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REAL TIME DISCLOSURE THROUGH CURRENT REPORTS: THE CASE OF MATERIAL CONTRACTS

By

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ABSTRACT

REAL TIME DISLCOSURE THROUGH CURRENT REPORTS: THE CASE OF MATERIAL CONTRACTS

By

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I examine the determinants and capital market implications of choosing current reports over other SEC reports to timely disclose an important set of non-routine corporate events—material contracts. My evidence suggests that firms with relatively less informative routine disclosures and higher market uncertainty choose current reports. Recognizing the multi-dimensional nature of competitive costs, I find that firms also choose current reports when facing lower (higher) competition from incumbents (potential entrants). From a capital market standpoint, firms choosing timely current reports have a lower level of information asymmetry and a 135 basis point lower annual cost of capital.

Dedicated to my parents, Ji Li and Renmei Zhang,

and

my host family in Lansing, John and Bonnie Bankson,

for their love and support.

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CHAPTER I: INTRODUCTION

In this dissertation, I investigate the determinants and capital market implications of firms' choice of the current report (i.e., Form 8-K) over other SEC reports to provide a more timely disclosure for an important set of non-routine corporate events—material contracts.[1] Registrants are required to disclose as exhibits in their filings with the SEC any material contracts that they entered. Prior to 2004, they could fulfill this requirement by making the disclosure either immediately through a Form 8-K or in the following periodic report or registration statement.[2]

Due to concerns that allowing registrants to delay the disclosure of material contracts would be detrimental to maintaining the "currency and adequacy" of disclosures and hurt the market's ability to "accurately and quickly price securities," effective August 23, 2004, the Additional Form 8-K Disclosure and Acceleration of Filing Date Rule (hereafter, the 2004 Current Report Rule) mandates that registrants provide at least summary information about material contracts through a Form 8-K while preserving the option to file the entire contracts in the following periodic report. Nevertheless, because the *limited* safe harbor provision that grants this option does not protect registrants against all disclosure liabilities under the securities laws, the escalated

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[1] Regulation S-K defines material contracts as significant definitive agreements that are "*not* made in the ordinary course of business" (emphasis added) and convey enforceable rights and obligations to the registrants. In SEC regulations, the term "material" is used when the disclosure is expected to substantially influence investment decisions (i.e., buy or sell the securities) of a reasonable investor. See 17 C.F.R. § 240.12b-2 (1990). Although managers could use their judgment to evaluate the materiality of contracts, they are subject to potential review by the SEC staff to ensure compliance with the regulation (Overdahl, 1991). Prior studies have shown that investors react to and assign significant value to material contracts (Carter and Soo, 1999; Verrecchia and Weber, 2006).

[2] In this dissertation, the filing of material contract refers to the disclosure of the *entire* agreement rather than some excerpts or key components of the agreement.

regulatory costs brought considerable pressure for registrants to file entire contracts on a current basis (Sena, 2004).[3]

Opponents to the regulation, however, have expressed three concerns. First, proprietary costs from immediate disclosure of material contracts may outweigh any informational benefits derived by investors. Second, due to the elusive terminologies and wordings used in contracts, as well as the inherent differences among individuals' information processing abilities (Mayo, 1976), a standalone disclosure of material contracts through current reports without other contextually-supporting information (e.g., financial statements, MD&A) may lead to more heterogeneity in investor assessment of the economic implications (O'Hara, 2004). Third, the short deadline for current reports may limit managerial due diligence and increase the chance of premature or incomplete disclosure, which could create unnecessary volatility and exacerbate the information problem.[4]

Despite the controversy surrounding the 2004 Current Report Rule, and the resulting large increase in current report filings by registrants, there is no systematic evidence on assessing corporate disclosure practices and their implications to the capital markets pre- or post-regulation. This dissertation attempts to fill this void. Given the marked attention paid to material contracts disclosures in the debate, I take a first look at the alleged costs and benefits associated with choosing Form 8-K over other SEC reports for the disclosure of material contracts. Specifically, I ask the following two questions: What are the determinants and capital market implications of choosing Form 8-K as the

[3] See Appendix A for institutional details on material contracts disclosure and Form 8-K regulation.
[4] For example, if firms are in the process of negotiating a series of related agreements, speedy release of the early signed ones might present a partial or biased picture of the whole series of agreements. See Comment letter from "Grundfest group" dated October 3, 2002, File No. S7-22-02.

medium for disclosure of material contracts in the pre-regulation period? How did the 2004 regulation alter the disclosure timing trade-offs?

Three characteristics of material contracts highlight their economic importance and shape the costs and benefits associated with the disclosure medium choice. First, material contracts are non-routine in nature, and hence, are likely to contain value relevant information about future earnings innovations as well as shifts in the earnings-generation process.[5] This makes Form 8-K disclosure of material contracts a valuable supplement to routine disclosures. Second, material contracts have high disclosure credibility because in addition to liability under the anti-fraud provisions of the securities acts, they are also enforceable under commercial laws. As material contracts *pre-commit* firms to certain aspects of the future operation rather than act merely as a management *forecast* of future events, Form 8-K disclosure of material contracts is less susceptible to the "cheap talk" problem (see Newman and Sansing, 1993; Stocken, 2000; Fischer and Stocken, 2001) and helps reduce the uncertainty regarding future operating results (Verrecchia, 1990). Third, material contracts are likely to contain highly proprietary information and, hence, their immediate disclosure through current reports could represent a costly option for some firms (Verrecchia, 1983).

Given these three features of material contracts, I hypothesize that firms are more likely to choose Form 8-K when their routine disclosures are less informative, when they experience higher market uncertainty due to strategic investment and financing activities (Healy and Palepu, 1993; 1995), or when they operate in product markets with less

[5] For example, a long-term agreement with a new customer could specify the expected sales revenue to be generated over the duration of the contract, while a joint research and development agreement could detail the amount of additional R&D expenditures that will be made in the future.

competition from incumbents (Verrecchia, 1990). Additionally, as competition is of multi-dimensional nature (Carlton and Perloff, 1994; Demsetz, 1997; Raith, 2003; Karuna, 2007), beside the competition with incumbents, I also hypothesize that firms are more likely to choose Form 8-K disclosure to deter would-be entrants when facing high potential competition (Darrough and Stoughton, 1990).

From the capital market implications standpoint, as the timely disclosure of material contracts contributes to "leveling the playing field" among investors (Hakansson, 1977; Diamond and Verrecchia, 1991; Kim and Verrecchia, 1994), I predict that firms choosing Form 8-K over other SEC reports for the disclosure of material contracts are associated with a lower level of information asymmetry, as captured by the Probability of Informed Trade (PIN) (Easley et al., 1997; Brown et al., 2004), share turnover (Easley et al., 1996; Leuz and Verrecchia, 2000), and quoted market depth (Verrecchia and Weber, 2006).

Based on comprehensive data of material contracts filed with the SEC, I identify a pre-regulation (fiscal years 2001-2003) sample of 11,784 firm-fiscal years with at least one material contract filed though SEC filings by 5,072 NYSE/AMEX/NASDAQ firms. Descriptive evidence shows that in 18.4% of the sample firm-years, at least one material contract was disclosed via Form 8-K, and 31.7% of the sample firms ever filed a Form 8-K for material contracts during the three years. This suggests a significant amount of variation in the disclosure medium choices.

Hypothesis tests on the pre-regulation period are consistent with my predictions. Firms are more likely to choose Form 8-K as the disclosure medium when they have less-informative GAAP earnings or are monitored by *less*-sophisticated market participants.

Although prior research generally finds timelier disclosure of *periodic* information in the presence of sophisticated market participants (e.g., Chen et al., 2002; Sengupta, 2004; Ajinkya et al., 2005), my result shows that sophisticated market participants have a dampening effect on firms' discretionary timely disclosure of *non-routine* information. I also find that firms choose Form 8-K more when they are engaged in new equity issuance and M&A activities, operate in an industry with low product substitutability, or face higher potential competition due to lower entry costs. The results on competitive costs suggest that, when the multi-dimensional nature of production market competition is considered, the seemingly conflicting predictions on the relationship between proprietary costs and disclosures from prior theoretical studies (Verrecchia, 1990; Darrough and Stoughton, 1990) can be supported at the same time.

My results on the capital market implications show that, after controlling for the self-selection, firms that choose Form 8-K for material contracts disclosure have significantly lower PIN, higher share turnover, and higher quoted market depth.[6, 7] Using the parametric relationship between PIN and the cost of equity capital reported in Easley et al. (2002), I estimate that firms choosing Form 8-K to file material contracts have a 135 basis point lower annual cost of capital. These results demonstrate that leveling-the-

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[6] It is possible for firms to use channels other than the SEC reports (e.g., press release) to disclose material contracts. Conversations with a securities lawyer and a manual check on a random sample show that although firms occasionally provide a condensed summary of material contracts through a press release, the disclosure of entire contracts is made only through the SEC filings. The manual check also reveals that when firms choose to report material contracts via periodic reports or registration statements, they most often do not pre-disclose such information through a press release. Regardless, any limited pre-disclosures would bias against my findings of a lower level of information asymmetry associated with Form 8-K disclosure of material contracts.

[7] Given that registrants can request confidential treatment of portions of material contracts (Verrecchia and Weber, 2006), I also check the robustness of my results to the effects of redaction. The replication of Verrecchia and Weber's (2006) study yields very similar results. After controlling for the effect of redaction, the inferences on the capital market implications of disclosure medium choice remain unchanged (see Chapter VII for details).

playing-field is the dominant effect in the pre-regulation period from timely disclosure of material contracts via current reports.

Using a post-regulation sample of 4,000 NYSE/AMEX/NASDAQ firms with material contracts for fiscal year 2005, I also examine the impact of the 2004 regulation. Given that escalated regulatory costs in the new regime are likely to dominate other cost considerations, I predict and find a significant reduction in the sensitivity of the disclosure medium choice to the hypothesized information demand and competitive cost determinants. The percentage of firms choosing Form 8-K to disclose at least one material contract in its entirety nearly quadrupled to 73.4%. These results are consistent with firms trading off increased regulatory costs for market-based disclosure incentives. This evidence also demonstrates an unintended consequence of the regulation that some firms are forced to choose a costly disclosure option which may hurt their competitive advantage. Results of capital market implications tests suggest that improved general market liquidity in the post-Sarbanes-Oxley Act period has driven down the association between the disclosure medium choice and information asymmetry to an undetectable level, reinforcing the notion that the marginal benefits of choosing Form 8-K disclosures will be larger with higher market uncertainty.

This dissertation contributes to the literature in several ways. First, prior research on disclosure timing focuses primarily on routine information (e.g., Givoly and Palmon, 1982; Chambers and Penman, 1984; Bagnoli et al., 2002). Extant research has not examined the determinants and implications of the timely release of non-routine information despite regulators' efforts to expedite its disclosure. This dissertation represents the first large-sample study that examines the disclosure timing of non-routine

information in material contracts and its implications for the capital market. Second, instead of considering the seemingly conflicting predictions from theoretical studies (Verrecchia, 1990; Darrough and Stoughton, 1990) as competing hypotheses (e.g., Verrecchia and Weber, 2006; Berger and Hann, 2007), this dissertation jointly tests and finds support for their contextual implications. Third, this dissertation adds to a growing body of literature on firms' disclosure choices and the level of information asymmetry (e.g., Leuz and Verrecchia, 2000; Bushee and Leuz, 2005). My research differs from these studies in that I investigate the timing of non-routine information disclosure, a topic that has been previously ignored but recently gained considerable attention from both regulators and academia (Verrecchia and Weber, 2006). Finally, the dissertation also sheds light on the unintended consequences of the 2004 Current Report Rule. By increasing regulatory costs, the rule has muted the effects of information demand and competitive costs, potentially leading to suboptimal disclosure timing decisions.

