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Earnings management around secondary equity offerings by insiders

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EARNINGS MANAGEMENT AROUND SECONDARY EQUITY OFFERINGS BY INSIDERS

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ABSTRACT

Accruals-based earnings management is becoming a more common practice. Firms have strong incentives to manage earnings around secondary equity offerings by insiders (insider offerings) to raise offer prices. However, the literature on earnings management around insider offerings is limited and provides mixed evidence of earnings management. In this study, I investigate the motivations and the extent of earnings management around insider offerings.

This study examines a sample of 490 secondary equity offerings made by insiders over the period 1989 to 2005. Inconsistent with the managerial opportunism hypothesis, I find negative adjusted discretionary total accruals before insider offerings. While discretionary accruals drop during the pre-offer year, operating performance improves during the pre-offer year, keeps improving during the offer year, and deteriorates only afterwards. These results suggest that downward earnings management before insider offerings may be manager response to an expectation of a decline in operating performance after the offerings. In the offer year I find positive adjusted discretionary total accruals, which may be driven by litigation concerns.

Furthermore, pre-offer discretionary accruals are positively related to the post-offer changes in operating performance but not related to post-offer stock performance. The findings suggest that earnings management before the offerings is not driven by managerial opportunism; instead, it reflects superior information about future opportunities, consistent with the earnings smoothing hypothesis. The deterioration in

operating performance immediately after insider offerings can induce securities fraud lawsuits filed against offering firms. Thus, managers have motives to inflate earnings to avoid operating performance deterioration, thereby lowering litigation risk. I find that offering firms do not show a higher incidence of restatements and lawsuits during the post-offer period. This is opposite of the prediction of the managerial opportunism hypothesis.

Moreover, I investigate whether firms engage in real earnings management (i.e., management of R&D expenses) before insider offerings. I find that firms slightly increase R&D expenses before and during the offer year, inconsistent with the hypothesis that firms manipulate R&D expenses to increase pre-offer earnings. Overall, the study suggests that discretionary accruals management before insider offerings is to achieve smoother earnings. Earnings management during the pre-offer and offer years is consistent with the litigation avoidance hypothesis.

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CHAPTER 1

INTRODUCTION

Importance of Examining Earnings Management

The market depends on financial statements prepared and reported by management for stock valuation. Managers can exert their discretion on financial reporting to temporarily alter the firms' operating performance. As a result, the market faces higher information risk when firms manage accruals to purposely misrepresent their performance for favorable stock prices. Such financial reporting decisions impair the efficiency of capital allocation. Bergstresser and Philippon (2006) report that the average ratio of accruals to the firms' total assets has been significantly increasing in the past 20 years, suggesting that accruals-based earnings management is becoming a more common practice. Accordingly, the motivations behind and the extent of such earnings management strategies are worthy of further investigation.

Motivations of the Study

Prior studies suggest that firms manipulate earnings before a number of corporate events (e.g., Rangan (1998) and Teoh, Welch, and Wong (1998b) [seasoned equity issues]; Teoh, Welch, and Wong (1998a) and Teoh, Wong, and Rao (1998) [IPOs]; Perry and William (1994) and Wu (1997) [management buyouts]; Erickson and Wang (1999)

and Louis (2004) [stock for stock acquisitions]; Rodriguez and Yue (2004) and Gong, Louis, and Sun (2008) [share repurchases]). There is also evidence that firms can manage earnings to reduce litigation risk (e.g., Beneish, Press, and Vargus (2005) and Weber (2004)) or to smooth earnings (e.g., Tucker and Zarowin (2006)).

Insider offerings provide one setting for examining the motivations behind earnings management strategies. This setting presents strong incentives to manage earnings so that managers can benefit from selling their holdings through the offerings at the expense of other shareholders or investors. However, the literature on earnings management around insider offerings is limited and provides mixed evidence of earnings management. Marquardt and Wiedman (2004) find that firms with insider offerings show significantly positive discretionary accruals in the offer year while they find no evidence of earnings management before the offerings. Similar to the pattern of discretionary accruals around insider offerings, net income increases during the offer year and then declines over the post-offer period. The authors suggest that offering firms inflate earnings in the offer year to obtain higher share prices. However, it seems late to release the distorted information at the end of the offer year if firms want to manage earnings to raise stock price in favor of insider sales. At the time of insider offerings, investors will not be able to observe inflated earnings reported at the end of the year.

Different from Marquardt and Wiedman, Heron and Lie (2004) examine earnings management around announcements of insider offerings. The authors document positive discretionary accruals in both the announcement year and the year before, along with better operating performance relative to matched firms. The managerial opportunism hypothesis suggests that if the boosted performance results from intentional

misrepresentation, the real corporate performance will reverse during later periods with the reversal of discretionary accruals. In contrast, Heron and Lie find no decline in operating performance during the post-announcement period. I argue that earnings management strategies around announcements of insider offerings may not be related to managerial opportunism.

Purpose and Objectives of the Study

The main purpose of my study is to investigate the motivations behind and the extent of earnings management around insider offerings. To examine the motivations behind earnings management around insider offerings, I test whether offering firms manipulate earnings to mislead investors, to lower litigation risk, or to smooth earnings. If firms want to benefit insiders, they may engage in opportunistic earnings management. That is, managers may temporarily inflate earnings before insider offerings to raise offer prices. On the other hand, fear of litigation may motivate managers to manage earnings downward before and upward after the offerings. Moreover, I expect that offering firms engage in earnings smoothing since earnings smoothing is quite common (e.g., Graham, Harvey, and Rajgopal (2005)). Making an insider offering is not likely to motivate firms that are engaged in earnings smoothing to abandon such long-term strategies. To examine the extent of earnings management around insider offerings, I study two earnings management techniques, accruals management and real earnings management through R&D expenses.

To achieve the purposes of this study, I analyze the following:

1. The pattern of industry- and performance-adjusted discretionary accruals around insider offerings.

2. The pattern of operating performance, such as net income and operating cash flows around insider offerings.

3. The volatility of earnings around insider offerings by estimating earnings smoothing ratios.

4. The relation between pre-offer discretionary accruals and post-offer operating performance.

5. The relation between pre-offer discretionary accruals and post-offer stock performance.

6. The likelihood of offering firms being sued during the post-offer period.

7. The likelihood of offering firms restating their earnings during the post-offer period.

8. The pattern of R&D expenses around insider offerings.

Contributions of the Study

This study enriches extant literature by examining the motivations behind and the extent of earnings management around insider offerings. The main contributions are as follows: First, this study focuses on a longer and more recent sample period when firms are threatened with more severe penalties for misleading financial reporting. The 1991 Federal Sentencing Guidelines for Organizations increase the sanctions imposed by federal judges by more than 20 times (Karpoff and Lott (1993) and Alexander (1999)). Prior studies on earnings management in the setting focus on a period of lighter sentences for such corporate violations. Marquardt and Wiedman (2004) examine a sample of insider offerings during the period of 1984 to 1991. Heron and Lie (2004) examine a sample of insider offerings announcements during the period of 1980 to 1998.

Second, my study leads to a more reliable inference on earnings management around insider offerings by examining industry- and performance-adjusted discretionary accruals estimated from cash flow statements. Prior studies on earnings management around such offerings use balance sheet data to calculate discretionary accruals. However, Hribar and Collins (2002) show that the estimation of discretionary accruals using balance sheet items can be biased around corporate events, such as mergers and acquisitions, discontinued operations, and foreign currency conversions. Kothari, Leone, and Wasley (2005) also suggest that performance-adjusted discretionary accrual measures are better specified in tests for earnings management. Controlling for corporate performance mitigates the misspecification problem associated with unadjusted discretionary accrual measures.

Third, I conduct a more detailed examination of earnings management around insider offerings. When examining the motivations behind earnings management in this setting, the two prior studies relate the pattern of discretionary accruals to that of net income. This study includes additional tests on relations between pre-offer discretionary accruals and post-offer operating performance as well as post-offer stock performance and tests on the incidence of earnings restatements and lawsuits following insider offerings. Unlike prior studies, I also examine whether firms manage R&D expenses around insider offerings.

Last, this study also adds to the research on the information content of insider trading. Earlier studies show that insider sales precede decreases in stock prices (e.g., Jaffe (1974) and Finnerty (1976)). In contrast, Lakonishok and Lee (2001) find that insider sales have no predictive power for future stock returns. Cline and Fu (2007) also

find no association between insider option exercises before announcements of seasoned equity offerings and post-offer abnormal returns. Consistently, I find that firms have no abnormal stock performance following insider offerings relative to size- and book-to-market-matched firms. This finding suggests that insider sales may be for liquidity and/or portfolio rebalancing purposes and thus may not contain predictive power for future stock performance as presented in some studies.

Plan of the Study

The remainder of the study is organized as follows. Chapter 2 reviews prior studies of earnings management around insider offerings and discusses the hypotheses of managerial opportunism, earnings smoothing, and litigation avoidance. Chapter 3 describes the sample of insider offerings and details the methodology for estimating discretionary total accruals from cash flow statements around the offerings and buy-and-hold abnormal returns during the post-offer period. In Chapter 4, I discuss results of earnings management around insider offerings. Chapter 5 concludes the study and discusses the implication of the results.

CHAPTER 2

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

A Review of Relevant Studies

There are two studies of earnings management in the context of insider offerings. Heron and Lie (2004) suggest that firms announcing insider offerings have incentives to manage earnings upward around the announcements. Likewise, Marquardt and Wiedman (2004) suggest that firms engage in upward earnings management to benefit insider sales around the offerings. However, there are mixed results of earnings management in this setting. Presuming such earnings management is aimed to raise stock prices, the two studies do not conduct further examination of the motivations behind the strategies. Nonetheless, their findings imply that positive discretionary accruals around announcements and the completion of insider offerings may not be driven by managerial opportunism.

In an examination of whether opportunistic earnings management dissociates financial reports and equity valuation, Marquardt and Wiedman (2004) test for evidence

of opportunistic earnings management around secondary equity offerings during the period of 1984 to 1991. [1] The authors find positive discretionary accruals in the year of all insider offerings as well as higher discretionary accruals in the year of the offerings by officers and directors. On the other hand, they find that in the pre-offer year firms with insider offerings have negative discretionary accruals while there is no significant difference in the accruals of firms with insider offerings and those with other secondary offerings. In the offer year, firms with insider offerings have higher net income than firms with other secondary offerings whereas there is no difference in operating cash flows of the two groups of firms. The results show that upward earnings management by firms with insider offerings causes a temporary increase in net income in the offer year. Further, earnings per share decreases in the year after insider offerings. The authors assert that the finding of positive discretionary accruals in the offer year is consistent with the managerial opportunism hypothesis.

Marquardt and Wiedman (2004) also find that firms with insider offerings have higher returns than firms with other offerings in the offer year and the year before. However, their finding of post-offer stock performance suggests that the evidence of opportunistic earnings management in the offer year is weak. Though firms with insider offerings have negative market-adjusted returns during the three years following the offerings, the post-offer returns are not significantly lower than the results of firms with other secondary offerings.

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[1] Marquardt and Wiedman (2004) include both combination and pure secondary equity offerings in the sample.

