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To the Graduate Council:

I am submitting herewith a dissertation written by Joshua Tyler White entitled "Ownership Structure and Monitoring around Secondary Offerings." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Business Administration.

Tracie Woidtke, Major Professor

We have read this dissertation and recommend its acceptance:

David Cicero, Phillip Daves, Joan Heminway

Accepted for the Council: Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

Ownership Structure and Monitoring around Secondary Offerings

A Dissertation Presented for the Doctor of Philosophy Degree The University of Tennessee, Knoxville

> Joshua Tyler White August 2012

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The views and opinions expressed in this paper are those of the author and do not necessarily reflect the official policy or position of The University of Tennessee or any agency of the U.S. Government. The author is responsible for any errors.

DEDICATION

This dissertation is dedicated to my daughter, Chrystalleni, for providing the balance and inspiration necessary to complete this journey.

ABSTRACT

Secondary offerings represent a unique setting to examine investors' perception of the value of monitoring intensity around changes in block ownership. I find blockholders present at 97% of firms with a secondary offering over 1998-2006. These blockholders participate in 87% of secondary offerings and offer the majority of secondary shares in 75% of these offerings. Using a unique, hand-collected dataset of ownership structure, I empirically test two hypotheses explaining secondary offering announcement returns and underpricing based on seller heterogeneities: the information hypothesis and the monitoring hypothesis. The results largely support the monitoring hypothesis. Secondary offerings by close, active monitors who frequently have significant board representation experience higher underpricing and more negative announcement returns than passive, indirect monitoring blockholders. I also find greater underpricing and more negative announcement returns for close monitors than insiders, and no evidence of increased near-term earnings misses. I interpret these results as the first evidence that markets view secondary offerings by close monitors as reductions in the shared benefits of valueenhancing monitoring rather than the conveyance of negative information about future profits. I find scarce evidence that stockholders negatively view the loss of a passive blockholder. I also provide some evidence that announcement returns for secondary offerings by close monitors cannot solely be explained by a temporary liquidity shock.

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Chapter 1

Introduction

Numerous empirical studies posit a monitoring role for blockholders at publicly traded firms (e.g., Shleifer and Vishny, 1986). ¹ Blockholder monitoring is often associated with increased firm value through reduced agency costs (Demsetz and Lehn, 1985; Shleifer and Vishny, 1986; Hertzel and Smith, 1993; Dennis and Serrano, 1996). Although blockholders bear the cost of their monitoring activities, increases in firm value are shared among all stockholders relative to their proportional ownership (Holderness, 1989; Wruck, 1989). ² Minority stockholders value the potential for shared monitoring benefits, as blockholder formation is associated with positive abnormal announcement returns (Mikkelson and Ruback, 1985; Wruck, 1989). However, the value that stockholders assign to blockholder presence may differ based on the perceived effort the blockholder will exert in monitoring management.

Monitoring effort is dependent upon a number of factors, such as ownership concentration. Private gains from monitoring in the form of reduced agency costs increase as the blockholder increases her ownership stake (Ang, Cole and Lin, 2000). Other factors shown to influence monitoring effort include investment horizon (e.g., Chen, Harford and Li, 2007), access to information (e.g., Demsetz, 1986) and conflicts of interest with the firm (e.g., Brickley, Lease and Smith, 1988).

In this paper, I examine variations in the market's perceived value of blockholder monitoring in the setting of a seasoned equity offering involving registered secondary shares (hereafter, secondary offerings).³ This setting is particularly attractive to study blockholder

¹ Blockholders are stockholders who own 5% or more of a company's common stock.

² Holderness (2003) notes private benefits may not necessarily reduce the wealth of minority stockholders.

³ Seasoned equity offerings are registered offerings of firms that are already publicly traded. Seasoned equity offerings may consist of primary shares, where the firm issues new shares and receives the proceeds; secondary

monitoring because it represents a potential change in blockholder ownership concentration, which some studies find is stable over time (Barclay and Holderness, 1989; Denis and Sarin, 1999). As opposed to blockholder formation, nearly 90% of secondary offerings in my sample represent a decrease in ownership by existing blockholders. As the ownership stake of a blockholder decreases, *ceteris paribus*, she has less incentive to increase firm value through costly monitoring. Any increases in agency costs from decreased monitoring will negatively impact both existing minority stockholders and secondary offering investors. These costs should be reflected in secondary offering announcement returns for existing stockholders and underpricing for secondary offering investors (i.e., flotation costs).

Wruck (1989) also studies the properties of announcement returns and underpricing in the context of blockholder monitoring. In Wruck's study, private placements of equity are underpriced, yet announcement returns are positive. She interprets the underpricing as a reflection of the expecting costs of monitoring, and the positive announcement return as the increase in total stockholder wealth due to the expected decrease in agency costs from additional monitoring.

One could view secondary offerings by blockholders as analogous to a reversal of private placements, except that secondary offerings are typically sold to a large number of investors. If the resulting ownership is increasing in the number of investors, this may give rise to the free-rider problem that impedes similar monitoring by new investors (Grossman and Hart, 1980; Shleifer and Vishny, 1986). In this case, negative announcement returns would reflect expected decreases in monitoring as the purchaser of secondary shares is unknown and the resulting ownership concentration is uncertain. Underpricing of secondary shares would also exist, as new

shares, where existing stockholders receive the proceeds and no new shares are issued; or a mixture of primary and secondary shares.

⁴ Secondary offerings do not included private blockholder to blockholder transactions.

investors would require compensation for expected decreases in monitoring or to compensate for new intervention costs. I hypothesize that a portion of secondary offering flotation costs in the form of negative announcement returns and underpricing represent changes in incentives to monitor by certain existing blockholders. Below, I argue that this incentive change would be strongest for blockholders viewed as active monitors.

Controlling for heterogeneities among blockholders is important in identifying which blockholders or blockholder activities enhance or harm total firm value. Cronqvist and Fahlenbrach (2009) find blockholder heterogeneities largely explain the impact of blockholder monitoring on firm investment and performance. They find large block ownership, board representation, and direct management involvement are statistically and economically significant sources of blockholder impact on a firm's policies and performance. To capture blockholder heterogeneities, I examine the valuation of expected changes in monitoring effort by hand collecting ownership data and partitioning the offering into the following categories based on the identity of the seller: Direct Monitors, Indirect Monitors, and Insiders. I classify private equity firms (including venture capitalists) as *Direct Monitors*. Private equity firms typically take large, illiquid ownership positions in firms and play the role of an interventionist in firm decisionmaking (Wright and Robbie, 1998). They often designate multiple persons with active monitoring skills to sit on the board of directors in order to closely and directly advise and monitor managers (Prowse, 1998; Holderness, 2003). Indirect Monitors take a less active approach to monitoring management than Direct Monitors. These blockholders less frequently designate directors and may have less access to private information making it difficult to closely monitor management. This category includes asset management firms, hedge funds, trusts, government entities, pension funds, insurance companies, not-for-profit entities, individuals, and

other corporations. The final seller category is *Insiders*, which includes managers and directors not designated by a blockholder.

I empirically test two hypotheses by examining underpricing and announcement returns partitioned by seller identity around secondary offerings: 1) the information hypothesis; and 2) the monitoring hypothesis. Explaining negative announcement returns and underpricing in the context of monitoring is less explored in the literature (Demiralp, D'Mello, Schlingemann and Subramaniam, 2011; Kim and Purnanandam, 2011), and to my knowledge this is the first study that empirically tests secondary offering announcement returns or underpricing based on seller identity in the context of a monitoring hypothesis. While many papers examine underpricing and announcement returns for seasoned equity offerings involving primary shares, studies often exclude secondary offerings because the selling incentives differ from those of the firm in selling shares (Heron and Lie, 2004). Nevertheless, secondary offerings represent a significant percentage of total equity offering transactions. Nearly 40% of all U.S. seasoned equity offerings in the Securities Data Company's (SDC) Global New Issues database over 1998-2006 involved the sale of some secondary shares, and pure secondary offerings generated nearly \$200 billion in proceeds during this period.

Studies of the determinants of announcement returns and underpricing frequently employ some form of an *information hypothesis* (Eckbo, Masulis and Norli, 2007). Under the information hypothesis, sellers with an informational advantage about future firm profits may be viewed as exploiting a "window of opportunity" by selling shares before a subsequent price drop (Bayless and Chaplinsky, 1996; Clarke, Dunbar and Kahle, 2004). The information content of these offerings sends a negative signal to the market about firm quality (Leland and Pyle, 1977). However, the negative signal requires that investors view selling stockholders as holders of

private information about future firm profits (Myers and Majluf, 1984). While Insiders and Direct Monitors may have access to private information about future profits, Indirect Monitors likely possess less private information. Thus, the information hypothesis predicts Insiders and Direct Monitors would have larger flotation costs (i.e., higher underpricing and more negative announcement returns) than Indirect Monitors due to the negative signal conveyed by their offerings. On the other hand, Insiders may have larger flotation costs than Direct Monitors if managers do not fully disclose all information to close monitors, or if Direct Monitors are unable to capture the "window of opportunity" around private information due to trading restrictions. Even if Direct Monitors have an information advantage over Indirect Monitors, they must rely upon reports generated by management. To the extent that managers do not make full disclosure to Direct Monitors, Insiders would maintain an information advantage over Direct Monitors. All else equal, the information hypothesis would predict that the announcement returns (underpricing) for Insiders would be at least as negative (high) as Direct Monitors, and potentially more negative (higher) on average.

Under the information hypothesis, informed participation in secondary offerings may also predict negative near-term operational performance (Clarke et al., 2004; Heron and Lie, 2004). If informed sellers trade on accurate information, I would expect some negative near-term corporate outcomes following a secondary offering. Thus, the information hypothesis predicts majority offerings by Insiders and Direct Monitors should be followed by more near-term negative corporate events, such as missed earnings, than Indirect Monitors. I examine the percentage of near-term post-offering earnings misses to see if potentially informed sellers dispose of stock in firms whose subsequent earnings fall short of the consensus analyst forecast.

An alterative explanation explored in this paper for variation in underpricing and announcement returns around secondary offerings is the *monitoring hypothesis*. Under the monitoring hypothesis, a decrease in ownership concentration diminishes firm value if the selling stockholder had previously used their voting rights or monitoring efforts to effectively increase managerial efficiency (Wruck, 1989). For selling blockholders, gains from monitoring in the form of reduced agency costs decrease proportionally with the shares offered following the secondary offering. This decrease should be reflected in negative announcement returns for existing stockholders and underpricing for secondary offering investors.

Board representation for blockholders is often tied to ownership concentration in stockholder agreements. As the blockholder reduces her ownership stake, board representation may decrease or terminate. As a result, the negative announcement returns and underpricing for Direct Monitors, who most frequently negotiate for board representation, could reflect a decrease in both the incentives and *mechanisms* to monitor management under this hypothesis. Indirect Monitors often lack information, board access, or other mechanisms and expertise necessary to closely monitor management. Moreover, Indirect Monitors often employ passive monitoring strategies (e.g., Parrino, Sias and Starks, 2003). These lower cost mechanisms for monitoring may not require scale economies like those necessary for close monitoring by Direct Monitors. Thus, the marginal reduction in monitoring effort by Indirect Monitors is expected to be smaller than the marginal reduction for Direct Monitors after secondary offerings. Consequently, the monitoring hypothesis predicts negative announcement returns and underpricing would be more severe for Direct Monitors than Indirect Monitors.

Insider participation may also be accompanied by negative announcement returns and underpricing under the monitoring hypothesis. For Insiders, the flotation costs may represent a

divergence of interest with other stockholders as the their ownership position is reduced (Morck et al., 1988). In this case, the need for outside monitoring arises or increases, and these costs are reflected in announcement returns and underpricing. On the other hand, reputational concerns may act as a monitoring mechanism for Insiders (Fama, 1980; Fama and Jensen, 1983; Yermack, 2004). Incentives regarding future career opportunities and board seats serve as a disciplining mechanism for Insiders. To the extent that reputational concerns outweigh ownership incentives, Insiders may experience lower underpricing than non-insiders under the monitoring hypothesis. Additionally, decreases in ownership by managers could shift control towards blockholders or improve the probability of a value-enhancing takeover. Thus, the monitoring hypothesis predicts lower flotation costs for Insiders versus Direct Monitors.

Under the monitoring hypothesis, differences in flotation costs between Indirect Monitors and Insiders are less clear. Minority stockholders may not value passive monitoring by Indirect Monitors and the marginal increase in the costs of indirect monitoring may not be sufficient to warrant a reduction in their monitoring effort. Insiders may experience a reduction in incentives alignment, but reputational concerns could lessen the inclination to shirk following a secondary offering. Therefore, I make no formal prediction regarding differences in flotation costs between Insiders and Indirect Monitors under the monitoring hypothesis. To my knowledge, this is the first paper to empirically test secondary offerings flotation costs using a monitoring hypothesis. ⁵

I test the information and monitoring hypotheses using a unique dataset of hand-collected ownership data obtained from secondary offering prospectuses. Capturing ownership data at the time of the secondary offering provides a snapshot of the ownership structure at the time of the offering. Granular ownership data allows me to forego homogenous treatment of selling

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⁵ A third hypothesis that is commonly used to explain flotation costs for seasoned equity offerings is the price pressure hypothesis. I explore this hypothesis in Chapter 5.

stockholders, and categorize blockholders based on monitoring incentives. Hand collecting ownership data also allows me to pinpoint more timely concentration data for Insiders versus Standard and Poor's ExecuComp database. ExecuComp data on officers and directors are taken from proxy statement disclosure, on average, six months prior to the secondary. Additionally, hand collecting data on large stockholders allows me to identify blockholder ownership between 5% and 10% that are not captured by the Thomson Reuters Insiders Data ownership database. More than half of the total blockholders I identify at firms with secondary offerings are not included in the Thomson Reuters ownership database.

I first look at ownership characteristics of secondary offering firms. Laeven and Levine (2008) argue that our understanding of dynamic, complex ownership structures with multiple blockholders is not well developed. They note that the vast majority of governance literature assumes one of two ownership structures: one large stockholder and many small stockholders or 100% small stockholders. In reality, ownership structures and cash-flow rights vary widely and these variations impact our understanding of the role of blockholders. Hand-collected ownership data allow me to characterize ownership structure for secondary offerings and compare those to extant literature. I find blockholders are present in 97% of secondary offering firms and own 42% of outstanding shares prior to the offering. These figures are consistent with the 96% blockholder representation and 39% ownership reported by Holderness (2009), who uses a similar hand-collection methodology to study ownership structure for all U.S. firms using a representative sample. Blockholders participate in 87% of all secondary offerings, and offer the majority of secondary shares for 75% of these offerings. These blockholders reduce 13%

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⁶ The Thomson Reuters ownership database is based on Securities and Exchange Commission (SEC) filings by directors, officers or ownership with greater than 10% ownership (SEC Forms 3, 4 and 5)

⁷ Holderness (2009) maintains that the notion of a widely held firm is a common misconception regarding ownership structure in the U.S.

ownership on average in secondary offerings, and 15% of sample blockholders sell all shares in a single offering.

I find the presence of many designated directors on the boards of firms with secondary offerings. Designated directors are present at 301 of 368 sample firms, and over 90% of secondary offerings where blockholders participate. I find 802 designated directors representing 400 blockholders, or 2.2 designated directors per sample firm. Among selling groups, I find the greatest number (2.8) and occurrence (97%) of designated directors for firms of secondary offerings where Direct Monitors offer the majority of shares.

Next, I turn to tests of the information and monitoring hypothesis. My central findings are as follows. I find significantly more negative announcement returns and higher underpricing for Direct Monitors than Indirect Monitors or Insiders. These differences are economically and statistically significant in univariate and multivariate tests. The differences are also robust to alternative model specifications and various treatments of announcement dates and windows. I find no evidence that Direct Monitors experience near-term earnings misses at higher rates than other sellers. Overall, these results are not consistent with the information hypothesis and yield support to the monitoring hypothesis for Direct Monitors.

Indirect Monitors experience the lowest underpricing and have a non-negative association with announcement returns in a multivariate setting. Although Indirect Monitors have the lowest access to private information among the three selling groups, their majority offerings experience the greatest occurrences of negative near-term corporate outcomes in the form of missed earnings. Collectively, the empirical evidence suggests minority and new stockholders do not value monitoring by Indirect Monitors, or do not perceive an overall reduction in value-enhancing monitoring following secondary offerings by these sellers. When Insiders are the

majority participants in secondary offerings, firms experience the lowest rate of near-term earnings misses, but have negative announcement returns. These results are also inconsistent with an information hypothesis.

Next, I examine the changes in the marginal value of excessive cash holdings. Managers may exploit reductions in monitoring following secondary offerings by misusing cash reserves (Jensen, 1985). Following the methodology of Dittmar and Mahrt-Smith (2007), I find no evidence that excess cash holdings are valued differently during the first two years after a secondary offering by Direct Monitors. I also find no evidence that managers are spending down cash reserves following secondary offerings. However, I argue that characteristics of Direct Monitor firms indicate differing agency costs than those traditionally measured by cash spending. These firms may be characterized as younger, smaller firms who continue to build cash reserves in order to fund growth opportunities. For these firms, the reduction in monitoring and advising by Direct Monitors may negatively impact project selection, risk exposure, or lead to myopic investment behavior (e.g., Bushee, 1998), rather than a reduction in cash.

I also examine post-offering abnormal returns to see if negative announcement returns and underpricing may be explained by a temporary liquidity shock (i.e., the price pressure hypothesis). I examine an 11- and 21-day event window centered on the secondary offering announcement date. I find no evidence of price reversals that would imply the negative announcement returns reflect temporary changes in liquidity. I also look at announcement returns around key ownership concentration percentages found in prior literature (Morck et al., 1988; Wruck, 1989). Consistent with the monitoring hypothesis, I find announcement returns are more negative when Direct Monitors hold larger stakes in the secondary offering firm. I also find evidence that markets assign less value to Indirect Monitors at any ownership threshold.

This paper contributes to the blockholder literature by examining the recurring question of which large stockholders are valuable. I provide evidence towards answering this question by examining flotation costs of secondary offering partitioned by seller identity. I find the variation in flotation costs of secondary offerings is consistent with a monitoring hypothesis that predicts announcement return differences based on expectations of changes in value-increasing monitoring. These costs are the greatest for close monitors and are not consistent with an information hypothesis. This paper also contributes to the literature explaining secondary offering flotation costs. As noted by Eckbo et al. (2007), a full explanation for flotation costs is missing in the literature. Hypotheses that are traditionally employed to empirically test primary offering flotation costs are less tractable for secondary offerings, which are dominated by blockholders. This paper contributes by examining ownership data partitioned by seller identity at the time of the offering; I find support for the less-explored monitoring hypothesis. These results afford a deeper understanding of the characteristics that impact flotation costs and may allow sellers and investors to better forecast these costs around secondary offerings.

The rest of this paper is organized as follows. Chapter 2 presents an overview of blockholder monitoring. Chapter 3 reviews secondary offerings and presents the hypotheses tested in this paper. Chapter 4 describes the data sources and summary statistics of the sample. Chapter 5 describes the research design and empirical results. I conclude in Chapter 6.

Chapter 2

Blockholders

In this Chapter, I provide a review of literature on blockholder monitoring (Section I), and discuss blockholder heterogeneities that reflect differing incentives and mechanisms for monitoring management (Section II).

I. Blockholder Monitoring

It has long been recognized that management (agents) may exploit the separation of ownership and control (Berle and Means, 1932). Self-interested managers can maximize their own wealth and power at the expense of owners (principals) (Jensen and Meckling, 1976; Fama, 1980), which creates agency costs that negatively impact stock prices (Fama and Jensen, 1983). Many studies identify monitoring by blockholders (5% stockholders) as a means of reducing these agency costs (e.g., Shleifer and Vishny, 1986). Greater ownership in the firm provides incentives for blockholders to monitor management and overcomes the free-rider problem that impedes similar monitoring by minority stockholders (Grossman and Hart, 1980; Shleifer and Vishny, 1986).