The remainder of the dissertation is organized as follows. In Chapter II, I review prior research and develop hypotheses. Research design is provided in Chapter III. Chapter IV contains the sample selection procedure and descriptive evidence. Chapter V presents results from hypothesis tests. Chapter VI investigates the consequences of the 2004 regulatory change and Chapter VII examines the relationship between disclosure medium choice and redaction. Concluding remarks are provided in the final chapter.

CHAPTER II: PRIOR RESEARCH AND HYPOTHESIS DEVELOPMENT

2.1 Prior Research

Form 8-K was devised to address the criticism that the SEC disclosure system was focused on historically-oriented accounting information and provided delayed disclosures that did not satisfy the needs of investors (Benston, 1969, p.520). Although prior research has studied current reports, its focus has been limited to market reactions surrounding the filings.

Pastena (1979) finds significant abnormal market returns around the time when registrants issue a press release regarding the filing of the current report disclosing the non-routine events. Carter and Soo (1999) use relatively recent data (i.e., 1993) to examine the relationship between the timeliness of Form 8-K report (i.e., the number of days between the event date and the filing date) and the immediate market reaction to Form 8-K filings. They find a significant market reaction around the event date and that the magnitude of market reaction around the filing date is positively related to how quickly firms file Form 8-K reports. Using intraday transactions data, McLelland (2003) examines the transaction size surrounding Form 8-K filings and finds that small-sized trades precede the large-sized ones. He infers that, while large investors wait until Form 8-K disclosure to trade, small investors may not rely on 8-K disclosure for trading.[8]

However, prior research does not examine an important aspect of Form 8-K, i.e., the decision whether or not to use Form 8-K over other less-timely disclosure media (e.g., periodic reports and registration statements) for disseminating significant non-routine

[8] There are also numerous studies on disclosure of auditor change through Form 8-K reports (See Whisenant et al., 2003 for a review).

information. I argue that examining the choice of disclosure medium is particularly relevant to justify regulators' efforts in promoting timely disclosure of non-routine events through Form 8-K reports. Consequently, the focus of the dissertation is to examine the determinants and capital market implications of the disclosure medium choice by exploiting the natural setting in which the choice of Form 8-K as the medium to disclose an important set of non-routine events—material contracts—was essentially voluntary prior to the 2004 regulatory change.

To date, the only study that focuses on the disclosure of material contracts is Verrecchia and Weber (2006), who use a hand-collected sample of 450 small firms to examine firms' decisions to redact proprietary information from the filed material contracts. They find firms that are not issuing new securities, operate in a competitive industry, or experience poor performance are more likely to redact information. They also show that redacting firms have a higher level of information asymmetry. However, the small sample size, as well as the inclusion of only relatively small firms, prevents them from exploring the effects of other economic factors (Verrecchia and Weber, 2006, p.794). Furthermore, as the decision to redact may be related to the choice of disclosure medium, a large sample study on the choice of disclosure medium can provide a more comprehensive picture on firms' material contracts disclosure.[9]

[9] On the one hand, if firms intend to maximize the effect of withholding proprietary information, they may choose to redact and delay the disclosure of material contracts at the same time. On the other hand, if firms want to soften the effect of redaction on information asymmetry, they may choose Form 8-K disclosure of material contracts.

2.2 Firms' Incentive to Use Form 8-K as the Disclosure Channel for Material Contracts

Given the three characteristics of material contracts discussed in the introduction, I develop testable hypotheses in this chapter on scenarios where these characteristics would be most relevant to firms' disclosure decisions. First, I employ two constructs—earnings informativenss and investor sophistication—to capture the effectiveness of routine disclosures and test the supplementary role of Form 8-K disclosure of material contracts. Second, I consider changes in capital structure and M&A activities as scenarios with high market uncertainty where the high credibility of material contracts disclosures would have a large impact. Third, I use product substitutability and entry costs to explore the effects of proprietary costs on Form 8-K disclosure of material contracts.

2.2.1 Earnings Informativeness, Sophisticated Market Participants and Form 8-K Disclosure of Material Contracts

Prior research shows that when reported GAAP earnings are less informative for valuation purposes, firms are more likely to speed up the disclosure of additional financial statement items in earnings press releases to mitigate the information problem (Chen et al., 2002; Wasley and Wu, 2006; D'Souza et al., 2006). Because material contracts are non-routine in nature, and hence, are more likely to provide additional valuable information on future earnings innovation as well as shifts in the earnings-generation process, Form 8-K disclosure of material contracts makes an effective disclosure mechanism to supplement historical and forecasted earnings information. Thus, I posit that firms provide timely disclosure of non-routine information when their periodic earnings-related information is less informative, leading to the following

hypothesis:[10]

H1a: *Ceteris paribus*, firms with less-informative GAAP earnings are more likely to choose Form 8-K over other SEC reports for the disclosure of material contracts.

Dye (1998) suggests that firms will increase disclosure frequency when catering to a more sophisticated investor clientele. Consistently, extant literature finds that firms monitored by sophisticated market participants face higher demand for timely earnings information (Sengupta 2004; Ajinkya et al., 2005). However, whether such firms would also make more timely disclosure of non-routine information is not readily apparent.

In contrast to the implications of disclosure theories, other arguments can be advanced to support firms' disincentives to make timely material contracts disclosure in the presence of sophisticated market participants. The first argument is based on sophisticated market participants' information rents. While the average investor is likely to be handicapped due to the non-routine nature of material contracts, sophisticated market participants may privately acquire the information with their superior analytical and information acquisition skills. Rather than requesting firms to make immediate public disclosure, sophisticated market participants may prefer to exploit their information advantage to compensate for their private information acquisition efforts (Kyle, 1985; McNichols and Trueman, 1994).[11] A second argument could be based on sophisticated market participants' fixation on earnings. As institutional investors generally place high

[10] An alternative argument could be that Form 8-K disclosure of material contracts weakens the ability of GAAP earnings in driving market returns, though it leads to the same hypothesis of a negative association between GAAP earnings informativeness and firms' propensity to choose Form 8-K for the disclosure of material contracts. However, as I measure the GAAP earnings informativeness using data from prior years (see Chapter 3.2), my empirical results are more pertinent to the original argument than to this alternative line of reasoning.

[11] This is not the case for earnings information because equity analysts *per se* have to provide forecasts on earnings and they are evaluated and compensated for their earnings forecast ability. In addition, analysts may also privately incorporate their information on material contracts into their earnings forecast and exhibit superior forecast ability.

emphasis on near-term profits (Porter, 1992; Bushee, 1998) and equity analysts focus extensively on earnings-related information (Asquith et al., 2007), they may have limited attention to non-routine events. Third, given the existence of sophisticated information intermediaries who gather, analyze, and disseminate information on public companies, and thereby reduce the level of information asymmetry (Roulstone, 2003), the marginal benefit to firms from providing additional disclosures may be limited.

Taken together, I do not make a directional prediction due to the conflicting arguments on the effects of sophisticated market participants on disclosure behavior:

H1b: *Ceteris paribus*, the extent to which firms are monitored by sophisticated market participants is unrelated to firms' choice of Form 8-K over other SEC reports for the disclosure of material contracts.

2.2.2 Changes in Capital Structure, Mergers and Acquisitions and Form 8-K Disclosure of Material Contracts

Ross (1977) and Myers and Majluf (1984) suggest significant market uncertainty is associated with changes in the capital structure of firms. Consequently, when firms raise public capital, they have incentives to mitigate the adverse effects of information asymmetry on the cost of capital (Bower and Hansen, 1985; Dierkens, 1991) by voluntarily providing additional disclosures (Gibbins et al., 1990; Lang and Lundholm, 1993; Healy and Palepu, 1993; 1995). Reported earnings and other financial disclosures (e.g., earnings guidance) may be less credible due to managers' ability to be opportunistic around securities issuance.[12] Given the high disclosure credibility of material contracts, immediate disclosure of key business relationships through current reports becomes a relatively more reliable and effective disclosure mechanism. In addition, changes in

[12] Both Teoh et al. (1998) and Shivakumar (2000) find evidence of earnings management before seasoned equity offerings, though they have different interpretations.

capital structure are likely related to significant changes in the investment opportunity set, which investors can better assess through Form 8-K disclosure of material business relationships. Taken together, I predict the following:

H2a: *Ceteris paribus*, firms with new securities issuance are more likely to choose Form 8-K over other SEC reports for the disclosure of material contracts.

As in the case of securities issuance, firms engaged in mergers and acquisitions are associated with significant information asymmetry as well (Grossman and Hart, 1981; Meyer and Majluf, 1984; Amihud et al., 1990). The market has uncertainty regarding the legitimacy of the transaction (i.e., whether the takeover represents a positive NPV project or is merely a part of an empire-building scheme). Similar to the case of new securities issuance, earnings-related information would be perceived to be of low quality due to managers' opportunistic behavior around takeover events (Erickson and Wang, 1999; Louis, 2004). Therefore, firms engaged in takeovers will have higher incentives to use the more timely Form 8-K disclosure of material contracts to ease the adverse selection problem, leading to the following hypothesis:

H2b: *Ceteris paribus*, firms with mergers and acquisitions activities are more likely to choose Form 8-K over other SEC reports for the disclosure of material contracts.

2.2.3 Product Substitutability, Entry Costs and Form 8-K Disclosure of Material Contracts

Verrecchia (1983) suggests that firms operating in highly competitive industries are likely to face large proprietary costs of disclosure (p.182). However, whether product market competition inhibits or spurs corporate disclosure is far from clear (Healy and Palepu, 2001). While Verrecchia (1990) argues that a market with seasoned competitors acts as a deterrent to disclosure, Darrough and Stoughton (1990) contend that firms will disclose more in the presence of elevated competition to discourage potential entry into

the product market. Taken together, these studies imply that it is important to understand the multi-dimensional nature of competition, which includes both competition with other incumbents and that with potential entrants (Raith, 2003; Karuna, 2007).

Hotelling (1929) suggests that competitors in an existing market may have "undue tendency" to mimic each other in all essential aspects of the product. While firms may have an incentive to generate rents through product differentiation (d'Aspremont et al., 1979), the rents can easily fade away if the firms fail to prevent imitation in a competitive market. Therefore, in a product market environment with high substitutability, firms with differentiating products will preserve their economic rents by refraining from or delaying the disclosure of highly proprietary information, leading to the following hypothesis:

H3a: *Ceteris paribus*, firms in industries with high product substitutability are less likely to choose Form 8-K over other SEC reports for the disclosure of material contracts.

Darrough and Stoughton (1990) demonstrate that when the disclosure effects on both capital and product markets are considered, the equilibrium strategy is for the incumbent to make full disclosure (non-disclosure or partial disclosure) when the entry cost is relatively low (high). They argue that the equilibrium disclosure strategy is immune to the types of the incumbent's private information. The incumbent will disclose unfavorable news to deter potential entrants. When having favorable news, the incumbent will also disclose it because (1) she has incentives to inform the capital market, and (2) a separating equilibrium of non-disclosure is not sustainable as potential entrants can rationally infer the news type. This leads to the following hypothesis with respect to entry costs:

H3b: *Ceteris paribus*, firms in industries with low entry costs are more likely to choose Form 8-K over other SEC reports for the disclosure of material contracts.