Furthermore, the authors show that for insider offerings, net income loses predictive power for contemporaneous stock price in the offer year whereas for other secondary offerings, net income is always a significant determinant of stock valuation. Their pooled regression analyses provide additional results for the diminishing value relevance of net income around insider offerings. Specifically, stock price is negatively related to an interaction term of net income and a year dummy of value one for the offer year. Instead, they find that nondiscretionary income is incorporated into the valuation of firms' value during the offer year. Overall, Marquardt and Wiedman's (2004) findings provide evidence that investors can see through opportunistic earnings manipulation.

As shown in Marquardt and Wiedman (2004), positive discretionary accruals in the offer year have decreasing relevance to equity valuation. Their finding suggests that firms with insider offerings may not be able to achieve higher stock prices for insider sales by managing earnings upward as managed earnings do not fool investors. Further, firms with insider offerings are more likely to be sued if they engage in opportunistic earnings management around the offerings. It is questionable that firms are willing to take high risk to intentionally misrepresent corporate performance for higher stock price when investors can see through the distorted information.

The other issue pertains to the timing of upward earnings management. It seems late to manage earnings upward at the end of the offer year to raise stock prices. At the time of insider offerings, investors are not able to observe positive discretionary accruals because inflated earnings are first available at the end of the offer year. Therefore, positive discretionary accruals in the offer year may not be the evidence of opportunistic earnings management.

Different than Marquardt and Wiedman (2004), Heron and Lie (2004) test for evidence of earnings management around announcements of insider offerings. [2] The authors examine insider offerings announced from 1980 to 1998. Using discretionary accruals estimated from balance sheets, Heron and Lie find that firms with insider offerings have more positive discretionary accruals in both the pre-announcement year and the announcement year than firms with other secondary offerings. For insider offerings, the upward earnings management coincides with better adjusted operating performance. Heron and Lie find that operating performance does not decline following the announcements; instead, firms with insider offerings have better adjusted operating performance than firms with other secondary offerings during the post-announcement period. The results on the post-announcement operating performance suggest the possibility that managers use financial reporting discretion for reasons other than misleading investors.

Hypothesis Development

Managers have discretion over financial reporting of operating performance of their firms. Information asymmetry allows firms to manage earnings and to alter market perceptions through their portrayal of corporate performance. Prior studies suggest that

[2] Heron and Lie (2004) argue that managed earnings influence equity valuation and thus an examination of earnings management strategies around equity issues helps reveal the motivations behind and the information associated with the choice of issue types. For instance, the authors find that firms announcing regular primary shares manage earnings upward before and during the announcement year; the firms experience declining operating performance following a temporary improvement in performance during the announcement year. Their interpretation of the results is that firms issue primary shares in response to inflated stock prices and thus the issuance conveys the overvaluation of the firms' securities.

firms manage reported earnings to mislead investors, to achieve smoother earnings, and to reduce litigation risk.

The Managerial Opportunism Hypothesis

The managerial opportunism hypothesis suggests that managers manipulate earnings to conceal the firms' real economic value from investors. The hypothesis implies that investors cannot see through distorted financial statements. Studies show evidence of opportunistic earnings management before several corporate events, such as management buyouts (Perry and William (1994) and Wu (1997)), stock for stock acquisitions (Erickson and Wang (1999) and Louis (2004)), IPOs (Teoh, Welch, and Wong (1998a) and Teoh, Wong, and Rao (1998)), seasoned equity offerings (Rangan (1998) and Teoh, Welch, and Wong (1998b)), and share repurchases (Rodriguez and Yue (2004) and Gong, Louis, and Sun (2008)). In contrast, other studies question whether managers are actually able to mislead investors (Shivakumar (2000), Coles, Hertzel, and Kalpathy (2006), and Di and Marciukaityte (2008)).

Earnings management before corporate events helps firms to reach desired stock prices. Teoh, Welch, and Wong (1998b) find that net income escalates before seasoned equity offerings and peak in the offer year while declining afterwards. Discretionary current accruals display a similar pattern while operating cash flows demonstrate an opposite pattern. The results suggest that upward earnings management leads to the improvement in pre-offer operating performance, inducing higher offer prices. When grouping firms by pre-offer discretionary current accruals, Teoh, Welch, and Wong find that firms with the highest level of the accruals experience the worst stock performance during the post-offer period. Regression analyses show similar results; that is, pre-offer

discretionary current accruals have predictive power for post-offer stock underperformance. Therefore, the authors conclude that investors cannot see through inflated earnings before seasoned equity offerings. Operating performance declines following the offerings as discretionary current accruals reverse back and investors are disappointed by the declining post-offer performance. Thus, offering firms experience worse stock performance during the post-offer period.

Insider offerings involve insiders' personal wealth since the proceeds from these transactions go directly to selling shareholders. The direct financial involvement in the issuance may create strong incentives for opportunistic earnings management around insider offerings. Prior studies show that firms are willing to engage in earnings management to benefit their insiders. Bartov and Mohanram (2004) and Wei (2004) find that managers overstate earnings through increasing discretionary accruals before large exercises of executive stock options to obtain higher payouts for executives. Moreover, the Enron case provides an example of firms using earnings management to benefit managers' sales: Jeffery Skilling, the CEO of Enron, was charged for both misleading financial reporting and profitable sales of his holdings at temporarily inflated stock prices (Tenpas (2006)). By examining a sample of fraudulent earnings overstatements, Beneish (1999) finds that insider sales have predictive power for the occurrence of earnings management that violates GAAP.

If managers engage in opportunistic earnings manipulation, I expect upward earnings management before insider offerings, specifically in Year -1. Such earnings management strategy results in a temporary improvement in reported earnings that induces higher stock prices for insider sales. Subsequently, offering firms experience a

deterioration in reported earnings and thus poor stock performance during the post-offer period when managed earnings reverse back. Managers can overstate earnings by increasing discretionary accruals or decreasing their expenses, especially R&D expenses. Furthermore, when earnings management is discovered, firms have to restate earnings and sometimes they are sued. Thus, if offering firms engage in opportunistic earnings management they should have a higher incidence of earnings restatements and lawsuits than matched firms.

Prior studies supporting the managerial opportunism hypothesis suggest that upward earnings management results in a temporary improvement in operating performance before insider offerings, inducing good stock performance. However, stock underperformance is expected after the offerings as earnings that are aggressively overstated reverse back (Huddart and Louis (2005)). Thus, the managerial opportunism hypothesis predicts a negative relation between pre-offer discretionary accruals and post-offer stock performance.

The Earnings Smoothing Hypothesis

Firms often engage in earnings smoothing. A survey by Graham, Harvey, and Rajgopal (2005) shows that 78% of CFO respondents express willingness to sacrifice economic value to obtain smoother earnings streams. Some studies suggest that firms do not abandon their earnings smoothing strategy around corporate events (e.g., Di and Marciukaityte (2008) [share repurchases]; Di, Goodwin, Marciukaityte (2008) [primary equity offerings]). The literature suggests that there are strong incentives to smooth earnings. Hepworth (1953) points out that earnings smoothing can be driven by tax concerns and stakeholder relations. Gordon (1964) argues that managers smooth

earnings for their own benefits, such as job security and compensation. In addition, Trueman and Titman (1988) show that earnings stability has a positive effect on debtholders' assessment of corporate performance and lowers the probability of bankruptcy.

Geol and Thakor (2003) use information asymmetry to explain the market reaction to accruals-based earnings smoothing. Specifically, they argue that uninformed shareholders avert volatile earnings due to expected losses on liquidity trading and such loss aversion drives firms to smooth earnings. Adverse market reaction occurs when firms fail to deliver smooth earnings as expected by shareholders. By the same token, firms have incentives to smooth earnings around insider offerings to avoid negative market reaction since the offerings involve the trade between informed insiders and uninformed investors.

The earnings smoothing hypothesis suggests that managers use their discretion in financial reporting to obtain smoother earnings streams. For example, when a firm experiences a temporary increase in earnings, it manages earnings downward to achieve smoother earnings. DeFond and Park (1997) provide evidence that earnings smoothing is related to current corporate performance and management expectation of future corporate performance. They find that firms currently performing worse than the industry median have positive discretionary accruals if they are expected to perform better than the industry median; in contrast, firms currently performing better than the industry median have negative discretionary accruals if they are expected to perform worse than the industry median. Since the strategy requires the ability to foresee temporary changes in

earnings, smoothed earnings streams reveal management's knowledge of the firm (Demski (1998)).

Unlike opportunistic earnings management, earnings smoothing is a long-term strategy that improves communications between managers and investors. Kirschenheiter and Melamud (2002) argue that smoothed earnings convey long-term corporate performance and improve the precision of financial figures. Accordingly, they propose that earnings smoothing is part of an optimal strategy employed by rational managers to disclose their superior information about future corporate performance. Furthermore, Tucker and Zarowin (2006) find that earnings smoothing determines whether current stock prices reflect future earnings. When an interaction term of earnings smoothing and future earnings is included in regression analyses, current stock returns are positively related to the interaction term while the returns become insignificantly related to future earnings. The findings suggest that earnings smoothing improves the information content of earnings about future corporate performance.

The earnings smoothing hypothesis predicts downward (upward) earnings management when a firm experiences a temporary increase (decrease) in earnings. To achieve smoother earnings, firms can engage in discretionary accruals management or real earnings management. If firms engage in earnings smoothing, I expect their smoothing ratios to be significantly higher than one, and I expect a positive relation between pre-offer discretionary accruals and post-offer changes in operating performance. When firms smooth earnings they reveal some information about future earnings and improve earnings informativeness. Accordingly, if firms manage earnings

to smooth them, I do not expect an increase in the number of restatements or lawsuits after insider offerings.

If offerings firms manage earnings to smooth earnings, such earnings management strategies are not aimed to benefit insiders at the expense of investors. Instead, smoothed earnings convey to investors information about the firms' future performance. Thus, the earnings smoothing hypothesis predicts no relation between earnings management around insider offerings and post-offer stock performance.

The Litigation Avoidance Hypothesis

Another explanation for earnings management around insider offerings is the litigation avoidance hypothesis suggesting that firms manage earnings to dissociate insider sales from poor operating performance afterwards (Beneish, Press, and Vargus (2005)). The hypothesis implies that earnings management around insider offerings is driven by litigation concerns. Shareholder litigation is associated with high costs, such as large lawsuit settlements and negative market reaction to litigation announcements (Ferris and Pritchard (2001)). According to DuCharme, Malatesta, and Sefcik's (2004) study of stock offerings made from 1988 to 1997, the lawsuits against the SEO firms misstating financial statements to mislead investors have an average settlement greater than $10M with the largest settlement being $87M. Moreover, insiders involved in fraudulent trading face criminal charges associated with up to $5M fine and maximum 20-year imprisonment (Tenpas (2006)). Material penalties on fraudulent insider trading and opportunistic earnings management impose high costs against these activities and may give firms the incentives to manage earnings to avoid such penalties.