A number of monitoring activities by blockholders are associated with increases in firm value (Demsetz and Lehn, 1985; Shleifer and Vishny, 1986; Agrawal and Mandelker, 1990; Hertzel and Smith, 1993; Dennis and Serrano, 1996). Blockholder presence also benefits other stockholders if it increases the possibility of a value-increasing takeover (e.g., Shleifer and Vishny, 1986). Empirical evidence shows blockholder formation is associated with positive abnormal announcement returns (Holderness and Sheehan, 1988; Mikkelson and Ruback, 1985; Wruck, 1989; Hertzel and Smith, 1993). Hertzel and Smith (1993) provide evidence that positive

abnormal returns around private placements of equity reflect anticipated monitoring benefits. However, as the ownership stake of a blockholder decreases, *ceteris paribus*, she has less incentive to increase firm value. Any expected decrease in cash flows or profit resulting from decreased monitoring will negatively impact existing minority stockholders, and new investors will require a discount to compensate for the loss in firm value (Shleifer and Vishny, 1986; Kahn and Winton, 1998).

Although blockholders may have a larger incentive to monitor management than minority stockholders, not all monitoring by blockholders increases firm value (e.g., Burkart, Gromb and Panunzi, 1997), and not all blockholders will monitor with the same intensity (e.g., Brickley et al., 1988). Some blockholder activities may result in private benefits not shared with minority stockholders (Holderness, 1989; Wruck, 1989). Numerous studies find the market views certain blockholders as less effective monitors (Shivdasani, 1993; Borokhovich, Brunarski, Harman and Parrino, 2006; Chen et al., 2007). For example, blockholders with potential business ties to firms vote less frequently on anti-takeover amendments (Brickley et al., 1988), and are valued less by other stockholders (Borokhovich et al., 2006).

Blockholders must tradeoff the costs of monitoring with potential private and shared benefits. These costs may be affected by access to information, investment horizon, and expertise. Monitoring costs are higher for blockholders without board representation, as they do not have direct access to nonpublic information (Demsetz, 1986). Blockholders with short-term investment horizons may forego costly monitoring and trade their shares (Parrino et al., 2003). Conversely, blockholders with longer investment horizons may expend costly resources to actively monitor management (Bushee, 1998; Chen et al., 2007). For example, Bushee (1998) finds institutions that make long-term investments in firms are more active monitors than short-

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⁸ Holderness (2003) notes private benefits may not necessarily reduce the wealth of minority stockholders.

term, transient investors. Chen et al. (2007) find a positive association between monitoring and ownership concentration for independent long-term institutional institutions. For these institutions, their long-term investment horizon creates profitable opportunities to exert influence over management. Blockholder expertise is also an important source of a blockholder's contribution to firm value. Blockholders with significant or specific managerial expertise are valued as more effective monitors of management (Holderness and Sheehan, 1988; Barclay and Holderness, 1991).

Blockholder ownership is quite prevalent for U.S. firms. Mehran (1995) finds blockholders at 56% of a random sample of manufacturing firms. More recently, Holderness (2009) finds 96% of a random sample of all U.S. firms has at least one blockholder. Empirical evidence shows blockholder presence is relatively stable for U.S. firms. Barclay and Holderness (1989) follow firms for five years following the initial blockholder formation and find these firms frequently continue to have a blockholder in their ownership structure. Denis and Sarin (1999) follow a similar period of time and find inside ownership concentration also remains stable over five-year windows. For blockholders, the realization of a prior investment may come in the form of a secondary offering, which represents one exit strategy (a background of secondary offerings is provided in Chapter 3).

II. Blockholder Heterogeneities

Cronqvist and Fahlenbrach (2009) examine a large panel dataset of blockholders and find blockholder heterogeneities are associated with effects on firm investment and performance. They find large block ownership, board membership, and direct management involvement has

⁹ The model posited by Shleifer and Vishny (1986) holds that blockholders perpetually monitor management. However, many models provide for blockholder entrance and exit based on changes in investment conditions (Holderness, 2003).

statistically and economically significant impact on a firm's policies and performance. Thus, it is important to understand the identity of blockholders participating in secondary offerings. In this section, I discuss the motivations for monitoring based on blockholder heterogeneities, and discuss a specific mechanism for directly monitoring management, the designated director. Based on these heterogeneities, I classify blockholders as Direct and Indirect Monitors.

A. Direct Monitors

In this study, I categorize private equity and venture capital blockholders as Direct Monitors. Extant literature identifies private equity and venture capital firms as the closest and most active monitors of management among all blockholders (Lerner, 1995; Kaplan and Stromberg, 2004; Beuselinck, Deloof and Manigart, 2009; Cornelli, Kominek and Ljungqvist, 2012). They generally make large, illiquid, long-term equity investments in companies with a goal of capital gains upon exit (Cumming and Johan, 2012). The undiversified nature of these investments provides substantial incentives to monitor (Anderson, Mansi and Reeb, 2003). The long-term commitment of the investment also reduces the costs of monitoring, as they become familiar with the firm and process new information quickly (Chen et al., 2007). Private equity firms often hold restricted shares, which provide a unique incentive to monitor intensely. By definition, holders of restricted shares are unable to sell for a period of time. However, they may acquire additional shares in the open market or from other holders of restricted shares. Kahn and Winton (1998) note that limiting the ability to sell but affording the ability to buy additional shares encourages intervention through monitoring.

The target firm of private equity and venture capital firms may be private or publicly traded (Chaplinsky and Haushalter, 2010). Typically, private equity funds invest in later-stage

private investments than venture capital funds, but venture capital funds will occasionally make late stage investments (Cumming, Fleming and Schwienbacher, 2009). Private equity and venture capital typically exit investments in the following routes: IPO, acquisition exit, repurchases by the company, secondary offerings, or a write-off (Cummings and MacIntosh, 2003; Cumming and Johan, 2009).

Literature shows private equity and venture capital investments are accompanied by intense monitoring through involvement in the daily operations of target firms as board members and advisers (e.g., Metrick and Yasuda, 2010). Because of this close monitoring, private equity and venture capital blockholders are often labeled "interventionists". Blockholders often seek board representation as a mechanism for monitoring management and accessing nonpublic and soft information (Shleifer and Vishny, 1986; Prowse, 1998; Holderness, 2003; Cornelli et al., 2012). Private equity and venture capital blockholders often designate multiple persons with active monitoring skills to sit on the board of directors in order to closely and directly advise and monitor managers (i.e., designated directors). Although designated directors are appointed to protect the investment interest of a specific large investor, they owe the same fiduciary duty to the corporation and all investors under Delaware and New York law (Morris, Herzeca and Kamps, 2008). However, for some firms, designated directors are only compensated by the designating investor. ¹⁰

The number of designated directors typically depends on the blockholder's ownership concentration and is usually agreed upon in a stockholder agreement. As the blockholder reduces her position in a secondary offering, she may lose some or all board representation if ownership

¹⁰ For example, CSK Auto Corporation's 2002 proxy statement notes it does not compensate directors associated with its private equity blockholder (CSK Auto Corporation, 2002, 7). In this example, the fiduciary duties require loyalty to the corporation and all investors, but the monetary incentives protect the interests of the large stockholder.

falls below an agreed upon threshold.¹¹ In this case, the blockholder has both a reduction in the incentives to monitor (through decreased ownership) and in the ability to monitor (through decreases in board representation and lost access to private information).

Designated directors are associated with a number of close monitoring activities and empirical evidence shows these activities are typically associated with increased firm value. Lerner (1995) shows directors designated by private equity firms monitor closely when need for supervision is greatest. Lerner finds the number of directors designated by private equity firms increases around CEO turnover, while the number of other outside directors remains constant. Cole (2011) finds firms with designated directors are better governed as proxied by two governance indexes. Agrawal and Nasser (2011) find designated directors are associated with increases in firm value and monitoring of the CEO.

B. Indirect Monitors

Blockholders other than private equity and venture firms also participate in or initiate secondary offerings. These blockholders often have less access to private information and less involvement in the daily operations of the firm than private equity and venture capital firms. Thus, their approach to monitoring is less direct than private equity and venture capital firms. This group includes asset management funds, hedge funds, pension plans, trusts, not-for-profit entities, government entities, insurance companies, other corporations, individuals, founding families, and other non-insiders. In this paper, I label these blockholders as Indirect Monitors.

Unlike private equity funds, whose undiversified stake generates a stronger incentive to monitor, asset management funds frequently represent the holdings of a well-diversified investor

¹¹ These thresholds are typically included in stockholder agreements that are filed with the SEC in accordance with 17 C.F.R. § 229.601(b)(4) (2012) (Exhibit 4 – Instruments Defining the Rights of Security Holders).

(Anderson et al., 2003). Thus, the incentive to monitor is reduced. Liquidity differences and investment horizons also allow asset management funds and hedge fund managers to forego costly monitoring of management. These blockholders often make smaller investments in individual firms than Direct Monitors, and choose to monitor management through trading strategies (Parrino et al., 2003; Smith and Swan, 2008; Edmans, 2009; Gallagher, Gardner and Swan, 2011; Edmans and Manso, 2011). Even when hedge funds choose non-trading strategies to monitor firms, they typically take a passive, non-controlling approach to monitoring (Gillan and Starks, 2007; Brav, Jiang, Partnoy and Thomas, 2008). Along the same lines, some non-insiders receive restricted securities as compensation for services or through acquisitions. These securities are frequently subject to a short-term lock-up period that restricts the timing of the offering. These sellers likely forego costly monitoring because of the short-term nature of their investment.

Pension plans often manage large, passive portfolios, which limits their ability to monitor management through trading (Carleton, Nelson and Weisbach, 1998). Pension plans may choose lower cost approaches to monitoring, such as private negotiations (e.g., Carleton et al., 1998), stockholder proposals (e.g., Ertimur, Ferri and Stubben, 2010), or voting campaigns (e.g., Del Guercio, Seery and Woidtke, 2008). Pension plans may also be subject to their own agency conflicts that limit their ability to effectively monitor (Woidtke, 2002).

Trusts, insurance companies, government entities, individuals, and not-for-profit entities also employ various forms of stockholder proposals or voting as a means of low-cost monitoring. Not-for-profit entities often receive their shares as donations from the firm's management or derive business from the firm, which creates a conflict of interest in monitoring. Similarly, trusts and insurance companies often have business relationships with firms that subject them to

management influence (Brickley et al., 1988). These blockholders typically have little or no board representation and are not involved in the firm's daily operations.

Similar to private equity funds, founding families often hold larger, non-diversified stakes. While Anderson et al. (2003) find some evidence of reduced agency conflicts at founding family firms, other studies find founding families often forego monitoring expenditures that result in shared benefits (e.g., Morck et al., 1988). More recently, Kim, Kim and Kwon (2009) find family blockholders frequently spend their resources on efforts that only accrue private benefits instead of monitoring. Founding families often delegate monitoring responsibilities to a third party, such as a trustee, who may lack the expertise to actively and closely monitor the firm.¹²

Secondary offerings by other corporations who are blockholders may reflect the continuation of a prior subsidiary divestiture or equity carve-out. In this case, the "parent" firm maintains a minority interest that gives them a temporary oversight role on the "child's" board. Although the parent's specialized knowledge qualifies them as managers of the spun-off firm, Daley, Mehrotra and Sivakumar (1997) do not find evidence linking these activities with improved monitoring for the child. Schipper and Smith (1986) note conflicts of interests between parent firms and minority stockholders arise in these settings due to potential expropriation of former subsidiary assets. These conflicts may offset any potential advantages the parent would have in monitoring the child. Semadeni and Canella (2011) provide recent evidence that minority stockholders do not positively value parent-firm monitoring.

¹² Founding families frequently establish two or more classes of stock as a means of retaining control of a firm. Multi-class common stock is excluded from my analysis. The final sample includes 5 founding family offerings.

C. Characterization of Blockholder Monitoring

Collectively, literature shows that private equity and venture capital funds possess the expertise, incentives and mechanisms to closely and actively monitor management. They take frequently take large, controlling positions in target firms that are accompanied by board representation and intervention in the daily operations of the firm. Other blockholder have differing motivations, investment horizons or lack access to information or expertise necessary to directly monitor management. They may also be subject to their own agency conflicts that prevent effective monitoring. These blockholders often choose to monitor management in lower cost and less direct ways. Based on these factors, I classify private equity and venture capitalists as *Direct Monitors* (i.e., passive monitors). Other blockholders and non-insiders are classified as *Indirect Monitors* (i.e., passive monitors).

Chapter 3

Secondary Offerings and Hypothesis Development

In this chapter, I provide an overview of secondary offerings, including the types of securities offered and alternative selling mechanisms (Section I). I also discuss two flotation costs associated with secondary offerings: announcement returns and underpricing (Section II). I then present two testable hypotheses explaining announcement returns and underpricing around secondary offerings (Section III).

I. Secondary Offerings

Seasoned equity offerings can be primary, secondary, or mixed offerings. ¹³ Primary offerings involve the sale of shares directly by the issuer. The firm issues new shares or sells shares from its treasury and receives the proceeds. In secondary offerings, existing stockholders sell their outstanding shares and the firm issues no new shares. Mixed offerings have both primary and secondary components in a single offering registered on the same registration statement. Approximately 40% of all U.S. seasoned equity offerings in the SDC database from 1998 to 2006 involved the sale of secondary shares (see Table 2). Offerings of 100% secondary shares generated almost \$200 billion in proceeds during this time (untabulated).

Sellers in secondary offerings are often the stockholders of previously restricted or control securities. (See Appendix A for an expanded discussion of relevant U.S. securities laws.) These stockholders include insiders, blockholders, and other stockholders (those with less than 5% ownership). *Restricted* securities are those securities obtained in a transaction or series of transactions not involving a public offering. These securities may be acquired from an affiliate of

¹³ Many finance papers abbreviate seasoned equity offerings as SEOs. Legal scholarship and practitioners often refer to seasoned equity offerings as follow-on offerings.

the issuer or from the issuer in a private placement offering. Primary offerings of restricted securities often include registration rights, which allow these stockholders to sell their securities in a registered secondary offering. Insiders may also receive restricted stock as compensation. Parties considered to have a control relationship with the firm are labeled affiliates 14 and their holdings are typically referred to as *control* securities. Holders of restricted or control securities typically sell these securities in registered secondary offerings, open market sales in accordance with Rule 144 under the Securities Act of 1933 (the "Securities Act"), or in privately arranged transactions. Sales of restricted or control securities must comply with certain conditions under Rule 144 as to the amount of securities to be sold, notice of the sale of the securities, and a minimum holding period for the shares to be resold. These conditions force holders of restricted shares and affiliates of the issuer to bear the costs of reduced liquidity and diversification (Kahl, Liu and Longstaff, 2003). On the other hand, registered secondary offerings are not restricted in frequency or size (although some holders of shares may be restricted from selling their shares by a lockup agreement that prohibits participants in an initial public offering from selling shares for a limited period of time, usually 180 days) (Brav and Gompers, 2003). Lockup agreements from a previous seasoned equity offering may also limit the timing of the secondary offering. 15

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¹⁴ An affiliate of an issuer is defined under Rule 144 of the Securities Act, 17 C.F.R. § 230.144(a)(1) (2009), as "a person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common controls with, such issuer." Accordingly, this definition includes certain executives (such as managers in control over a unit), directors, and large stockholders, or anyone with "the power to direct the management and policies of the company in question, whether through the ownership of voting securities, by contract, or otherwise (SEC, 2008, III)." See http://www.sec.gov/investor/pubs/rule144.htm

¹⁵ Karpoff, Lee and Masulis (2012) find lockup agreements for 94% of all seasoned equity offering over 1996 to 2006. The most common length is 90 days, which is half the duration of the typical initial public offering lockup period. They also find nearly 40% of lockups following seasoned equity offering are released early compared to only 15% of IPO early releases in Brav and Gompers (2003).

II. Flotation Costs

Flotation costs for secondary offerings are the expenses involved in registering and selling the shares. Two of the largest flotation costs are underpricing and negative announcement returns (Eckbo et al., 2007). ¹⁶ I discuss prior studies of announcement returns around secondary offerings in Subsection A, and underpricing around secondary offerings in Subsection B.

A. Announcement Returns

Negative announcement returns around secondary offerings were studied as early Scholes (1972). Overall, prior studies of secondary offerings find announcement returns historically average between -2.0% to -2.9% over 1972-1998 (Mikkelson and Partch, 1985; Asquith and Mullins, 1986; Clarke et al., 2004; Heron and Lie, 2004). ¹⁷

Previous studies have also examined differences in ownership concentration and seller identity for secondary offering announcement returns. Mikkelson and Partch (1985) find no relationship between announcement returns and ownership concentration for a sample of secondary offerings over 1972-1981, but do find differences according to the identity of the seller. They find announcement returns are more negative for insiders (i.e., executives and directors) than outsiders, which they attribute to information advantages. Heron and Lie (2004) also find announcement returns are more negative for insiders using a larger, more recent sample over 1980-1998. However, both studies treat outsiders as a homogenous group. In this paper, I examine announcement returns after partitioning non-insiders based on monitoring

¹⁶ In this paper, flotation costs refer specifically to announcement returns and underpricing. Other flotation costs accompany secondary offerings, including underwriter compensation, registration fees, and other offering-specific expenses, such as road show expenses, accounting, and legal fees (Eckbo et al., 2007).

Announcement returns around primary offerings range from -1.4% to -3.0% over 1961-2006 (Asquith and Mullins, 1986; Eckbo and Masulis, 1992; Heron and Lie, 2004; Demiralp et al., 2011), and -2.7% to -3.2% for mixed offerings over 1980-1998 (Asquith and Mullins, 1986; Heron and Lie, 2004).

characteristics (Direct versus Indirect Monitors). This partitioning of outsiders should be especially helpful in understanding the properties of secondary offering announcement returns since insider participation is significantly lower. Mikkelson and Partch (1985) find insiders sell in 13% of their sample, and Heron and Lie (2004) find insiders participate in only 16% of secondary offerings. These studies also classify secondary offerings as insider offerings based on participation, rather than offering proportion.

Clarke et al. (2004) forego homogenous treatment of outsiders in examining secondary offering announcement returns over 1980-1996. They classify outsiders as investment funds (i.e., investment banks, venture capitalists, private equity firms, and insurance companies), trusts, nondiscretionary insiders, and other. They find announcement returns over the three-day window centered on the announcement date to be the most negative for investment funds at -3.05%, although not significantly different from insiders at -2.77%. Trusts, non-discretionary insiders and other non-insiders have the least negative announcement returns. Clark et al. also find investment funds participate in 28% of all secondary offers, which is greater than any other group of insiders or outsiders. However, Clarke et al. (2004) do not explore variation in announcement returns based on a monitoring hypothesis. Two studies of primary offerings find support for a monitoring hypothesis. Demiralp et al. (2011) find announcement returns are significantly less negative for firms with increased active institutional ownership post-offering. Kim and Purnandam (2011) find announcement returns around primary offerings are more negative for firms with weaker alignment of managerial incentives where firms may mismanage proceeds.