2.3 Disclosure of Material Contracts through Form 8-K and Information Asymmetry

The preceding hypotheses relate to the determinants of the disclosure medium choice for material contracts. In this chapter, I turn my focus to the capital market implications of this choice, and specifically, its impact on the level of information asymmetry.

If firms with material contracts choose other SEC reports instead of Form 8-K, the delayed disclosure could contribute to information asymmetry among investors (Beaver and Demski, 1974; and Hakansson, 1977),[13] leading to an adverse selection problem (Healy and Palepu, 2001; Verrecchia, 2001). As a rational response, uninformed investors will, on average, price protect themselves. In turn, the actions of uninformed investors will increase the bid-ask spread in the secondary markets, and further, reduce the willingness of the uninformed investors to trade (Easley et al., 1997; Brown et al., 2004). Consequently, the liquidity will decrease (Copeland and Galai, 1983; Glosten and Milgrom, 1985), the required return premium will increase (Constantinides, 1986; Amihud and Mendelson, 1986), and the trading volume will decline (Easley et al., 1996; Leuz and Verrecchia, 2000).

Form 8-K disclosure of material contracts can mitigate the adverse selection problem and increase market liquidity by ensuring "equal access to information" (Hakansson, 1977) and "leveling the playing field" among investors (Diamond and Verrecchia, 1991; Kim and Verrecchia, 1994). This effect works in two ways. First, immediate disclosure of highly detailed information would make it harder for certain

[13] Although it is difficult to predict the occurrence of material contracts in advance, competent analysts may identify budding business relationships when actively monitoring a firm and its industry.

investors to benefit from being privately informed, and hence, reduces the chance for uninformed investors to trade with their informed counterparts. Second, when disclosed, the credibility of material contracts helps decrease the uncertainty about firm value, and hence, reduce the marginal benefit of being better informed (Diamond, 1985). The disincentive for private information acquisition arises from the inability of informed traders to precisely predict when their information advantage would be eliminated by firms' disclosure of material contracts. Taken together, I predict a negative relationship between information asymmetry and the choice of Form 8-K as the disclosure medium, leading to the following hypothesis:

H4: *Ceteris paribus*, firms choosing Form 8-K over other SEC reports for the disclosure of material contracts have a lower level of information asymmetry.

However, the opposite may be expected for the following reasons. First, unlike material contracts disclosed through periodic SEC filings or registration statement which are accompanied by financial statements, MD&A, and other contextually supporting information, those reported in Form 8-K are generally disclosed on a standalone basis. The isolated nature may make it hard for investors (especially those less sophisticated) to interpret the information and to assess its impact on firms' future operations.[14] This is especially pertinent to material contracts which are legal documents with elusive terminologies and wordings. The low readability may make it even harder for investors to grasp the information (Li, 2006) or interpret information in the same way. Therefore, equal access to timely material contracts disclosures does not necessarily lead to investors

[14] There was a requirement of a "mini-MD&A" with respect to the Form 8-K disclosure of material contracts in the Proposing Rule for the 2004 Current Report Rule, but the Final Rule removed this requirement due to some commentators' concerns for the limited time to provide a thorough and meaningful management discussion and analysis. See comment letter from the "Grundfest Group" dated October 3, 2002.

being equally well informed due to the inherent differences among individuals' information processing abilities (Mayo, 1976). Even worse, the heterogeneous interpretations may create higher information asymmetry among investors.

Second, Arya and Mittendorf (2005) suggest that firms may manipulate the information environment by selectively disclosing certain information to satisfy the external demand (and to guide the herd), while hiding other relevant information. If firms use material contracts disclosures opportunistically to hide more significant information, I expect a higher level of information asymmetry when firms choose Form 8-K disclosure of material contracts. Third, the short time horizon to disclose material contracts through Form 8-K may put management under pressure, which diverts them from due diligence in disclosure.[15] This increases the chances of premature or incomplete disclosures, which could create unnecessary volatility and exacerbate the information asymmetry problem. If any of the three arguments is valid, I expect a higher level of information asymmetry associated with the firms choosing Form 8-K over other SEC filings for the disclosure of material contracts.

2.4 Impact of the Increased Regulatory Costs in the Post-Regulation Period

While the above hypotheses focus on the pre-regulation period, I now consider how the 2004 regulation altered the disclosure timing trade-offs. As discussed in the introduction, the 2004 regulatory change imposes considerable pressure on registrants to file the entire contracts on a timely basis through current reports. From the determinants

[15] Optimally, managers may need more time to consult with directors and technical experts (i.e., company's business, legal, and financial advisors), who, unlike the managers, may not fully participate in the negotiation of every contract and are, hence, unlikely to provide "real time" consultancy (see the comment letter from the American Bar Association dated September 12, 2002).

perspective, some firms that did not use Form 8-K under the pre-regulation regime due to either information demand or competitive costs considerations may choose current reports in the post-regulation era to reduce their exposure to regulatory costs. Therefore, the escalated regulatory costs in the new regime would generally mute other disclosure incentive considerations by nudging registrants towards a timelier filing of material contracts, leading to the following hypothesis:

H5a: Firms' choice of Form 8-K over other SEC reports for the disclosure of material contracts has a lower sensitivity to information demand and competitive costs incentives in the post-regulation period than in the pre-regulation period.

From the capital markets standpoint, if Form 8-K disclosure of material contracts becomes a more prevalent practice in the post-regulation period, its association with the level of information asymmetry would diminish. For instance, if firms choose Form 8-K to disclose material contracts regardless of their information environment, the disclosure medium choice is less likely to be associated with the level of information asymmetry. Additionally, given that recent research documents improved general market liquidity in the post-Sarbanes-Oxley Act period (Jain et al., 2006), the marginal benefits of choosing Form 8-K as the disclosure medium are expected to decrease. Collectively, both arguments lead to the following prediction:

H5b: Firms' choice of Form 8-K over other SEC reports for the disclosure of material contracts has a lower association with the level of information asymmetry in the post-regulation period than in the pre-regulation period.

CHAPTER III: RESEARCH DESIGH

In this chapter, I first describe the method for identifying and extracting information from material contracts filed by firms and then develop empirical models to test the hypotheses outlined in the previous chapter.[16]

3.1 Identifying and Extracting Information from Material Contracts

Although material contracts can be filed with different SEC reports, there are two features of the EDGAR filing system that enable me to consistently extract information on material contracts. First, material contracts are always presented as exhibits after the main body of SEC filings. Second, the EDGAR system always generates several lines of brief descriptions on the top of each material contract and the first line always starts with "<TYPE>EX-10". Exploiting these features of the SEC filing system, I use PERL programs to search current reports, periodic reports and registration statements to identify all material contracts filed with the SEC. Because sometimes a material contract could be filed more than once using different SEC reports (Verrecchia and Weber, 2006), I eliminate duplicate contracts by keeping only the first one filed.[17] I then extract relevant descriptive information (i.e., form of the SEC report, entry or amendment date, status of redaction, and type of contract) from each of the contracts.[18]

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[16] I focus on the hypotheses related to the pre-regulation period (i.e., H1 through H4) in this chapter. Analysis of the post-regulation period hypotheses (i.e., H5a and H5b) is discussed in Chapter VI.

[17] For example, on March 9, 2004, Lodgian Inc. filed "EX-10.14.3 Second Amendment to Lease Agreement" on both 10-K and S-1, Continental Airlines Inc. filed "EX-10.39(L) Amendment No 12 to Purchase Agreement DCT 05498" with both 10-K on February 21, 2002 and 10-K/A on March 1, 2002. To eliminate duplicates, I keep only the one filed earlier and, if filed on the same day, keep the one filed with periodic filings over registration statements and original filings over amendment filings.

[18] The details of the procedure are provided in Appendix B and Appendix C.

I consider the twelve-month period ending four months after the end of the fiscal year to determine whether at least one material contract was filed for a specific fiscal year. I choose this window because (1) any unreported material contracts during a fiscal year are required to be filed with the 10-K report, and (2) virtually all the 10-K reports are filed within 120 days after fiscal year end (Easton and Zimijeski, 1993; Griffin, 2003; Li and Ramesh, 2007b). The yearly regression discussed below will be based on such a twelve-month period.

3.2 Development of Models

I employ the following model to test my hypotheses on the determinants of firms' incentives to use Form 8-K over other SEC reports for material contracts disclosure:

$$\begin{aligned} Dummy8K_i = {} & \beta_0 + \beta_1 ERC_i + \beta_2 AdjRSQR_i + \beta_3 NumAnalyst_i + \beta_4 InstOwn_i \\ & + \beta_5 EquityIssue_i + \beta_6 DebtIssue_i + \beta_7 M\&A_i + \beta_8 PCMargin_i + \beta_9 LnPPE_i \\ & + \beta_{10} IPIntens_i + \beta_{11} ROA_i + \beta_{12} Loss_i + \beta_{13} LnMVE_i + \beta_{14} LnNumMC_i + \varepsilon_i \end{aligned} \quad (1)$$

where the dependent variable *Dummy8K* is a dummy variable indicating whether the firm filed at least one material contract through Form 8-K during the twelve-month period, and zero otherwise. The definitions of all the test variables are provided in Appendix D. The proxies for earnings informativeness (*ERC* and *AdjRSQR*), the sophistication of market participants (*NumAnalyst* and *InstOwn*), changes in capital structure (*EquityIssue* and *DebtIssue*), and M&A activities (*M&A*) are based on prior literature, so I refrain from providing a detailed discussion.[19]

[19] I measure earnings informativeness and the sophistication of market participants using data from prior year(s) to avoid possible endogeneity issues. In addition, I identify equity issuance, public debt issuance, and mergers and acquisitions directly from the SDC database to avoid any measurement error associated with using financial statement information to construct the proxies.

I use the industry price-cost margin (*PCMargin*) as a proxy for product substitutability. Extant Industrial Organization literature suggests that high (low) levels of product substitutability manifest through low (high) levels of price-cost margin (Carlton and Perloff, 1994; Demsetz, 1997). Similar to Karuna (2007), I measure the price-cost margin as industry sales divided by industry operating costs and predict a positive slope for this variable.

Conceptually, industry entry costs refer to the minimal level of investment that an industry must make before commencement of operations (Karuna, 2007). Because different industries have different structures for start-up costs, a single measure may not be reflective of entry costs for both infrastructure-intensive industries (e.g., manufacturing) and intellectual property based industries (e.g., software). Therefore, I employ two measures, *LnPPE* and *IPIntens*, to capture the entry cost related to the infrastructure and intellectual property investments, respectively. Similar to Karuna (2007), I compute *LnPPE* as the natural logarithm of the market-share-weighted average gross value of property, plant and equipment (*PPE*) for each industry. Due to the absence of a natural financial statement item for the capitalized value of intellectual property, I use an industry dummy instead. Specifically, *IPIntens* takes a value of one for the drugs, R&D services, programming, computers, electronics, or precise measurement instrument industries, and zero otherwise. I predict negative slopes for both proxies.

I include firm performance (*ROA* and *Loss*), size (*LnMVE*) and the number of material contracts filed during the twelve-month period (*LnNumMC*) as controls as they have been shown to affect material contracts disclosure (Verrecchia and Weber, 2006). Finally, I include year dummies in the model (not shown) to capture any inter-temporal

variations.