Examining whether insider trading provides the incentives for voluntary disclosure to maximize their profits, Cheng and Lo (2006) find no evidence of a significant association between insider sales and the frequency of good news or bad news forecasts by management. The relation between selling activities and management forecasts remains insignificant when the authors investigate whether CEO trading exerts more influence over voluntary disclosure than trading by other insiders. Cheng and Lo's results suggest that managers do not mislead investors to increase insiders' trading gains by disclosing good news or avoiding disclosing bad news before the sales. The authors propose that managers are reluctant to voluntarily disclose distorting information to investors before insider sales as insider sales are associated with high litigation risk.

Prior research provides evidence that mandatory and voluntary disclosures of corporate performance are essentially the same. Specifically, Kasznik (1999) finds that the median of the difference between reported earnings and management forecasts is 0.000. In the absence of such similarity, contradictory mandatory and voluntary disclosures would increase the likelihood of investors detecting the fraudulent information, regardless if mandatorily or voluntarily disclosed. If managers' voluntary disclosure reflects their concerns of high litigation risk induced by insider sales (Cheng and Lo (2006)), I expect that the litigation concerns also have an influence on mandatory financial reporting around insider sales.

Beneish, Press, and Vargus (2005) test the litigation avoidance hypothesis using a sample of firms associated with technical default from 1983 to 1997. The authors argue that litigation risk of firms with poor corporate performance stems from the possibility of investors perceiving to be deceived. They find that firms with abnormal insider sales

during the year preceding technical default announcements contemporaneously manage earnings upward while firms with the sales in the default year do not engage in earnings management. Further, regression analyses show that contemporaneous abnormal insider sales predict pre-default earnings management but the insider sales in the default year have no predictive power. The results suggest that default firms employ the earnings management strategy at the end of the year before technical default to dissociate insider trades from subsequent poor corporate performance and thus to lower litigation risk. On the other hand, no evidence of earnings management for firms with abnormal insider sales in the default year helps these firms to invalidate the accusation of purposefully misleading investors. The findings of Beneish, Press, and Vargus support the litigation avoidance hypothesis, suggesting that litigation concerns have a significant impact on insider trading and financial reporting. Without restricting the sample to firms with technical defaults, Weber (2004) also find that firms manage earnings upward following stock sales by CEOs.

Earlier studies show that insider sales precede decreases in stock prices (e.g., Jaffe (1974) and Finnerty (1976)). If insider sales are followed by a deterioration in operating performance, it will likely induce investor suspicion about trading based on superior information. In addition, the 1991 Federal Sentencing Guidelines for Organizations increase the sanctions imposed by federal judges by more than 20 times (Karpoff and Lott (1993) and Alexander (1999)). Facing the threat of shareholder litigation, firms may take actions to lower the likelihood of costly litigation.

The litigation avoidance hypothesis predicts upward earnings management following insider offerings to dissociate the sales from the firms' declining performance

afterwards. Furthermore, to reduce the probability of litigation firms can manage earnings downward before insider offerings. If firms are successful in managing earnings after insider offerings, I expect that the incidence of lawsuits after insider offerings will not be higher than the incidence of lawsuits for matched firms.

If firms manage earnings due to litigation concerns, earnings management strategies are aimed to help stabilize stock prices around the offerings rather than to benefit insiders at the expense of investors. In this case, the litigation avoidance hypothesis predicts no relation between earnings management around insider offerings and post-offer stock performance.

Summary

In this chapter, I review the literature on earnings management and present the development of hypotheses examined in this study. Insider offerings provide a setting associated with strong incentives for opportunistic earnings management as insiders' personal wealth is directly tied to insider offerings. There are few studies examining earnings management around insider offerings. Though they find that firms engage in earnings management, they provide mixed evidence of such financial reporting strategies. In addition, the limited literature does not investigate the motivations behind earnings management around the events. It is worthy of research effort to examine the motivations behind and the extent of earnings management around insider offerings.

There are three possible explanations for earnings management around insider offerings. First, prior studies posit that firms have incentives to engage in opportunistic earnings management around corporate events like seasoned equity offerings and share repurchases. These event studies find evidence that firms misrepresent their operating

performance to mislead investors to obtain desired stock prices. The managerial opportunism hypothesis predicts that firms may temporarily inflate earnings before insider offerings for higher stock prices.

Second, some studies suggest that firms engage in earnings management to smooth earnings and to convey future operating performance. The earnings smoothing hypothesis predicts that firms may manage earnings around insider offerings to communicate future prospects to the market.

Third, more recent studies suggest that firms manage earnings to lower litigation risk. The litigation avoidance hypothesis predicts that firms manage earnings downward before and upward after insider offerings to dissociate the offerings from poor corporate performance afterwards. Empirical tests on these hypotheses are discussed in the following chapters.

CHAPTER 3

RESEARCH METHODOLOGY

Data

I start with the announcements of U.S. seasoned equity offerings reported in the Securities Data Corporation (SDC) new issues database from January 1989 to December 2005. Both primary/secondary combination and pure secondary equity offerings are included to compile a sample of secondary equity offerings by insiders. I require that firms have CRSP share codes of 10 or 11 and that returns be available in CRSP for the announcement month. Furthermore, I exclude regulated utilities (SIC codes 4910 – 4949), depository institutions (SIC codes 6000 – 6099), and holding or other investment firms (SIC codes 6700 – 6799). The reason for the selection criterion is that firms in these industries have different accounting and reporting standards and probably have different motivations for earnings management. There are 1,507 combination and pure secondary equity offerings identified from the SDC database.

I use insider trading information from both the SDC and the Thomson Financial Insider Trading databases to identify secondary equity offerings by insiders. The Thomas Financial Insider Trading database contains information of all insider trading activities based on SEC filings. I define insiders as directors, committee members, officers, or founders of the firm and identify these insiders based on relationship codes in the

Thomson Financial database. I assume that insiders participate in secondary offerings when the Thomson Financial database documents insider sales on the offering day. When I cannot determine whether an equity offering involves insider selling transactions using the Thomson Financial data, I refer to the SDC database for data on insider (management) holdings before and after the offering. A secondary equity offering is identified as an insider offering when there is a decrease in insider holdings after the offering. Following the procedure, I identify 820 insider offerings during the sample period.

As prior studies suggest that firms may manage earnings before insider offerings (Heron and Lie (2004) and Marquardt and Wiedman (2004)), I require adjusted discretionary total accruals to be available for the pre-offer year. Furthermore, I require insider offerings involving each firm to be at least three years apart. When there is more than one insider offering for a firm in a four-year period, I include only the earliest one. My final sample consists of 490 insider offerings. The event year (Year 0) is the fiscal year of an insider offering.

Table 3.1 presents descriptive statistics of insider offerings as well as offering firms. As shown in Panel A, the frequency of insider offerings peaks in 1996, with 13.67% of the offerings in my sample. In Panel B, I report the distribution of insider offerings based on two-digit Standard Industrial Classification (SIC) codes. Industry groups with more than 5% of insider offerings in my sample are electronic and other electric equipment, business services, industrial machinery and equipment, and instruments and related products.

Table 3.1
Descriptive Statistics of Insider Offering Sample

Panel A: Calendar Distribution

Year	Number of Events	Percent of Events	Year	Number of Events	Percent of Events
1989	5	1.02	1998	43	8.78
1990	4	0.82	1999	27	5.51
1991	10	2.04	2000	30	6.12
1992	21	4.29	2001	22	4.49
1993	42	8.57	2002	18	3.67
1994	26	5.31	2003	15	3.06
1995	47	9.59	2004	34	6.94
1996	67	13.67	2005	21	4.29
1997	58	11.84	Total	490	100.00

Panel B: Industry Distribution

Industry	SIC Code	Number of Events	Percent of Events
Electronic and other electric equipment	36	53	10.82
Business services	73	52	10.61
Industrial machinery and equipment	35	38	7.76
Instruments and related products	38	36	7.35
Wholesale trade – durable goods	50	24	4.90
Oil and gas extraction	13	22	4.49
Health services	80	18	3.67
Chemicals and allied products	28	15	3.06
Trucking and warehousing	42	13	2.65
Wholesale trade – nondurable goods	51	12	2.45
Other		207	42.24
Total		490	100.00

Panel C: Select Characteristics of Offering and Matched Firms

	Offering Firms		Industry- & Performance-Matched Firms	
Total assets, $M	421	120	1,385	159
Percentage change in total assets	36.35	21.83	22.12	12.08
Book leverage, percent	46.11	45.25	42.55	41.73
Cash / total assets, percent	18.39	7.37	19.69	9.36
Tobin's *q*	2.53	1.97	2.14	1.66
Percentage of insider sales	6.96	7.83		

The sample consists of insider sales through secondary equity offerings during 1989 to 2005. Select characteristics are estimated during or at the end of the pre-offer year. Book leverage is estimated as total liabilities (item 181) plus the liquidating value of preferred stock (item 10) minus deferred taxes (item 35) minus convertible debt (item 79), divided by total assets (item 6). Tobin's *q* is the ratio of total assets minus the book value of common equity plus the market value of common equity to total assets. I obtain the market value of equity from CRSP at the beginning of the offer year (Year 0). I obtain accounting variables from Compustat and the market value of common equity from CRSP. I winsorize accounting variables at the top 1% and the bottom 1%.

Panel C of Table 3.1 shows select characteristics of insider offerings and offering firms. I obtain all variables from Compustat. Following Baker and Wurgler (2002), I estimate book leverage as total liabilities (item 181) plus the liquidating value of preferred stock (item 10) minus deferred taxes (item 35) minus convertible debt (item 79), divided by total assets (item 6). I compute Tobin's *q* as the ratio of total assets minus the book value of common equity (item 60) plus the market value of common equity (item 199 multiplied by item 54) to total assets. The variables are estimated during or at the end of the pre-offer year. To avoid problems with extreme values, I winsorize financial variables at the top 1% and the bottom 1%.[3] For comparison purposes, I also present corresponding characteristics of the industry- and performance-

[3] All accounting variables used in the paper are winsorized at the top 1% and the bottom 1%. However, my results remain the same without winsorizing.

matched sample. The sample is matched by two-digit SIC codes and return on assets in the pre-offer year.

As shown in Panel C, offering firms are smaller than matched firms. The median (mean) total assets of offering firms is $120M ($421M) while that of matched firms is $159M ($1,385M). Moreover, offering firms grow faster than matched firms. The median (mean) percentage change in total assets for offering firms is 21.83% (36.35%) whereas it is 12.08% (22.12%) for matched firms. Offering firms are slightly more levered than matched firms, with the median (mean) book leverage of 45.25% (46.11%) versus 41.73% (42.55%). There is similarity in the level of cash holding between offering and matched firms. Moreover, offering firms have higher Tobin's q's than matched firms; the median (mean) Tobin's q is 1.97 (2.53) for offering firms and 1.66 (2.14) for matched firms. The panel also shows that during the offer year the median (mean) percentage of common shares sold by insiders relative to outstanding shares is 7.83% (6.96%).