B. Underpricing

Underpricing is the difference between the offer price and the stock price close to the offer. Whereas announcement returns represent wealth changes for existing stockholders, underpricing captures the discount required by new investors. Despite a voluminous literature studying underpricing of initial public offerings, much less attention has been paid to underpricing of secondary offerings (Corwin, 2003). Intintoli and Kahle (2010) find underpricing averages 2.4% for all seasoned equity offerings over 1980-2004 (including primary and mixed offerings). They find underpricing is lower for secondary and mixed offerings when managers participate. Although Corwin (2003) finds similar underpricing for primary and mixed seasoned equity offerings over 1980-1998, he documents a substantial increase during the 1990s. ¹⁸

Only a few published studies look at the role of the identity of sellers in underpricing of secondary offerings, and these studies focus on participation by insiders rather than blockholders. ¹⁹ Zhang (2005) examines underpricing during the three years after firms go public and finds underpricing is lower when insiders participate. Intintoli and Kahle (2010) find greater managerial participation in mixed offerings results in lower underpricing. However, neither study partitions outsider participation based on seller identity. I am not aware of a published study that examines secondary offering underpricing in the context of a monitoring hypothesis.

III. Hypothesis Development

In this section, I present two hypotheses to explain announcement returns and underpricing of secondary offerings: the information hypothesis and the monitoring hypothesis.

¹⁸ Loughran and Ritter (2004) find IPO underpricing also increased during this period.

¹⁹ Corwin (2003) examines several hypotheses explaining underpricing for primary and mixed offerings. He relates underpricing of these offerings to temporary price pressure, pre-offer moves in stock price, and underwriter pricing practices, such as rounding.

Table 1 presents a summary of my predictions of announcement returns and underpricing magnitudes partitioned by seller identity under each hypothesis. Direct Monitors are private equity and venture capital blockholders. Indirect Monitors include all other non-insider participants in secondary offerings. Insiders are managers and directors not designated by a blockholder.

A. Information Hypothesis

Numerous studies of seasoned equity offerings explain flotation costs using some form of an information hypothesis (Eckbo et al., 2007). Under the information hypothesis, flotation costs represent information frictions between informed and uninformed parties. If selling stockholders have an informational advantage, they may use it to profit during a "window of opportunity" where they could sell their own shares at higher market prices. In this case, announcement returns around seasoned equity offerings are negative because they convey unanticipated poor information about earnings (Scholes, 1972; Leland and Pyle, 1977; Miller and Rock, 1985). In the models by Miller and Rock (1985) and Rock (1986), underpricing of equity offerings is necessary to encourage uninformed investors to participate in new offerings. Since informed investors only invest in good offerings, uninformed investors must be compensated for higher percentages of bad offerings.

The information hypothesis also predicts differences in flotation costs based on seller identity (Scholes, 1972). The negative signal requires that minority stockholders view selling stockholders as holders of private information about future firm profits. Insiders likely have more information about future profits than outsiders, including some blockholders. However, blockholders with designated directors may have some access to private information. While

Insiders and Direct Monitors may be privy to private information about future profits, Indirect Monitors may hold less private information as they less frequently have board representation. Consequently, the information hypothesis predicts Insiders and Direct Monitors should have larger flotation costs than Indirect Monitors. Nevertheless, Insiders may have larger flotation costs than Direct Monitors if managers do not fully disclose all information, or if Direct Monitors are unable to capture the "window of opportunity" around private information due to trading restrictions. Even if Direct Monitors possess superior information to Indirect Monitors, the accuracy of this information is dependent reports controlled by managers. If managers do not make full disclosure to Direct Monitors, Insiders would maintain an informational advantage over Direct Monitors. In this case, the information hypothesis would predict the announcement returns (underpricing) for Insiders would be at least as negative (high) as Direct Monitors, and potentially more negative (stronger) than Direct Monitors on average.

Existing studies of flotation costs around secondary offerings have provided mixed support for the information hypothesis. Mikkelson and Partch (1985) examine secondary offerings over 1972-1981 and find announcement returns are more negative for offerings where insiders (managers and directors) participate versus those with no insider participation. Using a larger sample period, Heron and Lie (2004) find similar results when examining secondary offering announcement returns over 1980-1998. They provide univariate evidence that announcement returns are lower when insiders participate, but the difference is not statistically significant in a multivariate setting. It is important to note that both studies classify secondary offering as "insider" offerings if an insider sells a non-zero quantity of shares. In the extreme case, a single share offered by insiders would be classified as an insider offering. Clarke et al. (2004) find announcement returns are more negative for insiders than non-insiders. However,

when they partition non-insiders into investment funds, trusts, non-discretionary insiders and other non-insiders, they find announcement returns are the most negative for investment funds (including private equity and venture capital funds).

In addition to negative announcement returns, if the Insiders or Direct Monitors conduct secondary offerings based on negative private information, I would expect poor near-term operational performance (Clarke et al., 2004; Heron and Lie, 2004). Accordingly, the information hypothesis predicts majority offerings by Insiders and Direct Monitors should be associated with more near-term negative corporate events, such as missed earnings, than Indirect Monitors. Prior studies have associated negative operating performance with insider participation Empirical results by Lee (1997) show secondary offerings without managerial trading do not experience negative post-offering operational performance. Heron and Lie (2004) find operating performance runup is higher prior to secondary offerings with insider information, but find no evidence of a decline in future operating performance after the offering. They find no similar runup or subsequent decline in operating performance for non-insiders as a single group. Clarke et al. (2004) find announcement returns are more negative for insiders and investment funds. However, only insider participation in secondary offerings is followed by a subsequent decline in long-term abnormal operating performance. This evidence is consistent with an information hypothesis for insiders, but inconsistent with the information hypothesis for non-insiders. Clarke et al. do not explore alternative hypotheses to the information hypothesis in explaining announcement returns and long-term operating performance for non-insiders.

Overall, existing literature finds little support for an information hypothesis in explaining secondary offerings by non-insiders, including private equity and venture capital blockholders.

The conflicting results of studies of insider participation in secondary offerings may be a result

of low participation by insiders (less than 20% in previous studies), or differing classifications of insider participation (e.g., participating vs. majority offering).

B. Monitoring Hypothesis

The monitoring hypothesis holds that variation in announcement returns and underpricing may be explained by changes in the alignment of incentives that were designed to mitigate agency costs. Under this hypothesis, firm value declines if the selling stockholder in a secondary offering has fewer incentives to exert value-enhancing monitoring effort. The monitoring hypothesis requires that the selling stockholder was using her monitoring efforts to increase managerial efficiency (e.g., Wruck, 1989). On the other hand, reductions in ownership concentration by large stockholders could improve firm value if the blockholders were diverting resources to their own benefit at the expense of other stockholders; or have no effect on firm value if the monitoring efforts are ineffective or only generated private benefits to the blockholder (Holderness, 2003).

The removal of mechanisms that mitigate agency costs will be reflected in the flotation costs of equity offerings (e.g., Ljungqvist and Willhelm, 2003). In the setting of a secondary offering, the monitoring hypothesis predicts negative announcement returns, as existing stockholder wealth is reduced, and increased underpricing, as new investors will require a discount for the expected decrease in monitoring or additional intervention costs (Kahn and Winton, 1998).

For outsiders with board representation, the monitoring hypothesis posits negative announcement returns and underpricing represent a decrease in the incentives and mechanisms to monitor management, since many stockholder agreements reduce the number of designated directors as ownership levels fall. Accordingly, the monitoring hypothesis predicts negative announcement returns and underpricing would be stronger for Direct Monitors than Indirect Monitors, as they frequently appoint more designated directors than Indirect Monitors. Even if board representation does not decrease, the monitoring hypothesis would predict Direct Monitors would have larger marginal reductions in their incentives to monitor. Direct Monitors bear the costs of closely and directly monitoring management. As their ownership levels decrease, *ceteris paribus*, they lose scale economies in bearing these costs. If the Direct Monitor sells all of her holdings in a secondary offering, negative announcement returns and larger underpricing could reflect the need for a new Direct Monitor.

Indirect Monitors employing passive monitoring strategies may experience lower marginal reductions in incentives to monitor. Indirect Monitors often lack board access, information, or other mechanisms and expertise necessary to monitor management. These barriers to monitoring would not change around a secondary offering. Flotation costs for Indirect Monitors would also be lower if markets did not value their passive monitoring style prior to the offering, if no prior expectation of monitoring existed, or if the monitoring only resulted in private benefits. Therefore, the monitoring hypothesis predicts flotation costs would be smaller for Indirect Monitors than Direct Monitors.

Insider participation may also be accompanied by negative announcement returns and underpricing under the monitoring hypothesis. Here, the flotation costs may represent a divergence of interest with other stockholders as the Insiders' ownership position is reduced (Morck et al., 1988; McConnell and Servaes, 1990). In this case, the need for outside monitoring arises or increases, and these costs are reflected in announcement returns and underpricing. On the other hand, Insider participation may see lower flotation costs than blockholders if

reputational concerns act as a monitoring mechanism for Insiders (Fama, 1980; Fama and Jensen, 1983). Since future career opportunities often depend on firm performance, Insiders may not experience a reduction in the incentive to exert effort. In this case, concerns regarding future career earnings would dominate changes in ownership incentives resulting in lower flotation costs than outsiders. A reduction in ownership by Insiders may also reduce entrenchment or increase the probability of a value-increasing takeover.

In summary, the monitoring hypothesis predicts flotation costs should be largest for Direct Monitors. For Direct Monitors, the secondary offering may reduce both the incentives and mechanisms used to monitor management. Differences in flotation costs between Indirect Monitors and Insiders are less clear. To the extent that reputational concerns dominate ownership incentives, Insiders may experience lower underpricing. However, reduction in inside ownership results in a divergence of interest with stockholders. Moreover, markets may not value passive monitoring by Indirect Monitors and the marginal increase in the costs of indirect monitoring may not be sufficient to warrant a reduction in their monitoring effort. Therefore, I make no formal prediction regarding differences in flotation costs between Insiders and Indirect Monitors under the monitoring hypothesis.

Chapter 4

Data and Summary Statistics

In this chapter, I describe the data sources and summary statistics. Section I presents the data sources and filters used to identify the sample. I also describe the distribution of secondary offerings. Section II reviews ownership structure characteristics for firms with secondary offerings. In Section III presents the offering, firm and board statistics that characterize the sample firms.

I. Sample Identification and Distribution

A. Sample Selection and Filters

I use the Securities Data Company's (SDC) Global New Issues database to identify secondary offerings. I begin with the full sample of registered equity offerings from 1998 to 2006. The yearly distribution of equity offerings is presented in Panel A of Table 2. To mitigate well-documented errors and missing information in the SDC database²⁰, I hand collect and verify data on all sample offerings from prospectuses. Specifically, I verify the gross proceeds, number of primary and secondary shares offered, common stock outstanding after the offering, and the underwriters' over-allotment option.²¹ I correct missing or erroneous underwriting spread data in SDC for 34 offerings.

-Insert Table 2 here-

http://people.stern.nyu.edu/aljungqv/research.htm. A number of SDC corrections are made available for download on Jay Ritter's website: http://bear.warrington.ufl.edu/ritter/SDC%20corrections122811.pdf

 $^{^{\}rm 20}$ For a discussion of these errors, see Alexander Ljungvist's website:

²¹ The over-allotment option (also referred to as a "greenshoe") covers additional sales by underwriters in excess of the amount listed in the prospectus. For empirical tests, I assume the underwriters' over-allotment options are not exercised unless the prospectus indicates otherwise.

Excluding all IPOs, rights offerings, non-U.S. offerings, and offerings of only primary shares, I begin with 1,497 seasoned equity offerings with non-negative amounts of secondary shares. Nearly 58% were mixed offerings, which include primary and secondary shares offered from the same prospectus. Because the incentive to offer new (primary) shares differs from the incentive to sell existing (secondary) shares, I retain only those equity offerings where secondary shares constitute 90% or more of the total number of shares offered. These requirements produce an initial sample of 662 secondary offerings, including 33 mixed offerings.

B. Sample Selection and Filters

Panel B of Table 2 displays the filters applied to obtain the final sample. I delete two offerings with missing return information in the Center for Research in Security Prices (CRSP) database, and 25 offerings incorrectly listed as pure secondary offerings in SDC. I also exclude one American Depositary Receipts and 15 unit offerings. I correct information on primary and secondary shares offerings that SDC incorrectly classified, which results in the deletion of 25 offerings. Because monitoring and incentive mechanisms differ for financial firms and regulated utilities, I exclude all firms with Standard Industrial Classification (SIC) System codes (6000-6999 (financials) and 4900-4949 (utilities), which reduces the sample by 118 and five offerings. I also delete 24 offerings whose prospectuses are not found in the SEC's EDGAR database. Firms with multiple classes of common stock separate cash-flow rights from voting rights. This separation has been labeled as "the most extreme example of antitakeover protection" as the superior voting class is often non-publicly traded (Gompers, Ishii and Metrick, 2010). To mitigate differences between inferior and superior voting classes, I delete all firms with multiple classes of common stock, which reduces my sample by 109 firms. Finally, I delete five

observations where the issuing firm is participating in an ongoing merger around the offering. Merger data are obtained from prospectus statement disclosure and press release searches using a Lexis-Nexis search. The final sample includes 368 secondary offerings by 266 unique firms.

C. Distribution of Offerings

The yearly distribution of secondary offerings for each of the selling groups is presented in Panel A of Table 3. I discuss classification of selling groups in Section II of this chapter. Total secondary offerings increase in number for the period 2004 to 2006, which is consistent with offering equity during pro-business cycles. This increase could stem from the dependence upon the cyclical IPO market (Ritter and Welch, 2002), or the profit incentive for selling shares when stock prices are higher (Choe, Masulis and Nanda, 1993). The firm-level yearly distribution of Figure 1 indicates multiple secondary offerings of the same firm's common stock within a single calendar year are less common in the first half of my sample period.

-Insert Table 3 here-

-Insert Figure 1 here-

In untabulated results, I examine the sequence of offering for the 368 secondary offerings. Selling stockholders may conduct multiple offerings of secondary shares when choosing to dispose of their shares. Stockholder or lock-up agreements may limit the timing or number of shares that may be sold in one offering, resulting in a delayed offering of some of the shares sellers intend to offer. 22 Also, sellers wishing to maintain a positive equity ownership in the firm may believe multiple offerings could improve the announcement returns, as frequent mixed and primary offerings have been shown to reduce information asymmetries (D'Mello,

 $^{^{22}}$ Lockup agreements typically restrict secondary offerings for 90 days following a secondary offering. See Brau,

Tawatnuntachai and Yaman, 2003). Of the 266 unique firms in the sample, secondary offerings are conducted twice for 69 firms, three times for 24 firms, and four times for eight firms. Only one firm is the subject of a secondary offering five times during my sample.

I also look at the seasonal distribution of secondary offerings (untabulated). While nearly 70% of all secondary offerings during 1998 to 2002 took place in the first six months of the calendar year, a slight majority of secondary offerings were completed in the second half of the calendar year over the years 2003 to 2006. For multivariate regressions, I control for potential seasonality in issue patterns using the number of days between the end of the prior fiscal year and the secondary offering announcement date.

The industry distribution of secondary offerings is displayed in Panel B of Table 3 and Figure 2. I use the 30 industries (FF30) identified by Fama and French (1997). These classifications are obtained from Kenneth French's website. ²³ I do not find considerable evidence of industry clustering. Overall, secondary offerings are most common in service (20%), retail (12%), and business equipment (10%) industries. ²⁴ No other industry comprises more than 8% of the secondary offerings in this sample. Within the seller categories, it is interesting to note that Direct Monitors offer the majority of shares in secondary offerings for firms in the retail and automobile industries. These offerings may reflect the ability to unwind investments in an industry where advising and monitoring expertise are less specialized. Insiders participate less frequently in the business equipment and retail industry than either outsider group.

-Insert Figure 2 here-

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²³ Kenneth French's website: http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

²⁴ The service industry (FF30 industry #22) includes personal and business services. Sample firms from this industry include Paypal, Electronic Data Services, Weight Watchers International, and Strayer Education. Sample firms from the retail industry (FF30 industry #27) include Autozone, Dollar Tree Stores, Tuesday Morning, and Staples. The business equipment industry (FF30 industry #23) includes electronic equipment, measuring and control equipment, and computers. Sample firms from the business equipment industry include Seagate Technology, Cisco Systems, and Netgear.

Size distributions based on market capitalization are presented in Figure 3. I categorize offerings based on market capitalization into small-, mid- and large-cap firms with less than \$1 billion, \$1 to \$5 billion, and greater than \$5 billion in market capitalization respectively. Figure 3 presents a pie chart of all offerings. There are 162 small-cap offerings, which make up 44% of the sample. Mid- and large-cap offerings number 116 and 90, which constitute 32% and 24% of the sample. Thus, over 75% of my sample includes secondary offerings of small- and medium-sized firms. In untabulated results, I also find size distributions are similar at the firm level, which indicates repeated offerings are not driving the high frequency of small-cap firms with secondary offerings.

-Insert Figure 3 here-

II. Ownership Structure

Ownership data are collected using the following methodology. First, I hand collect²⁵ share ownership of all blockholders, directors, named executives, and selling stockholders from the final prospectus or prospectus supplement (SEC Form 424B).²⁶ Assumptions regarding ownership disclosure are provided in Appendix B. Second, I check the previous and next definitive proxy statement (SEC Form DEF 14A) around the offering date, as well as SEC Forms 13D and 13G, to search for other 5% owners at the time of the offering.

Collecting ownership data in this method is more appropriate for this study than using Standard and Poor's ExecuComp database for directors and officers and Thomson Reuters ownership databases for large stockholders. ExecuComp ownership data are based on annual

²⁵ Holderness (2009) notes it is paramount to hand collect block ownership data to ensure accuracy. The prospectuses and accompanying footnotes must be read to correct common problems, such as listing the ownership of the same shares for both the blockholder and the designated director (i.e., double counting).

²⁶ These prospectuses are filed as SEC Forms 424B3, 424B4, 424B5, or 424B7. The firm typically discloses ownership of each of the directors, under a section referred to as "Principal and Selling Stockholders".

proxy statement disclosure, which is filed 174 days on average prior to a secondary offering. Hand collecting these data increases ownership estimate accuracy to reflect active open market sales or other transactions altering concentration prior to the secondary offering (Lee, 1997). Hand collecting ownership data also allows me to identify more 5% stockholders. The Thomson Reuters Insider Filing Data Feed lists ownership data disclosed on SEC Forms 3, 4 and 5. All directors, officers or owners with greater than 10% ownership must file these forms with the SEC. By examining the final prospectus or prospectus supplement, I am able to identify an additional 510 blockholders with ownership levels between 5% and 10%.

I categorize selling stockholders as a(n) (1) *Direct Monitor* if the seller is a private equity or venture capital fund or firm; (2) *Indirect Monitors* if the seller is a blockholder not associated with a private equity or venture capital fund or firm, or a non-insider; or (3) *Insiders* if the seller is a named executive or director. The motivation for these categorizations is discussed in Section II of Chapter 2. Of the 368 secondary offerings, 211 (57%) are classified as Direct Monitor offerings; 109 (30%) are classified as Indirect Monitor offerings; and 48 (13%) are classified as Insider offerings. Sellers are identified as private equity firms through their website or the May 2011 issue of *Private Equity International*. Venture capital firms are identified through their website or Bloomberg. When more than one seller participates in the secondary offering, I categorize the offering (i.e. Direct Monitor, Indirect Monitor, or Insider) based on the identity of the largest selling stockholders in terms of number of shares offered. ²⁷ To ensure multiple category sellers are not altering my results, I re-estimate flotation costs for the subset of firms where the largest selling stockholder offers greater than 80% of the shares offered. The results are similar except where noted below.

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²⁷ I aggregate totals within the subgroups before determining the largest selling stockholder group. See Appendix B for additional ownership assumptions.