My second set of analysis focuses on the capital market implications of firms' disclosure medium choice for material contracts. Specifically, I estimate the following models:

$$PIN_i = \gamma_0 + \gamma_1 Dummy8K_i + \gamma_2 NumAnalyst_i + \gamma_3 InstOwn_i + \gamma_4 LnNumMC_i + \gamma_5 LnMVE_i + \gamma_6 NYSE_i + \gamma_7 AMEX_i + \gamma_8 LnPrice_i + \gamma_9 InvMills_i + \varepsilon_i \quad (2)$$

$$MonthlyTurnover_i = \gamma_0 + \gamma_1 Dummy8K_i + \gamma_2 NumAnalyst_i + \gamma_3 InstOwn_i + \gamma_4 LnNumMC_i + \gamma_5 LnMVE_i + \gamma_6 NYSE_i + \gamma_7 AMEX_i + \gamma_8 LnPrice_i + \gamma_9 InvMills_i + \varepsilon_i \quad (3)$$

$$DollarDepth_i = \gamma_0 + \gamma_1 Dummy8K_i + \gamma_2 NumAnalyst_i + \gamma_3 InstOwn_i + \gamma_4 LnNumMC_i + \gamma_5 LnMVE_i + \gamma_6 NYSE_i + \gamma_7 AMEX_i + \gamma_8 LnPrice_i + \gamma_9 InvMills_i + \varepsilon_i \quad (4)$$

where the dependent variable of Model (2), *PIN*, is the probability of private-information-based trading, estimated according to Easley et al. (1997) for the twelve-month period. Prior studies argue that *PIN* is a more direct measure of information asymmetry than, and is hence not subject to the various econometrics and interpretation issues associated with, spread-based proxies (Callahan et al., 1997; Brown et al., 2004). The dependent variable of Model (3), *MonthlyTurnover*, is the average monthly share turnover during the twelve-month period. Because uninformed traders shy away from stocks with high probability of private-information-based trading, prior studies argue that share turnover is negatively related to the level of information asymmetry (Easley et al., 1996; Leuz and Verrecchia, 2000). The dependent variable used in Model (4), *DollarDepth*, is the average daily median quoted dollar depth during the twelve-month period.[20] The intuition for this proxy is that market makers will reduce the quoted depth in response to increased information

[20] The use of long-window information asymmetry measures eases the concern regarding the "news effect," which occurs only temporarily around an event (see Leuz and Verrecchia, 2000).

asymmetry (Verrecchia and Weber, 2006).

In addition to the explanatory variable, *Dummy8K*, I add several controls in the models by following prior studies, namely, the sophistication of market participants (*NumAnalyst* and *InstOwn*) from Roulstone (2003) and Brown et al. (2004); and the number of material contracts filed (*LnNumMC*), firm size (*LnMVE*), exchange membership (*NYSE* and *AMEX*) and average share price (*LnPrice*) from Verrecchia and Weber (2006). To control for the self-selection problem associated with firms' disclosure medium choice, I also include the inverse Mills ratio (*InvMills*) estimated from the Model (1).[21] In addition, I include both year and industry dummies in the model (not shown) to capture any inter-temporal and cross-industry variations.

Although *Dummy8K* reflects firms' propensity to choose Form 8-K over other SEC reports for the disclosure of material contracts, one concern is that it captures only the occurrence, but not the extent, of this choice. To address this issue and provide a robustness check, I replace *Dummy8K* in all the above models with *Percent8K*, which is the percentage of material contracts that a firm filed through Form 8-K during the twelve-month period. For the determinants model (Model (1)), because *Percent8K* is a percentage variable with high incidence of extreme values (i.e., 0% and 100%), an OLS regression would be inappropriate for two reasons: the effect of any independent variable cannot be constant over its range, and the OLS regression cannot ensure that the predicted value will fall into the unit interval (Papke and Wooldridge, 1996). Following

[21] Other than including the inverse Mills ratio in the model, an alternative method to control for self-selection is to substitute $\Phi(\gamma_2'x_2)$ for *Dummy8K*, where $\Phi(\cdot)$ is the standard normal distribution function and $\gamma_2'x_2$ is the estimated linear combination from the first-stage determinants model. The coefficient on $\Phi(\gamma_2'x_2)$ is a consistent estimator for the effect of *Dummy8K* (see Maddala, 1983, p.121, eqn. 5.48). Both methods yield very similar results.

Papke and Wooldridge (1996), I use the GLM-based fractional response variable regression to estimate the determinants model. For the capital market implications models (Model (2) – (4)), I use the two-stage least square (2SLS) instrumental variable method suggested by Wooldridge (2002) to derive consistent slope estimates for *Percent8K*.[22]

[22] Specifically, I first run the fractional response variable regression including as regressors all the exogenous variables from both the first-stage (i.e., determinants model) and second-stage (i.e., capital market implications model) models, and obtain the predicted value of *Percent8K*. Then, I use the predicted value of *Percent8K* as its own instrument to estimate the capital market implications models (2) - (4). Untabulated results from the identification/IV relevance tests on these models consistently show that the models are identified and the instruments used are relevant to the models.

CHAPTER IV: SAMPLE SELECTION AND DESCRIPTIVE EVIDENCE ON MATERIAL CONTRACTS DISCLOSURE

4.1 Sample Selection

My initial sample consists of 23,274 firm-fiscal years from the COMPUSTAT/CRSP merged database over the period 2001-2003. The choice of the sample period is made to ensure a clean test in which (1) the choice of Form 8-K versus other SEC reports for material contracts disclosure is truly voluntary and (2) the effects of Form 8-K disclosure is less likely to be contaminated by the selective disclosure prior to the Regulation FD as well as any changes in the general information environment with the passage of Regulation FD. I exclude 2,272 observations from the banking industry because SEC filings capture only part of their regulatory disclosure (Verrecchia and Weber, 2006). Given that the TAQ database covers only NYSE, AMEX, and NASDAQ firms, I limit my analysis to firms in those markets, which reduces my sample size to 19,220. To identify material contracts from SEC filings, I require that firms be linked to the EDGAR system, yielding 15,140 observations. By focusing on those firm-fiscal years with at least one material contract filed (similar to Verrecchia and Weber, 2006), I further reduce my sample to 11,784 fiscal years corresponding to 5,072 firms.[23] Depending on the availability of regressors, the sample size varies across different analyses.

[23] As firms are not randomly choosing whether or not to have material contracts, limiting my sample to firm-fiscal years with at least one material contract raises the concern about the potential self-selection problem. To address this issue and to provide a robustness check, I developed a two-stage model in which I explicitly model the choice of whether or not to have at least one material contract as a function of changes in capital structure, product market competition intensity, operating performance and firm size in the first-stage and use Model (1) with *Dummy8K* in the second stage. Heckman probit regression on this two-stage models shows that (1) firms with new equity issuance, public debt issuance, M&A activity, higher competition from incumbents, lower performance and larger size are more likely to have material contracts; and (2) the inferences on the hypothesized determinants of firms' disclosure medium choice for material contracts remain unchanged after controlling for the self-selection. The results are presented in Table A1.

4.2 Descriptive Evidence on Material Contracts Disclosure

Descriptive evidence shows that 2,168 (18.4%) out of the 11,784 firm fiscal years have at least one material contract filed via Form 8-K, and that 1,606 (31.7%, untabulated) of the 5,072 firms filed at least one material contract through Form 8-K over the period 2001-2003, suggesting considerable variations in firms' disclosure medium choices.

Table 1 provides information on the persistence of the incidence and disclosure of material contracts through Form 8-K. Within the 15,140 firm-years that can be linked to the EDGAR system, I identify 4,399 unique firms that have continuous information over the period 2001-2003. Panel A reveals that 2,710 (61.6%) of these firms have at least one material contract for each of the three years, indicating a fairly persistent occurrence of material contracts over time. Panel B further shows that out of the 2,710 firms, only 102 (3.8%) used Form 8-K for all three years, suggesting that Form 8-K disclosure of material contracts may not be a sticky disclosure strategy in general. Panel C provides additional information on firms' material contracts disclosure. The average total number of material contracts per firm-year is fairly stable over the sample period with mean values ranging from 6.3 to 6.8 and median values staying consistently at 5 (which is the same as the median value reported in Verrechia and Weber, 2006). The percentage of firms using Form 8-K for at least one material contract exhibits a slight increase from 17.0% in 2001 to 20.3% in 2003.

To gain further understanding of Form 8-K disclosure of material contracts, I also provide information at the individual contract level. I identify 76,827 unique material contracts filed with the SEC during the sample period. By following the guideline in Item

601 of Regulation S-K, I classify the contracts into eight categories.[24] The second column in Table 2 shows that Employment-Related category represents the largest share (41.1%), followed by Debt-Related (22.0%), Business-Related (12.3%) and Equity-Related (7.7%). These frequencies are comparable to those reported in Verrecchia and Weber (2006), except that my Business-Related category absorbs their Purchase/Sale of Inventory or Services, License, and part of Other categories. Table 2 also shows that while 10.3% of all material contracts are filed through Form 8-K, the incidence is only 2.8% and 5.3% for employment- and lease-related contracts, respectively. The lower incidence suggests that these contracts, in general, are unlikely to contain information requiring immediate dissemination to the marketplace. Asset Acquisition or Disposition, Equity-Related, Debt-Related and Business Structure Changes are among the highest categories.[25] Business-Related and Other categories are close to the overall average.

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[24] The details of the classification scheme are presented in Appendix C. The different categories of material contracts may raise a concern that the amount of information contained in each contract (i.e., the level of materiality) differs across categories. To address this issue and provide a robustness check, I create a percentage variable for each of the eight categories (e.g., the percentage variable for the Business-Related category is calculated as the proportion of all material contracts that the firm filed during the twelve-month period that are business-related) and add seven of these eight percentage variables (I exclude one to avoid singularity) to Model (1) – (4) to control for the materiality of contracts. Results presented in Table A2 and A3 show that the inferences on the hypothesized determinants and capital market implications remain unchanged. Furthermore, as 41.1% of the material contracts are employment-related, another concern is that whether the results are primarily driven by the Employment-Related category. To provide a robustness check, I drop all the employment-related contracts from the sample and find that the inferences on the hypothesized determinants and capital market implications remain unchanged. The results are presented in Table A4 and A5.

[25] The high incidence of Form 8-K disclosure on these categories of material contracts may raise a concern that the association between the choice of Form 8-K and new securities issuance/M&A activities is just a mechanical relationship due to regulatory requirements for filing related contracts. For example, Regulation S-K mandates that plans of acquisition, reorganization, arrangement, liquidation, or succession be filed as exhibits to Form 8-K. However, these plans are *different* from the material contracts included in the category "Business Structure Changes" because material contracts are ancillary agreements to these plans, *not* the plans *per se*. While material contracts are filed under EX-10, these plans are reported under EX-2. Importantly, Item 601 of Regulation S-K does not require Form 8-K disclosure of any contracts under the exhibit categorical number EX-10 (i.e., material contracts), leaving it as a voluntary decision. Nevertheless, to provide a robustness check, I drop all the Asset Acquisition or Disposition-related and Business Structure Changes-related contracts from the sample and find that the inferences on the hypothesized

To investigate the timing of material contracts disclosure, I obtain the event date (i.e., the entry or amendment date) of each contract.[26] Based on the 73,604 contracts with event dates, Figures 1(a) and 1(b) provide the calendar time distribution of event dates and disclosure dates, respectively. I count the number of contracts for each calendar day during each year and average the daily counts over the three-year period. The inter-temporal average daily counts are plotted in the figures with the calendar dates indicated on the x-axis (e.g., the number "1.14" corresponds to January 14). Figure 1(a) shows that the consummation of material contracts occurs somewhat evenly throughout the calendar year except for the spikes around the turn of each calendar month.[27] In contrast, Figure 1(b) illustrates that the disclosure dates cluster around the filing date of 10-Ks (i.e., March 15 through March 31) and 10-Qs (May 15, August 14, November 14), consistent with my earlier discussions that most firms wait until the next periodic report date to file material contracts.[28]

To assess whether Form 8-K in fact represents a more timely disclosure medium than other SEC reports, I define the number of calendar days between the event date and

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determinants and capital market implications remain unchanged. The results are presented in Table A4 and A5.

