***	0.0604***	0.0596***
	(2.85)	*(2.87)*	*(2.85)*
Cash flow	0.142***	0.144***	0.143***
	(6.54)	*(6.91)*	*(6.58)*
Other	0.107***	0.108***	0.107***
	(3.42)	*(3.48)*	*(3.52)*
Assets	-7.07E-04	-0.00113*	-9.18E-04
	(-0.78)	*(-1.74)*	*(-1.06)*
Constant	-0.00393*	-0.0003	-0.0019
	(-1.77)	*(.)*	*(-0.87)*
Observations	6,183	6,183	6,183
R-squared	0.111	0.109	0.112

Table 5

After controlling for R&D - Effect of the presence of blockholders on cash savings after share issuance (Using only SEOs)

This table reports the results from panel regressions that contain both firm- and year fixed effects. The dependent variable is ΔCash, which is the difference between cash at the end of the year and cash at the beginning of the year. Issue is the cash proceeds from share issuance. Debt is the proceeds from debt sales. Cash flow is cash flow from operations. Other is all other cash sources, which include the sales of assets and investments. These measures are scaled by total assets measured at the beginning of the year. Assets is the log of total assets. This model is then augmented with interaction terms and a control variable. The interaction terms are the product of Issue and the monitoring proxies # Block, # Officer Block, # Director Non-Officer Block, and # Outside Block. Each monitoring proxy is also included in the regression as a control. D(# Block) is a dummy for the presence of blockholders for that firm-year. D(# Officer Block) is a dummy for the presence of officer blockholders. D(# Director Non-Officer Block) is a dummy for the presence of non-officer director blockholders. D(# Outside Block) is a dummy for the presence ofoutside blockholders. Standard errors are estimated by clustering on both firm and year. t-Statistics are reported in parentheses. * = significant at 10%; ** = significant at 5%; *** = significant at 1%. The sample consists of 6,183 firm-year observations during the period 1996–2001. All ratio variables are winsorized at the 1st and 99th percentiles, with the exception of Issue. Observations with Issue greater than 10 are dropped.

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable	ΔCash	ΔCash	ΔCash	ΔCash	ΔCash	ΔCash
Issue	0.404***	0.393***	0.337**	0.395***	0.522***	0.426***
	(2.66)	*(2.97)*	*(2.24)*	*(2.59)*	*(6.46)*	*(4.73)*
D(# Block)		0.00516				
		(1.51)				
D(# Block)*Issue		0.0135				
		(0.05)				
D(# Officer Block)			0.00206			0.0023
			(0.38)			*(0.43)*
D(# Officer Block)*Issue			0.281*			0.259**
			(1.86)			*(2.07)*
D(# Director Non-Officer Block)				-0.00766**		-0.00711**
				(-2.45)		*(-2.27)*
D(# Director Non-Officer Block)*Issue				0.2960		0.252
				(1.44)		*(0.99)*
D(# Outside Block)					0.00732**	0.00700**
					(2.43)	*(2.30)*
D(# Outside Block)*Issue					-0.151	-0.116
					(-0.69)	*(-0.55)*
Debt Proceeds	0.0624***	0.0621***	0.0616***	0.0625***	0.0616***	0.0609***
	(2.93)	*(2.86)*	*(2.91)*	*(2.93)*	*(2.91)*	*(2.89)*
Cash flow	0.144***	0.143***	0.143***	0.145***	0.146***	0.146***
	(7.71)	*(8.16)*	*(7.34)*	*(7.75)*	*(8.01)*	*(7.98)*
Other	0.101***	0.101***	0.100***	0.102***	0.0981***	0.0986***
	(3.42)	*(3.29)*	*(3.45)*	*(3.52)*	*(3.29)*	*(3.35)*
Assets	-0.00282**	-0.00255**	-0.00266**	-0.00305***	-0.00245**	-0.00250**
	(-2.46)	*(-2.07)*	*(-1.99)*	*(-2.89)*	*(-2.16)*	*(-2.06)*
R&D	2.89e-05**	3.00e-05***	2.89e-05**	2.89e-05**	3.10e-05***	3.09e-05***
	(2.47)	*(2.67)*	*(2.44)*	*(2.46)*	*(2.75)*	*(2.69)*
R&D*Issue	0.00	0.000716	0.000789	0.000728	0.000739*	0.000810*
	(1.55)	*(1.60)*	*(1.62)*	*(1.56)*	*(1.66)*	*(1.66)*
Constant	0.00968***	0.0034	0.00857	0.0119***	0.00164	0.00275
	(2.85)	*(0.43)*	*(1.58)*	*(6.26)*	*(0.29)*	*(0.48)*
Observations	6,183	6,183	6,183	6,183	6,183	6,183
R-squared	0.114	0.114	0.117	0.115	0.115	0.119