Methodology

Discretionary Accruals

Prior studies on earnings management around insider offerings use balance sheet data to estimate discretionary accruals. Hribar and Collins (2002) show that discretionary accruals estimated from balance sheet data may lead to spurious findings of earnings management around corporate events, such as mergers and acquisitions, discontinued operations, and foreign currency conversions. Therefore, I follow their recommendation and estimate discretionary total accruals from cash flow statements. Consistent with Hribar and Collins, total accruals for each firm j in year t ($TAC_{j,t}$) is defined as

$$TAC_{j,t} = EBXI_{j,t} - CFO_{j,t}, \quad (1)$$

where $EBXI_{j,t}$ is earnings before extraordinary items and discontinued operations (item 123) and $CFO_{j,t}$ is operating cash flow from continuing operations (item 308 minus item 124). When observations have total accruals of the absolute value greater than total assets, they are likely to be subject to recording errors. Therefore, I follow Kothari, Leone, and Wasley (2005) and exclude these observations from the sample.

I apply the modified Jones (1991) model proposed by Dechow, Sloan, and Sweeney (1995) to estimate discretionary total accruals. I exclude firm-years with combination or pure secondary equity offering from corresponding two-digit SIC code groups and then estimate the following OLS regression for each two-digit SIC code group in each year:

$$TAC_{j,t} / TA_{j,t-1} = \beta_0 (1/TA_{j,t-1}) + \beta_1 (\Delta Sales_{j,t} / TA_{j,t-1}) + \beta_2 (GPPE_{j,t} / TA_{j,t-1}) + \varepsilon_{j,t}, \quad (2)$$

where $TA_{j,t-1}$ is total assets (item 6) at the beginning of year t, $\Delta Sales_{j,t}$ is a change in sales (item 12) during year t, and $GPPE_{j,t}$ is the gross property, plant, and equipment (item 7). To enhance the reliability of the estimates, I perform the OLS regressions only for the two-digit SIC code groups with at least 10 observations. For each sample firm k in year t, nondiscretionary total accruals ($NDTAC_{k,t}$) are estimated based on the predicted coefficients from Equation (2):

$$NDTAC_{k,t} = \hat{\beta}_0 (1/TA_{k,t-1}) + \hat{\beta}_1 ((\Delta Sales_{k,t} - \Delta TR_{k,t}) / TA_{k,t-1}) + \hat{\beta}_2 (GPPE_{k,t} / TA_{k,t-1}), \quad (3)$$

where $\Delta TR_{k,t}$ is a change in trade receivables (item 151).

For each sample firm k in year t, discretionary total accruals ($DTAC_{k,t}$) is estimated as the difference between total accruals normalized by beginning total assets and nondiscretionary total accruals:

$$DTAC_{k,t} = TAC_{k,t} / TA_{k,t-1} - NDTAC_{k,t}. \quad (4)$$

Although Dechow, Sloan, and Sweeney (1995) indicate that the modified version of the Jones (1991) model is a powerful tool to detect earnings management, they suggest that the model can be problematic in examining firms with extreme financial performance. To improve the reliability of the discretionary total accruals measure, I follow Kothari, Leone, and Wasley (2005) and estimate industry- and performance-adjusted discretionary total accruals. I match firms by their two-digit SIC codes and return on assets in the pre-offer year. Offering firms are excluded from the matched sample during the three years before to three years after the offer year. Furthermore, I use the same data availability requirements for matched firms that I use for offering firms. Adjusted discretionary accruals are estimated as the difference between discretionary accruals of offering firms and those of matched firms.

Stock Performance after Insider Offerings

To measure long-run post-offer performance, I estimate buy-and-hold abnormal returns relative to size-, prior-return-, and book-to-market-matched firms. Buy-and-hold abnormal returns capture investor experience and suggest a low-trading-cost strategy to take advantage of detected mispricings.

I follow Barber and Lyon (1997) to estimate buy-and-hold abnormal returns. The size-, prior-return-, and book-to-market-matched sample is constructed using the

following procedure. Each month, CRSP firms are separated into ten size portfolios based on the market value of equity and there is the same number of firms in each size portfolio. I further establish five prior-return portfolios for each size portfolio. Then, I assign the corresponding size and prior-return portfolio to each offering firm. Among firms in each assigned portfolio, I select the firm having the book-to-market ratio closest to that of the offering firm to the matched sample. The matched sample excludes firms with combination or pure secondary equity offerings during the three years before to three years after the offer year. Both the market value of equity and the book-to-market ratio are obtained at the beginning of the offer year. Book-to-market ratios are estimated following Fama and French (1993). Prior returns are six-month raw returns before the offer year.

To estimate buy-and-hold abnormal returns, I first compute the buy-and-hold return for each firm in the offering and matched samples:

$$BHR_{l,a,b} = \left[\prod_{t=a}^{b}(1+R_{l,t})\right]-1, \tag{5}$$

where $BHR_{l,a,b}$ is the buy-and-hold return for firm l during the period from month a to b and $R_{l,t}$ is the stock return for firm l in month t. The abnormal return is the difference between the buy-and-hold return of an offering firm and that of its matched firm. If offering or matched firm does not have returns for the entire buy-and-hold period, I use abnormal returns for the longest buy-and-hold period that is available (e.g., Hertzel, Lemmon, Linck, and Rees (2002)).

The stock performance measure can suffer from the delisting bias. As such, I make the following adjustments to mitigate the delisting bias in measuring long-term

stock performance. When the CRSP delisting return is available, I add the delisting return after the return that is last available for the delisted firm. When the CRSP delisting return is not available and the firm is delisted as a result of poor performance, I follow Shumway (1997) to use -30% as the last return for NYSE and AMEX firms and follow Shumway and Warther (1999) to use -55% for Nasdaq firms.

Summary

This chapter presents the sampling procedure. Using the data reported in the SDC and the Thomson Financial Insider Trading databases, I identify 490 insider offerings made over the period 1989 to 2005. Based on the descriptive statistics, sample firms are small, fast-growing firms with high leverage relative to industry- and performance-matched firms. This chapter also discusses the methodology used to examine earnings management strategies of sample firms. Specifically, I follow the cash flow approach to estimate discretionary accruals and adjust the discretionary accrual measure for industry and performance. To measure long-term stock performance following insider offerings, I estimate buy-and-hold abnormal returns.

CHAPTER 4

RESULTS

Net Income and Operating Cash Flows

The managerial opportunism hypothesis suggests that upward earnings management before insider offerings induces a temporary increase in earnings that leads to higher offer prices before the offerings. Consistent with the hypothesis, I should expect overstated reported earnings before insider offerings. On the other hand, the litigation avoidance hypothesis predicts that firms manage earnings that are reported before offerings (Year -1) downward and/or manage earnings that are reported after offerings (Year 0) upward. Table 4.1 shows the pattern of net income and cash flows normalized by beginning total assets during the three years before to three years after insider offerings. I also apply a winsorizing procedure to improve the reliability of the accounting variables. In Table 4.2, both variables are winsorized at the top 1% and the bottom 1%, without a significant effect on my results. I use *t*-tests to evaluate the statistical significance of means and use Wilcoxon sign-rank tests to evaluate that of medians.

Table 4.1
Unwinsorized Net Income and Cash Flow from Operations

Fiscal Year	-3	-2	-1	0	1	2	3
Panel A: Net Income							
Net income							
Mean, percent	4.18***	4.78***	5.97***	8.57***	2.43	2.94***	2.20***
Median, percent	4.48***	5.78***	7.78***	9.83***	6.69***	4.95***	4.55***
No.	330	383	490	475	443	394	339
Changes in net income from previous year							
Mean, percent		0.11	1.46	2.39**	-6.47***	0.77	-1.34*
Median, percent		0.35	1.22***	1.63***	-1.79***	-1.02***	-0.22*
No.		325	383	475	442	392	335
Panel B: Cash Flow from Operations							
Cash flow from operations							
Mean, percent	8.52***	9.60***	9.25***	9.34***	8.52***	8.96***	9.30***
Median, percent	8.60***	9.45***	10.53***	11.02***	8.90***	9.12***	9.72***
No.	326	379	490	475	443	393	337
Changes in cash flow from operations from previous year							
Mean, percent		1.07	0.66	0.10	-1.24	0.18	-0.19
Median, percent		-0.20	1.13*	0.39	-0.52*	-0.43	0.04
No.		320	379	475	442	391	333

This table reports net income and cash flow from operations from three years before to three years after the offer year (Year 0) and annual changes in these variables. Net income and cash flow are scaled by total assets at the beginning of the year. I use *t*-tests for the means and Wilcoxon sign-rank tests for the medians.

***, **, and * indicate statistical significance at the 1, 5, and 10% levels (two-tail tests).

Table 4.2
Winsorized Net Income and Cash Flow from Operations

Fiscal Year	-3	-2	-1	0	1	2	3
Panel A: Net Income							
Net income							
Mean, percent	4.43***	5.39***	6.16***	8.79***	4.57***	3.24***	2.47***
Median, percent	4.48***	5.78***	7.78***	9.83***	6.69***	4.95***	4.55***
No.	330	383	490	475	443	394	339
Changes in net income from previous year							
Mean, percent		0.32	1.10	2.41***	-4.46***	-1.51**	-1.15
Median, percent		0.35	1.22***	1.63***	-1.79***	-1.02***	-0.22*
No.		325	383	475	442	392	335
Panel B: Cash Flow from Operations							
Cash flow from operations							
Mean, percent	9.09***	9.68***	9.52***	9.47***	8.95***	9.01***	9.39***
Median, percent	8.60***	9.45***	10.53***	11.02***	8.90***	9.12***	9.72***
No.	326	379	490	475	443	393	337
Changes in cash flow from operations from previous year							
Mean, percent		0.20	0.76	-0.04	-0.91	-0.12	-0.15
Median, percent		-0.20	1.13*	0.39	-0.52*	-0.43	0.04
No.		320	379	475	442	391	333

This table reports net income and cash flow from operations from three years before to three years after the offer year (Year 0) and annual changes in these variables. Net income and cash flow are scaled by total assets at the beginning of the year and winsorized at the top 1% and the bottom 1%. I use *t*-tests for the means and Wilcoxon sign-rank tests for the medians.
***, **, and * indicate statistical significance at the 1, 5, and 10% levels (two-tail tests).

As shown in Panel A of Table 4.2, net income increases during the pre-offer and the offer year and deteriorates afterwards. Though net income grows during Year -1, the increase in net income is only significant when using the Wilcoxon sign-rank test. Panel B shows that operating cash flows exhibit the same pattern as net income during Year -1 but not afterwards. I find that there is no significant change in operating cash flows during the offer year and only a marginally significant decrease afterwards. Taken together, these results suggest that the increase in net income in Year 0 and the subsequent decrease may be a result of upward earnings management during Year 0. The improving net income at the end of the offer year is consistent with the litigation avoidance hypothesis, suggesting that firms overstate earnings reported after insider offerings. Moreover, the simultaneous improvement in net income and operating cash flows in Year -1 does not support the notion that firms opportunistically manage earnings during the pre-offer year for higher stock prices.

Industry- and Performance-Adjusted Discretionary Accruals

To test for earnings management around insider offerings, I examine industry- and performance-adjusted discretionary total accruals during the three years before to the three years after the offer year (Table 4.3). To enhance the reliability of the proxy variable, I winsorize adjusted discretionary total accruals at the top 1% and the bottom 1%. Panel A presents adjusted discretionary total accruals without being winsorized while Panel B presents the discretionary accruals after being winsorized. The winsorizing procedure has no significant impact on my results. The following discussion of adjusted discretionary accruals is based on the results shown in Panel B of Table 4.3.