[26] However, I find that 3,223 material contracts filed (or 4.2%) do not have a specific event date. Discussions with a securities lawyer suggest that firms sometimes file undated contracts, especially employment-related ones such as incentive compensation agreement or option grant agreement. Consistently, untabulated results show that three out of four of these undated material contracts are from the Employment-Related category. One interesting question is whether undated contracts represent managerial opportunism.

[27] The tendency to consummate contracts at the turn of calendar year or months could be driven by compensation-related incentives. This tendency raises a concern that contracts entered around the turn of calendar month could drive my results. To provide a robustness check, I drop all the contracts entered around the turn of calendar month from the sample and find that the inferences on the hypothesized determinants and capital market implications remain unchanged. The results are presented in Table A4 and A5.

[28] Untabulated results show that the disclosure dates of material contracts filed via Form 8-K are distributed approximately evenly throughout the calendar year with some minor clustering around the 10th day of each calendar month, consistent with the finding that the median disclosure lag is 10 days for material contracts filed through current reports.

the disclosure date of each material contract as the disclosure lag (hereafter, *DLag*), and in Figure 2 plot the cumulative distributions of *DLag* for material contracts filed via Form 8-K and those filed through other media using black and gray lines, respectively. Not surprisingly, the black line converges to one at a more rapid rate than the gray line. The median disclosure lag is 10 (90) days for material contracts filed through current reports (other SEC reports). Untabulated parametric and non-parametric tests confirm that material contracts filed through current reports are on average, significantly timelier than those filed via other SEC reports.[29]

[29] Figure 2 also reveals that in the pre-regulation period, registrants took beyond the next periodic report to file a nontrivial proportion of material contracts. This high incidence of non-compliance reflects, and adds to the evidence of, the low regulatory costs associated with delayed material contracts disclosure in the pre-regulation period. To address the concern that Form 8-K is a noisy proxy for disclosure timeliness, one additional analysis replaces *Dummy8K* with another indicator variable *DummyDLag10* (which indicates whether the firm filed at least one material contract within 10 calendar days after its event date during the twelve-month period) and yields similar results on the hypothesized capital market implications. The results are presented in Table A6. Replacing 10 calendar days with either 5 or 20 calendar days does not change the tenor of the results.

CHAPTER V: HYPOTHESIS TESTS

In this chapter, I discuss hypothesis tests of determinants and capital market implications of choosing Form 8-K over other SEC reports for the disclosure of material contracts. I first present the descriptive statistics in Chapter 5.1, and then discuss the findings with respective to the determinants and capital market implications in Chapter 5.2 and 5.3, respectively.

5.1 Descriptive Statistics

Table 3 presents descriptive statistics for all of the variables used in my models. By requiring data availability for all variables except *PIN* and *DollarDepth*, I further reduce the sample to 10,504 observations. I find that firms filed at least one material contract through Form 8-K in 18.3% of the firm years. The average percentage of material contracts filed through Form 8-K is 8.1% for the sample firm years. I also find that on average, firms are followed by 4.3 equity analysts with institutional investors holding 37.2% of shares outstanding.[30] The table further shows that 7.6%, 5.3%, and 32.1% of the firm years are associated with equity issuance, public debt issuance, and M&A activities, respectively. The average industry price-to-cost margin is 1.109 and the mean industry-weighted average gross *PPE* is $1,086 million. Nearly a quarter of all sample firms operate in intellectual-property intensive industries.

In terms of control variables, about 44% of the firm years in my sample suffered losses. The median (first quartile of) market value of equity is $265 million ($54 million),

[30] To reduce the influence of outliers, I winsorize *ERC*, *InstOwn*, and *ROA* at their respective top and bottom 1%.

which indicates that the sample in Verrecchia and Weber (2006) (i.e., $50 - $100 million) falls approximately between the first quartile and median of my sample in terms of firm size. NYSE (AMEX) firms constitute 36.8% (7.8%) of my sample. The mean (median) monthly share turnover is 14.1% (8.8%) and the mean (median) dollar depth is $8,260 ($4,900); these values are higher than those reported in Verrecchia and Weber (2006) due to their focus on small firms.[31] The average *PIN* is 0.205 for my sample, which is higher than the 0.182 reported in Brown et al. (2004). This is not surprising given that their sample consists of firms that had at least one conference call, and that are less likely to face information asymmetry issues.

The lower-left (upper-right) triangle of the Panel A in Table 4 provides the Pearson (Spearman) correlation coefficients among the test variables used in the determinants model. As the Pearson and Spearman correlations provide similar results, I limit my discussions to the former. Not surprisingly, the two proxies for firms' propensity to use Form 8-K for material contracts disclosure, *Dummy8K* and *Percent8K*, are highly correlated (0.797). Consistent with H1a, H2a, H3a, and H3b, both *ERC* and *LnPPE* are significantly negatively associated with *Dummy8K*, whereas *EquityIssue* and *PCMargin* show a positive relationship. The significant negative correlations of *Dummy8K* with *NumAnalyst* (-0.116) and *InstOwn* (-0.122) indicate that firms monitored by sophisticated market participants are less likely to use Form 8-K for material contracts disclosure. The remaining simple correlations are either insignificant (*AdjRSQR*, *M&A*, and *IPIntens*) or not in the predicted directions (*DebtIssue*).

[31] Both monthly share turnover and quoted dollar depth exhibit significant positive skewness. As a robustness check, I rerun all the relevant regressions using the natural logarithm of these two variables and find that my inferences remain unchanged.

Panel B of Table 4 presents the correlation coefficients among the test variables used in the capital market implications models. Not surprisingly, the three information asymmetry proxies are highly correlated in the expected directions. The univariate positive (negative) correlation between *PIN* (*DollarDepth*) and *Dummy8K* is not consistent with H4. However, this result is likely driven by the possibility that firms with poorer information environment (lower *NumAnalyst*, *InstOwn,* and *LnMVE*) are more likely to choose the Form 8-K disclosure to mitigate the information problem. To examine the incremental effects of the disclosure medium choice, one has to use regression analysis to control for other information environment factors.

5.2 Determinants of Choosing Form 8-K over Other SEC Reports

The multivariate tests of the determinants of the disclosure medium choice are presented in Table 5. The first column shows the predicted sign of the coefficients. The next two columns report the estimated coefficients and z-statistics from two probit regressions with *Dummy8K* as the dependent variable. As the partial model without control variables (Column (2)) and the full model (Column (3)) yield similar results, I will focus on the latter. The significantly negative coefficient on *ERC* (-0.003) indicates that firms are more likely to choose Form 8-K over other SEC reports for material contracts disclosure when the earnings valuation multiple is low, providing support to H1a. However, the insignificant result on *AdjRSQR* suggests that the strength of the association between earnings and market return is not a determinant of the disclosure

medium choice.[32] The significant results for both *NumAnalyst* and *InstOwn* reject the no-relationship hypothesis H1b, suggesting that firms monitored by more sophisticated market participants are less likely to use Form 8-K for the disclosure of material contracts. While the prior disclosure research finds more timely disclosure of periodic information in the presence of sophisticated market participants (Chen et al., 2002; Sengupta, 2004; Ajinkya et al., 2005), my result suggests that sophisticated market participants may have a different effect on firms' non-routine information disclosures.

I also find that firms are more likely to choose Form 8-K when they issue new equities (*EquityIssue*, 0.355) or are involved in mergers and acquisitions (*M&A*, 0.214), supporting both H2a and H2b. The insignificant coefficient on *DebtIssue* (0.007) suggests that information problems in public debt issuance are better solved through covenants or indentures.[33]

PCMargin has a significant positive coefficient (0.407), indicating that firms operating in a product market with high product substitutability are less likely to use Form 8-K in material contracts disclosure. This is consistent with H3a that firms tend to avoid speedy disclosure of proprietary information when they face escalating competition

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[32] Following Lougee and Marquardt (2004), I also considered two additional proxies for earnings informativeness: *Intangible* (the intangible assets (*DATA33*) deflated by the total assets (*DATA6*) at the beginning of the fiscal year and *SaleGrowth* (the growth rate of the sales (*DATA12*) for the current fiscal year over that of the prior year). Results on both measures strongly support H1a, though I acknowledge that intangible assets from acquisitions pre- versus post-SFAS No. 141 may not be comparable due to the elimination of pooling of interests method of accounting, and that sales growth may capture constructs other than earnings informativeness. The results are presented in Table A7. Additionally, a factor analysis of *ERC*, *AdjRSQR*, *Intangible*, and *SaleGrowth* produces two factors—f1 and f2. f1 (f2) loads heavily on *ERC* and *AdjRSQR* (*Intangible* and *SaleGrowth*). Replacing *ERC* and *AdjRSQR* with the factor scores for f1 and f2 in Model (1) yields a similar result supporting H1a.

[33] Verrecchia and Weber (2006) use an indicator variable that takes a value of one if the annual COMPUSTAT *DATA111* is not zero, and 0 otherwise, as a proxy for debt issuance. This measure differs from mine in that it captures both public and private debt issuances. I do not use their measure because my hypothesis is primarily on the relationship between public debt issuance and material contracts disclosure. Interestingly, Verrecchia and Weber (2006) do not find significant results when using proxy for only public debt issuances (p.812).

with other incumbents. Also consistent with H3b, *IPIntens* shows a significantly negative coefficient (-0.105), supporting the view that industries with low intellectual property investment provide more timely disclosure of proprietary information to deter entry.[34] The coefficient on *LnPPE* has the predicted sign but is insignificant, suggesting that entry cost in terms of physical infrastructure investment does not influence the occurrence of choosing Form 8-K. Taken together, the results for product market competition provide moderate support for the hypothesized effects of different competitive dimensions on firms' material contracts disclosure. While prior empirical work on disclosure usually treats product market competition as a single construct (e.g., Verrecchia and Weber, 2006; Berger and Hann, 2007), I extend the literature by testing hypotheses on the finer aspects of product market competition. More importantly, recognizing the multi-dimensional nature of competition suggests a potential route to consider contrasting predictions from extant theoretical work on competition and disclosure (e.g., Verrecchia, 1990; Darrough and Stoughton, 1990).

Regarding the control variables, I find that firms with lower operating performance, reporting losses, and of smaller size are more likely to choose Form 8-K for material contracts disclosure. As these firms are generally associated with a coarser information environment, the results for the control variables also support the notion that firms with information problems tend to use Form 8-K disclosure of material contracts to mitigate the problem. The overall Pseudo R-Squared is 10.6%, and 82.04% of the 10,504

[34] Given intellectual-property-intensive firms postpone disclosures in my setting, *IPIntens* is unlikely to be a proxy for litigation risk from omission of disclosure typically associated with high technology firms. However, as discussed in Li and Ramesh (2007b), firms operating in highly uncertain environments may postpone certain disclosures to avoid litigation risk due to the likelihood of subsequent corrective disclosures. To this extent, *IPIntens* may also proxy for litigation risk.

observations are correctly classified, indicating a reasonable fit for the model.