Table 6

Considering other independent variables from Dittmar and Duchin (2011)

This table reports the results from panel regressions that contain both firm- and year fixed effects. The dependent variable is ΔCash, which is the difference between cash at the end of the year and cash at the beginning of the year. Issue is the cash proceeds from share issuance. Debt is the proceeds from debt sales. Cash flow is cash flow from operations. Other is all other cash sources, which include the sales of assets and investments. These measures are scaled by total assets measured at the beginning of the year. Assets is the log of total assets. This model is then augmented with other independent variables suggested by Dittmar and Duchin (2011). The finance deficit is the flow of funds deficit, defined as cash dividends, plus capital expenditures, changes in net working capital (less cash) and current portion of long-term debt due, less operating cash flow, where all variables are deflated by assets. Age is the number of years since the firm's IPO. Net Working Capital is net working capital (*wcap*) excluding cash (*che*), divided by lagged total assets (*at*). t-Statistics are reported in parentheses. * = significant at 10%; ** = significant at 5%; *** = significant at 1%. The sample consists of 6,183 firm-year observations during the period 1996–2001. All ratio variables are winsorized at the 1st and 99th percentiles, with the exception of Issue. Observations with Issue greater than 10 are dropped.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent Variable	ΔCash	ΔCash	ΔCash	ΔCash	ΔCash	ΔCash	ΔCash
Issue	0.486***	0.474**	0.608***	0.404**	0.480**	0.653***	0.493**
	(4.04)	*(2.48)*	*(8.53)*	*(2.41)*	*(2.48)*	*(14.55)*	*(2.46)*
D(# Block)			-0.00201**				
			(-2.40)				
D(# Block)*Issue			-0.0605				
			(-0.59)				
D(# Officer Block)				-0.00663			-0.0058
				(-1.02)			*(-0.75)*
D(# Officer Block)*Issue				0.352**			0.437***
				(2.38)			*(3.25)*
D(# Director Non-Officer Block)					-0.0041		-0.0030
					(-1.10)		*(-0.53)*
D(# Director Non-Officer Block)*Issue					-0.474***		-0.783***
					(-2.69)		*(-6.56)*
D(# Outside Block)						-0.0005	0.0066
						(-0.48)	*(1.43)*
D(# Outside Block)*Issue						-0.0888	-0.1180
						(-0.96)	*(-0.39)*
Debt Proceeds	0.0604***	0.102***	0.103***	0.101***	0.102***	0.102***	0.113***
	(2.86)	*(4.18)*	*(4.23)*	*(4.24)*	*(4.20)*	*(4.16)*	*(4.93)*
Cash flow	0.143***	0.293***	0.284***	0.302***	0.294***	0.287***	0.314***
	(6.89)	*(3.69)*	*(3.89)*	*(3.87)*	*(3.71)*	*(3.87)*	*(4.50)*
Other	0.107***	0.0589***	0.0528**	0.0565***	0.0587***	0.0525**	0.0558**
	(3.38)	*(3.06)*	*(2.22)*	*(3.46)*	*(3.04)*	*(2.25)*	*(2.25)*
Assets	-9.15E-04	-2.52E-03	-3.00E-03	-2.87E-03	-2.49E-03	-2.65E-03	-2.31E-03
	(-1.28)	*(-1.27)*	*(-1.40)*	*(-1.31)*	*(-1.29)*	*(-1.29)*	*(-1.14)*
Finance Deficit		0.103	0.0876	0.11	0.103	0.0887	0.11
		(0.78)	*(0.77)*	*(0.82)*	*(0.78)*	*(0.79)*	*(1.00)*
Age		-0.000537***	-0.000556***	-0.000575***	-0.000548***	-0.000538***	-0.000570***
		(-10.73)	*(-12.08)*	*(-10.56)*	*(-11.61)*	*(-12.72)*	*(-9.09)*
Finance Deficit x Age		-0.00525**	-0.00510**	-0.00523**	-0.00525**	-0.00517**	-0.00541**
		(-2.34)	*(-2.38)*	*(-2.29)*	*(-2.33)*	*(-2.45)*	*(-2.51)*
Net Working Capital		-0.0942***	-0.0955***	-0.0914***	-0.0942***	-0.0956***	-0.0899***
		(-3.62)	*(-3.59)*	*(-3.60)*	*(-3.59)*	*(-3.60)*	*(-3.82)*
Capital Expenditure		-0.213**	-0.208***	-0.220**	-0.214**	-0.208***	-0.245***
		(-2.50)	*(-2.72)*	*(-2.58)*	*(-2.54)*	*(-2.70)*	*(-3.10)*
R&D		4.16e-05***	3.96e-05***	4.24e-05***	4.10e-05***	4.13e-05***	4.32e-05***
		(3.58)	*(3.76)*	*(3.48)*	*(3.46)*	*(3.90)*	*(3.38)*
Acquisitions		-0.203***	-0.205***	-0.207***	-0.202***	-0.206***	-0.216***
		(-5.10)	*(-5.02)*	*(-5.09)*	*(-5.05)*	*(-4.89)*	*(-5.26)*
Payout		-0.375***	-0.382***	-0.379***	-0.374***	-0.379***	-0.387***
		(-7.96)	*(-7.99)*	*(-7.63)*	*(-7.83)*	*(-7.87)*	*(-8.59)*
Constant	-0.00241	0.0493***	0.0593***	0.0538***	0.0500***	0.0518***	0.0465**
	(.)	*(2.85)*	*(2.83)*	*(2.62)*	*(3.02)*	*(2.71)*	*(2.30)*
Observations	6,183	3,753	3,753	3,753	3,753	3,753	3,753
R-squared	0.108	0.174	0.177	0.181	0.175	0.179	0.190