Table 4.3
Industry- and Performance-Adjusted Discretionary Total Accruals Estimated from Cash Flow Statements

Fiscal Year	-3	-2	-1	0	1	2	3
Panel A: Unwinsorized Adjusted Discretionary Total Accruals							
Adjusted discretionary total accruals							
Mean, percent	-1.63	1.26	-1.64*	3.39***	1.05	-1.83*	-1.56
Median, percent	-1.74*	0.37	-1.35**	1.91***	1.01	-1.49*	-1.53**
No.	258	323	490	475	392	320	258
Changes in adjusted discretionary total accruals from previous year							
Mean, percent		3.40**	-2.59*	4.98***	-2.91***	-1.59	0.87
Median, percent		2.51**	-1.74*	2.75***	-2.88***	-0.44*	0.58
No.		250	323	475	391	311	251
Panel B: Winsorized Adjusted Discretionary Total Accruals							
Adjusted discretionary total accruals							
Mean, percent	-1.56	1.32	-1.49*	3.47***	1.10	-1.69*	-1.42
Median, percent	-1.74*	0.37	-1.35**	1.91***	1.01	-1.49*	-1.53**
No.	258	323	490	475	392	320	258
Changes in adjusted discretionary total accruals from previous year							
Mean, percent		3.45**	-2.70**	4.90***	-2.93***	-1.73*	0.64
Median, percent		2.51*	-1.74*	2.75***	-2.88***	-0.44*	0.58
No.		250	323	475	391	311	251

This table reports industry- and performance-adjusted discretionary total accruals estimated from cash flow statements during the three years before to three years after Year 0 for a sample of 490 insider offerings. Adjusted accruals are estimated as a difference between the accruals of issuing firms and those of matched firms and scaled by total assets at the beginning of the year. I match firms by the two-digit SIC code and return on assets in Year -1. Panel B presents adjusted discretionary accruals winsorized at the top 1% and the bottom 1%. I use *t*-tests for the means and Wilcoxon sign-rank tests for the medians. ***, **, and * indicate statistical significance at the 1, 5, and 10% levels (two-tail tests).

I find negative adjusted discretionary total accruals as well as a decline in adjusted discretionary accruals during Year -1, consistent with the litigation avoidance hypothesis. The mean (median) adjusted discretionary total accruals are -1.49% (-1.35%) in Year -1 and decrease by 2.70% (1.74%) during Year -1, significant at the 10% or higher level. Furthermore, offering firms have positive adjusted discretionary total accruals and experience a significant increase in adjusted discretionary accruals in Year 0. The mean (median) adjusted discretionary total accruals are 3.47% (1.91%) in Year 0 and increase by 4.90% (2.75%) from Year -1 to Year 0, significant at the 1% level. Discretionary accruals decline after Year 0. This evidence of a temporary increase in discretionary accruals in Year 0 is consistent with the litigation avoidance hypothesis.

When insider offerings occur later in the fiscal year, investors can observe part of Year 0 earnings before the offerings through quarterly reports. In this case, overstated earnings in Year 0 can lead to higher offer prices. To ensure that such opportunistic earnings management is not driving Year 0 discretionary accruals, I construct a subsample of insider offerings that occur during the second quarter of the fiscal year. For this subsample, investors can observe Year -1 earnings but cannot observe earnings for most quarters in Year 0 yet. If offering firms continue having a significant increase in adjusted discretionary accruals in Year 0, it is unlikely that positive accruals are related to managerial opportunism. I report industry- and performance-adjusted discretionary total accruals during the three years before to the three years after the offer year in Table 4.4. Panel A presents adjusted discretionary total accruals without being winsorized while Panel B presents the discretionary accruals after being winsorized at the top 1% and the bottom 1%. The winsorizing procedure does not have a significant impact on my results.

The pattern of discretionary accruals for the subsample is very similar to that of the full sample. Thus, the results on discretionary accruals around insider offerings provide no support for the managerial opportunism hypothesis.

Table 4.4
Industry- and Performance-Adjusted Discretionary Total Accruals Estimated from Cash Flow Statements for the Subsample

Fiscal Year	-3	-2	-1	0	1	2	3
Panel A: Unwinsorized Adjusted Discretionary Total Accruals							
Adjusted discretionary total accruals							
Mean, percent	-3.27*	-1.44	-1.90	2.24	0.44	-2.56	0.39
Median, percent	-1.90*	-0.50	-2.94*	3.35**	-0.16	-3.09	-1.47
No.	79	102	152	147	118	93	70
Changes in adjusted discretionary total accruals from previous year							
Mean, percent		2.32	0.06	3.95*	-3.12*	-0.94	2.91
Median, percent		1.60	-1.52	3.93***	-4.16**	0.79	1.07
No.		77	102	147	118	89	66
Panel B: Winsorized Adjusted Discretionary Total Accruals							
Adjusted discretionary total accruals							
Mean, percent	-3.27*	-1.22	-2.04	2.02	0.56	-2.56	0.39
Median, percent	-1.90*	-0.50	-2.94*	3.35**	-0.16	-3.09	-1.47
No.	79	102	152	147	118	93	70
Changes in adjusted discretionary total accruals from previous year							
Mean, percent		2.32	0.15	3.66*	-2.76	-0.94	2.91
Median, percent		1.60	-1.52***	3.93*	-4.16	0.79	1.07
No.		77	102	147	118	89	66

This table reports industry- and performance-adjusted discretionary total accruals estimated from cash flow statements during the three years before to three years after Year 0 for a subsample of 152 insider offerings made during the second quarter of the fiscal year. Adjusted accruals are estimated as a difference between the accruals of issuing firms and those of matched firms and scaled by total assets at the beginning of the year. I match firms by the two-digit SIC code and return on assets in Year -1. Panel B presents adjusted discretionary accruals winsorized at the top 1% and the bottom 1%. I use *t*-tests for the means and Wilcoxon sign-rank tests for the medians. ***, **, and * indicate statistical significance at the 1, 5, and 10% levels (two-tail tests).

Earnings Smoothing

Earlier tests do not support the hypothesis that firms opportunistically manage earnings before insider offerings to mislead investors for higher stock prices. I further examine whether earnings management around insider offerings reflects offering firms' efforts for smoother earnings streams by estimating earnings smoothing ratios for offering and industry- and performance-matched firms. The earnings smoothing ratio is defined as the standard deviation of net income before extraordinary items and discretionary accruals divided by the standard deviation of net income before extraordinary items (e.g., Hunt, Moyer, and Shevlin (1997) and Pincus and Rajgopal (2002)). The net income before extraordinary items and discretionary accruals is the sum of operating cash flows from continuing operations (Compustat item 308 minus item 124) and nondiscretionary total accruals (obtained from Equation 3). The net income before extraordinary items is item 123. Standard deviations of both net income measures are estimated for offering and matched firms during Year -3 to Year 3. I require that both net income measures have no missing values during the 7-year period examined in this study. For a comparison between offering and matched firms, I require smoothing ratios to be available for both offering and matched firms. Under the restrictions imposed here, there are 127 pairs of offering and matched firms.

If offering firms engage in earnings management to smooth earnings, managed earnings should have a lower variability than unmanaged earnings. Accordingly, standard deviations of net income before extraordinary items and discretionary accruals should be higher than standard deviations of net income before extraordinary items, resulting in smoothing ratios higher than 1. Table 4.5 presents smoothing ratios of

offerings and industry- and performance-matched firms. I use *t*-tests and Wilcoxon sign-rank tests when examining whether smoothing ratios are higher than 1 and whether smoothing ratios of offering firms are different than those of matched firms. I find that the mean (median) smoothing ratio of offering firms is 1.90 (1.34), significantly higher than 1 at the 1% level. Moreover, I find no significant difference in smoothing ratios of offering and matched firms. The results suggest that, similar to other firms, offering firms use discretionary accruals to smooth earnings.

Table 4.5
Earnings Smoothing around Insider Offerings

	Offering Firms	Matched Firms	Difference
Earnings smoothing ratio, mean	1.90***	1.78***	0.12
Earnings smoothing ratio, median	1.34***	1.43***	-0.13
t-statistic for smoothing ratio minus 1	5.46	7.40	0.65
p-value for smoothing ratio minus 1	0.000	0.000	0.72
No.	127	127	127

The earnings smoothing ratio is the standard deviation of earnings before extraordinary items and discretionary accruals divided by the standard deviation of earnings before extraordinary items. The net income before extraordinary items and discretionary accruals is the sum of operating cash flows from continuing operations (Compustat item 308 minus item 124) and nondiscretionary total accruals (obtained from Equation 3). The net income before extraordinary items is item 123. I estimate these standard deviations for each issuing and industry- and performance-matched firm during Years -3 to 3. To determine whether smoothing ratios are significantly different than 1 and whether smoothing ratios of issuing firms are different than those of matched firms, I report *t*-statistics as well as *p*-values from Wilcoxon sign-rank tests.
***, **, and * indicate statistical significance at the 1, 5, and 10% levels (two-tail tests).

A potential explanation for downward earnings management before insider offerings is that firms may manage earning downward to reflect insiders' knowledge about future performance. If offering firms smooth earnings, I expect that discretionary accruals in Year -1 contain information about the firms' future cash flows. Specifically,

the earnings smoothing hypothesis suggests that offering firms increase (decrease) discretionary accruals when expecting an improvement (deterioration) in operating performance. I further test the earnings smoothing hypothesis by examining the relation between pre-offer discretionary accruals and post-offer changes in operating cash flows. I report changes in operating cash flows from Year -1 to Year 3 by the quartiles of discretionary total accrual (Year -1) in Table 4.6 where changes in cash flows are not winsorized and in Table 4.7 where the cash flow variables are winsorized at the top 1% and the bottom 1%. In these tables, Panel A presents post-offer changes in cash flows by the quartiles of adjusted discretionary total accruals in Year -1 and Panel B presents post-offer changes in cash flows by the quartiles of changes in adjusted discretionary total accruals in Year -1.

Table 4.6
Unwinsorized Operating Performance by the Quartiles of Pre-Offer Discretionary Accruals

	Changes in Operating Cash Flows From Year -1 to Year 3				
	Mean, %	*t*-Statistic	Median, %	*p*-Value	No.
Panel A: Quartiles of Adjusted Discretionary Total Accruals in Year -1					
Lowest quartile	-5.37***	-3.15	-3.50***	0.001	79
2nd quartile	-4.49***	-3.32	-5.10***	0.000	92
3rd quartile	-1.31	-1.05	0.49	0.607	86
Highest quartile	8.98***	4.35	6.84***	0.000	80
Difference (highest – lowest)	14.35***	5.36	10.34***	<0.0001	
Panel B: Quartiles of Changes in Adjusted Discretionary Total Accruals in Year -1					
Lowest quartile	-2.64	-1.03	-2.47	0.269	51
2nd quartile	-2.32	-1.42	-1.45	0.263	53
3rd quartile	-1.37	-0.99	-0.87	0.328	58
Highest quartile	0.25	0.10	-1.13	0.891	57
Difference (highest – lowest)	2.89	0.81	1.34	0.561	

This table reports the post-offer operating performance by the quartiles of discretionary accruals. Panel A presents the cash flow from operations from Year -1 to Year 3 by the quartiles of adjusted discretionary total accruals in Year -1. Panel B presents the changes in cash flow from operations from Year -1 to Year 3 by the quartiles of changes in adjusted discretionary total accruals in Year -1. The cash flow from operations and adjusted discretionary accruals are scaled by total assets at the beginning of the year. I use *t*-tests for the means and the differences in the means between the highest and lowest accrual quartiles. I use Wilcoxon sign-rank tests for the medians and for the differences in the medians between the highest and lowest accrual quartiles.