For robustness check, Column (4) and (5) present the regression results with *Percent8K* as the dependent variable. These results are comparable to those for the *Dummy8K* regressions, except for the entry cost proxies. While the *Dummy8K* regression yields a significantly negative coefficient for *IPIntens*, *Percent8K* regression finds significance only for *LnPPE*. A literal interpretation of this finding is that low entry costs increase firms' propensity to choose Form 8-K over other SEC reports, though different forms of entry costs—infrastructure versus intellectual property investment—impact different aspects of the disclosure medium choice—occurrence versus the extent.

5.3 Capital Market Implications of Choosing Form 8-K over Other SEC Reports

This chapter presents the results on the capital market implications of the disclosure medium choice. In Table 6 I separately report the multivariate regression results for each of the three information asymmetry measures. The first, second, and third column under each measure present the predicted sign, regression results with *Dummy8K* as the independent variable, and regression results with *Percent8K* as the independent variable, respectively.

Focusing on the first measure, *PIN*, column (2) shows a significantly negative coefficient on *Dummy8K* (-0.053), indicating that firms choosing Form 8-K over other SEC reports for material contracts disclosure have lower probability of private-information-based trading. Using the parametric relationship between *PIN* and the cost of equity capital reported in Easley et al. (2002), I estimate that the annual cost of capital is 135 basis points lower when firms with material contracts choose Form 8-K as the

disclosure medium. In terms of control variables, I find that firms with higher institutional ownership, fewer material contracts, higher market value of equity, and lower share price are associated with lower *PIN*. The insignificant result on the number of analysts following is due to its high correlation with share price (0.498). Untabulated results show that after dropping *LnPrice* from the regression, *NumAnalyst* has a significantly negative coefficient. NYSE firms have lower *PIN* than firms on NASDAQ, whereas AMEX firms show no significant difference from their NASDAQ peers. The inverse Mills ratio also has a significant positive coefficient, indicating a significant self-selection issue.[35] The inferences from the *Percent8K* regression shown in column (3) are similar.

The regression results on *MonthlyTurnover* as reported in column (5) shows that firms choosing Form 8-K for material contracts disclosure have a greater monthly share turnover of 18.4%, indicating higher market liquidity. Column (8) presents the results from the quoted dollar depth regression. The significant positive result for *Dummy8K* suggests that when firms choose Form 8-K for material contracts disclosure, the willingness of market makers to trade shares increases, suggesting significantly lower information asymmetry. The coefficient of 33.578 indicates that the market maker raises quoted dollar depth by $3,357.8, on average, when firms choose the Form 8-K disclosure of material contracts. The 2SLS results on Column (9) offer similar inferences.

In summary, the regressions based on three different information asymmetry measures provide consistent results in supporting H4 that firms choosing Form 8-K over

[35] As the inverse Mills ratio represents the private information underlying firms' choice that is not captured by the included determinants (Li and Prabhala, 2007), the significant coefficient on the inverse Mills ratio indicates that the private information underlying firms' choice of Form 8-K disclosure of material contracts also drives the level of information asymmetry.

other SEC reports for material contracts disclosure are associated with a lower level of information asymmetry.[36,37] In the next chapter, I provide evidence on the impact of the 2004 regulation.

[36] To check the stability of my results, I replicate the regressions in Table 6 separately for each fiscal year in my sample. Out of the eighteen separate regressions, sixteen provide results supporting H4 and only two (i.e., the quoted market depth on *Dummy8K* or *Percent8K* for the fiscal year 2003) show insignificant results, indicating reasonable stability across years.

[37] A factor analysis of *PIN*, *MonthlyTurnover*, and *DollarDepth* yields a single factor, which loads negatively (positively) on *PIN* (*MonthlyTurnover* and *DollarDepth*). Untabulated analysis using the single factor score as a proxy for information asymmetry provides similar inference on the hypothesized capital market implications.

CHAPTER VI: CONSEQUENCES OF THE 2004 REGULATORY CHANGE

To test hypotheses H5a and H5b, I follow the sample selection procedure outlined in Chapter 4.1 and construct a post-regulation sample of 4,000 firms with at least one material contract filed for the fiscal year 2005. The transition year 2004 is excluded. Panel A of Table 7 shows that the mean (median) number of material contracts per firm increased from 6.5 (5) in the pre-regulation period to 8.1 (6) in 2005 (comparative figures in Table 1), possibly because firms have lowered the threshold of reportable contracts in the new regulatory regime. The percentage of firms choosing Form 8-K to disclose at least one material contract in its entirety jumps from 18.3% in 2001-2003 to 73.4% in 2005. This, coupled with the uniform increases in Form 8-K disclosure of material contracts across all contract types (Table 2 versus Panel B of Table 7), show that the 2004 regulation has resulted in an environment with more "real time issuer disclosure," consistent with the spirit of Section 409 of the Sarbanes-Oxley Act.

Table 8 provides evidence on the marginal effect of the 2004 regulatory changes on the determinants and capital market implications of material contracts disclosure medium choice. Specifically, I estimate the determinants models using the 2005 sample and present the results in columns (3) and (6) in Panel A. Then, I compare the estimated coefficients with those from the pre-regulation sample (shown in columns (2) and (5)) using a pooled regression with separate intercept and dummy interactions for the pre- and post-regulation periods. The differences between the pre- and post-regulation period coefficients are reported in columns (4) and (7). Consistent with descriptive evidence, the probit regressions with *Dummy8K* in Panel A shows a significant increase in the intercept

(1.156, z-stat = 5.17) with a similar effect in the *Percent8K* regression. The magnitude of the coefficients for equity issuance, M&A activities, and competitive costs proxies all decline, supporting H5a that firms trade-off increased regulatory costs for disclosure incentives due to information demand and competitive costs. This provides evidence on an unintended consequence of the regulation that some firms are forced to choose a costly disclosure option which may hurt their competitive advantage. The significantly positive coefficients on *AdjRSQR* and *InstOwn*, while unexpected, could be caused by the higher regulatory costs that the new regulation imposed on firms in the spotlight.

In Panel B, while the *PIN* and *DollarDepth* regressions on *Dummy8K* fail to show a significant shift in the intercept, the *MonthlyTurnover* regression reveals a significant increase in the intercept (0.184, t-stat = 3.43), providing moderate support to the prior finding of improved general market liquidity in the post-Sarbanes-Oxley Act period (Jain et al., 2006).[38] The coefficients on *Dummy8K* lose their significance across all three measures of information asymmetry, consistently supporting H5b that the association between disclosure medium choice and information asymmetry would be lower in the post-regulation period. Untabulated results from regressions with *Percent8K* as the independent variable give similar inference. Taken together, the analysis reinforces the notion that the marginal benefits of choosing Form 8-K as the disclosure medium will be larger with higher market uncertainty.

[38] This test does not allow me to link the increase in general market liquidity to the new Form 8-K regulation. I will explore this issue more in follow up work.

CHAPTER VII: DISCLOSURE MEDIUM CHOICE VERSUS REDACTION IN MATERIAL CONTRACTS

Given the findings in Verrecchia and Weber (2006) on firms' decision to request for confidential treatment, one question arises: Are the capital market implications of firms' disclosure medium choice merely a manifestation of the redaction decision effects?

To address this question, I first replicate Verrecchia and Weber (2006). I identify 436 firms by following Verrecchia and Weber (2006) sample construction procedures.[39] Both Panel A and B of Table 9 show that my replication results on the determinants and capital market implications of redaction decision are very close to those in Verrechia and Weber (2006). Then, I extend their analysis on the determinants of redaction decision to a comprehensive sample. Specifically, I estimate Model (1) by replacing *Dummy8K* with *DummyRedact*, which takes a value of one if the firm filed a request for confidential treatment on at least one material contract filed during the twelve-month period. Incrementally, the results presented in Panel C show that firms with less sophisticated market participants, equity issuance, and larger size are more likely to redact information. I also find that firms are more (less) likely to redact when facing high competition from existing incumbents (potential entrants), providing further support to both Verrecchia (1990) and Darrough and Stoughton (1990).[40]

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[39] The sample size is very close to the 450 in their paper. The slight difference may be due to the choice of annual window—while I choose the twelve-month window ending four months after the end of the fiscal year, they select the fifteen months window ending 3 months after the end of the fiscal year.

[40] As a sensitivity analysis, by allowing for a correlation between the disclosure medium choice and the redaction choice, I run a bivariate probit regression with *Dummy8K* and *DummyRedact* as the two dependent variables on all the independent and control variables in Model (1). While the results indicates

After including *DummyRedact* in the capital market implications models (2)-(4) to control for the effects of redaction, I re-estimate these models and present the results in Panel D. The coefficients on *Dummy8K* remain significant and in the predicted directions across all the three models, indicating that the documented capital market implications of firms' disclosure medium choice is robust to controlling for the redaction decision. As an additional check, I replace the inverse Mills ratio from the *Dummy8K* model with that from the *DummyRedact* model and find that the inferences remain unchanged. Finally, I include *DummyRedact* in the capital market implications models with *Percent8K* as the explanatory variable (results reported in Panel E). The significant results on *Percent8K* are not subsumed by the inclusion of *DummyRedact*. In contrast to the *Dummy8K* models, the significance of *DummyRedact* in the *Percent8K* models vanishes when the dependent variable is *PIN* or *MonthlyTurnover*.

Overall, the analysis in this chapter indicates that despite the correlation between firms' choice of disclosure medium and redaction, the capital market implications of firms' disclosure medium choice are not merely a manifestation of the redaction decision effects.

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significant positive correlation between the two choices (rho = 0.155, p-value < 0.001), the inferences on the determinants for both choices remain unchanged.

CHAPTER VIII: CONLCUDING REMARKS

Beginning with the SEC's initiatives to implement the requirements of Section 409 "Real Time Issuer Disclosure" under the Sarbanes-Oxley Act, the relevance of using Form 8-K to provide timely disclosures of significant non-routine corporate events has been extensively debated by various constituents. To help assess the new regulations, I provide the first large sample study on the alleged costs and benefits associated with choosing Form 8-K over other SEC report for the disclosure of material contracts.

In the pre-regulation period, I find that firms are more likely to choose current reports as the disclosure medium when their routine disclosures are less informative or when they experience higher market uncertainty due to strategic investment and financing activities. Additionally, by recognizing the multi-dimensional nature of competition, I also find that firms are more likely to use the Form 8-K disclosure when they operate in product markets with lower competition from incumbents or when they face higher competition from potential entrants. From a capital market implications standpoint, I find that firms that choose Form 8-K as the disclosure medium for material contracts are associated with a significantly lower level of information asymmetry, as captured by PIN, share turnover, and quoted market depth.