Table 7

Effect of the presence of Institutional Holdings on cash savings after share issuance (Using only SEOs)

This table reports the results from panel regressions that contain both firm- and year fixed effects. The dependent variable is ΔCash, which is the difference between cash at the end of the year and cash at the beginning of the year. Issue is the cash proceeds from share issuance. Debt is the proceeds from debt sales. Cash flow is cash flow from operations. Other is all other cash sources, which include the sales of assets and investments. These measures are scaled by total assets measured at the beginning of the year. Assets is the log of total assets. This model is then augmented with interaction terms and a control variable. Institutional Ownership is a continuous variable for the combined percentage ownership by all institutional investors in the firm. The interaction terms are total percentage of ownership held by institutional investors. D(20% or Greater Holdings) is a dummy for the presence of total institutional of greater than 20% in that year for a firm. D(5% <= Inst. Holdings < 20%) is a dummy for the presence of total institutional between 5% and 20% in that year for a firm. D(0% <= Inst. Holdings < 5%) is a dummy for the presence of total institutional of less than 5% in that year for a firm. Standard errors are estimated by clustering on both firm and year. t-Statistics are reported in parentheses. * = significant at 10%; ** = significant at 5%; *** = significant at 1%. The sample consists of 127,822 firm-year observations during the period 1980–2008. All ratio variables are winsorized at the 1st and 99th percentiles, with the exception of Issue. Observations with Issue greater than 10 are dropped.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dependent Variable	ΔCash	ΔCash	ΔCash	ΔCash	ΔCash	ΔCash	ΔCash	ΔCash	ΔCash
Issue	0.378***	0.339***	0.346***	0.360***	0.425***	0.276***	0.425***	0.426***	0.466***
	(48.26)	*(27.33)*	*(34.88)*	*(36.24)*	*(46.06)*	*(21.82)*	*(41.92)*	*(29.87)*	*(37.87)*
Institutional Ownership		0.0163*							
		(1.96)							
Institutional Ownership*Issue		0.205***							
		(3.98)							
D(20% or Greater Institutional Ownership)			0.00744**			0.0142**		0.0103***	
			(2.39)			*(2.26)*		*(3.97)*	
D(20% or Greater Institutional Ownership)*Issue			0.0795***			0.149***		-0.000702	
			(4.83)			*(8.50)*		*(-0.04)*	
D(5% <= Institutional Ownership < 20%)				-0.00436		0.00392	-0.0103***		
				(-1.25)		*(0.62)*	*(-3.97)*		
D(5% <=Institutional Ownership < 20%)*Issue				0.0669***		0.150***	0.000702		
				(3.64)		*(7.28)*	*(0.04)*		
D(0% <= Institutional Ownership < 5%)					-0.00798		-0.0142**	-0.00392	
					(-1.29)		*(-2.26)*	*(-0.62)*	
D(0% <= Institutional Ownership < 5%)*Issue					-0.149***		-0.149***	-0.150***	
					(-8.67)		*(-8.50)*	*(-7.28)*	
IO Concentration (Using Herfindahl- Hirschman Index)									*-0.0512****
									(-4.33)