***, **, and * indicate statistical significance at the 1, 5, and 10% levels (two-tail tests).

Table 4.7
Winsorized Operating Performance by the Quartiles of Pre-Offer Discretionary Accruals

	Changes in Operating Cash Flows From Year -1 to Year 3				
	Mean, %	*t*-Statistic	Median, %	*p*-Value	No.
Panel A: Quartiles of Adjusted Discretionary Total Accruals in Year -1					
Lowest quartile	-5.04***	-3.18	-3.50***	0.001	79
2nd quartile	-4.58***	-3.50	-5.10***	0.000	92
3rd quartile	-1.29	-1.04	0.49	0.607	86
Highest quartile	8.63***	4.46	6.84***	0.000	80
Difference (highest – lowest)	13.67***	5.47	10.34***	<0.0001	
Panel B: Quartiles of Changes in Adjusted Discretionary Total Accruals in Year -1					
Lowest quartile	-2.30	-1.01	-2.47	0.273	51
2nd quartile	-2.32	-1.42	-1.45	0.263	53
3rd quartile	-1.37	-0.99	-0.87	0.328	58
Highest quartile	0.22	0.09	-1.13	0.891	57
Difference (highest – lowest)	2.52	0.76	1.34	0.563	

This table reports the winsorized post-offer operating performance by the quartiles of discretionary accruals. Panel A presents the cash flow from operations from Year -1 to Year 3 by the quartiles of adjusted discretionary total accruals in Year -1. Panel B presents the changes in cash flow from operations from Year -1 to Year 3 by the quartiles of changes in adjusted discretionary total accruals in Year -1. The cash flow from operations and adjusted discretionary accruals are scaled by total assets at the beginning of the year. The changes in cash flow from operations are winsorized at the top 1% and the bottom 1%. I use *t*-tests for the means and the differences in the means between the highest and lowest accrual quartiles. I use Wilcoxon sign-rank tests for the medians and for the differences in the medians between the highest and lowest accrual quartiles.

***, **, and * indicate statistical significance at the 1, 5, and 10% levels (two-tail tests).

Though the winsorizing procedure does not have a significant impact on my results, I focus my discussion on the results as shown in Table 4.7 due to the higher reliability. Firms in the highest discretionary accrual quartile experience significant increases in operating cash flows from Year -1 to Year 3 while firms in the lowest discretionary accrual quartile experience significant decreases in operating cash flows.

The difference in the mean (median) post-offer change in operating performance between firms in the highest and the lowest discretionary accrual quartiles is 13.67% (10.34%), significant at the 1% level. The results are consistent with earnings smoothing. Similarly, I also find that firms in the highest quartile of changes in adjusted discretionary accruals show improved operating cash flows during the post-offer period while firms in the lowest quartile show deteriorating operating cash flows; the changes in operating cash flows for all quartiles are not statistically significant. However, there is no significant difference in post-offer changes in operating cash flows between firms in the two extreme quartiles of changes in adjusted discretionary accruals.

As univariate analyses show some evidence of earnings smoothing, I employ regression analyses to reexamine the relation between changes in post-offer operating performance and pre-offer discretionary accruals while controlling for firm characteristics (Table 4.8). Panel A reports the results of regressions using the accounting variables without being winsorized while Panel B reports the results of regressions using winsorized variables. The winsorizing procedure is applied to the top 1% and the bottom 1% of the accounting variables and does not have a significant impact on my results. I include the logarithm of the market value of equity to control for firm size, Tobin's q to control for growth opportunities, and book leverage to control for financial distress.

Consistent with the univariate test results, I find that discretionary accruals in Year -1 show statistically significant predictive power on changes in operating cash flows from Year -1 to Year 3. Specifically, post-offer operating cash flows increase with pre-offer discretionary accruals. Furthermore, regression analyses show a significant relation

between the changes in discretionary accruals before the offers and the changes in operating cash flows after the offers. My findings provide evidence that firms reduce discretionary accruals before insider offerings to smooth earnings rather than to deceive investors about the firms' true performance.

Table 4.8
Regression Analyses of the Relation between Post-Offer Changes in Cash Flow from Operations and Pre-Offer Discretionary Accruals

	Dependent Variable: Changes in Cash Flow from Operations	
Panel A: Regressions with Unwinsorized Variables		
Intercept	-0.0216	-0.0607
	(-0.58)	(-1.18)
Adjusted discretionary total accruals	0.2932***	
	(7.22)	
Changes in adjusted discretionary total accruals		0.1019**
		(2.52)
Logarithm of market value of equity	0.0036	0.0062
	(0.59)	(0.79)
Tobin's *q*	-0.0015	-0.0074
	(-0.34)	(-1.16)
Book leverage	0.0000	0.0007
	(0.05)	(1.11)
Adjusted R^2	0.130	0.043
No.	325	210
Panel B: Regressions with Winsorized Variables		
Intercept	-0.0089	-0.0511
	(-0.24)	(-1.03)
Adjusted discretionary total accruals	0.3204***	
	(7.49)	
Changes in adjusted discretionary total accruals		0.0830*
		(1.86)
Logarithm of market value of equity	0.0055	0.0058
	(0.93)	(0.78)
Tobin's *q*	-0.0058	-0.0089
	(-1.22)	(-1.40)
Book leverage	-0.0002	0.0006
	(-0.51)	(1.03)
Adjusted R^2	0.140	0.030
No.	325	210

This table reports regression analyses of the relation between post-offer changes in cash flow from operations and pre-offer adjusted discretionary accruals as well as changes in pre-offer adjusted discretionary accruals. The dependent variable is the change in cash flow from operations from Year -1 to Year 3. The cash flow from operations and adjusted discretionary accruals are scaled by total assets at the beginning of the year. All independent variables are estimated during or at the end of Year -1. In Panel B, all variables are winsorized at the top 1% and the bottom 1% of the data. *T*-statistics are in parentheses. ***, **, and * indicate statistical significance at the 1, 5, and 10% levels (two-tail tests).

Stock Performance after Insider Offerings

Table 4.9 presents buy-and-hold abnormal returns during one year and three years after insider offerings. Similar to Clarke, Dunbar, and Kahle (2004), I find some evidence of stock underperformance following insider offerings. On average, offering firms have returns that are 25.76% lower than size-, prior-returns-, and book-to-market-matched firms during the three years after insider offerings and the difference in returns is significant at the 5% level. However, the abnormal stock performance after insider offerings is sensitive to the choice of matching portfolios. When estimating the post-offer abnormal stock performance relative to the portfolio matched by size and book to market, I find no evidence that offering firms perform worse than matched firms during the three years following insider offerings.

Table 4.9
Abnormal Stock Performance after Insider Offerings

	Matching Portfolios:	
	Size and Book to Market	Size, Prior Return, and Book to Market
Panel A: Abnormal Returns in One Year after Insider Offerings		
Mean, percent	5.18	4.36
t-Statistic	1.17	0.91
No.	459	434
Panel B: Abnormal Returns in Three Years after Insider Offerings		
Mean, percent	-5.16	-25.76**
t-Statistic	-0.75	-2.33
No.	459	434

This table reports abnormal returns during the one year and the three years following the offer year (Year 0). Panel A presents the one-year post-offer abnormal returns and Panel B presents the three-year post-offer abnormal returns. Abnormal returns are buy-and-hold size-, prior-return-, and book-to-market-adjusted returns during the post-offer period.
***, **, and * indicate statistical significance at the 1, 5, and 10% levels (two-tail tests).

If earnings management before insider offerings is driven by managerial opportunism, I expect a negative relation between discretionary accruals before the offerings and stock performance afterwards. Table 4.10 examines abnormal returns after insider offerings by the quartiles of adjusted discretionary total accruals (Panel A) as well as by the quartiles of changes in adjusted discretionary total accruals (Panel B) in Year -1. Abnormal returns are buy-and-hold size-, prior-return-, and book-to-market-adjusted returns during the three years after insider offerings. Inconsistent with the managerial opportunism hypothesis, I find no evidence of a negative relation between discretionary accruals in Year -1 and stock performance following the offerings.

Table 4.10
Stock Performance by the Quartiles of Pre-Offer Discretionary Accruals

	Abnormal Returns after Insider Offerings				
	Mean, %	*t*-Statistic	Median, %	*p*-Value	No.
Panel A: Quartiles of Adjusted Discretionary Total Accruals in Year -1					
Lowest quartile	-31.35*	-1.86	-30.51*	0.054	104
2nd quartile	-8.40	-0.49	2.54	0.942	111
3rd quartile	-22.19	-1.50	-11.41	0.265	108
Highest quartile	-41.35	-1.23	-16.88**	0.030	111
Difference (highest – lowest)	-10.01	-0.27	13.63	0.921	
Panel B: Quartiles of Changes in Adjusted Discretionary Total Accruals in Year -1					
Lowest quartile	-17.61	-0.95	-7.83	0.402	75
2nd quartile	-2.92	-0.18	-2.31	0.775	73
3rd quartile	-78.02	-1.62	-11.28	0.154	72
Highest quartile	16.11	0.63	-13.60	0.616	70
Difference (highest – lowest)	33.72	1.07	-5.77	0.797	

This table reports the post-offer stock performance by the quartiles of pre-offer discretionary accruals. Panel A presents post-offer abnormal returns by the quartiles of adjusted discretionary total accruals in Year -1. Panel B presents post-offer abnormal returns by the quartiles of changes in adjusted discretionary total accruals in Year -1. Abnormal returns are buy-and-hold size-, prior-return-, and book-to-market-adjusted returns during the three years after insider offerings. Adjusted discretionary accruals are scaled by total assets at the beginning of the year. I use *t*-tests for the mean values while I use Wilcoxon sign-rank tests for the median values.
***, **, and * indicate statistical significance at the 1, 5, and 10% levels (two-tail tests).

In addition, I use regression analyses to reexamine the relation between discretionary accruals and stock performance while controlling for firm characteristics (Table 4.11). Panel A reports the results of regressions using the accounting variables without being winsorized while Panel B reports the results of regressions using winsorized variables. The winsorizing procedure is applied to the top 1% and the bottom 1% of the accounting variables and does not have a significant impact on my results.

Similar to the univariate test results, regression analyses show no relation between post-offer stock performance and pre-offer discretionary accruals. Overall, these findings suggest that firms do not mislead investors by managing the earnings before insider offerings.