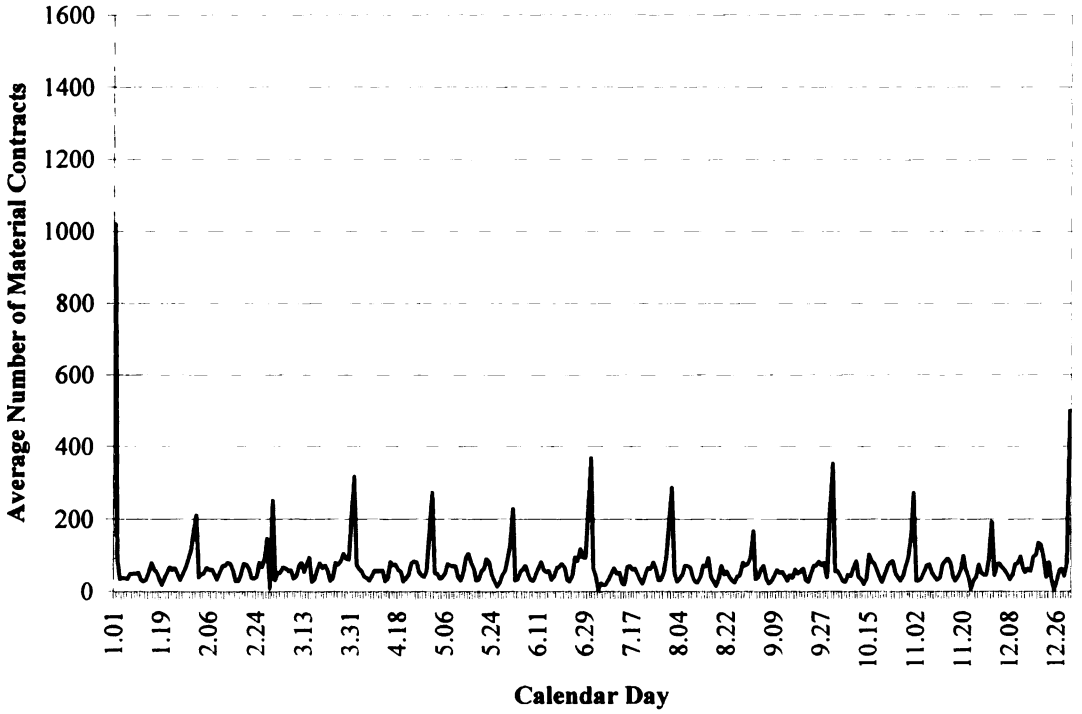
I also examine the consequences of the 2004 regulation, which mandated that registrants provide at least summary information about material contracts through a Form 8-K while preserving the option to file the entire contracts in the following periodic report. My analysis on the post-regulation period reveals a dramatic increase in the use of Form 8-K to file the entire material contracts and a corresponding reduction in the

sensitivity of the disclosure medium choice to the hypothesized determinants. The evidence is consistent with firms trading-off increased regulatory costs for disclosure incentives due to information demand and competitive costs. In addition, increased prevalence of Form 8-K disclosure and improved general market liquidity in the post-Sarbanes-Oxley Act period has driven down the association between the disclosure medium choice and information asymmetry to an undetectable level.

Finally, my analysis provides additional insights on firms' decision to redact sections of material contracts, and demonstrates that the association between disclosure medium choice and information asymmetry are not subsumed by the effects of firms' redaction decision.

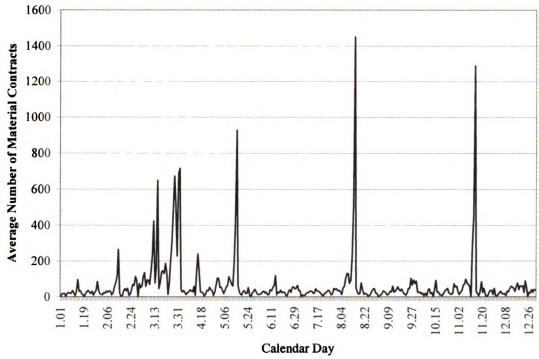
As the current focus of the dissertation is on the average capital market implications of choosing Form 8-K as the disclosure medium, I could explore in future work whether such choices exacerbate the information problem under certain circumstances, especially when the managers have incentives to opportunistically use such disclosures either to hide other important information or to present an incomplete picture of their business prospects. In addition, while this dissertation provides evidence that delayed disclosures of material contracts via other SEC reports contribute to information asymmetry among investors, I could investigate the trading behavior of insiders and institutional investors to see whether and how these informed traders explore their information advantage on material contracts.

Figure 1(a): Distribution of Material Contract Event Dates



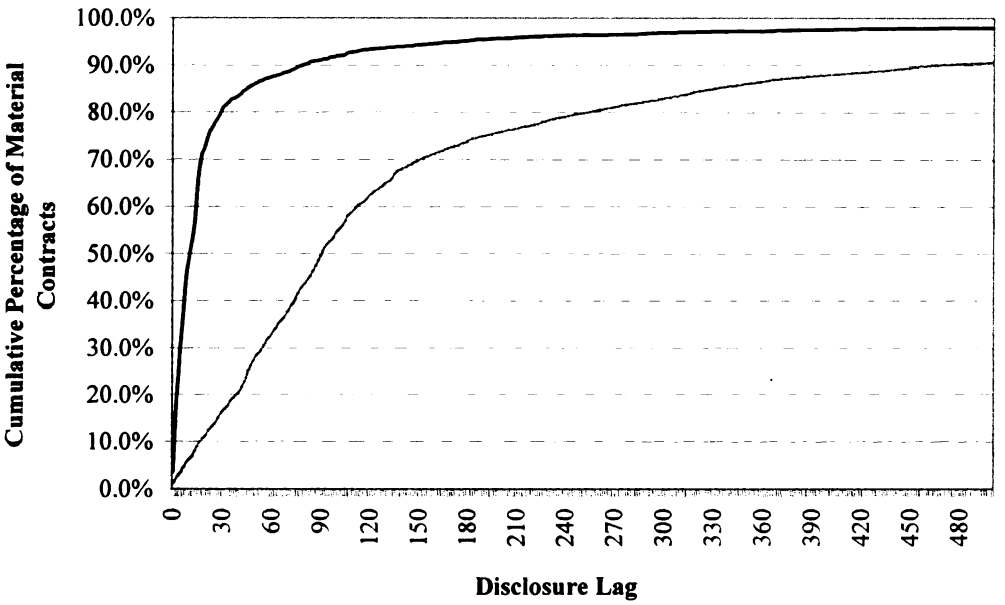
Frequencies represent time-series average number of material contract events per day. This figure is based on 73,604 material contracts in the period 2001-2003.

Figure 1(b): Distribution of Material Contract Disclosure Dates



Frequencies represent time-series average number of material contracts disclosed per day. This figure is based on 73,604 material contracts in the period 2001-2003.

Figure 2: Cumulative Distribution of Material Contract Disclosure Lag by Disclosure Media



Disclosure Lag is the number of calendar days between the material contract event date and the disclosure date. This figure is based on 73,604 material contracts in the period 2001-2003.

Table 1

Descriptive Information on Firms' Material Contracts Disclosure through Form 8-K

Panel A: Incidence of material contracts for 4,399 firms with continuing information over the fiscal years 2001-2003[a]

Number of Fiscal Years with At Least One Material Contract	Frequency	Percentage
0	384	8.7%
1	439	10.0%
2	866	19.7%
3	2,710	61.6%

Panel B: Incidence of material contracts filed through Form 8-K by 2,710 firms with at least one material contract for each of the three fiscal years 2001-2003

Number of Fiscal Years with At Least One Material Contract Filed Through Form 8-K	Frequency	Percentage
0	1,724	63.6%
1	633	23.4%
2	251	9.3%
3	102	3.8%

Panel C: Number of material contracts per firm and percentage of firms choosing Form 8-K for at least one material contract, by fiscal year[b]

	2001	2002	2003	2000 -2003
Number of Firms	4,151	3,945	3,688	11,784
Number of Material Contracts per Firm				
Mean	6.4	6.8	6.3	6.5
Median	5	5	5	5
Percentage of Firms Choosing Form 8-K for At Least One Material Contract	17.0%	18.2%	20.2%	18.4%

[a] The 4,399 firms are identified from the 15,140 firm-fiscal years that: (1) are in the COMPUSTAT/CRSP merged database over the fiscal years 2001-2003; (2) are not in the banking industry; (3) are traded on NYSE, AMEX or NASDAQ; and (4) can be linked to the EDGAR system.

[b] This is based on the 11,784 firm-fiscal years with at least one material contracts.

Table 2
Descriptive Information on Form 8-K Disclosure of Material Contracts by Contract Types[a]

Contract Type	Number of Material Contracts *(% of All Material Contracts)*	Material Contracts Filed through Form 8-K	
		Number	% within the Type
Business-Related	9,423 *(12.3%)*	1,079	11.5%
Leases-Related	4,201 *(5.5%)*	224	5.3%
Asset Acquisition or Disposition	2,984 *(3.9%)*	922	30.9%
Equity-Related	5,944 *(7.7%)*	1,780	30.0%
Business Structure Changes	1,604 *(2.1%)*	223	13.9%
Debt-Related	16,861 *(22.0%)*	2,400	14.2%
Employment-Related	31,559 *(41.1%)*	874	2.8%
Other	4,251 *(5.5%)*	399	9.4%
Total	76,827 *(100%)*	7,910	10.3%

[a] This table is based on all unique material contracts filed as exhibits in various SEC reports (i.e., current reports, periodic reports, and registration statements) by sample firms for the fiscal years 2001-2003.

Table 3

Descriptive Statistics

Variables[a]	N	Mean	Std. Dev.	Q1	Median	Q3
Dummy8K	10,504	0.183	0.386	0.000	0.000	0.000
Percent8K	10,504	0.081	0.216	0.000	0.000	0.000
ERC	10,504	3.553	14.842	-0.719	1.082	5.312
AdjRSQR	10,504	0.077	0.255	-0.068	0.030	0.186
NumAnalyst	10,504	4.342	6.052	0.000	2.000	6.000
InstOwn	10,504	0.372	0.307	0.053	0.354	0.643
EquityIssue	10,504	0.076	0.265	0.000	0.000	0.000
DebtIssue	10,504	0.053	0.224	0.000	0.000	0.000
M&A	10,504	0.321	0.467	0.000	0.000	1.000
PCMargin	10,504	1.109	0.173	1.025	1.081	1.144
LnPPE	10,504	6.990	2.141	5.563	7.079	8.504
IPIntens	10,504	0.249	0.433	0.000	0.000	0.000
ROA	10,504	-0.119	0.389	-0.113	0.011	0.053
Loss	10,504	0.437	0.496	0.000	0.000	1.000
LnMVE	10,504	5.545	2.184	3.997	5.580	7.019
LnNumMC	10,504	1.481	0.904	0.693	1.609	2.197
NYSE	10,504	0.368	0.482	0.000	0.000	1.000
AMEX	10,504	0.078	0.269	0.000	0.000	0.000
LnPrice	10,504	2.159	1.289	1.295	2.377	3.168
MonthlyTurnover	10,504	0.141	0.180	0.043	0.088	0.169
PIN	10,043	0.205	0.096	0.135	0.193	0.259
DollarDepth	10,414	82.6	101.8	26.3	49.0	103.9

[a] All the variables are defined in Appendix D. *ERC*, *InstOwn*, *ROA* have been winsorized at the top and bottom 1% of their respective distribution.