IO Concentration*Issue									-0.225***
									(-9.82)
Debt Proceeds	0.0612***	0.0608***	0.0614***	0.0615***	0.0617***	0.0621***	0.0621***	0.0621***	0.0572***
	(5.91)	*(5.86)*	*(5.94)*	*(6.04)*	*(6.29)*	*(6.32)*	*(6.32)*	*(6.32)*	*(5.72)*
Cash flow	-0.172***	-0.178***	-0.176***	-0.172***	-0.180***	-0.180***	-0.180***	-0.180***	-0.153***
	(-6.98)	*(-7.24)*	*(-7.14)*	*(-7.08)*	*(-7.33)*	*(-7.33)*	*(-7.33)*	*(-7.33)*	*(-5.17)*
Other	0.108***	0.105***	0.106***	0.109***	0.107***	0.107***	0.107***	0.107***	0.0927***
	(5.15)	*(4.87)*	*(4.95)*	*(5.15)*	*(4.87)*	*(4.83)*	*(4.83)*	*(4.83)*	*(4.30)*
Assets	0.00403**	2.48E-03	2.79E-03	0.00390**	2.67E-03	1.73E-03	1.73E-03	1.73E-03	-1.81E-03
	(2.35)	*(1.37)*	*(1.60)*	*(2.31)*	*(1.51)*	*(0.97)*	*(0.97)*	*(0.97)*	*(-0.88)*
Constant	0.0190***	0.0247***	0.0233***	0.0206***	0.0305***	0.0260***	0.0402***	0.0299***	0.0638***
	(3.00)	*(3.76)*	*(3.54)*	*(3.33)*	*(3.12)*	*(4.22)*	*(4.00)*	*(3.04)*	*(4.42)*
Observations	127,822	127,822	127,822	127,822	127,822	127,822	127,822	127,822	117,259
R-squared	0.351	0.354	0.354	0.353	0.361	0.361	0.361	0.361	0.385

Table 8
Changes after the SEO - Blockholder Dataset (Using only SEOs)

This table reports changes in key financial statistics from the year end following the SEO to 4 years after the SEO, comparing both firms with an outside blockholder to those with an officer blockholder. Cash is scaled by total assets and winsorized at the 1st and 99th percentiles. Cash in Year 4 is scaled by total assets in year 4. Excess cash is defined as the difference between actual cash and predicted, normal cash (see Appendix B). Operating income is operating income before depreciation (Compustat item *oibdp*). If a firm has more than one SEO, they will be in this sample twice. Blockholders are those who own at least 5% of the firm's equity in a given year. Outside Blockholder is a dummy for the presence of outsider blockholders for that firm-year. Officer Blockholder is a dummy for the presence of officer blockholders for that firm-year. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	Obs	Mean	t-test (p-value)	Median	Wilcoxon test (p-value)
Panel A: Change in Cash over 4 years from time of SEO					
Outside Blockholder	81	-8.02%	0.007***	-0.03%	0.643
Officer Blockholder	26	-25.16%	0.040**	-0.94%	0.067*
Difference		17.14%	0.041**	0.91%	0.209
Panel B: Estimated excess Cash 4 years from time of SEO					
Outside Blockholder	70	9.72%	0.000***	5.13%	0.698
Officer Blockholder	23	6.29%	0.128	0.96%	0.119
Difference		3.42%	0.435	4.17%	0.185
Panel C: Change in Operating Income over 4 years from time of SEO					
Outside Blockholder	81	-8.06%	0.000***	-5.78%	0.314
Officer Blockholder	25	-8.63%	0.001***	-4.77%	0.537
Difference		0.57%	0.854	-1.02%	0.809
Panel D: Change in Total Assets over 4 years from time of SEO					
Outside Blockholder	81	53.74%	0.000***	31.40%	0.359
Officer Blockholder	26	66.40%	0.004***	45.01%	0.524
Difference		-12.66%	0.558	-13.61%	0.799