Ownership characteristics are presented in Table 4. Blockholders are present in 97% of sample firms and participate in 87% of all secondary offerings. The average firm with a secondary offering has 2.7 blockholders who owns 42% of outstanding shares prior to the offering. These blockholder values are similar to those reported by Holderness (2009), who finds 96% blockholder representation and 39% blockholder ownership at a representative sample of all U.S. firms. While nearly all Direct and Indirect Monitor firms have at least one blockholder prior to the offering, approximately 17% of Insider firms do not have a blockholder, and blockholders only participate in approximately 30% of these offerings.

-Insert Table 4 here-

Ownership statistics for the selling stockholder are presented in Panel B of Table 4. This panel only displays ownership for the largest selling stockholder when multiple parties participate in a secondary offering. For the full sample, the selling stockholder reduces ownership of outstanding shares from 31.7% to 18.0% during the offering. Direct Monitors have higher levels of pre- and post-offering ownership than other seller categories. Insiders have the lowest average change in ownership when they are the largest stockholders in a secondary offering, and rarely sell all of their shares (0.8%). On the other hand, 25% of Indirect Monitor offerings represent a full exit. This statistic may reflect the tendency by Indirect Monitors to trade their shares rather than expend scarce resources on active monitoring (e.g., Parrino et al., 2003). Panel C presents the total number of stockholders, and total blockholder and inside ownership for the firms with secondary offerings. I measure the number of stockholders at the end of the fiscal years prior to and after the secondary offering from Compustat. There are no statistical differences in the average number of stockholders for the seller groups prior to the

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²⁸ The firms associated with the full sample of 368 secondary offerings are partially owned by 966 blockholders associated with 427 unique blockholder entities (i.e., under common management).

offering. However, the number of stockholders increases by about 700 for all secondary offering firms. Direct Monitors see an increase of approximately 1,400 investors after the offering, which is statistically different from the decline of about 500 stockholders for firms with secondary offerings by Indirect Monitors (p = .054). The average total blockholder ownership level is reduced from 42% pre-offer to 29% post-offer. There are no statistically significant differences in pre- or post-offering blockholder or insider ownership, or changes in total blockholder or insider ownership, for the Direct and Indirect Monitor firms.

III. Descriptive Statistics

This section presents descriptive statistics of firms with secondary offerings. I use the following data sources for my analysis. Financial data are obtained from Compustat. Stock return data are obtained from CRSP. Information on the underwriter ranking, firm incorporation date, and IPO date are obtained from Jay Ritter's website. ²⁹ Missing IPO data are augmented with the earliest trading date from CRSP.

-Insert Table 5 here-

Offering, firm and board characteristics are presented in Panels A, B, and C of Table 5. Variable definitions are listed in Appendix C. The first column in each panel presents mean (median) offering characteristics for all secondary offerings. The next three columns present mean (median) offering characteristics for the each seller category. The final three columns present p-values from standard t-tests (Wilcoxon rank sum test) of mean (median) offering values between pairs of seller categories. ³⁰

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²⁹ Jay Ritter's website: http://bear.warrington.ufl.edu/ritter/ipodata.htm

³⁰ I compare each of the three groups individually because of the heterogeneities among seller category.

A. Offering Characteristics

Secondary offerings generate an average of \$231 million in gross proceeds. This amount is more than 60% larger than gross proceeds for primary and mixed seasoned equity offerings during the same sample period, which average \$141 million and \$152 million respectively (untabulated). Gross proceeds from IPOs in the SDC database average just over \$130 million during 1996-2006. Thus, secondary offerings are generally the largest single offering of common stock. Among the seller categories, secondary offerings by Indirect Monitors are larger on average than those by Direct Monitors, although there is no statistical difference in median proceeds. The median proceeds for Insiders is smaller than either group of outsiders. Insiders are also more than twice as likely to participate in mixed offerings, and tend to be the largest seller in secondary offerings closer to the prior fiscal year end, where accounting-based information asymmetries are lowest. Collectively, the smaller offering size and tendency not to sell secondary shares alone (i.e., "piggyback") or away from year-end information releases may indicate differing selling motivations for Insiders (e.g., liquidity) or potential concerns about negative information conveyed through a solo secondary offering (Heron and Lie, 2004).

The median percentage of outstanding shares offered in a secondary offering is 14%, while the median percentage of tradable shares offered (i.e., as a percentage of float) is 32%. Again, we see that Insiders tend to make smaller offerings, as the median percentage of tradable shares offered is smaller for Insiders compared to both categories of outside sellers. The mean underwriting spread for secondary offerings is 3.4%. Although many previous studies find underwriting spreads are closely related to firm or offer size (Eckbo et al., 2007), Direct Monitor firms tend to have the lowest underwriting spreads, which may reflect higher propensity to engage in repeated secondary offerings. Here, lower spreads may also reflect catering by

investment banks for future business. Direct Monitors also participate in more secondary offerings after the passage of the Sarbanes-Oxley Act in 2002 (SOX) than Indirect Monitors or Insiders. One possible explanation is that provisions of SOX provide external monitoring mechanisms that substitute for ownership by monitoring blockholders. Direct Monitors may reduce their ownership to reflect the new regime. Another possibility is that Direct Monitors participated in more IPOs just prior to this time period.

B. Firm Characteristics

Several firm characteristics presented in Panel B of Table 4 are noteworthy. Despite the large number of small capitalization firms in my sample, median firm size in terms of market capitalization and total assets is larger than the median values from the CRSP/Compustat merged database over the same period (not tabulated). Not surprisingly, many firms with secondary offerings recently conducted an IPO. The median number of years since the IPO is 3.2 years. Sample firms with secondary offerings may be characterized as high growth. The book-to-market value is less than half the average value for the CRSP/Compustat merged database over the same period, and the average firm experiences a 35% increase in sales over the prior fiscal year (not tabulated). Firms with secondary offerings also see an 11% abnormal stock price runup over the 90-day period ending just before the offering. Lastly, the number of shares outstanding is nearly double the number of tradable shares prior to the offering.

Firms with secondary offerings by Direct Monitors are smaller than those by Indirect Monitors in terms of assets and market capitalization. Although Direct Monitor firms have been in business longer than the other seller groups, with an average of nearly 40 years since incorporation, they offer secondary shares closer to the IPO than Indirect Monitors. Cash and

free cash flow are similar among firms with majority offerings by Direct and Indirect Monitors, but are significantly higher for those by Insiders. There are few statistical differences among dividend payout ratios, although firms of Indirect Monitors have a lower numerical value. Firms with majority offerings by Insiders have more growth opportunities. The median book-to-market value is 0.18, which is significantly lower than firms with majority offerings by Direct (0.29) and Indirect Monitors (0.35) at the 1% level (p < .001). Insiders also tend to sell after increases in operating income. For Insider firms, earnings per share (EPS) increases by approximately 20% during the fiscal year prior to the secondary offering and approximately 75% of Insider firms report earnings increases prior to the offer. This result is consistent with Heron and Lie (2004), who find increased operating performance prior to secondary offerings with insider participation. Indirect Monitor firms tend to have lower stock price runup and higher R&D intensity than Direct Monitor firms. 31 Indirect Monitor firms have lower return on assets than Direct Monitor or Insider firms. Direct Monitor firms also experience lower stock return volatility and bid-ask spreads than other seller firms. Firms of offerings by Direct Monitors also have more blockholders than firms with Insider offerings, but there are no significant differences between the number of blockholders at firms of Direct and Indirect Monitors.

C. Board Characteristics

Board characteristics for firms with secondary offerings are presented in Panel C of Table 4. The average firm has 8.4 total directors. Over 80% of these firms have designated directors, with an average of 2.2 designated directors per firm. Less than half of the firms with secondary offerings in this sample period separate the role of Chairman of the Board and CEO.

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³¹ I also find similar results using raw returns. I report abnormal returns for ease of comparison.

Board representation size and frequency is larger for firms with secondary offerings by Direct Monitors. Designated directors are present for 97% of Direct Monitor firms. The average Direct Monitor firm in this sample has 2.8 designated directors. Indirect Monitor firms average 1.7 designated directors, and Insiders average 0.7 designated directors. The number and percentage of designated directors for all pairs are significantly different at the 1% level (p < .001). Total board size is similar for firms with secondary offerings by Direct and Indirect Monitors. However, boards of Insider offerings are smaller than either group of outsiders.

Chapter 5

Research Design and Empirical Results

This chapter presents my research design and empirical results. Section I describes how flotation costs of secondary offerings are calculated. Section II presents the results of univariate tests of differences in flotation costs based on seller identity. Section III presents the independent variables used in the multivariate regression analysis of flotation costs around secondary offerings. The model specification and results of these regressions are presented in Section IV. Additional tests are presented in Section V.

I. Estimation of Flotation Costs

A. Announcement Returns

In their survey of equity offerings, Eckbo et al. (2007) note announcement returns are typically measured over the three-day period [-1, 1] centered on the announcement date (day 0), or over the two-day period [-1, 0]. Using these windows, I estimate the announcement date as the earliest of the issue date from SDC, preliminary prospectus (424A) filing date, or final prospectus (424B) filing date. For robustness, I also replace the announcement date with the issue date from SDC. In order to compare announcement returns with previous studies of secondary offerings, I estimate announcement returns for these dates using the methodology established in the equity offering literature (Mikkelson and Partch, 1985; Lee, 1997; Heron and Lie, 2004; Clarke et al., 2004). Following these studies, I employ conventional event-study methodology to estimate market model using CRSP equal-weighted market returns over 255 days ending 46 days before the announcement date.³² Because of a minimum period needed for parameter estimates, and to mitigate planned secondary offerings following standard 180-day

³² The results are similar using market-adjusted returns in place of the market model.

IPO lockup periods (Field and Hanka, 2001; Cao, Field and Hanka, 2004), I require 200 days between the IPO date and secondary offering date for announcement returns. This requirement excludes 34 secondary offerings from announcement return analysis.³³ The announcement return (*ARET*) is then defined as the cumulative abnormal return over the three- and two-day announcement period.

B. Underpricing

Underpricing (*UPRICE*) is the difference between the offer price and the stock price close to the offer. Following Corwin (2003) and Intintoli and Kahle (2010), I estimate underpricing as minus one times the return from the prior day's closing price to the offer price. This typically expresses underpricing as a positive number. I also employ a volume-based announcement date correction methodology for underpricing similar to Corwin and Intintoli and Kahle. The offer date is adjusted to the day following the SDC issue date if the following trading-volume conditions are met: (1) trading volume on the day after the SDC issue date is more than 2 times the trading volume on SDC issue date; and (2) trading volume on the day after the SDC issue date is more than twice the average daily volume over the previous 250 trading days. This method adjusts the offer date by one day for 54% of my sample, which is higher than the percentage of all seasoned equity offerings corrected in Corwin (35%) and Intintoli and Kahle (40%).

II. Univariate Results

Consistent with prior research, I find secondary offering announcement returns are negative on average in the full sample. The mean and median announcement returns over the

³³ Empirical results are similar without this exclusion.

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period [-1, +1] are -2.85% and -2.76%. I also find secondary offerings are underpriced relative to the prior closing price. The mean and median values of underpricing are negative and statistically significant across the full sample and all categories of sellers. I also estimate announcement returns over the periods [-1, 0]. The results are similar to those discussed above.

-Insert Table 6 here-

I begin with a one-way ANOVA test to test the null hypothesis that mean announcement returns and underpricing are identical across the three seller groups. This test allows me to proceed with individual comparisons between pairs of groups. Announcement returns over [-1, 1] and [-1, 0] vary significantly across the three groups, F(2, 365) = 22.7, p < .001, and F(2, 365) = 17.0, p < .001. The results are similar for underpricing, F(2, 365) = 13.1, p < .001. The ANOVA test shows the seller categories explain a significant portion of the flotation-cost variation between groups.³⁴ Thus, we reject the null hypothesis that the means are equal across all three groups for announcement returns and underpricing.

Next, I perform individual comparisons of flotation costs using standard t-tests and Wilcoxon rank sum tests for equality between pairs of sellers. Where the results are similar using the mean or median amount for announcement returns and underpricing, I only discuss the average values below. When announcement returns are similar in magnitude and difference, I only discuss the [-1, 1] window centered on the announcement date. The results indicate that flotation costs are significantly higher for Direct Monitor firms than Indirect Monitor firms. Abnormal returns over the three-day period centered on the secondary offering announcement are -4.63% for Direct Monitor firms. These returns are lower than the 0.58% return for Indirect Monitor firms. The difference between Direct and Indirect Monitor firm announcement returns is

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³⁴ Although announcement returns and underpricing are approximately normally distributed, I also compare flotation costs between the three seller categories using a Kruskal-Wallis rank test, which relaxes the Gaussian assumption. The results are similar for all measures of announcement returns and underpricing.

significantly different from zero at the 1% level (p < .001). Underpricing is also more severe for Direct Monitor offerings than Indirect Monitor offerings. The mean underpricing for Direct Monitor firms is 2.77% versus 1.40% for Indirect Monitor firms. The difference is also significant at the 1% level (p = .000). Collectively, univariate results indicate the flotation costs are more severe for Direct Monitor offerings than Indirect Monitor offerings.

Flotation costs are also higher for Insider offerings than Indirect Monitor offerings. The abnormal returns for Insider firms is -2.63%, which is 3.21% lower than Indirect Monitor firms. The difference is significantly different from zero with a p = .012. The announcement returns are similar for the window [-1, 0], but the mean and median values just miss marginal significance with p = 0.108 and 0.125 respectively. Underpricing is also 0.60% higher for Insider offerings compared to Indirect Monitor offerings. However, the difference just misses significance at the 10% level with p = 0.104. There are no statistical differences in median values of underpricing.

Although lower flotation costs for Indirect Monitor firms do not help us resolve differences in the information and monitoring hypotheses, they do help affirm the categorization of these sellers. Both hypotheses predict lower flotation costs for Indirect Monitor firms. The information hypothesis holds that less negative announcement returns and lower underpricing for Indirect Monitor offerings reflects poorer access to private information than Direct Monitor or Insider offerings. In this case, no negative information about future profit is conveyed through the secondary offering. The monitoring hypothesis predicts lower flotation costs reflect little change in value-enhancing monitoring activities following the reduction of holdings by an Indirect Monitor. The non-negative announcement returns indicate the other stockholders do not expect profits to drop from a reduction in monitoring by Indirect Monitors following a secondary offering. The non-negative announcement returns for Indirect Monitor offerings is also

surprising given the results in Table 4 indicate their offerings are the largest or of comparable size (in terms of proceeds and percentage of outstanding or tradable shares) among the three categories of sellers. This result suggests that secondary offerings announcement returns do not solely reflect a temporary liquidity shock from a large offering of shares.

In order to resolve differences in the information and monitoring hypotheses, I must compare the magnitude of flotation costs between Direct Monitor and Insider firms. The mean underpricing for Direct Monitor offerings is 2.00% lower than Insider offerings. The difference is statistically different from zero with p = .076. The difference in the median announcement returns between Direct Monitor and Insider offerings is of comparable size and significance. Underpricing is also more severe for Direct Monitor offerings than Insider offerings. The average underpricing for Direct Monitor offerings is 2.77%, which is 0.77% higher than mean underpricing for Insider offerings. The difference is significant at the 5% level (p = .047). When I examine the median value of underpricing, the difference between the two groups widens to 1.09% and is also significant at the 5% level (p = .021). Together, these results contradict the information hypothesis, which predicts flotation costs for Insiders should be of comparable size or larger than Direct Monitors. I interpret the larger flotation costs of Direct Monitor offerings as preliminary evidence of a reduction in monitoring. Since the announcement returns are the most negative for Direct Monitor offerings, markets view the reduction in ownership by Direct Monitors as a permanent reduction in stockholder value (assuming markets are efficient). Larger underpricing for secondary offerings by Direct Monitors may be interpreted as new investors requiring the greatest discount to compensate for reduced monitoring.

III. Variable Definitions

In this section, I present the independent variables used in the multivariate regression analysis of announcement returns and underpricing. I also discuss prior studies that employ these variables to explain announcement returns and underpricing. Variable labels are both capitalized and italicized for ease of identification. Variable definitions are also provided in Appendix C, and a correlation matrix is provided in Appendix D.

I include a number of variables to control for differences in offering characteristics. Offering size is measured in both actual and relative amounts. The actual offering size is the total gross proceeds (*PROCEEDS*), which is calculated as the number of shares offered multiplied by the offer price. Relative offer size (*OSIZE_O*) is the number of shares offered scaled by the number of shares outstanding listed in the prospectus. Multiple studies show underpricing is negatively related to offer size (Mikkelson and Partch, 1985; Kim, Palia and Saunders, 2010; Lee and Masulis, 2009). On the other hand, Altinkilic and Hansen (2003) find underpricing is positively related to relative offer size, and Zhang (2005) finds no relationship between the underpricing and offering size for firms that went public in the past three years.

The underwriting spread (*USPREAD*) is the difference between the offering price to investors and the purchase price to underwriters. This value is estimated as a percentage of the offering share price. Eckbo et al. (2007) note extant literature shows spreads are increasing in a security's total risk, and decreasing in offering size, firm size, and prior trading liquidity. Underwriter ranking (*URANK*) is the Carter and Manaster (1990) underwriter prestige scale obtained from Jay Ritter's website. The rankings are on a 0-9 scale based on the lead underwriter listed in SDC, where rankings of eight or h are considered high prestige. SE Kim et al. (2010) find

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³⁵ I also substitute underwriter rankings from Corwin and Schultz (2004). These rankings are available over 1997-2002 at http://nd.edu/~scorwin/papers/UWRANKS_9702.xls. The Corwin-Schultz rankings treat underwriter

a positive correlation between underwriting spreads and underpricing. Several studies show underpricing is negatively related to underwriter quality (Safieddine and Wilhelm, 1996; Altinkilic and Hansen, 2003; Kim and Shin, 2004; Mola and Loughran, 2004; Kim et al., 2010).

The Sarbanes-Oxley Act of 2002 (SOX) fundamentally altered the corporate governance landscape in the U.S with the goal of increasing managerial accountability and enhancing the role of the board of directors. ³⁶ The SOX indicator equals one if the offer date is on or after July 29, 2002, and otherwise zero. The mixed offering indicator (MIXED) equals one when primary and secondary shares are offered from the same prospectus. This study limits primary shares to less than 10% of the total shares offered. An equity-timing model posited by Korajczyk, Lucas and McDonald (1992) predicts clustering of equity issues after information releases, such as key financial reports. In order to proxy for secondary offering timing with respect to key information release dates, I measure the number of days between the announcement date and the end of the prior fiscal year (DISTFYE).

Prior literature finds association between a number of accounting- and market-based firm variables and the variation in announcement returns and underpricing for equity offerings. These include proxies for firm size, age, profitability, growth opportunities, cash flow, pre-offering performance, risk, information asymmetries, and ownership structure. All accounting variables are measured at the end of the fiscal year prior to the secondary offering. The measurement period for market-based variables is specified below.

Firm size is proxied by market capitalization (MVAL) and total assets (ASSETS). Market capitalization is measured at the end of the month prior to the offering. Total assets are the book

mergers and acquisitions as a new entity. Results are similar except Insider offerings employ less prestigious underwriters.

³⁶ There is some evidence that firms with large informational asymmetries responded to SOX by going private (Engel, Hayes, and Wang, 2007).

value of assets. Heron and Lie (2004) find secondary offering firms are larger than primary offering firms using either proxy for size. The natural log of each proxy of firm size (*LMVAL*, *LASSETS*) is calculated for multivariate regressions.

I estimate firm age in two ways. First, I calculated the distance since the initial public offering date (*DISTIPO*), which is defined as the number of years between the initial public offering and the secondary offering. Second, I follow Lougran and Ritter (2004) in estimating firm age as the number of years since incorporation (*DISTINC*). Corwin (2003) finds younger firms helped drive an increase in underpricing during the 1990s relative to the 1980s. This result implies a negative relationship between firm age and underpricing. The existing studies of underpricing or announcement returns and time since IPO are mixed. Intintoli and Kahle (2010) find underpricing for secondary offerings is lower for firms that recently went public, but Zhang (2005) finds announcement returns are more negative for secondary offerings of firms that conducted an IPO within the past 3 years.