Table 4.11
Regression Analyses of the Relation between Post-Offer Stock Performance and Pre-Offer Discretionary Accruals

	Dependent Variable: Abnormal Returns after Insider Offerings	
Panel A: Regressions on Unwinsorized Independent Variables		
Intercept	0.9737*	1.4187*
	(1.79)	(1.85)
Adjusted discretionary total accruals	-0.0121	
	(-0.02)	
Changes in adjusted discretionary total accruals		0.2764
		(0.43)
Logarithm of market value of equity	-0.1163	-0.0770
	(-1.31)	(-0.66)
Tobin's *q*	-0.0558	-0.1378
	(-0.84)	(-1.36)
Book leverage	-0.0109*	-0.0192**
	(-1.75)	(-2.15)
Adjusted R^2	0.004	0.007
No.	419	278
Panel B: Regressions with Winsorized Independent Variables		
Intercept	1.0408*	1.4360*
	(1.89)	(1.86)
Adjusted discretionary total accruals	0.1398	
	(0.21)	
Changes in adjusted discretionary total accruals		0.2320
		(0.33)
Logarithm of market value of equity	-0.1046	-0.0746
	(-1.18)	(-0.64)
Tobin's *q*	-0.0870	-0.1471
	(-1.15)	(-1.41)
Book leverage	-0.0120*	-0.0194**
	(-1.89)	(-2.17)
Adjusted R^2	0.006	0.008
No.	419	278

The table reports regression analyses of the relation between post-offer abnormal stock returns and adjusted discretionary accruals as well as changes in adjusted discretionary accruals in Year -1. The dependent variable is three-year post-offer buy-and-hold size-, prior-return-, and book-to-market-adjusted returns. Adjusted discretionary accruals are scaled by total assets at the beginning of Year -1. All independent variables are estimated during or at the end of Year -1. In Panel B, the winsorized procedure is applied at the top 1% and the bottom 1% of all accounting variables. *T*-statistics are in parentheses.
***, **, and * indicate statistical significance at the 1, 5, and 10% levels (two-tail tests).

Earlier tests suggest that firms increase discretionary accruals in the year of insider offerings to lower litigation risk. In contrast, it may be argued that the increase in discretionary accruals is related to managers' opportunistic intention of misleading the market into raising its evaluation of the firms' securities. To further examine this possibility, I test for a relation between post-offer stock performance and discretionary accruals in Year 0 as described before. First, I examine post-offer abnormal returns by the quartiles of adjusted discretionary total accruals as well as by the quartiles of changes in adjusted discretionary total accruals in Year 0 (Table 4.12). Then I apply regression analyses to reexamine the relation between the two measures while controlling for firm characteristics (Table 4.13). Both tests show similar results, suggesting that offering firms' discretionary accruals in Year 0 do not provide an explanation for stock performance afterwards. The findings are inconsistent with the managerial opportunism hypothesis that predicts post-offer stock underperformance of firms with high accruals.

Table 4.12
Stock Performance by the Quartiles of Discretionary Accruals in Year 0

	Abnormal Returns after Insider Offerings				
	Mean, %	*t*-Statistic	Median, %	*p*-Value	No.
Panel A: Quartiles of Adjusted Discretionary Total Accruals in Year 0					
Lowest quartile	-34.70	-0.98	-2.73	0.641	98
2nd quartile	-25.29	-1.58	-17.18*	0.073	107
3rd quartile	-30.89*	-1.79	-13.66	0.113	113
Highest quartile	-21.53	-1.13	-13.25*	0.054	107
Difference (highest – lowest)	13.17	0.33	-10.52	0.343	
Panel B: Quartiles of Changes in Adjusted Discretionary Total Accruals in Year 0					
Lowest quartile	-31.62	-0.97	-2.00	0.683	105
2nd quartile	-24.83	-1.53	-17.88**	0.049	100
3rd quartile	-16.57	-0.80	-11.79	0.118	111
Highest quartile	-39.07**	-2.37	-13.49*	0.063	109
Difference (highest – lowest)	-7.45	-0.20	-11.49	0.304	

This table reports the post-offer stock performance by the quartiles of discretionary accruals in Year 0. Panel A presents post-offer abnormal returns by the quartiles of adjusted discretionary total accruals in Year 0. Panel B presents post-offer abnormal returns by the quartiles of changes in adjusted discretionary total accruals in Year 0. Abnormal returns are buy-and-hold size-, prior-return-, and book-to-market-adjusted returns during the three years after insider offerings. Adjusted discretionary accruals are scaled by total assets at the beginning of the year. I use *t*-tests for the mean values while I use Wilcoxon sign-rank tests for the median values.

***, **, and * indicate statistical significance at the 1, 5, and 10% levels (two-tail tests).

Table 4.13
Regression Analyses of the Relation between Post-Offer Stock Performance and Discretionary Accruals in Year 0

	Dependent Variable: Abnormal Returns after Insider Offerings	
Panel A: Regressions on Unwinsorized Independent Variables		
Intercept	0.9110	0.9159*
	(1.63)	(1.66)
Adjusted discretionary total accruals	0.0392	
	(0.06)	
Changes in adjusted discretionary total accruals		0.0113
		(0.02)
Logarithm of market value of equity	-0.1071	-0.1075
	(-1.20)	(-1.21)
Tobin's *q*	-0.0582	-0.0584
	(-0.87)	(-0.87)
Book leverage	-0.0110*	-0.0111*
	(-1.74)	(-1.75)
Adjusted R^2	0.004	0.004
No.	412	412
Panel B: Regressions with Winsorized Independent Variables		
Intercept	0.9913*	0.9825*
	(1.75)	(1.76)
Adjusted discretionary total accruals	-0.0133	
	(-0.02)	
Changes in adjusted discretionary total accruals		0.0390
		(0.08)
Logarithm of market value of equity	-0.0970	-0.0966
	(-1.08)	(-1.08)
Tobin's *q*	-0.0902	-0.0896
	(-1.19)	(-1.18)
Book leverage	-0.0122*	-0.0121*
	(-1.89)	(-1.89)
Adjusted R^2	0.005	0.005
No.	412	412

The table reports regression analyses of the relation between post-offer abnormal stock returns and adjusted discretionary accruals as well as changes in adjusted discretionary accruals in Year 0. The dependent variable is three-year post-issue buy-and-hold size-, prior-return-, and book-to-market-adjusted returns. Adjusted discretionary accruals are scaled by total assets at the beginning of Year 0. Other independent variables are estimated during or at the end of Year -1. In Panel B, the winsorized procedure is applied at the top 1% and the bottom 1% of all accounting variables. *T*-statistics are in parentheses.
***, **, and * indicate statistical significance at the 1, 5, and 10% levels (two-tail tests).

Securities Fraud Lawsuits

Lu (2004) finds that there is a positive relation between accruals-based earnings management and litigation risk as well as lawsuit settlements. Similarly, DuCharme, Malatesta, and Sefcik (2004) show that opportunistic earnings management around equity offerings raises the possibility of shareholder lawsuits against issuing firms. Accordingly, I expect that if firms opportunistically manage earnings before insider offerings, offering firms should be sued afterwards more often than other firms.

I obtain a list of federal class action securities fraud lawsuits that were filed after 1995 from the Stanford Securities Class Action Clearinghouse.[4] From the database, I identify the firms that were sued and the dates when lawsuits were filed. To match lawsuits involving offering and industry- and performance-matched firms, I obtain the CRSP Permanent Number for each sued firm. The final lawsuit sample consists of filings against 1,643 firms during the period of January 1996 to December 2005.

I examine securities fraud lawsuits filed against offering firms and matched firms during the three years after the offer year (Table 4.14). I find that 8.16% of offering firms are sued during the post-offer period. There is no significant difference in the frequency of lawsuits between offering and matched firms. My findings provide no evidence that offering firms are more likely to be sued after insider offerings than matched firms. The results suggest that investors do not perceive discretionary accruals around the offerings, especially positive discretionary accruals in Year 0, to be misleading. Rather, overstated earnings at the end of the offer year seem to help offering firms lower litigation risk, as suggested by the litigation avoidance hypothesis.

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[4] http://securities.stanford.edu/index.html

Table 4.14
Securities Fraud Lawsuits after Insider Offerings

	Percentage of Firms Named in Lawsuits
Offering firms	8.16%
Industry- and performance-matched firms	7.35%
Difference	0.81%
z-statistic	0.48

This table reports the percentages of offering and matched firms that get sued for committing securities fraud. I match firms by the two-digit SIC code and return on assets in Year -1. The lawsuits examined here are filed during the three years after the offer year. The lawsuit sample includes the lawsuits filed from 1996 to 2005. I use the *z*-test for the difference in the percentages of lawsuits between repurchasing and matched firms.

Earnings Restatements

Agrawal and Chadha (2005) suggest that the examination of earnings restatements has certain advantages in detecting earnings manipulation over examination of discretionary accruals. When managers agree to restate earnings, they admit that earlier reported earnings are incorrect. On the other hand, measures of discretionary accruals are academic concepts that only proxy for earnings management and suffer from measurement error problems. The finding of positive or negative discretionary accruals does not necessarily indicate that reported earnings are incorrect. Instead, managers may increase or decrease discretionary accruals to reflect their expectations of business conditions.[5]

Examining earnings restatements gives a more clear indication of underlying managerial intentions behind aggressive accounting practices. Richardson, Tuna, and Wu (2003) find that restating firms have higher total accruals than non-restating firms. Their logistic regression results suggest that firms with higher accruals are more likely to

[5] Teoh, Welch, and Wong (1998a) present a description of earnings management methods.

restate earnings. Thus, if firms opportunistically manage earnings before insider offerings, offering firms should be more likely to restate their earnings after offerings than other firms.

To compile the restatement sample, I start with the Financial Statement Restatement Database created by the General Accounting Office (GAO). The database includes restatements made from January 1997 to June 2005. To extend the database to include restatements made from January 1989 to December 1996, I follow the procedure used to construct the Financial Statement Restatement Database as described in GAO (2002). I conduct a *Lexis-Nexis* search of the keyword "restate" and its variations. Further, I exclude restatements associated with changes in accounting rules and methods because such restatements are not associated with earnings misstatements. Based on the *Lexis-Nexis* articles, I identify downward earnings restatements. Since downward earnings restatements suggest upward earnings manipulation before the restatements, they are especially appropriate for my study. My initial sample consists of 1,310 earnings restatements. For 1,121 of them, I can identify whether the restatement increases, decreases, or has no effect on previously reported earnings. There are 972 (86.71%) restatements that have a negative impact on earnings.

In Table 4.15 I examine earnings restatements during the three years following insider offerings and compare the frequencies of earnings restatements between offering and industry- and performance-matched firms. I find that only 1.63% of offering firms have downward earnings restatements. The percentage of restatements made by offering firms is not significantly different than that of restatements made by industry- and performance-matched firms. As offering firms are not more likely to restate earnings

than do matched firms, the results are inconsistent with the proposition that firms opportunistically manipulate earnings upward before insider offerings.