Table 9
Changes after the SEO - Institutional Investor Holdings Dataset (Using only SEOs)

This table reports changes in key financial statistics from the year end following the SEO to 4 years after the SEO, comparing firms with different total levels of institutional ownership. Cash is scaled by total assets and winsorized at the 1st and 99th percentiles. Cash in Year 4 is scaled by total assets in year 4. Excess cash is defined as the difference between actual cash and predicted, normal cash (see Appendix B). Operating income is operating income before depreciation (Compustat item oibdp). If a firm has more than one SEO, they will be in this sample twice. Institutional Holdings>20% is a dummy for the presence of total institutional of greater than 20% in that year for a firm. 5%<Institutional Holdings<20% is a dummy for the presence of total institutional between 5% and 20% in that year for a firm. Institutional Holdings<5% is a dummy for the presence of total institutional of less than 5% in that year for a firm. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

	Obs	Mean	t-test (p-value)	Median	Wilcoxon test (p-value)
Panel A: Change in Cash over 4 years from time of SEO					
Institutional Holdings=0%	349	-67.19%	0.000***	-27.74%	0.000***
Institutional Holdings>0%	6479	-47.14%	0.000***	-10.24%	0.000***
Difference		-20.04%	0.000***	-17.50%	0.000***
Institutional Holdings<5%	960	-60.77%	0.000***	-23.36%	0.000***
Institutional Holdings>5%	5868	-46.11%	0.000***	-9.47%	0.000***
Difference		-48.17%	0.000***	-13.90%	0.000***
5%<Institutional Holdings<20%	1641	-57.09%	0.000***	-16.65%	0.000***
Institutional Holdings>20%	4227	-41.84%	0.000***	-7.35%	0.000***
Difference		-15.25%	0.000***	-9.30%	0.000***
Panel B: Estimated excess Cash 4 years from time of SEO					
Institutional Holdings=0%	53	-14.48%	0.000***	-20.67%	0.000***
Institutional Holdings>0%	4110	7.66%	0.000***	-3.11%	0.000***
Difference		-22.14%	0.000***	-17.57%	0.000***
Institutional Holdings<5%	226	-6.96%	0.003***	-16.45%	0.000***
Institutional Holdings>5%	3937	8.20%	0.000***	-2.58%	0.000***
Difference		-15.16%	0.000***	-13.87%	0.000***
5%<Institutional Holdings<20%	933	4.98%	0.002***	-6.37%	0.000***
Institutional Holdings>20%	3004	9.20%	0.000***	-1.52%	0.000***
Difference		-4.22%	0.002***	-4.85%	0.000***
Panel C: Change in Operating Income over 4 years from time of SEO					
Institutional Holdings=0%	347	9.15%	0.009***	-4.43%	0.023**
Institutional Holdings>0%	6453	-1.97%	0.000***	-5.41%	0.023**
Difference		11.12%	0.000***	0.98%	0.023**
Institutional Holdings<5%	955	6.31%	0.003***	-4.67%	0.017**
Institutional Holdings>5%	5845	-2.66%	0.000***	-5.48%	0.017**
Difference		8.97%	0.000***	0.81%	0.017**
5%<Institutional Holdings<20%	1628	-1.29%	0.345	-8.07%	0.000***
Institutional Holdings>20%	4217	-3.19%	0.000***	-4.73%	0.010***
Difference		1.90%	0.122	-3.34%	0.000***
Panel D: Change in Total Assets over 4 years from time of SEO					
Institutional Holdings=0%	350	183.29%	0.000***	56.12%	0.172
Institutional Holdings>0%	6496	138.45%	0.000***	59.55%	0.172
Difference		44.84%	0.040**	-3.43%	0.172
Institutional Holdings<5%	963	187.32%	0.000***	57.71%	0.1807
Institutional Holdings>5%	5883	133.11%	0.000***	59.74%	0.1807
Difference		140.74%	0.000***	-2.03%	0.1807
5%<Institutional Holdings<20%	1645	155.26%	0.000***	60.47%	0.843
Institutional Holdings>20%	4238	124.52%	0.000***	59.61%	0.433
Difference		30.75%	0.010***	0.86%	0.923