I include three proxies for the amount of resources under control by secondary offering firms' managers: cash, free cash flow and payout ratios. The cash ratio (*CASH*) is the cash level reported on the balance sheet scaled by total assets. Free cash flow (*FCF*) is calculated as the operating cash flow less preferred and common dividends divided by the book value of assets. The dividend payout ratio (*PAYOUT*) is the ratio of dividends paid to net income. Agency costs are higher for firms with greater levels of free cash flow and lower payout ratios (Jensen, 1986). McLaughlin, Safieddine and Vasudevan (1996) maintain that documented long-term stock underperformance after a seasoned equity offering is the result of the free cash flow problem.³⁷ In the setting of a secondary offering, if blockholders reduce their incentives to monitor, this may

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³⁷ See Loughran and Ritter (1995), Loughran and Ritter (1997), and Speiss and Affleck-Graves (1995) for studies of long-term stock returns after seasoned equity offerings.

exacerbate any free cash flow problems within the firm. Harford, Mansi and Maxwell (2008) find firms with poor monitoring have smaller cash reserves, and choose to repurchase shares instead of increasing dividend payouts. Thus, the marginal return of monitoring may be higher for firms with greater free cash flow and lower payouts.

I use accounting and market measures of firm performance. Firm profitability is calculated as return on assets (ROA), or the ratio of operating income before depreciation scaled by assets. Heron and Lie (2004) find operating performance is higher for secondary offerings compared to mixed and primary offerings. The change in earnings per share ($\triangle EPS$) is calculated as the percentage change in operating earnings per share over the prior fiscal year to offering. 38 I also create an indicator variable (EPSUP) that takes the value of one if the firm reported increased annual earnings for the fiscal year prior to the offering. Heron and Lie (2004) find operating performance increases for primary, mixed, and secondary offerings prior to the offering. However, only primary and mixed offerings see subsequent performance declines in the year following the offering. Managers wishing to sell their personal shares have incentive to positively influence their stock price over the short-term (Heron and Lie, 2004). I measure stock runup (RUNUP) as the buy-and-hold abnormal returns for the secondary offering firm over the 90 trading days ending five days prior to the announcement. The abnormal return is the raw buyand-hold return less the buy-and-hold return on the CRSP equal-weighted index. Heron and Lie (2004) find mean and median stock runup over the 250 days prior to the offering announcement is higher for primary and mixed offerings versus secondary offerings. They interpret this as evidence that firms' managers better opportunistically time equity issues than outsiders.

³⁸ Substituting sales growth for earnings growth in regressions yields similar results.

My proxy for growth opportunities (*BKMK*) is the ratio of book value of equity to market value of equity. I use this specification for growth opportunities because near-zero or negative book values present in this sample result in poor performance of the market-to-book ratio (Hertzel and Smith, 1993). For multivariate tests, I take the natural log of BKMK (LBKMK). This value is set to the first percentile value for observations with a negative book value of equity. Prior evidence shows underpricing is more severe for firms with higher growth opportunities (Corwin, 2003). Monitoring costs are also larger for firms with higher growth opportunities because growth projects are difficult to evaluate. Their boards have fewer outside directors, and those appointed tend to possess specialized expertise in specific high-growth areas (Bhagat and Black, 1999; Agrawal and Knoeber, 2001; Lehn, Patro and Zhao, 2004; Boone, Field, Karpoff and Raheja, 2007).

I also control for firm complexity and risk. Research and Development Intensity (*RDINT*) is the ratio of R&D expenditures to the book value of assets. R&D intensity is set to zero for missing observations in Compustat. The nature of R&D intensity may reflect board and ownership structure differences. Coles, Daniel and Naveen (2008) find firms with high R&D expenditures have more insider representation on the board because of the need for firm specific knowledge. Firm risk (*RETVOL*) is the standard deviation of daily excess returns, relative to the CRSP equal-weighted index, over the 90 trading days ending five days prior to the secondary offering announcement. ³⁹ Eckbo et al. (2007) note return volatility proxies for the ex-ante risk that the offering is overpriced. Extant literature shows underpricing is positively associated with pre-offering return volatility (Bhagat, Marr and Thompson, 1985; Eckbo and Masulis, 1992).

 $^{^{39}}$ I also compute *RETVOL* using the CRSP value-weighted index, and over the 250 and 180 trading days ending five days prior to the announcement. The results are similar.

Flotation costs are generally higher in offerings of firms with greater levels of information asymmetry (Eckbo et al., 2007; Lee and Masulis, 2009). I capture information asymmetry using two measures. The bid-ask spread (*BIDASK*) is the average difference between the closing ask and bid price scaled by the bid-ask midpoint for the secondary offering firm during the 90 days prior to the offering, from CRSP. Butler, Grullon and Weston (2005) find underpricing is increasing in the bid-ask spread. Second, I measure the number of shares traded during the fiscal year prior to the offering, or the aggregate trading volume (*TRADEVOL*), from Compustat. I take the natural log of *TRADEVOL* in multivariate regressions (*LTRADEVOL*). Butler et al. (2005) find underpricing is negatively related to trading volume and issuer share turnover. I also control for the total number of stockholders (*OWNERS*), from Compustat. I use an indicator variable for firms listed on the New York Stock Exchange (*NYSE*). Prior literature shows underpricing is lower for firms listed on the NYSE (Habib and Ljungqvist, 2001; Corwin, 2003; Altinkilic and Hansen, 2003).

The total number of shares outstanding at the time of the offering (SHROUT), are obtained from the prospectus. The portion of a firm's outstanding shares of common stock held by affiliates has restrictions from being freely traded with public stockholders. Following Intintoli and Kahle (2010), I define float (FLOAT) as the number of shares outstanding that are available for public trading. This is calculated as the number of shares outstanding prior to the offering x (1 – number of shares held by named executives, directors and blockholders). The float has been show to be positively related to underpricing for secondary offerings (Eckbo and Masulis, 1992), especially for low trading volume firms (Intintoli and Kahle, 2010). For multivariate results, I measure the change in the float ($\Delta FLOAT$) around the secondary offering. I

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⁴⁰ The results are similar when I compute *BIDASK* over the 250 and 180 trading days ending five days prior to the announcement.

also re-estimate relative offer size using float (OSIZE_F) in place of shares outstanding (OSIZE_O)

I also include controls related to the board of directors. Board size is the total number of directors (*NUMDIR*). Holderness (2009) notes blockholders often have designated representatives serving as directors. Monitoring costs may increase for blockholders without board representation (Demsetz, 1986), and some evidence shows designated directors are associated with better governed firms. The number of designated directors (*NUMDESIG*) is identified from the disclosure of stockholder agreements within the secondary offering prospectus. ⁴¹ I also capture the percentage of firms with at least one designated director (*DESIG*). I include an indicator (*CEOISCOB*) that equals one if the CEO is Chairman of the Board. Brickley, Coles and Jarrell (1997) find firms combining the role of CEO and Chairman of the Board increase agency costs. The potential benefits of monitoring may be higher for these firms.

Finally, I use a number of ownership characteristics discussed in Table 4 as independent variables. For the primary regression specifications, I obtain the number of blockholders (*NUMBLOCK*) for each secondary offering firm from the prospectus. I also obtain the percentage of outstanding shares held by blockholders after the offering (*BLOCKOWN_POST*). Alternative ownership specifications are discussed blow.

IV. Multivariate Design and Results

A. Multivariate Design

For announcement returns and underpricing, I conduct a multivariate regression using an OLS model with variations of the following specification:

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⁴¹ I only consider a director to be designated if they are associated with a current blockholder.

$$\{ARET, UPRICE\} = \beta_0 + \beta_1 SELLER + \beta_2 LASSETS + \beta_3 RUNUP + \beta_4 RETVOL + \beta_5 OSIZE_F$$

$$+ \beta_6 \Delta FLOAT + \beta_7 BIDASK + \beta_8 LBKMK + \beta_9 DISTFYE + \beta_{10} NYSE$$

$$+ \beta_{11} FCF + \beta_{12} DISTIPO + \beta_{13} USPREAD + \beta_{14} BHOWN$$

$$+ FF30 \text{ indicators} + \text{year indicators} + \epsilon$$

$$(1)$$

The coefficient of main interest is β_L To explain the differences in underpricing among seller categories, I replace SELLER with indicator variables for *DIRECT*, *INDIRECT* and *INSIDER*. A summary of predictions under the information and monitoring hypotheses are presented in Table 1. For all models, I calculate robust standard errors to correct for heteroskedasticity. ⁴² In addition to year indicators, I also include industry indicators using Fama-French 30 industries (*FF30*) to control for unobserved heterogeneity (Gormley and Matsa, 2012). ⁴³ I also cluster errors by firm to account for possible cross-correlation among error terms. ⁴⁴

I use the following alternative specifications. The alternative variables are defined in Appendix C. To measure firm size, I substitute the natural log of market capitalization (*LMVAL*). I replace buy-and-hold abnormal returns with buy-and-hold raw returns or with return on assets. I alternate offer size relative to float with offer size relative to outstanding shares and gross proceeds. I substitute the float percentage for change in float. Because of concerns for potential multicollinearity, I do not include gross proceeds in the same regression with float or firm size. I substitute the log of trading volume and the log of the number of owners for bid-ask spreads. I

⁴² I find evidence of non-constant variance in the residuals. OLS assumes homogeneity in the variance of the residuals (i.e., homoscedasticity). I test for heteroskedasticity using the Breusch-Pagan test in Stata using the command "estat hettest" immediately after running the regression. Under this test, the null hypothesis is constant variance (homoskedasticity). I find p-values <0.001, so I must correct for heteroskedasticity with robust standard errors in regressions (see Wooldridge, 2002).

⁴³ In controlling for unobserved factors potentially correlated with the variables of interest, Gormley and Matsa (2012) argue that employing industry indicator variables is a more appropriate treatment than demeaning or taking the industry average, as the latter provides inconsistent coefficients.

⁴⁴ Estimating standard errors for models containing multiple observations of the same firm are potentially biased because the estimates may not account for the residual dependence created by the firm effect (Peterson, 2009; Gow, Ormazabal and Taylor, 2010). Because the sample includes repeated secondary offerings for the same firm, I cluster at the firm level to account for this cross-correlation.

also conduct regressions with change in operating earnings and an indicator for an increase in EPS in place of market runup. I also include an indicator for firms with a CEO serving as Chairperson. I substitute *SOX* for year indicators and use alternative Fama-French industry indicators. I also include underwriter prestige rankings. Finally, I exclude offerings for firms in the retail and automobile industries to ensure the results are not driven by disproportionate representation of Direct Monitors in these industries. I discuss any qualitative differences from alternative model specifications below.

B. Multivariate Results

Table 7 reports the results of eight OLS regressions in which the dependent variable is the announcement returns around the secondary offering. Models 1-4 report coefficients and p-values in parentheses for the event window [-1, 1]. Regression results for the tighter event window [-1,0] are presented in Models 5-8.

-Insert Table 7 here-

Model 1 of Table 7 shows secondary offerings by Direct Monitors are negatively and significantly related to announcement returns (p < .001) even when controlling for firm and ownership characteristics. Firms with greater free cash flow, where agency costs may be higher, also experience more negative announcement returns in regressions with a Direct Monitor indicator. On the other hand, the relationship between announcement returns and secondary offerings by Indirect Monitors is positive and significant (p < 0.001). Although I find no statistically significant relationship between Insider offerings and announcement returns in Model 3, the results in Model 4 show this relationship is negative when including indicators for

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⁴⁵ Results are identical substituting dividend payout ratio for free cash flow.

both Direct Monitors and Insiders. 46 Model 4 also has the best explanatory power (adjusted R² = .132). 47 The Direct Monitor indicator remains positive in Model 4 when I include both indicators for Direct Monitors and Insiders. However, the coefficient on Direct Monitors is larger (-0.068) compared to Insiders (-0.051). The results are similar using the event window [-1, 0]. The negative relationship between Direct Monitors and announcement returns remains negative and significant in Models 5 and 7 (p < .001), while the coefficient on Insider offerings is not significant under the tighter return window. Growth opportunities are negatively and significantly related to announcement returns under the tighter event window. This relationship is consistent with prior research that finds monitoring costs are larger for firms with higher growth opportunities because growth projects are difficult to evaluate (e.g., Boone et al., 2007). 48

Overall, these results are consistent with the monitoring hypothesis explanation. Announcement returns for reductions in ownership by close, Direct Monitors are more negative than reductions by passive, Indirect Monitors. Moreover, the reduction in stockholder value is larger for Direct Monitor offerings than Insider offerings even when controlling for other factors related to announcement returns. This result cannot be fully explained under an information hypothesis of flotation costs.

Table 8 reports the results of four OLS regressions in which the dependent variable is underpricing (i.e., close-to-offer returns). Model 1 shows underpricing is positively and significantly related to secondary offerings by Direct Monitors (p < .001). Consistent with prior studies of underpricing, firms listing on the NYSE and those paying larger underwriting spreads experience smaller underpricing (e.g., Eckbo et al., 2007). The boards of NYSE-listed firms have

⁴⁶ The Indirect Monitor indicator is omitted in Models 4 and 8 to avoid perfect multicollinearity. The coefficients on Direct Monitors remain negative and significant when I substitute Indirect Monitors for Insiders in Models 4 and 8.

⁴⁷ Foldo at al. (2007) note that most repressions of equity offering appropriate testimes have explanatory power.

⁴⁷ Eckbo et al. (2007) note that most regressions of equity offering announcement returns have explanatory power under 10%.

⁴⁸ Regression analysis using alternative model specifications discussed in Subsection A yields similar results.

different requirements for the makeup of key committees and definitions of independence than the boards of non-NYSE listed firms (Duchin, Matsusaka and Ozbas, 2010). These additional requirements may serve as external monitoring mechanisms around secondary offerings and mitigate the reduction in monitoring for any offering.

-Insert Table 8 here-

Model 2 of Table 8 shows underpricing is less severe for secondary offerings by Indirect Monitor firms. The coefficient on the Indirect Monitor indicator is negative and significant (p < .001). Although I find no statistically significant relationship between underpricing and secondary offerings by Insiders, when I include Insiders and Direct Monitors in the same regression in Model 4, the coefficient on Insiders becomes positive and marginally significant (p = .073). Nevertheless, the coefficient on Direct Monitors in Model 4 is larger (0.016) than Insiders (0.010) and significant at the 1% level (p < .001). Thus, even when controlling for factors related to secondary offering underpricing, Direct Monitor firms experience higher underpricing of secondary offerings than Indirect Monitor and Insider firms.

Similar to regressions with announcement returns as the dependent variable, the models of underpricing support the monitoring hypothesis. Secondary offerings with Direct Monitors as the majority seller are associated with larger underpricing than those by other sellers. These results indicate investors in the secondary offering require compensation for the expected reduction in firm value due to a reduction in ownership incentives for active monitors.⁵⁰

Taken together, the univariate and multivariate results in Tables 6 - 8 indicate secondary offerings by Direct Monitors experience larger flotation costs than those by Indirect Monitors.

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⁴⁹ The coefficient on Direct Monitors remains positive and significant when I substitute Indirect Monitors for Insiders in Models 4 and 8.

⁵⁰ Since Direct Monitors typically make long-term investments, they may be willing to accept larger underpricing, as they would consider the profit of their full investment over time and their initial investment in the firm was most likely underpriced (e.g., Wruck, 1989).

New and existing investors value the close oversight of Direct Monitors more than the passive monitoring of Indirect Monitors. Furthermore, the significantly larger coefficients in multiple regressions suggest flotation costs for Direct Monitor offerings are greater than for Insider offerings. This is not consistent with an information hypothesis. Overall, the announcement returns and underpricing results for Direct Monitor offerings support the monitoring hypothesis.

V. Other Tests

In this section, I provide additional analysis of secondary offerings. In Subsection A, I look at post-offering operating performance to see if sellers with potential private information accurately predict near-term operating performance. In Subsection B, I look at changes in the value of excess cash holdings. In Subsection C, I examine a wider announcement return window and discuss implications with respect to stock liquidity. In Subsection D, I look at key pre- and post-offering ownership thresholds and their relationship with seller identity and flotation costs. In Subsection E, I look at potential industry clustering by Direct Monitors.

A. Post-Offering Operational Performance

To further discern between the information and monitoring hypothesis, I examine the offering firm's operational performance following a secondary offering. If the secondary offering seller is trading based on private information regarding future declines in profitability, we might expect a subsequent decline in the firm's near-term operational performance. Clarke et al. (2004) find firms of secondary sellers possessing private information experience lower post-offering operating and market performance than firms of uninformed sellers.

⁵¹ Loughran and Ritter (1997) document operating performance declines following primary and mixed seasoned equity offerings.

In order to proxy for near-term operating performance, I examine post-offering earnings releases to see if sellers are exploiting a "window of opportunity" by selling shares in firms whose subsequent earnings per share (EPS) fall short of the consensus analyst forecast. I compare the realized EPS at the end of the secondary offering quarter and fiscal year to the consensus analyst forecast at the time of the offering. Analyst and earnings data are obtained from the I/B/E/S Historical Earnings Estimates Database. Analyst consensus forecast is the median analyst forecast of EPS at the end of the month prior to the offering. I create an indicator variable that equals one when the realized EPS is less than the median analyst benchmark at the time of the secondary offering. I then compare the frequency of missed EPS between each pair of seller categories using a standard t-test of differences. I also examine the rate of earnings misses for the same forecast periods of the prior year. This allows me to establish a base level of earnings misses within each seller group.

If Direct Monitor offerings are informed, the rate of EPS misses should be no smaller than those of less-informed Indirect Monitors. The results are presented in Table 9.

-Insert Table 9 here-

Panel A (B) of Table 9 presents the earnings misses for quarterly (annual) EPS. Firms with secondary offerings by Direct Monitors do not miss quarterly and annual earnings during the offering period more frequently than firms with secondary offerings by Indirect Monitors. In fact, Indirect Monitor firms miss annual earnings more frequently than Direct Monitor firms (33.6% vs. 20.6%). The difference is significant at the 5% level (p = .012).

There is some evidence that Indirect Monitor firms miss annual EPS estimates at a higher rate than Insider firms. However, the rate of quarterly or annual earnings misses during the offering year is not statistically different for Direct Monitor firms versus Insider firms. For

Direct Monitor firms, the rate of quarterly and annual earnings misses actually declines from the prior year. For example, the percentage of Direct Monitor firms missing the consensus annual EPS forecasts declines from almost 35% to just fewer than 21%. The difference is significant at the 1% level (p = .003). In untabulated results, I also examine forecasts for the subsequent two quarters and following fiscal year. The results are similar except Insiders see an increase in the percentage of annual earnings misses for the fiscal year after the offering.

To ensure differences in earnings misses are not driven by differences in analyst following, I report the number of analyst estimates for each period and subgroup in Panel C. The mean number of quarterly (annual) estimates at the time of the issue is 6.8 (7.2). There are no statistical differences between each selling subgroup. I also fail to reject the null hypothesis of equality in the mean number of analyst estimates for all seller subgroups in an unreported one-way ANOVA test. Thus, the absence of increased earnings misses for Direct Monitor firms does not appear to be driven by analyst following. In fact, there is some evidence that analyst following increases from the prior year. Quarterly EPS estimates increase from 5.8 to 6.7 forecasts, and the difference is significant at the 10% level (p = .059).