Table 4.15
Earnings Restatements after Insider Offerings

	Percentage of Firms Restating Earnings
Offering firms	1.63%
Industry- and performance-matched firms	1.43%
Difference	0.20%
z-statistic	0.26

This table reports the percentages of offering and matched firms experiencing earnings restatements during the three years after the offer year. I match firms by the two-digit SIC code and return on assets in Year -1. The earnings restatement sample includes restatements announced during January 1989 to June 2005. I obtain the restatements made from 1989 to 1996 from the General Accounting Office restatement database. When extending the sample to earlier and later years, I identify whether a restatement is earnings-increasing or earnings-decreasing from *Lexis-Nexis* articles. This study focuses on downward earnings restatements. I use the *z*-test for the difference in the percentages of earnings restatements between repurchasing and matched firms.

Real Earnings Management

The requirement to immediately and fully recognize R&D expenses gives firms an alternative way to manipulate earnings around corporate events. In addition, Healy and Wahlen (1999) suggest that discretionary accruals may not capture the effect of real earnings management using R&D expenses. Prior studies show that firms alter R&D investments to meet earnings expectations (e.g., Jacobs (1991) and Dechow and Sloan (1991)). In the survey by Graham, Harvey, and Rajgopal (2005), top executives show preference for managing real expenses like R&D in reaching earnings goals. If managers intend to mislead investors before insider offerings, they can increase reported earnings by temporarily decreasing R&D expenses. Such real earnings management strategies lead to poor business decisions that are costly to firms in the long run. Gunny (2005)

shows that earnings management through reducing R&D expenses induces lower operating performance in the subsequent periods.

In Table 4.16 I examine the pattern of R&D expenses normalized by beginning total assets during the three years before to three years after the offer year. Panel A presents R&D expenses without being winsorized while Panel B presents the expenses after being winsorized. The variable is winsorized at the top 1% and the bottom 1% of the data, without a significant impact on my results. I find no evidence of firms decreasing R&D expenses before the offering. The median changes in R&D expenses in these two years are positive and statistically significant whereas the mean changes in the expenses are not significantly positive. The results do not support the hypothesis that firms temporarily decrease R&D expenses before insider offerings to overstate earnings. Among all firm-years, approximately 47% of them have R&D expenses taking zero values. In Table 4.17 I reexamine the pattern of R&D expenses around insider offerings by excluding those observations with R&D expenses equal to zero. Panel A presents R&D expenses without being winsorized while Panel B presents the expenses after being winsorized at the top 1% and the bottom 1% of the data. Inconsistent with managerial opportunism, I find some evidence that R&D expenses increase in Year -1 and Year 0.

Table 4.16
R&D Expenses

Fiscal Year	-3	-2	-1	0	1	2	3
Panel A: Unwinsorized R&D Expenses							
R&D expenses							
Mean, percent	9.10***	8.85***	10.35***	10.88***	8.74***	7.01***	6.09***
Median, percent	4.18***	3.76***	4.53***	4.80***	3.87***	3.24***	3.25***
No.	173	200	267	264	242	220	195
Changes in R&D expenses from previous year							
Mean, percent		0.48	1.04	0.54	-1.93*	-1.97	-0.70*
Median, percent		0.00	0.00*	0.00*	0.00***	0.00	0.00
No.		165	197	259	239	215	191
Panel B: Winsorized R&D Expenses							
R&D expenses							
Mean, percent	8.91***	8.59***	10.14***	10.78***	8.11***	6.97***	6.08***
Median, percent	4.18***	3.76***	4.53***	4.80***	3.87***	3.24***	3.25***
No.	173	200	267	264	242	220	195
Changes in R&D expenses from previous year							
Mean, percent		0.44	0.85	0.65	-2.77***	-1.17*	-0.67**
Median, percent		0.00	0.00*	0.00*	0.00***	0.00	0.00
No.		165	197	259	239	215	191

This table reports R&D expenses of the sample of insider offerings from three years before to three years after the offer year (Year 0) and annual changes in these expenses. R&D expenses are scaled by total assets at the beginning of the year and winsorized at the top 1% and the bottom 1%. I use *t*-tests for the means and Wilcoxon sign-rank tests for the medians.
***, **, and * indicate statistical significance at the 1, 5, and 10% levels (two-tail tests).

Table 4.17
R&D Expenses of Firms without the Expenses Equal to Zero

Fiscal Year	-3	-2	-1	0	1	2	3
Panel A: Unwinsorized R&D Expenses							
R&D expenses							
Mean, percent	12.39***	12.74***	15.18***	16.05***	12.98***	10.64***	9.28***
Median, percent	9.27***	9.64***	10.39***	10.88***	7.65***	7.51***	7.63***
No.	127	139	182	179	163	145	128
Changes in R&D expenses from previous year							
Mean, percent		0.67	1.50	0.79	-2.89*	-2.98	-1.03*
Median, percent		0.12	0.20**	0.30*	-1.18***	-0.00	0.08
No.		121	137	175	160	142	125
Panel B: Winsorized R&D Expenses							
R&D expenses							
Mean, percent	12.13***	12.66***	14.99***	15.98***	12.24***	10.61***	9.26***
Median, percent	9.27***	9.64***	10.39***	10.88***	7.65***	7.51***	7.63***
No.	127	139	182	179	163	145	128
Changes in R&D expenses from previous year							
Mean, percent		0.61	1.22	0.82	-3.44***	-2.15*	-0.99**
Median, percent		0.12	0.20**	0.30*	-1.18***	-0.00	0.08
No.		121	137	175	160	142	125

This table reports R&D expenses of the sample of insider offerings from three years before to three years after the offer year (Year 0) and annual changes in these expenses. R&D expenses are scaled by total assets at the beginning of the year and winsorized at the top 1% and the bottom 1%. I use *t*-tests for the means and Wilcoxon sign-rank tests for the medians.
***, **, and * indicate statistical significance at the 1, 5, and 10% levels (two-tail tests).

Summary of the Results

This chapter presents the results of my empirical analyses on earnings management around insider offerings. Main findings of the study are as follows:

1. In the year of insider offerings, net income increases while operating cash flows show no change. In the pre-offer year, offerings firms experience some increases in both net income and operating cash flows. During the post-offer period, net income declines significantly.

2. In the offer year, offering firms have negative adjusted discretionary accruals while they have positive adjusted discretionary accruals during the offer year. The results suggest that the improving net income in the offer year is a result of upward earnings management.

3. I find a positive relation between post-offer operating performance and pre-offer adjusted discretionary accruals; however, there is no relation between post-offer stock performance and pre-offer adjusted discretionary accruals. The results suggest that firms engage in earnings management before insider offerings to smooth earnings.

4. I do not find that offering firms are more likely to be sued than matched firms during the post-offer period. This finding is consistent with the litigation avoidance hypothesis that firms engage in earnings management to lower litigation risk.

5. The examination of the occurrence of earnings restatements during the three years after insider offerings shows that offering firms are not more likely to restate earnings than matched firms during the three years following the offerings.

6. I find that firms raise R&D investments before insider offerings, in opposition to the prediction of the managerial opportunism hypothesis.

Overall, I find no evidence that firms with insider offerings opportunistically manage earnings upward before the offerings to raise stock prices. Instead, the findings of downward earnings management before and upward earnings management after insider offerings are consistent with the earnings smoothing hypothesis and the litigation avoidance hypothesis.

CHAPTER 5

CONCLUSIONS

Summary of Prior Research

Prior research suggests that firms have incentives to mislead investors about firm value around corporate events and documents evidence of opportunistic earnings management around the events. For example, Teoh, Welch, and Wong (1998a and 1998b) find that firms manage earnings upward by increasing discretionary accruals around the issuance of primary shares. Inflated earnings have a temporary impact on market valuation and raise the price of issuing firms' securities. In contrast, other studies suggest that managers do not always use their discretion on financial reporting opportunistically. That is, firms can manage earnings to achieve smoother earnings or to lower litigation risks.

Insider offerings provide one setting involving managers' personal wealth and thus strong incentives for opportunistic earnings management. The literature on earnings management around insider offerings is limited and provides mixed evidence of earnings management in that setting. Heron and Lie (2004) find that firms announcing insider offerings have more positive discretionary accruals than firms announcing other secondary offerings in the pre-announcement year. In contrast, Marquardt and Wiedman

(2004) find that firms with insider offerings do not have significantly higher discretionary accruals than firms with other secondary offerings in the pre-offer year. Despite different results on pre-event earnings management, the two prior studies show evidence of positive discretionary accruals around announcements and the completion of the offerings, respectively. Positive discretionary accruals around insider offerings announcements or the completion may be subject to explanations other than managerial opportunism.

Summary of Current Findings and Conclusions

In this study, I examine earnings management around insider offerings. As firms have incentives to benefit insider sales, they may opportunistically manage earnings upward before insider offerings to increase offer prices. On the other hand, as suggested by Beneish, Press, and Vargus (2005), fear of litigation may motivate firms to manage earnings downward before and upward after the offerings. Moreover, I expect that offering firms engage in earnings smoothing as this is a common practice (e.g., Graham, Harvey, and Rajgopal (2005)). I test whether offering firms manipulate earnings to mislead investors to obtain favorable stock prices, to lower litigation risk, or to smooth earnings. Different from prior studies, I examine two earnings management techniques, accruals management and real earnings management through R&D expenses. I also investigate the likelihood of offering firms restating earnings and the likelihood of the firms being sued during the post-offer period.

This study examines a sample of 490 insider offerings made during 1989 to 2005. I find that offering firms have negative adjusted discretionary accruals during the pre-offer year and positive adjusted discretionary accruals during the offer year. Firms with

higher discretionary accruals before the offerings show better operating performance afterwards. In addition, these firms do not have worse stock performance following the offerings. Taken together, these results suggest that firms engage in earnings management before insider offerings to smooth earnings. Moreover, I find no evidence that offering firms are more likely to be sued or to restate earnings during the three years after the offerings. Therefore, positive discretionary accruals at the end of the offer year are not driven by managerial opportunism; instead, upward earnings management after insider offerings along with the pre-offer earnings management seems to help firms to lower litigation risk. In addition, I do not find evidence that firms decrease R&D expenses before insider offerings to raise offer prices. Overall, my findings are consistent with the hypotheses of earnings smoothing and litigation avoidance while being inconsistent with the managerial opportunism hypothesis. The finding of discretionary accruals before insider offerings containing information about the firms' future operating cash flows suggests that earnings management around the offerings does not diminish the role of financial statements in capital allocation; rather, it helps improve the efficiency of capital allocation.

Future Research

One implication of the managerial opportunism hypothesis is that firms with higher accruals show stock underperformance during the post-offer period as previously deceived investors reevaluate the firms' securities. In opposition to this prediction, I find no association between post-offer abnormal returns and pre-offer discretionary accruals. When assessing the post-offer stock performance, I follow the event-time methodology to estimated buy-and-hold abnormal returns. Though the measure of long-term stock

performance captures real investment strategies, it suffers from cross-sectional dependence that inflates the statistical significance of the measure (e.g., Mitchell and Stafford (2000)). To enhance the reliability of the results on long-term stock performance, future research could also follow the calendar-time procedure to estimate post-offer abnormal returns.

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