Table 10
Summary Statistics of Blockholdings, Excess Cash, and SEO Announcement Returns

This table reports summary statistics relating announcement period returns to firm excess cash prior to and at the time of seasoned equity offerings. Returns are the cumulative abnormal returns measured as the Fama-French adjusted returns over the interval (-3,3) around the equity announcement date. Returns are reported as percentages. If the firm has more than one SEO in the same fiscal year, I drop all SEO's after the first. D(Outside Blockholder) is a dummy for the presence of outside blockholders in the year-end immediately prior to the equity issue announcement date. D(# Officer Block) is a dummy for the presence of director-officer blockholders in the year-end immediately prior to the equity issue announcement date. Excess Cash is the difference between actual cash and predicted, normal cash, as described in Appendix B. Panel A reports announcement returns when comparing year-end levels of excess cash from the year before the SEO. Panel B reports announcement returns when comparing year-end levels of excess cash from the year the SEO occured. * = significant at 10%; ** = significant at 5%; *** = significant at 1%.

Panel A: Return Event Window (-3,3) When Measuring Excess Cash From the Year End Before SEO

	Obs	When Excess Cash>0	Obs	When Excess Cash<=0	Difference	t-test (p-value)
When D(Outside Blockholder)>0						
Mean Return	94	-2.31	77	-3.02	0.71	0.355
Median Return	94	-2.26	77	-2.54	0.29	
When D(Officer Blockholder)>0						
Mean Return	16	-5.27	16	-0.43	-4.84	0.006**
Median Return	16	-5.46	16	-1.11	-4.35	

Panel B: Return Event Window (-3,3) When Measuring Excess Cash From the Year End of SEO

	Obs	When Excess Cash>0	Obs	When Excess Cash<=0	Difference	t-test (p-value)
When D(Outside Blockholder)>0						
Mean Return	101	-2.54	70	-2.76	0.22	0.773
Median Return	101	-2.38	70	-2.08	-0.29	
When D(Officer Blockholder)>0						
Mean Return	19	-3.51	13	-1.90	-1.61	0.397
Median Return	19	-3.53	13	-1.48	-2.05	