The post-secondary offering operational results in Table 9 do not support an information hypothesis. Earnings misses are most frequent for Indirect Monitor firms who have the least amount of access to private information between the seller categories. If Direct Monitors are attempting to exploit a "window of opportunity" in selling secondary shares before subsequent performance declines, they are no better at predicting these outcomes than less-informed Indirect Monitors. Moreover, firms with secondary offerings by Direct Monitors less frequently miss analyst earnings estimates compared to the year prior to the offering.

B. Value of Excessive Cash Holdings

If secondary offerings by Direct Monitors result in a decrease in monitoring, entrenched managers may increase their use of firm resources for private benefits (Jensen, 1986). One potentially vulnerable source of firm resources is cash reserves. Dittmar and Mahrt-Smith (2007) empirically demonstrate that the value of excess cash holdings is lower for firms with weak governance. Following the framework of Faulkender and Wang (2006) and Dittmar and Mahrt-Smith (2007), I examine changes in the marginal value of unexpected cash holdings for secondary offering firms where Direct Monitors reduce holdings through a secondary offering. This regression is specified in equation (2) of Dittmar and Mahrt-Smith (p. 616). For the sake of brevity, I do not present the formal equation or report results from these regressions in a Table.

I find no changes in the value of excess cash holdings for the two years following a secondary offering by a Direct Monitor compared to the two years ending with the offering year. I also create a control sample based on all firms with the same two-digit SIC codes as Direct Monitor firms. I then conduct a difference-in-difference test for the same periods. Again, I see no statistically significant change in the value of unexpected cash holdings. I also examine changes in cash reserves around the secondary offering. I find no evidence that managers are spending down cash reserves following secondary offerings. Cash and cash equivalents as a percentage of total assets are statistically similar during the three fiscal years centered on the secondary offering.

Although these results do not provide additional support for the monitoring hypothesis, it is possible that differences between the sample in this paper and the firms examined by Dittmar and Mahrt-Smith are preventing me from finding similar cross-sectional variation in the properties of cash holdings. For example, the mean asset size for Direct Monitor firms is

approximately one half of the firms in Dittmar and Mahrt-Smith. In addition to being small firms, Direct Monitor firms also have a relatively short trading history and may be characterized as high growth firms. Although the exit or reduction in holdings of a Direct Monitor may exacerbate agency problems, these problems may not necessarily impact the use of excess cash for small firms with high growth opportunities. These firms likely need cash to fund new projects or expansion so managers may retain cash to fund these investments. In this case, the Direct Monitors may oversee more than just spending. Their advisory role may have ensured that firms were selecting good projects or acquisitions (e.g., Chen et al., 2007), exposing themselves to adequate risk, and avoiding myopic investment behavior (e.g., Bushee, 1998).

C. Temporary Changes to Liquidity

Because secondary offerings are large equity transactions, it is possible that the negative announcement returns and underpricing reflect a temporary liquidity shock. Many studies have examined announcement returns (e.g., Mikkelson and Partch, 1985) and underpricing (e.g., Corwin, 2003) around seasoned equity offerings in the framework of a price pressure hypothesis. ⁵² Under the price pressure hypothesis, new shares shift the aggregate supply of shares, and price declines along downward sloping aggregate demand curves. However, this hypothesis may be less beneficial in explaining secondary offering flotation costs since shifts in the aggregate supply of shares for secondary offerings differ from those of primary offerings; no new shares are issued in a secondary offering. On the other hand, Intintoli and Kahle (2010) argue that temporary price pressure may still exist in secondary offerings because the offering

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⁵² Corwin (2003) also cites a number of studies that look at liquidity concessions around block trades.

may represent a shock to the supply of *tradable* shares.⁵³ Therefore, I extend my analysis to consider the implications of the price pressure hypothesis.

Previously discussed announcement returns show secondary offerings by Direct Monitors have the most negative abnormal returns around the windows [-1, +1] and [-1, 0]. These differences do not appear to be driven by offer size differences. ⁵⁴ Nevertheless, if negative announcement returns may be explained by a temporary shock to a stock's liquidity, then we should find evidence of a short-term price reversal immediately following equity offerings (Altinkilic and Hansen, 2005; Eckbo et al., 2007). Altinkilic and Hansen (2005) note if no price reversal is found, then the negative announcement returns cannot solely be explained by a price pressure hypothesis. To determine if announcement returns may be explained by temporary liquidity shocks, I examine a broader window around the announcement date. Figure 4 displays the mean cumulative announcement returns during the 11-day period [-5, 5] centered on the announcement date.

-Insert Figure 4 here-

As the flat line indicates during the post-offering period, I find no evidence of a price reversal for secondary offerings by Direct Monitors or Insiders. For Direct Monitor offerings, abnormal returns begin to drift slightly downward beginning three days prior to the announcement of a secondary offering. However, abnormal returns do not improve during the five trading days following the offering. For the total event window [-5,5], the cumulative announcement return is -4.91% for Direct Monitors is significant at the 1% level (p < .001). Insiders see a slight increase on day two following the offering, but do not continue a reversal.

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⁵³ In this case, underpricing would be a "sweetener" for new investors to wait on price reversal following the temporary shock (Scholes, 1972).

Table 5 shows offer sizes by Direct Monitors are smaller than those by Indirect Monitors. Median proceeds for Direct Monitors are larger than Insiders, but the difference in means is not significantly different from zero.

The cumulative announcement return for Insiders over [-5, 5] is -4.47%, which is significantly different from zero at the 5% level (p = .027). For Indirect Monitor offerings, the abnormal returns drifts slightly downward prior to the offering and appears to rebound during the post-offering period. However, the abnormal returns of -0.80% for the [-5, 5] window are not statistically different from zero for Indirect Monitors (p = .904).

Although I do not find evidence of temporary price pressure for Insiders and Direct Monitors, there is the potential that the price reversal could take longer than five business days. Nevertheless, even when I extend the event window to [-10, 10] around the announcement date, I find no evidence of a post-offer price reversal (not tabulated). Results are also similar using the issue date in SDC.

Overall, I find no evidence of price reversals following secondary offerings that would imply the negative announcement returns are merely transitory shocks in liquidity that may be explained as temporary price pressure. The cumulative announcement returns are negative and both economically and statistically significant for Direct Monitor and Insider offerings. The returns are not significantly different from zero for Indirect Monitor offerings. The ability for markets to absorb large secondary offerings may highlight the importance of the book building process and other stabilizing activities employed by underwriters (Benveniste and Spindt, 1989; Hanley, Kumar and Seguin, 1993).

I also look at the offer price relative to the stock's opening price and closing price on the offering date. These results are not tabulated. Unlike underpricing, which compares the offer price relative to the previous day's close, these measures of return are meant to associate the secondary offering discount to the market price once the trade has consummated. Overall, I find the discount is greater for Indirect Monitor firms relative to the offer day price than Insider or

Direct Monitor firms. For example, the offer price represents a 1.9% discount relative to the closing price on the offering date for the median Indirect Monitor firms. The median discount to offer day closing is 1.1% for Direct Monitor offerings and 0.8% for Insider offerings. Although Indirect Monitor firms see less underpricing than Direct Monitor firms, the stock price increases on the offering day as it approaches the new equilibrium. This may indicate some liquidity concessions for Indirect Monitor offerings. However, the offer price for firms with majority offerings by Direct Monitors and Insiders more accurately reflect the true value given the new ownership structure. For these offerings, there is little reversal in the stock price and the closing price is much nearer to the offer price on the offering day. These results reaffirm that the discount is valid for Direct Monitor firms because it is taking into account the decrease in firm value from reduced incentives to monitor.

D. Ownership Concentration

Wruck (1989) finds a non-monotonic, sawtooth-patterned relationship between blockholder ownership concentration and firm value following private placements of equity. Morck et al. (1988) find similar patterns in a study of management and director ownership concentration. Both papers explain the results in the broader context of monitoring and incentives alignment. As ownership concentration increases, firm value improves as Insiders share a greater portion of agency costs, which encourages them to not waste firm resources. Similarly, blockholders and directors have larger incentives to monitor as their ownership increases because they share in the rewards of monitoring through residual equity ownership (Jensen and Meckling, 1976). However, firm value is diminished if higher levels of ownership prevent the disciplining effect of takeovers or promotes misuse of firm resources (Fama and

Jensen, 1983). Because these competing forces are not mutually exclusive, firm value may vary at different levels of ownership concentration. Wruck (1989) finds that firm value is generally increasing in ownership concentration over 0% to 5% and above 25%. However, value is decreasing in ownership concentration over the range 5-25%, where managers and monitors become entrenched.

Detailed ownership data allow me to directly examine secondary offerings that operate within or across these thresholds. These thresholds are also consistent with key designated director ownership levels. Some stockholder agreements in my sample remove board representation if the blockholder reduces her position below 25%. I examine the relationship between announcement returns and underpricing using the resulting ownership concentration from a secondary offering.

-Insert Table 10 here-

Table 10 displays the relationship between the majority seller and flotation costs for the full sample and partitioned by seller identity. In this table, pre-offering ownership is labeled "PRE"; post-offering ownership is labeled "POST". I create three categories examining the relationship between offering concentration around the secondary offering. These are: (1) sellers that own fewer than 5% of outstanding shares after the secondary offering (POST); (2) sellers that own 5% to 25% of outstanding shares before (PRE) and after (POST) the secondary offering; and (3) sellers that owned greater than 25% of shares prior to the offering (PRE) and retain greater than 5% ownership after the offering (POST).

For Direct Monitor firms, ownership concentration is negatively related to announcement returns. Direct Monitor offering announcement returns are the lowest when the pre-offering level exceeds 25%. The strongly negative returns above this level may reflect both diminished

incentives to monitor and the ability to monitor if the Direct Monitor loses board access. The negative returns may also reflect the intention of a Direct Monitor to completely exit the investment in the future. Returns are also largely negative in the 5-25% ownership range, which supports the notion that these blockholders are viewed as monitors that enhance firm value.

Only secondary offerings that maintain ownership within the 5-25% range are associated with significantly negative returns for Insider firms. However, the sample size is low so it is difficult to make strong inferences. Literature shows that ownership concentration in this range is high enough to deter takeovers, but not sufficiently high to align interests. Although this is consistent with the monitoring hypothesis, managers may also be selling shares ahead of negative information, but retain enough ownership to prevent takeovers. Announcement returns around Indirect Monitor offerings are not statistically different from zero for any of the three categories of ownership concentration.

E. Industry Clustering

The industry distribution of secondary offerings presented in Table 3 indicates Direct Monitor representation in the retail and automobile industries may be disproportionately high. To ensure that potential clustering by Direct Monitors in these industries are not driving the empirical results, I exclude observations in these industries and re-estimate the univariate and multivariate analysis. Excluding these offerings, the mean announcement return for the event windows [-1, 1] and [-1, 0] increases from -4.63% and -3.77% to -4.95% and -3.86%, respectively. Underpricing also increases from 2.77% to 2.86%. These values remain significant at the 1% level (p < .001). The multivariate results are also similar. The coefficients on the Direct Monitor indicator is nearly identical in all specifications and remains significant at the 1% level

(p <.001). Therefore, it does not appear that potential industry clustering by Direct Monitors in the retail and automobile industries is driving my results.

Chapter 6

Conclusion

A recurring question in the blockholder literature is which large stockholders are valuable. I provide evidence towards answering this question in the context of a secondary offering. I find the variation in flotation costs of secondary offerings by blockholders is associated with the expectations of changes in future monitoring. Prior research has not focused on potential changes in monitoring in explaining the economically and statistically significant decline in stockholder wealth around secondary offering announcements. Previous studies have treated blockholders as a homogeneous group or grouped them in ways that do not reflect monitoring tendencies. In this paper, I utilize hand-collected ownership data to partition sellers based on heterogeneities consistent with the propensity to provide value-added monitoring. I find secondary offerings by the closest monitors of the firm are met with the greatest negative announcement returns and largest underpricing on average. These flotation costs are significantly larger than those for offerings by passive monitors even when controlling for a number of offering, firm and board characteristics. These results support a monitoring hypothesis that explains flotation costs as reflecting changes in expected monitoring.

An alternative explanation of the differences in flotation costs frequently explored in the equity offering literature is information asymmetry. Close monitors have access to management and information through significant board representation. This representation likely gives them an informational advantage over other non-insiders regarding future firm performance. If close monitors possess negative private information about future firm profits, the secondary offering may reflect a desire to capture a "window of opportunity" by selling while prices are high. Thus,

the decline in market value at the time of the offering may reflect a conveyance of negative private information.

I do not find results that support an information hypothesis. The level of flotation costs for secondary offerings by close monitors are greater than those for insiders where information advantages are not likely to exist. Moreover, I find no evidence of a subsequent decline in near-term operating performance that may be explained by information frictions. I find firms of secondary offerings by close monitors have the lowest rate of near-term earnings misses with regards to consensus analyst forecasts at the time of the offering. I also find no evidence of price reversals that would imply the negative announcement returns for close monitors reflect temporary changes in liquidity. I am unable to link changes in ownership by close monitors with changes in the value of excess cash reserves. However, many of my sample firms are small and young with significant growth opportunities. These firms may not generate excess cash as it is used to fund growth projects. I argue that the loss of a close monitor and advisor likely impacts the firm's selection of investment projects and risk exposure rather than misuse or spending of cash reserves.

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Appendices

Appendix A: Control and Restricted Securities

The SEC has specific rules regarding the sales of restricted and control securities. Control securities are those held by an affiliate of an issuer. Rule 144 of the Securities Act defines an affiliate of an issuer as "a person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common controls with, such issuer." Thus, executive officers, directors, and large stockholders may be considered affiliates.

Restricted securities are those securities purchased in a non-registered transaction or a chain of non-registered transactions from an issuer or affiliate. For example, securities acquired in a private placement transaction exempted from registration under Section 4(2) of the Securities Act would constitute restricted securities under this rule. Restricted securities also would include equity securities received as compensation for professional services or through employee stock benefit plans in an offering exempt from registration under Rule 701 of the Securities Act. In addition to the legal restriction on resale of restricted securities imposed by the Securities Act, issuers of securities may impose contractual restriction on the resale of securities acquired in primary offerings. These contractual restrictions may take the form of covenants commonly referred to as "tag-along rights", "drag-along rights", rights of first refusal, and rights of first offer.

There are three methods for reselling restricted and control securities: 1) sell publicly into the market with a "safe harbor" under Rule 144; 2) private sales; or 3) registered secondary offerings. Stockholders may sell publicly into the market under Rule 144, which gives them a "safe harbor" exemption under Section 4(1) of the Securities Act. However, a number of conditions must be met (depending on the securities being offered, with regard to the amount, timing, and holding period). These rules have been revised twice, once in 1997 and again in

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⁵⁵ See 17 C.F.R. § 230.144(a)(1) (2009).

2007, each time lessening the restrictions to make open market transactions easier. The second method for reselling restricted and control securities is private resale. Although these offerings are technically exempt from registration under Section 4(1) offerings of the Securities Act, they are referred to colloquially as Section 4(1-1/2) offerings since they contain elements of Sections 4(1) and 4(2). This registration exemption developed out of case law and requires the purchasing investor meet thresholds to be considered "sophisticated". The third method for reselling restricted or control securities is through a registered offering. These are the secondary offerings examined in this paper where secondary shares are sold from a prospectus registered with the SEC. Registration rights may allow sellers to demand that the firm register shares of stock for resale ("demand rights"), or participate in a specified registration of common stock by the company ("piggyback rights"). Even if no registration rights exist, the issuer may offer to register a portion of shares for a stockholder in order to facilitate a proposed sale and provide a more liquid market for its stock.

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⁵⁶ See Schneider (1988), Campbell (1995) and Loss, Seligman and Paredes (2003) for discussions of private resales of restricted and control securities.

Appendix B: Ownership Assumptions

A number of ownership assumptions were made in accounting for hand-collected ownership data from prospectuses. As a general matter, these assumptions are consistent with the concept of "beneficial ownership" defined in Rule 13d-3 of the Securities Exchange Act of 1934. The following is a list of assumptions regarding ownership of common stock:

- 1. Entities under common management are considered a single stockholder.
- 2. Stock (a) beneficially owned by a director's or named executive officer's spouse or children, or (b) in a revocable or non-revocable trust or in a limited partnership in whom the executive officer or director has sole investment or voting authority is considered owned by the officer or director.
- 3. Investment advisors "own" shares if they have sole investment or voting power over these shares.
- 4. A stockholder owns all shares of common stock that may be acquired upon the exercise of stock options, warrants, or share purchase rights that are currently exercisable or exercisable within 60 days.
- 5. Designated directors and directors who are managing partners or otherwise have a controlling interest in an entity are considered to own those shares.

Appendix C: Variable Definitions

Dependent Variables

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UPRICE = underpricing is calculated as - 1 x [(offer price / closing price prior to offer) - 1].
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ARET = announcement return is the cumulative abnormal return using the CRSP equal-weighted for the periods [-1, +1] and [-1, 0] around the secondary offering announcement date.

Offering Characteristics

DISTFYE = number of calendar days between the secondary offering and prior fiscal year end.

MIXED = 1 if the offering includes primary and secondary shares; and otherwise 0.

OSIZE_O = total shares offered divided by the shares outstanding prior to the offering.

 $OSIZE_F$ = total shares offered divided by the tradable shares (FLOAT).

PROCEEDS = gross proceeds before underwriting discounts (in \$000,000s) for the secondary offering.

SOX = 1 if the issue date is on or after July 29, 2002, and otherwise 0.

USPREAD = underpricing spread is calculated as -1 x [(net offer price per share / gross offer price per share] - 1).

URANK = the Carter-Manaster underwriter reputation ranking on a 0-9 scale.

Firm Characteristics

ASSETS = total assets at the end of fiscal year prior to the secondary offering.

BIDASK = average closing bid-ask spread scaled by price over the 90 trading days ending 5 days prior to the offering.

BHOWN = percentage of outstanding shares held by 5% stockholders immediately following the secondary offering.

BKMK = ratio of book value of equity to market value of equity to at the end of prior fiscal year to offering.

CASH = ratio of cash to book value of assets at end of prior fiscal year to offering.

DISTINC = number of calendar years between the firm's incorporation year and the secondary offering.

DISTIPO = number of calendar years between the IPO and secondary offering.

 $\triangle EPS$ = operating earnings per share growth over the fiscal year prior to the secondary offering.

EPSUP = 1 if the firm's annual EPS in the fiscal year prior to the secondary offering is greater than its previous annual EPS, and otherwise 0.

FCF = free cash flow for the secondary firm at the end of the fiscal year prior to the secondary offering.

FF30 = indicator variable with value of 1 if firm is in a specified Fama-French 30 industry.

FLOAT = number of shares available to trade by the public.

 $\Delta FLOAT$ = the change in the number of shares available to trade by the public around the secondary offering.

Appendix C: Variable Definitions (Continued)

Firm Characteristics (Continued)

INSOWN = percentage of outstanding shares held by managers and directors not associated with blockholders immediately following the secondary offering.

LASSETS = natural log of total assets at the end of fiscal year prior to the secondary offering.

LBKMK = natural log of ratio of book value of equity to market value of equity at the end of prior fiscal year to offering.

LMVAL = natural log of the market value of common equity at the end of fiscal year prior to the secondary offering.

MVAL = market value of common equity at the end of fiscal year prior to the secondary offering.

OWNERS = number of stockholders of common stock at the end of fiscal year prior to the secondary offering.

PAYOUT = ratio of common dividends paid to net income at the end of prior fiscal year to offering.

RDINT = ratio of research and development expenses to book value of at the end of prior fiscal year to offering.

RETVOL = standard deviation of excess returns using CRSP equal-weighted index over the 90 trading days ending 5 days prior to the offering.

ROA = ratio of operating earnings to book value of assets at end of prior fiscal year to offering.