Table 11
Effect of Blockholdings and Excess Cash on SEO Announcement Returns

This table reports the results from regressions relating announcement period returns to blockholder ownership prior to and at the time of seasoned equity offerings. The dependent variable in the regressions is the cumulative abnormal returns measured as the Fama-French adjusted returns over the interval (-3,3) around the equity announcement date. If the firm has more than one SEO in the same fiscal year, I drop all SEO's after the first. Excess Cash is the difference between actual cash and predicted, normal cash, as described in Appendix B. Excess Cash (year before SEO) is the excess cash at the year-end prior to the equity issue announcement date. Excess Cash (year of SEO) is the excess cash at the year-end of the year that contained the equity issue announcement date. Firm size is the book-value of total assets in the year-end prior to the equity issue announcement date. Age is the firm age scaled by 100. Leverage is the ratio of total debt to total assets, measured in the year-end prior to the equity issue announcement date. The G-Index is the Gompers, Ishii, and Metrick governance index. The E-Index is the Bebchuck, Cohen, and Ferrell entrenchment index. Standard errors are estimated by clustering on both firm and year. t-Statistics are reported in parentheses. * = significant at 10%; ** = significant at 5%; *** = significant at 1%. The sample consists of 157 firm-year observations during the period 1996–2001.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent Variable	FF Adj. Return	FF Adj. Return	FF Adj. Return	FF Adj. Return	FF Adj. Return	FF Adj. Return	FF Adj. Return
Number of Officer Director Blocks	0.321	0.431			0.225	-0.901	-0.946
	(0.27)	*(0.36)*			*(0.19)*	*(-0.48)*	*(-0.50)*
Number of Outsider Blocks	-0.978		-1.0160	-1.1120		-1.4330	-1.5010
	(-0.80)		*(-0.84)*	*(-0.88)*		*(-0.71)*	*(-0.73)*
Excess Cash (year before SEO)				-6.742	-6.797	-11.22	-10.34
				(-1.60)	*(-1.60)*	*(-1.47)*	*(-1.36)*
Excess Cash (year of SEO)				3.827	3.776	6.426	5.804
				(1.05)	*(1.02)*	*(1.04)*	*(0.94)*
Firm Size	0.728*	0.749*	0.705*	0.901**	0.940**	-0.163	-0.249
	(1.77)	*(1.82)*	*(1.76)*	*(2.19)*	*(2.25)*	*(-0.21)*	*(-0.33)*
Age	2.346	2.6020	2.31	1.105	1.251	7.228	8.151
	(0.68)	*(0.75)*	*(0.67)*	*(0.31)*	*(0.35)*	*(1.09)*	*(1.15)*
Leverage	-5.282*	-5.676**	-5.262*	-5.118*	-5.664**	-4.345	-4.205
	(-1.89)	*(-2.07)*	(-1.89)	*(-1.76)*	*(-1.99)*	*(-0.83)*	*(-0.78)*
E Index						0.489	
						(0.76)	
G Index							0.125
							(0.38)
Constant	-6.317**	-7.283***	-6.073**	-7.026**	-8.205***	-1.532	-1.107
	(-2.23)	*(-2.85)*	*(-2.28)*	*(-2.55)*	*(-3.16)*	*(-0.28)*	*(-0.19)*
Observations	157	157	157	152	152	58	58
R-squared	0.068	0.064	0.067	0.085	0.080	0.170	0.162

Table 12
Summary Statistics of Institutional Holdings, Excess Cash, and SEO Announcement Returns

This table reports summary statistics relating announcement period returns to firm excess cash prior to and at the time of seasoned equity offerings. Returns are the cumulative abnormal returns measured as the Fama-French adjusted returns over the interval (-3,3) around the equity announcement date. Returns are reported as percentages. If the firm has more than one SEO in the same fiscal year, I drop all SEO's after the first. Inst. Holdings is the ratio of the number of shares held by institutional investors to the number of shares outstanding in the year-end immediately prior to the equity issue announcement date. Excess Cash is the difference between actual cash and predicted, normal cash, as described in Appendix B. Panel A reports announcement returns when comparing year-end levels of excess cash from the year before the SEO. Panel B reports announcement returns when comparing year-end levels of excess cash from the year the SEO occured. * = significant at 10%; ** = significant at 5%; *** = significant at 1%.

Panel A: Return Event Window (-3,3) When Measuring Excess Cash From the Year End Before SEO

	Obs	When Excess Cash>0	Obs	When Excess Cash<=0	Difference	t-test (p-value)
When D(0% <= Inst. Holdings < 5%)>0						
Mean Return	189	-1.86	48	-3.12	1.25	0.550
Median Return	189	-1.08	48	-4.82	3.74	
When D(5% <= Inst. Holdings < 20%)>0						
Mean Return	423	-3.45	200	-4.20	0.75	0.467
Median Return	423	-2.88	200	-3.97	1.09	
When D(Inst. Holdings >= 20%)>0						
Mean Return	2426	-3.58	1985	-3.94	0.36	0.198
Median Return	2426	-3.03	1985	-3.73	0.69	

Panel B: Return Event Window (-3,3) When Measuring Excess Cash From the Year End of SEO

	Obs	When Excess Cash>0	Obs	When Excess Cash<=0	Difference	t-test (p-value)
When D(0% <= Inst. Holdings < 5%)>0						
Mean Return	172	-1.69	65	-3.25	1.56	0.41
Median Return	172	-1.02	65	-4.56	3.54	
When D(5% <= Inst. Holdings < 20%)>0						
Mean Return	416	-3.54	207	-4.00	0.46	0.65
Median Return	416	-2.84	207	-3.60	0.76	
When D(Inst. Holdings >= 20%)>0						
Mean Return	2697	-3.63	1714	-3.91	0.28	0.32
Median Return	2697	-3.14	1714	-3.72	0.58	

Table 13
Effect of Institutional Holdings and Excess Cash on SEO Announcement Returns

This table reports the results from regressions relating announcement period returns to institutional ownership prior to and at the time of seasoned equity offerings. The dependent variable in the regressions is the cumulative abnormal returns measured as the Fama-French adjusted returns over the interval (-3,3) around the equity announcement date. If the firm has more than one SEO in the same fiscal year, I drop all SEO's after the first. Institutional Ownership is the ratio of the number of shares held by institutional investors to the number of shares outstanding in the year-end immediately prior to the equity issue announcement date. Excess Cash is the difference between actual cash and predicted, normal cash, as described in Appendix B. Excess Cash (year before SEO) is the excess cash at the year-end prior to the equity issue announcement date. Excess Cash (year of SEO) is the excess cash at the year-end of the year that contained the equity issue announcement date. Firm size is the book-value of total assets in the year-end prior to the equity issue announcement date. Age is the firm age scaled by 100. Leverage is the ratio of total debt to total assets, measured in the year-end prior to the equity issue announcement date. Issue fraction is the ratio of the number of new shares issued to the total number of shares outstanding prior to the equity issue. The G-Index is the Gompers, Ishii, and Metrick governance index. The E-Index is the Bebchuck, Cohen, and Ferrell entrenchment index. Standard errors are estimated by clustering on both firm and year. t-Statistics are reported in parentheses. * = significant at 10%; ** = significant at 5%; *** = significant at 1%. The sample consists of 5,042 firm-year observations during the period 1980–2008.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
					Governance Index Controls			
Dependent Variable	FF Adj. Return	FF Adj. Return	FF Adj. Return	FF Adj. Return	FF Adj. Return	FF Adj. Return	FF Adj. Return	FF Adj. Return
Institutional Ownership	1.048*	1.509**	1.691**	1.518**	4.660***	4.709***	3.859*	3.924**
	(1.65)	*(1.99)*	*(2.24)*	*(2.03)*	*(3.00)*	*(3.03)*	*(1.95)*	*(1.98)*
Excess Cash (year before SEO)		-1.170*	0.1260				2.7430	2.7270
		(-1.93)	*(0.29)*				*(1.25)*	*(1.24)*
Excess Cash (year of SEO)		1.805***		0.763*			-1.494	-1.457
		(3.10)		*(1.90)*			*(-0.68)*	*(-0.67)*
Firm Size	0.0576	0.265*	0.169	0.118	-0.0157	-0.0764	-0.107	-0.141
	(0.54)	*(1.83)*	*(1.20)*	*(0.89)*	*(-0.06)*	*(-0.29)*	*(-0.30)*	*(-0.41)*
Age	1.761	0.845	0.997	1.428	3.989	5.418**	5.761*	7.204**
	(1.37)	*(0.51)*	*(0.60)*	*(0.89)*	*(1.63)*	*(2.11)*	*(1.81)*	*(2.13)*
Leverage	-0.156	-0.475	-0.705	-0.0725	1.583	1.778	3.067	3.282
	(-0.22)	*(-0.54)*	*(-0.81)*	*(-0.09)*	*(0.84)*	*(0.94)*	*(1.42)*	*(1.52)*
Issue fraction	0.0574	0.1580	0.148	0.109	1.076***	1.082***	1.090***	1.097***
	(1.08)	*(1.42)*	*(1.33)*	*(1.01)*	*(3.68)*	*(3.69)*	*(3.45)*	*(3.47)*
E Index					0.0925		0.0293	
					(0.36)		*(0.09)*	
G Index						-0.11		-0.127
						(-0.85)		*(-0.80)*
Constant	-2.529***	-3.926***	-3.290***	-3.196***	-5.181**	-3.975*	-4.606*	-3.594
	(-6.19)	*(-6.47)*	*(-5.75)*	*(-6.00)*	*(-2.56)*	*(-1.84)*	*(-1.81)*	*(-1.34)*
Observations	5,042	3,695	3,695	3,933	476	474	356	355
R-squared	0.013	0.023	0.020	0.019	0.074	0.075	0.086	0.088

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