RUNUP = buy-and-hold abnormal return versus the CRSP equal weight index over the 90 trading days ending 5 days prior to the offering.

TRADEVOL = total number of shares traded during prior fiscal year to offering.

Board Characteristics

DESIG = percentage of secondary firms with at least 1 designated director.

CEOISCOB = 1 if the firm's CEO is Chairman of the Board, and otherwise 0.

NUMBLOCK = total number of blockholders, or 5% stockholders.

NUMDESIG = total number of designated directors.

NUMDIR = total number of members on board of directors.

NYSE = 1 if the firm is listed on the New York Stock Exchange, and otherwise 0.

Appendix D: Correlation MatrixThis table presents a correlation matrix. All variables are defined in Appendix C.

	ARET [-1,+1]	ARET [-1,0]	UPRICE	DIRECT	INDIRECT	INSIDER	LASSETS	RUNUP	RETVOL	OSIZE_F	AFLOAT	BIDASK	LBKMK	DISTFYE	NYSE	FCF	DISTIPO	USPREAD	BHOWN
ARET [-1,+1]	1.00																		
ARET [-1,0]	0.84	1.00																	
UPRICE	-0.35	-0.20	1.00																
DIRECT	-0.33	-0.29	0.22	1.00															
INDIRECT	0.33	0.27	-0.24	-0.75	1.00														
INSIDER	0.04	0.07	0.01	-0.46	-0.23	1.00													
LASSETS	-0.06	0.03	-0.15	0.08	0.04	-0.17	1.00												
RUNUP	-0.12	-0.16	0.10	0.05	-0.07	0.03	-0.18	1.00											
RETVOL	0.06	-0.06	0.08	-0.16	0.06	0.16	-0.45	0.28	1.00										
OSIZE_F	-0.06	-0.05	-0.04	-0.03	0.04	-0.01	-0.08	0.11	0.09	1.00									
ΔFLOAT	-0.01	-0.03	-0.09	0.04	0.04	-0.11	0.38	-0.06	-0.09	0.04	1.00								
BIDASK	-0.01	-0.03	-0.05	-0.15	0.08	0.11	-0.21	0.08	0.27	0.08	-0.10	1.00							
LBKMK	0.07	0.17	0.07	-0.12	0.19	-0.07	0.20	0.04	-0.16	0.05	-0.04	-0.04	1.00						
DISTFYE	0.02	0.08	0.05	0.01	0.09	-0.14	-0.04	0.02	-0.12	0.00	-0.14	-0.09	0.05	1.00					
NYSE	-0.05	0.02	-0.15	0.19	-0.05	-0.22	0.61	-0.16	-0.42	0.00	0.23	-0.03	0.12	0.05	1.00				
FCF	-0.06	-0.01	0.04	-0.03	-0.17	0.27	-0.15	0.09	-0.01	-0.05	-0.03	0.01	-0.12	-0.17	-0.14	1.00			
DISTIPO	0.05	0.11	-0.05	-0.12	0.13	0.00	0.37	-0.05	-0.17	0.04	0.04	-0.08	0.14	0.07	0.24	-0.02	1.00		
USPREAD	0.10	-0.02	-0.18	-0.23	0.20	0.07	-0.45	0.12	0.37	0.21	-0.12	0.32	-0.05	-0.05	-0.21	-0.04	-0.09	1.00	
BHOWN	-0.16	-0.14	0.05	0.18	0.01	-0.28	0.07	0.10	0.16	0.12	0.11	0.04	0.03	-0.06	0.20	-0.03	-0.03	0.15	1.00

Table 1: Hypothesized Magnitude of Flotation Costs

This table displays the formalized predictions of flotation cost magnitude partitioned by seller identity. Higher flotation costs indicate more negative announcement returns and larger underpricing of secondary offerings. Direct Monitors are private equity and venture capital blockholders. Indirect Monitors include all other non-insider participants in secondary offerings. Insiders are managers and directors not designated by a blockholder.

	Direct Monitors	Indirect Monitors	Insiders
Information Hypothesis	Higher than Indirect Monitors, but no higher than Insiders.	Lower than Direct Monitors and Insiders.	Higher than Indirect Monitors, and potentially higher than Direct Monitors.
Monitoring Hypothesis	Higher than Indirect Monitors and Insiders.	Lower than Direct Monitors, but no prediction compared to Insiders.	Lower than Direct Monitors, but no prediction compared to Indirect Monitors.

Table 2: Sample Selection

This table displays the distribution of all equity offerings in the SDC Global New Issues Database between 1998 and 2006. Panel A presents all equity offerings in the SDC Global New Issues Database. Initial public offerings (IPOs) are the first offerings of equity. Seasoned equity offerings (SEOs) are equity offerings after the IPO. Panel B presents the data filters used to obtain the final sample.

Panel A. Distribution of Equity Offerings in SDC Global New Issues Database

		(Offering Type			gion	U.S. 8	SEO Offerin	g Type	Secondar	y and Mixed	Offerings
Year	Total Offerings	IPOs	Rights Offerings	SEOs	Non- U.S. SEOs	U.S. SEOs	Primary Offerings	Mixed Offerings	Secondary Offerings	Total Mixed and Secondary	<90% Secondary Shares	>90% Secondary Shares
1998	964	392	18	554	30	524	322	143	59	202	138	64
1999	987	542	15	430	33	397	195	156	46	202	155	47
2000	789	389	4	396	27	369	193	142	34	176	140	36
2001	587	137	14	436	66	370	218	92	60	152	86	66
2002	622	173	31	418	72	346	245	51	50	101	46	54
2003	658	134	24	500	58	442	319	61	62	123	56	67
2004	892	307	11	574	51	523	318	91	114	205	88	117
2005	766	282	6	478	63	415	259	67	89	156	63	93
2006	745	257	6	482	37	445	265	65	115	180	62	118
Total	7,010	2,613	129	4,268	437	3,831	2,331	868	629	1497	834	662

Panel B. Sample Selection Data Filters

	Offerings Deleted	Total Offerings
Secondary and Mixed Offerings with > 90% secondary shares		662
Less Not in CRSP	2	660
Less SDC Errors	25	635
Less American Depositary Receipt (ADR)	1	634
Less Unit Offerings	15	619
Less Financials (SIC 6000-6999)	118	501
Less Regulated Utilities (SIC 4900-4949)	5	496
Less Not in EDGAR	14	482
Less Dual Class	109	373
Less Recent or Ongoing Merger	5	368
Final Sample		368
Unique Firms		266

Table 3: Secondary Offering Distributions

This table displays the yearly and industry distributions of secondary offerings over 1998 to 2006. Panel A presents the yearly distribution. Panel B presents the industry distribution based on the 30 industries identified by Fama and French (1997). No sample firms are in the alcohol (#2), tobacco (#3), utilities (#20), or financial (#29) industry. Direct Monitors are private equity and venture capital blockholders. Indirect Monitors include all other non-insider participants in secondary offerings. Insiders are managers and directors not designated by a blockholder.

Panel A. Yearly Distribution of Secondary Offerings

Year	Direct Monitors	Indirect Monitors	Insiders	Total Offers (Firms)
1998	18	12	6	36 (34)
1999	12	8	4	24 (23)
2000	4	11	4	19 (18)
2001	10	6	5	21 (21)
2002	18	9	5	32 (32)
2003	28	7	7	42 (36)
2004	45	21	9	75 (63)
2005	29	22	4	55 (51)
2006	47	13	4	64 (54)
Total	211	109	48	368 (332)

Panel B. Industry Distribution of Secondary Offerings

	Direct Monitors	Indirect Monitors	Insiders	Full	Sample
Industry	N	N	N	N	%
1. Food	5	6	0	11	3.0
4. Recreation	3	2	2	7	1.9
5. Printing and Publishing	4	1	0	5	1.4
6. Consumer Goods	1	2	2	5	1.4
7. Apparel	4	1	1	6	1.6
8. Healthcare	12	14	1	27	7.3
9. Chemicals	4	3	0	7	1.9
10. Textiles	1	0	0	1	0.3
11. Construction	9	4	4	17	4.6
12. Steel	2	1	0	3	0.8
13. Fabricated Products	4	3	1	8	2.2
14. Electrical Equipment	1	0	0	1	0.3
15. Automobiles	10	0	0	10	2.7
16. Aircraft, Ships, and Railroad	4	3	0	7	1.9
17. Mines	2	1	1	4	1.1
18. Coal	7	0	0	7	1.9
19. Oil	14	6	2	22	6.0
21. Telecom	6	9	0	15	4.1
22. Services	32	22	19	73	19.8
23. Business Equipment	20	12	3	35	9.5
24. Business Supplies	7	2	0	9	2.5
25. Transportation	10	6	3	19	5.2
26. Wholesale	9	3	0	12	3.3
27. Retail	33	4	7	44	12.0
28. Restaurants and Hotels	3	1	1	5	1.4
30. Other	4	3	1	8	2.2

Table 4: Ownership Characteristics

The table presents ownership characteristics for secondary offerings. Panel A presents blockholder characteristics. Panel B presents ownership characteristics for the majority seller(s) in a secondary offering. Multiple sellers within each selling category are combined in Panel B. Panel C presents secondary offering firm ownership concentration. Block ownership includes all 5% blockholders. Inside ownership includes managers and directors not designated by a blockholder. The last 3 columns display p-values from standard two-tailed t-tests of the difference in means for pairs of seller groups.

	All	(1) Direct Monitors	(2) Indirect Monitors	(3) Insiders	(1) vs. (2) p-value of difference	(1) vs. (3) p-value of difference	(2) vs. (3) p-value of difference
	(N=368)	(N=211)	(N=109)	(N=48)	test	test	test
Panel A. Blockholder Presence							_
At least one Blockholder %	97.01	100.00	97.25	83.33	0.015^{**}	0.000^{***}	0.002***
Number of Blockholders	2.65	2.81	2.76	1.73	0.787	0.000^{***}	0.000^{***}
Blockholder Participates in Offering %	86.96	97.63	90.83	31.25	0.006^{***}	0.000^{***}	0.000^{***}
Panel B. Selling Stockholder							
Pre-Offering Ownership %	31.65	34.08	26.83	23.76	0.002^{***}	0.510	0.136
Post-Offering Ownership %	17.95	19.59	13.00	13.85	0.001^{***}	0.402	0.002^{***}
Change in Ownership %	13.67	14.44	13.83	9.91	0.528	0.000^{***}	0.008^{***}
Sells All Shares %	19.02	18.96	23.85	0.83	0.307	0.077^{*}	0.023**
Panel C. Ownership Concentration							
Number of Stockholders Pre-Offering (000s)	7.79	8.26	9.37	2.23	0.865	0.517	0.113
Change in Number of Stockholders (000s)	0.68	1.37	-0.52	0.41	0.054^{*}	0.441	0.427
Block Ownership Pre-Offering %	42.12	46.82	43.28	18.84	0.127	0.000^{***}	0.000^{***}
Block Ownership Post-Offering %	29.21	32.29	29.30	15.46	0.155	0.000^{***}	0.000^{***}
Insider Pre-Offering %	7.27	5.61	5.89	31.91	0.773	0.000^{***}	0.000^{***}
Insider Post-Offering %	6.36	5.05	5.61	22.01	0.525	0.000^{***}	0.000***

^{***, **,} denote significance at the 1%, 5% and 10% levels based on a standard two-tailed *t*-test (Wilcoxon rank sum test).»

Table 5: Descriptive Statistics

This table presents descriptive statistics for the sample of 368 secondary offerings over 1998 to 2006. See Appendix C for Variable Definitions. The last 3 columns display p-values from standard t-tests (Wilcoxon rank sum test) of the difference in means for the seller groups. Significance levels are indicated by * (0.10), ** (0.05), and *** (0.01). Not all variables are available for all observations.

Panel A. Offering Characteristics

		(1)	(2)	(3)			
Variable	All (N=368)	Direct Monitors (N=211)	Indirect Monitors (N=109)	Insiders (N=48)	(1) vs. (2) p-value	(1) vs. (3) p-value	(2) vs.(3) p-value
PROCEEDS	231.04	205.97	302.32	179.34	0.012**	0.504	0.121
(\$MM)	(132.50)	(138.00)	(136.50)	(94.15)	(0.989)	(0.007)***	(0.032)**
OSIZE_O %	15.11	15.47	15.27	13.17	0.842	0.088 [*]	0.204
	(14.23)	(15.06)	(14.36)	(10.97)	(0.610)	(0.024) ^{**}	(0.105)
OSIZE_F %	71.65	70.08	59.91	105.22	0.661	0.387	0.307
	(31.55)	(36.94)	(29.31)	(20.93)	(0.430)	(0.003)***	(0.036)**
USPREAD %	3.38	3.04	3.84	3.80	0.000***	0.013**	0.903
	(4.04)	(3.69)	(4.50)	(4.49)	(0.001)***	(0.021)**	(0.923)
URANK	8.65	8.71	8.57	8.56	0.214	0.290	0.942
	(9.10)	(9.10)	(9.10)	(9.10)	(0.546)	(0.412)	(0.740)
SOX %	66.03	72.99	58.72	52.08	0.009***	0.005***	0.443
	(100.00)	(100.00)	(100.00)	(100.00)	(0.010)***	(0.005)***	(0.441)
MIXED %	6.52	6.16	3.67	14.58	0.348	0.049**	0.013**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.347)	(0.049)**	(0.014)**
DISTFYE	187.86	187.33	202.51	156.94	0.221	0.065*	0.010***
	(173.0)	(168.00)	(197.00)	(139.00)	(0.194)	(0.088)*	(0.012)**

Panel B. Firm Characteristics

		(1)	(2)	(3)			
		Direct	Indirect		(4)		(a) (a)
	All	Monitors	Monitors	Insiders	(1) vs. (2)	(1) vs. (3)	(2) vs.(3)
Variable	(N=368)	(N=211)	(N=109)	(N=48)	p-value	p-value	p-value
MVAL	3260.81	1864.45	6403.24	2731.35	0.011^{**}	0.281	0.336
	(881.96)	(869.74)	(1121.78)	(880.53)	(0.411)	(0.785)	(0.814)
ASSETS	1706.63	1591.34	2236.43	1010.36	0.071^{*}	0.124	0.054^{*}
	(617.50)	(675.34)	(703.34)	(230.08)	(0.778)	$(0.000)^{***}$	$(0.002)^{***}$
DISTINC	32.93	39.58	24.24	19.91	0.001***	0.000^{***}	0.197
	(23.00)	(27.00)	(19.00)	(16.00)	$(0.005)^{***}$	$(0.000)^{***}$	(0.201)
DISTIPO	7.86	6.89	10.04	7.20	0.060^{*}	0.879	0.289
	(3.23)	(2.64)	(4.39)	(3.36)	$(0.048)^{**}$	(0.625)	(0.365)
FCF %	10.50	9.99	9.57	14.85	0.749	0.004***	0.008^{***}
	(9.69)	(9.03)	(8.48)	(14.11)	(0.416)	$(0.003)^{***}$	(0.001)***
ROA %	16.89	17.74	13.75	20.34	0.012^{**}	0.140	0.009***
	(15.34)	(15.12)	(13.68)	(18.83)	$(0.006)^{***}$	$(0.012)^{**}$	$(0.000)^{***}$

Table 5: Descriptive Statistics (Continued)

Panel B. Firm Characteristics (Continued)

Panel B. Firm					*	**	-
ΔEPS %	-0.73 (0.34)	2.25 (0.38)	-16.01 (0.04)	20.11 (0.71)	0.054^* $(0.035)^{**}$	0.034** (0.198)	$0.077^* (0.007)^{***}$
EPSUP %	59.35	59.59	51.52	75.56	0.221	0.065***	0.012**
	(100.00)	(100.00)	(100.0)	(100.00)	(0.221)	(0.065)***	(0.012)**
CASH %	11.59	9.66	12.21	18.73	0.117	0.000***	0.019**
	(5.91)	(5.09)	(5.94)	(14.63)	(0.142)	(0.000)***	(0.006)***
PAYOUT %	13.22	16.53	5.92	15.25	0.539	0.961	0.279
	(0.00)	(0.00)	(0.00)	(0.00)	(0.061)*	(0.573)	(0.430)
BKMK	0.34	0.33	0.42	0.23	0.441	0.213	0.210
	(0.29)	(0.29)	(0.35)	(0.18)	(0.771)	(0.000)***	(0.000) ***
RDINT %	2.15	1.57	3.60	1.45	0.011**	0.876	0.132
	(0.00)	(0.00)	(0.00)	(0.00)	(0.114)	(0.752)	(0.187)
RUNUP %	10.67 (4.58)	12.64 (6.10)	6.54 (2.47)	11.08 (2.80)	$0.062^* \\ (0.054)^*$	0.731 (0.429)	0.340 (0.637)
RETVOL %	2.56	2.42	2.68	2.95	0.044**	0.001***	0.194
	(2.32)	(2.17)	(2.41)	(2.85)	(0.026)**	(0.000)***	(0.082)*
BIDASK %	0.57	0.48	0.66	0.72	0.035**	0.027**	0.690
	(0.29)	(0.25)	(0.34)	(0.42)	(0.095)*	(0.030)**	(0.452)
TRADEVOL	176.43 (43.40)	183.16 (44.53)	197.80 (44.37)	99.38 (23.86)	0.913 (0.818)	$0.644 \\ (0.057)^*$	0.431 (0.069)*
OWNERS	7.79 (0.56)	8.26 (0.61)	9.37 (0.71)	2.23 (0.20)	0.865 (0.034)**	0.517 $(0.059)^*$	0.113 (0.002)***
NYSE %	52.99 (100.00)	59.72 (100.00)	52.29 (100.00)	25.00 (0.00)	0.205 (0.204)	$0.000^{***} $ $(0.000)^{***}$	0.001*** (0.002)***
SHROUT	94.33 (39.95)	83.52 (40.96)	126.80 (40.34)	68.13 (35.28)	0.128 (0.736)	0.492 (0.036)**	$0.271 \\ (0.091)^*$
FLOAT	56.12	44.38	84.68	42.83	0.107	0.926	0.391
	(18.47)	(19.34)	(18.72)	(14.32)	(0.834)	(0.324)	(0.455)

Panel C. Board Characteristics

		(1) Direct	(2) Indirect	(3)			
Variable	All (N=368)	Monitors (N=211)	Monitors (N=109)	Insiders (N=48)	(1) vs. (2) p-value	(1) vs. (3) p-value	(2) vs.(3) p-value
NUMDIR	8.42 (8.00)	8.64 (9.00)	8.47 (8.00)	7.38 (7.00)	0.500 (0.259)	0.000*** (0.000)***	0.006*** (0.005)***
DESIG %	77.72 (100.00)	97.16 (100.00)	74.31 (100.00)	0.00 (0.00)	0.000*** (0.000)***	$0.000^{***} $ $(0.000)^{***}$	0.000*** (0.000)***
NUMDESIG	1.98 (2.00)	2.76 (2.00)	1.35 (1.00)	0.00 (0.00)	0.000*** (0.000)***	$0.000^{***} $ $(0.000)^{***}$	0.000^{***} $(0.000)^{***}$
CEOISCOB %	55.71 (100.00)	54.50 (100.00)	56.88 (100.00)	58.33 (100.00)	0.686 (0.686)	0.632 (0.631)	0.866 (0.866)

^{***, **, *} denote significance at the 1%, 5% and 10% levels from standard t-tests (Wilcoxon rank sum tests).

Table 6: Univariate Tests of Announcement Returns and Underpricing

This table compares mean and median values of secondary offering announcement returns and underpricing. ARET is the announcement return over the windows [-1, +1] and [-1, 0] around the offering date. UPRICE is the underpricing of the secondary offering. Panel A presents announcement returns and underpricing for the full sample and seller categories. Panel B presents test statistics from a one-way ANOVA test of joint equality among the three groups, and p-values from paired seller difference tests (median tests) based on standard two-tailed t-tests (Wilcoxon sign rank tests).

Panel A: Flotation Costs

	N	ARET [-1, 1]	N	ARET [-1, 0]	N	UPRICE
Mean		[-1, 1]		[-1, 0]		
Full Sample	334	-2.854 ^a	334	-2.520 a	368	2.264 a
Direct Monitors	193	-4.630 a	193	-3.771 a	211	2.772 a
Indirect Monitors	97	0.578	97	-0.282	109	1.396 a
Insiders	44	-2.629 a	44	-1.964 ^b	48	2.002 a
Median						
Full Sample	334	-2.761 ^a	334	-1.840 ^a	368	1.835 ^a
Direct Monitors	193	-3.877 ^a	193	-2.409 a	211	2.571 a
Indirect Monitors	97	0.356	97	-0.375	109	0.865 a
Insiders	44	-1.549 ^b	44	-1.502 ^b	48	1.486 a

Panel B: Test Statistics

	ARET	ARET	UPRICE
	[-1, 1]	[-1, 0]	
One-Way ANOVA			
F (2, 365)	22.72	16.95	13.13
p-value	0.000^{***}	0.000^{***}	0.000^{***}
Mean			
Direct vs. Indirect Monitors	0.000^{***}	0.000^{***}	0.000^{***}
Direct Monitors vs. Insiders	0.076^*	0.070^*	0.047^{**}
Indirect Monitors vs. Insiders	0.012^{**}	0.108	0.104
Median			
Direct vs. Indirect Monitors	0.000^{***}	0.000^{***}	0.000^{***}
Direct Monitors vs. Insiders	0.079^{*}	0.092^{*}	0.021^{**}
Indirect Monitors vs. Insiders	0.020^{**}	0.125	0.295

a, b, c indicate significantly different from zero at the 1%, 5% and 10% levels using two-tailed Patel Z scores for ARET, and standard two-tailed t-test (Wilcoxon sign rank test) for UPRICE. ***, indicate the mean flotation costs are significantly different at the 1%, 5% and 10% level across all three groups using a one-way ANOVA test, or that difference in mean (median) flotation costs between pairs of seller groups is significantly different from zero at the 1%, 5% and 10% levels using a standard two-tailed t-test (Wilcoxon rank sum test).

Table 7: Multivariate Tests of Announcement Returns

This table presents OLS regression models of Equation (1) with announcement returns (ARET) as the dependent variable. ARET is calculated using the CRSP equal-weighted index. Models 1-4 are calculated over the event window [-1, 1] centered on the announcement date. Models 5-8 are calculated over the event window [-1, 0] to the announcement date. All variables are defined in Appendix C. All models include year and industry controls using Fama-French 30 industries. All models are calculated with robust standard errors and errors are clustered at the firm level. Significance levels are indicated by * (0.10), ** (0.05), and **** (0.01) with p-values in parentheses. Some observations are dropped because the minimum number of trading for the pre-estimation period pre-dates initial public offering, or due to missing data.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ARET	[-1, 1]	[-1, 1]	[-1, 1]	[-1, 1]	[-1, 0]	[-1, 0]	[-1, 0]	[-1, 0]
Intercept	0.139**	0.066	0.110	0.136**	0.093*	0.0465	0.0758	0.092*
	(0.046)	(0.309)	(0.138)	(0.038)	(0.084)	(0.378)	(0.178)	(0.083)
DIRECT	-0.052***			-0.068***	-0.037***			-0.044***
INDIRECT	(0.000)	0.065***		(0.000)	(0.000)	0.039***		(0.000)
INDIKECI		(0.000)				(0.000)		
INSIDER		(*****)	-0.006	-0.051***		(*****)	0.010	-0.019
			(0.710)	(0.003)			(0.442)	(0.183)
LASSETS	-0.014**	-0.014***	-0.012**	-0.014***	-0.005	-0.005	-0.003	-0.005
	(0.011)	(0.010)	(0.037)	(0.009)	(0.287)	(0.315)	(0.456)	(0.280)
RUNUP	-0.008	-0.008	-0.022	-0.006	-0.019	-0.020	-0.028	-0.018
	(0.734)	(0.724)	(0.341)	(0.783)	(0.300)	(0.248)	(0.118)	(0.313)
RETVOL	0.134 (0.847)	0.319 (0.621)	0.688 (0.335)	0.215 (0.749)	0.037 (0.943)	0.213 (0.673)	0.371 (0.502)	0.068 (0.896)
OSIZE_F	-0.002	-0.002	-0.002	-0.002	-0.001	-0.001	-0.001	-0.001
OSIZE_I	(0.577)	(0.631)	(0.650)	(0.613)	(0.407)	(0.527)	(0.509)	(0.453)
ΔFLOAT	0.042	0.031	0.046	0.033	0.069	0.062	0.012	0.033
	(0.391)	(0.514)	(0.394)	(0.488)	(0.871)	(0.988)	(0.797)	(0.938)
BIDASK	-1.283	-1.218	-0.815	-1.287	-0.965	-0.870	-0.664	-0.966
	(0.293)	(0.256)	(0.462)	(0.249)	(0.348)	(0.359)	(0.497)	(0.335)
LBKMK	0.004	0.002	0.009*	0.002	0.008**	0.007*	0.012***	0.007*
DIGERNAL (100	(0.377)	(0.640)	(0.050)	(0.682)	(0.040)	(0.051)	(0.003)	(0.063)
DISTFYE/100	-0.015 (0.711)	-0.040 (0.311)	-0.024 (0.958)	-0.037 (0.349)	0.021 (0.610)	0.074 (0.857)	0.034 (0.426)	-0.012 (0.758)
NYSE	0.020	0.019	0.013	0.020	0.013	0.012	0.009	0.013
NISE	(0.127)	(0.159)	(0.358)	(0.136)	(0.257)	(0.315)	(0.468)	(0.260)
FCF	-0.088*	-0.056	-0.054	-0.066	-0.0182	0.005	-0.002	-0.010
	(0.072)	(0.222)	(0.301)	(0.171)	(0.673)	(0.913)	(0.965)	(0.818)
DISTIPO	0.002	0.003	0.005	0.000	0.001	0.001	0.003	0.000
	(0.373)	(0.343)	(0.105)	(0.402)	(0.650)	(0.547)	(0.323)	(0.661)
USPREAD	-0.008	-0.010	-0.001	-0.011	-0.007	-0.007	-0.001	-0.008
DHOWN	(0.248)	(0.160)	(0.984)	(0.133)	(0.266)	(0.265)	(0.845)	(0.212)
BHOWN	-0.031 (0.227)	-0.062** (0.015)	-0.058** (0.031)	-0.053** (0.042)	-0.017 (0.442)	-0.038* (0.078)	-0.028 (0.197)	-0.025 (0.258)
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	274	274	274	274	274	274	274	274
Adjusted R ²	0.101	0.132	0.004	0.133	0.053	0.047	-0.012	0.056

^{***, **, *} denote significance at the 1%, 5% and 10% levels.

Table 8: Multivariate Tests of Underpricing

This table presents OLS regression models of Equation (1) with underpricing (UPRICE) as the dependent variable. All variables are defined in Appendix C. All models include year and industry controls using Fama-French 30 industries. All models are calculated with robust standard errors and errors are clustered at the firm level. Significance levels are indicated by * (0.10), ** (0.05), and *** (0.01) with p-values in parentheses. Some observations are dropped due to missing data.

UPRICE	(1)	(2)	(3)	(4)
Intercept	-0.001	0.015	0.006	-0.001
	(0.951)	(0.478)	(0.802)	(0.950)
DIRECT	0.013*** (0.000)			0.016*** (0.000)
INDIRECT		-0.015*** (0.000)		
INSIDER		(,	-0.001 (0.817)	0.010 * (0.073)
LASSSETS	0.000	0.000	-0.001	0.000
	(0.974)	(0.986)	(0.811)	(0.949)
RUNUP	0.005	0.005	0.009	0.005
	(0.381)	(0.351)	(0.139)	(0.413)
RETVOL	0.327	0.280	0.213	0.314
	(0.186)	(0.251)	(0.415)	(0.202)
OSIZE_F	-0.001	-0.001	-0.001	-0.001
	(0.217)	(0.161)	(0.134)	(0.191)
ΔFLOAT	-0.005	-0.003	-0.006	-0.004
	(0.673)	(0.809)	(0.651)	(0.764)
BIDASK	0.153	0.144	0.033	0.165
	(0.555)	(0.588)	(0.902)	(0.522)
LBKMK	0.001	0.001	0.000	0.001
	(0.540)	(0.396)	(0.849)	(0.378)
DISTFYE/100	0.015	0.021	0.011	0.019
	(0.288)	(0.133)	(0.470)	(0.159)
NYSE	-0.010**	-0.009**	-0.008*	-0.010***
	(0.016)	(0.021)	(0.056)	(0.016)
FCF	0.010	0.003	0.004	0.006
	(0.588)	(0.876)	(0.850)	(0.729)
DISTIPO	0.005	0.004	0.008	0.0001
	(0.627)	(0.685)	(0.947)	(0.620)
USPREAD	-0.008***	-0.007***	-0.010****	-0.007***
	(0.001)	(0.004)	(0.000)	(0.005)
BHOWN	0.005	0.012	0.010	0.009
	(0.667)	(0.246)	(0.369)	(0.426)
Industry Effects	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes
N	286	286	286	286
Adjusted R ²	0.147	0.153	0.095	0.155

^{***, **, *} denote significance at the 1%, 5% and 10% levels.

Table 9: Missed Earnings Benchmarks

This table presents the frequency of earnings misses for the secondary offering firms. Analyst estimates and earnings data are obtained form the I/B/E/S Historical Earnings Estimates Database. Analyst consensus estimates are taken at the end of the month prior to the secondary offering. The firm is considered to have missed its benchmark if the realized earnings are less than the median analyst forecast. Panel A (B) presents earnings misses for quarterly (annual) EPS estimates during the quarter (fiscal year) of the offering and the corresponding period during the prior year. Panel C presents the number of estimates for each forecast period. Data are not available for 6 firms with secondary offerings. The last 3 columns display p-values from standard two-tailed t-tests of the difference in means for pairs of seller groups.

		(1) Direct	(2) Indirect	(3)	(1) vs. (2) p-value of	(1) vs. (3) p-value of	(2) vs. (3) p-value of
	All (N=362)	Monitors (N=208)	Monitors (N=107)	Insiders (N=47)	difference test	difference test	difference test
Panel A. Quarterly EPS							
Prior Year Quarterly Miss	24.50^{iii}	26.71 ⁱⁱ	21.43	21.21	0.404	0.516	0.980
Offering Quarterly Miss	15.32 ⁱⁱⁱ	15.61 ⁱⁱ	17.76	8.51	0.628	0.211	0.140
Panel B. Annual EPS							
Prior Year Annual Miss	33.73 ⁱⁱⁱ	34.90^{iii}	38.36	18.18	0.616	0.063^{*}	0.040^{**}
Offering Annual Miss	24.03 ⁱⁱⁱ	20.57 ⁱⁱⁱ	33.64	17.02	0.012**	0.574	0.036**
Panel C. Number of Estimates							
Quarterly							
Prior Year Quarterly Estimates	6.35	5.83 ⁱ	7.39	6.42	0.032^{**}	0.471	0.462
Offering Quarterly Estimates	6.79	6.67 ⁱ	6.94	6.94	0.633	0.705	0.994
Annual							
Prior Year Annual Estimates	6.78	6.25	7.74	7.09	0.063^{*}	0.346	0.661
Offering Annual Estimates	7.16	6.91	7.54	7.43	0.318	0.490	0.916

Offering Annual Estimates 7.16 6.91 7.54 7.43 0.318 0.490 0.916

***, **, * denote significance between pairs of sellers at the 1%, 5% and 10% levels. ***, ** denote significance for mean offer year and 1-year lagged values within pairs of sellers at the 1%, 5% and 10% levels.

Table 10: Flotation Costs and Ownership Concentration

This table presents mean (median) announcement returns (ARET) and underpricing (UPRICE) based on the majority seller. PRE is the ownership percentage of shares outstanding prior to the secondary offering. POST is the ownership percentage of shares outstanding after the secondary offering. Some observations are dropped because the minimum number of trading for the pre-estimation period pre-dates initial public offering

	N	All	N	Direct Monitors	N	Indirect Monitors	N	Insiders
ARET [-1, 1]								
POST: <5%	113	-1.20 ^b (0.88) ^c	59	-2.40 ^a (-2.17) ^a	41	0.43 (0.10)	13	-0.90 (-0.70)
PRE: 5-25% POST: 5-25%	53	-2.94 ^a (-3.32) ^a	27	-4.64 ^a (-4.75) ^a	18	1.67 (2.73)	8	-7.54 ^b (-7.82) ^c
PRE: >25% POST: >5%	168	-3.94 ^a (-4.00) ^a	107	-5.86 ^a (-5.22) ^a	38	0.21 (0.45)	23	-1.90 (-1.96)
ARET [-1, 0]								
POST: <5%	113	-1.39 ^a (-0.83) ^b	59	-2.19 ^a (-0.97) ^a	41	-0.46 (-0.05)	13	-0.68 (-0.70)
PRE: 5-25% POST: 5-25%	53	-1.91 ^b (-1.32) ^c	27	-3.36 ^a (-2.10) ^a	18	1.44 (1.82)	8	-4.56° (-2.34)°
PRE: >25% POST: >5%	168	-3.47 ^a (-3.23) ^a	107	-4.75 ^a (-4.27) ^a	38	-0.91 (-1.82)	18	-1.79 (-2.25)
UPRICE								
POST: <5%	116	1.98 ^a (1.29) ^a	60	2.27 ^a (1.88) ^a	43	1.37 ^a (0.69) ^a	13	2.67 ^a (2.78) ^a
PRE: 5-25% POST: 5-25%	62	2.23 ^a (1.60) ^a	29	3.07 ^a (3.08) ^a	24	1.53 ^a (0.95) ^a	9	1.40 (0.19)
PRE: >25% POST: >5%	190	2.45 ^a (1.96) ^a	122	2.95 ^a (2.71) ^a	42	1.35 ^a (1.10) ^a	26	1.88 ^a (1.23) ^a

a, b, c indicate significantly different from zero at the 1%, 5% and 10% levels using two-tailed Patel z-scores for ARET, and standard two-tailed t-test (Wilcoxon sign rank test) for UPRICE.

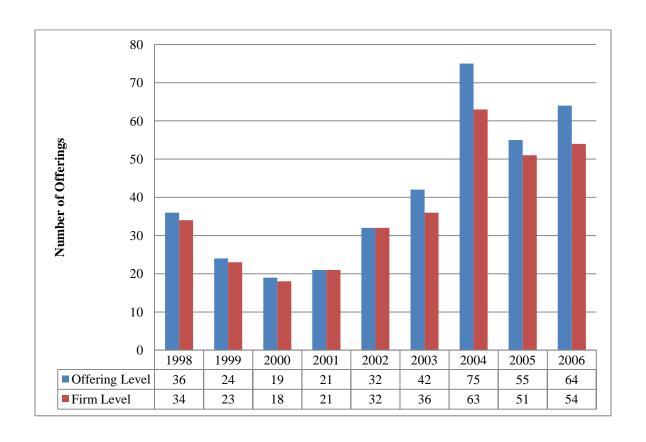


Figure 1: Yearly Distribution of Secondary Offerings

Fama French 30 Industries

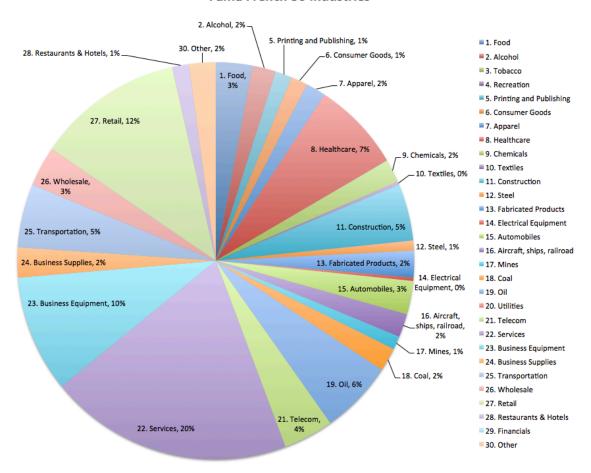


Figure 2: Industry Distribution of Secondary Offerings

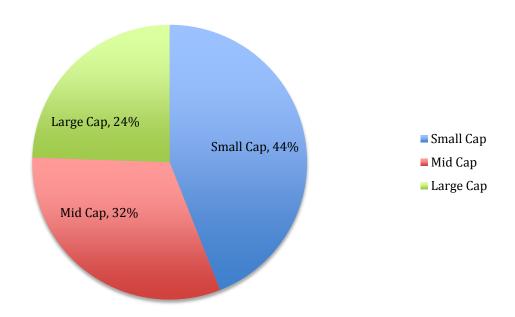


Figure 3: Size Distribution of Secondary Offerings

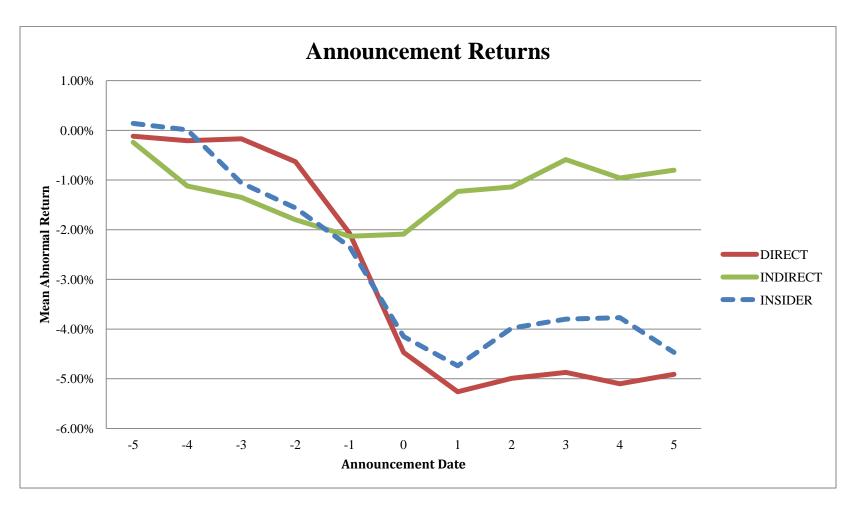


Figure 4: Cumulative Announcement Returns with Extended Event Window

Vita

Joshua White was born in Knoxville, Tennessee. He is a graduate of Lenoir City High School. He received his B.S. and an M.B.A. from The University of Tennessee. Joshua will complete his Ph.D. from The University of Tennessee in August 2012. At that time he will join the staff of the U.S. Securities and Exchange Commission in Washington D.C. as a Financial Economist Fellow in the Division of Risk, Strategy & Financial Innovation.

Joshua has received a number of academic honors and awards. As an undergraduate majoring in finance, Joshua received the Chancellor's Top Collegiate Scholar award for extraordinary scholarship. As a doctoral student, Joshua was the recipient of the J. Wallace & Katie Dean Graduate Fellowship, the Walter Melville Bonham Graduate Fellowship, and was awarded a College of Business Administration-ESPN Scholarship.

Prior to joining the doctoral program, Joshua was employed by two Fortune 500 corporations and as an intern with the Department of State at the U.S. Embassy in Nicosia, Cyprus. Joshua has worked as a Research Assistant for The University of Tennessee's Department of Finance since 2007. He has taught several undergraduate finance courses and received the Allen H. Keally Graduate Teaching Award in 2011.