Table 4

Correlation Matrix (n=10,504)[a,b]

Panel A: Determinants Models

Variables	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	*(15)*	*(16)*
(1)Dummy8K		**0.993**	**-0.072**	0.006	**-0.128**	**-0.125**	**0.074**	**-0.017**	0.004	**0.032**	**-0.033**	-0.014	**-0.133**	**0.109**	**-0.113**	**0.233**
(2)Percent8K	**0.797**		**-0.071**	0.005	**-0.136**	**-0.132**	**0.072**	**-0.019**	0.004	**0.034**	**-0.038**	-0.012	**-0.131**	**0.107**	**-0.121**	**0.208**
(3)ERC	**-0.056**	**-0.044**		**0.189**	**0.115**	**0.089**	**-0.022**	0.009	**0.062**	**-0.021**	**-0.040**	-0.009	**0.217**	**-0.178**	**0.095**	**-0.047**
(4)AdjRSQR	0.007	0.001	**0.102**		**-0.023**	-0.012	0.005	-0.011	0.004	-0.001	**-0.020**	**-0.026**	**0.061**	**-0.046**	**-0.029**	-0.007
(5)NumAnalyst	**-0.116**	**-0.122**	**0.105**	**-0.033**		**0.739**	**0.060**	**0.226**	**0.297**	**0.070**	**0.237**	-0.010	**0.235**	**-0.208**	**0.661**	**0.020**
(6)InstOwn	**-0.122**	**-0.138**	**0.079**	**-0.035**	**0.572**		**0.075**	**0.150**	**0.275**	**0.104**	**0.085**	**-0.065**	**0.312**	**-0.276**	**0.576**	-0.011
(7)EquityIssue	**0.074**	**0.047**	**-0.021**	-0.006	**0.017**	**0.070**		**0.118**	**0.071**	**0.124**	**-0.023**	**-0.061**	**0.049**	**-0.080**	**0.178**	**0.058**
(8)DebtIssue	**-0.017**	**-0.021**	-0.004	-0.015	**0.268**	**0.152**	**0.118**		**0.122**	**0.149**	**0.134**	**-0.090**	**0.108**	**-0.138**	**0.307**	**0.030**
(9)M&A	0.004	-0.001	**0.067**	-0.008	**0.291**	**0.274**	**0.071**	**0.122**		**0.079**	**0.069**	0.008	**0.209**	**-0.195**	**0.328**	**0.017**
(10)PCMargin	**0.040**	**0.056**	**-0.017**	0.004	**0.019**	**0.063**	**0.181**	**0.143**	**0.053**		**0.155**	**-0.214**	**0.267**	**-0.269**	**0.237**	-0.012
(11)LnPPE	**-0.041**	**-0.064**	**-0.018**	-0.015	**0.269**	**0.100**	**-0.045**	**0.116**	**0.067**	**-0.089**		**0.050**	**-0.046**	**0.032**	**0.255**	**0.028**
(12)IPIntens	-0.014	-0.002	-0.007	**-0.018**	-0.002	**-0.068**	**-0.061**	**-0.090**	0.008	**-0.201**	**0.062**		**-0.172**	**0.184**	**-0.112**	-0.014
(13)ROA	**-0.127**	**-0.099**	**0.088**	**0.020**	**0.163**	**0.284**	**0.059**	**0.092**	**0.138**	**0.180**	**-0.022**	**-0.179**		**-0.859**	**0.430**	**-0.128**
(14)Loss	**0.109**	**0.078**	**-0.122**	-0.016	**-0.196**	**-0.273**	**-0.080**	**-0.138**	**-0.195**	**-0.229**	**0.035**	**0.184**	**-0.523**		**-0.401**	**0.113**
(15)LnMVE	**-0.114**	**-0.135**	**0.110**	**-0.036**	**0.661**	**0.571**	**0.159**	**0.326**	**0.326**	**0.184**	**0.258**	**-0.101**	**0.344**	**-0.396**		**0.062**
(16)LnNumMC	**0.237**	**0.068**	**-0.048**	-0.003	**0.023**	0.000	**0.057**	**0.026**	**0.017**	-0.009	**0.023**	-0.012	**-0.110**	**0.113**	**0.055**	

Table 4 (cont'd)

Panel B: Capital Market Implications Models [c]

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)PIN		**-0.614**	**-0.723**	**0.074**	**0.082**	**-0.613**	**-0.493**	**-0.094**	**-0.833**	**-0.525**	**0.238**	**-0.623**
(2)MonthlyTurnover	**-0.363**		**0.421**	**0.017**	0.010	**0.420**	**0.364**	**0.115**	**0.489**	**0.056**	**-0.252**	**0.338**
(3)DollarDepth	**-0.482**	**0.182**		**-0.091**	**-0.097**	**0.540**	**0.498**	**0.050**	**0.854**	**0.590**	**-0.108**	**0.814**
(4)Dummy8K	**0.059**	**0.022**	**-0.052**		**0.993**	**-0.128**	**-0.125**	**0.233**	**-0.113**	**-0.039**	**0.044**	**-0.139**
(5)Percent8K	**0.088**	-0.004	**-0.063**	**0.797**		**-0.136**	**-0.132**	**0.208**	**-0.121**	**-0.045**	**0.050**	**-0.142**
(6)NumAnalyst	**-0.553**	**0.235**	**0.530**	**-0.116**	**-0.122**		**0.739**	**0.020**	**0.661**	**0.356**	**-0.244**	**0.526**
(7)InstOwn	**-0.483**	**0.205**	**0.320**	**-0.122**	**-0.138**	**0.572**		-0.011	**0.576**	**0.379**	**-0.216**	**0.577**
(8)LnNumMC	**-0.094**	**0.081**	**0.047**	**0.237**	**0.068**	**0.023**	0.000		**0.062**	**0.061**	**-0.025**	**-0.038**
(9)LnMVE	**-0.774**	**0.243**	**0.658**	**-0.114**	**-0.135**	**0.661**	**0.571**	**0.055**		**0.575**	**-0.283**	**0.826**
(10)NYSE	**-0.480**	**-0.097**	**0.422**	**-0.039**	**-0.057**	**0.331**	**0.394**	**0.057**	**0.558**		**-0.222**	**0.507**
(11)AMEX	**0.238**	**-0.129**	**-0.086**	**0.044**	**0.071**	**-0.177**	**-0.229**	**-0.020**	**-0.277**	**-0.222**		**-0.231**
(12)LnPrice	**-0.540**	**0.173**	**0.495**	**-0.141**	**-0.136**	**0.443**	**0.579**	**-0.048**	**0.800**	**0.482**	**-0.257**	

[a] All the variables are defined in Appendix D. *ERC*, *InstOwn*, *ROA* have been winsorized at the top and bottom 1% of their respective distribution. The Pearson (Spearman) correlation coefficients are presented in the lower-left (upper-right) half of the tables.

[b] Correlation coefficients (ρ) are significant at the .01 level when $|\rho| \geq 0.0251$, significant at the .05 level when $0.0251 > |\rho| \geq 0.0191$, and significant at the .10 level when $0.0191 > |\rho| \geq 0.0160$, two-tailed. Correlation coefficients are shown in bold if they are at least significant at the .10 level.

[c] The numbers of observations are slightly smaller than 10,504 on *PIN* and *DollarDepth*.

Table 5

Determinants of Choosing Form 8-K over Other SEC Reports for Material Contracts Disclosure[a]

Variables	Pred. Sign	Probit Regressions (DV=*Dummy8K*) Coeff. (Z-stat)	Coeff. (Z-stat)	Fractional Response Variable Regressions (DV=*Percent8K*) Coeff. (Z-stat)	Coeff. (Z-stat)
	(1)	(2)	(3)	(4)	(5)
Intercept		-0.755	-1.505	-1.328	-1.491
		(-5.31) ***	(-10.13) ***	(-9.32) ***	(-10.31) ***
ERC	–	-0.005	-0.003	-0.003	-0.002
		(-4.17) ***	(-2.38) **	(-3.05) ***	(-1.98) **
AdjRSQR	–	0.036	0.040	-0.015	-0.012
		(0.59)	(0.66)	(-0.27)	(-0.22)
NumAnalyst	?	-0.020	-0.013	-0.020	-0.010
		(-4.44) ***	(-2.75) ***	(-4.29) ***	(-2.06) **
InstOwn	?	-0.499	-0.283	-0.575	-0.376
		(-6.99) ***	(-3.73) ***	(-8.08) ***	(-5.02) ***
EquityIssue	+	0.364	0.355	0.203	0.242
		(6.81) ***	(6.40) ***	(4.04) ***	(4.71) ***
DebtIssue	+	-0.007	0.077	-0.006	0.090
		(-0.09)	(0.94)	(-0.08)	(1.17)
M&A	+	0.155	0.214	0.152	0.201
		(4.50) ***	(5.87) ***	(4.63) ***	(5.96) ***
PCMargin	+	0.154	0.407	0.313	0.486
		(1.51)	(3.95) ***	(3.08) ***	(4.78) ***
LnPPE	–	-0.008	-0.008	-0.020	-0.017
		(-0.92)	(-0.97)	(-2.42) **	(-1.94) *
IPIntens	–	-0.053	-0.105	0.002	-0.044
		(-1.32)	(-2.48) **	(0.05)	(-1.10)
ROA			-0.194		-0.149
			(-4.47) ***		(-3.91) ***
Loss			0.116		0.064
			(3.02) ***		(1.78) *
LnMVE			-0.062		-0.066
			(-5.05) ***		(-5.77) ***
LnNumMC			0.404		0.101
			(21.27) ***		(5.42) ***
Coefficients and z-statistics on fiscal year indicator variables are suppressed.					
Pseudo R^2		0.034	0.106	0.038	0.052
% of correct classification		81.74%	82.04%		
Number of observations		10,504	10,504	10,504	10,504

Table 5 (cont'd)

*, **, ***: $p < 0.10$, $p < 0.05$ and $p < 0.01$, respectively, two-tailed tests. z-statistics for the pooled regressions have been adjusted for heteroskedasticity and firm-specific clustering in the panel data.

[a] This table is based on a sample period from 2001 to 2003. All the variables are defined in Appendix D. *ERC*, *InstOwn*, *ROA* have been winsorized at the top and bottom 1% of their respective distribution. Probit regressions are used to estimate the models with *Dummy8K* as the dependent variable, while fractional response variable regressions developed by Papke and Wooldridge (1996) are used to estimated the models with *Percent8K* as the dependent variable. Results on the partial model (i.e., without control variables *ROA*, *Loss*, *LnMVE* and *LnNumMC)* are presented in Column (2) and (4). Results on the full models (i.e., with both indepedent variables and control variables) are presented in Column (3) and (5). Fiscal year indicator variables are included in both models.

Table 6

Capital Market Implications of Choosing Form 8-K over Other SEC Reports for Material Contracts Disclosure[a]

	DV=*PIN*			DV=*MonthlyTurnover*			DV=*DollarDepth*		
		Two-Stage Heckman Reg.	2SLS Instrumental Variable Reg.		Two-Stage Heckman Reg.	2SLS Instrumental Variable Reg.		Two-Stage Heckman Reg.	2SLS Instrumental Variable Reg.
	Pred. Sign	(IV=*Dummy8K*) Coeff. (t-stat)	(IV=*Percent8K*) Coeff. (t-stat)	Pred. Sign	(IV=*Dummy8K*) Coeff. (t-stat)	(IV=*Percent8K*) Coeff. (t-stat)	Pred. Sign	(IV=*Dummy8K*) Coeff. (t-stat)	(IV=*Percent8K*) Coeff. (t-stat)
Variables									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Intercept		0.476	0.487		-0.086	-0.126		-33.434	-49.755
		(16.60) ***	(17.39) ***		(-3.57) ***	(-5.62) ***		(-1.20)	(-1.87) *
Dummy8K	–	-0.053		+	0.184		+	33.578	
		(-5.81) ***			(6.78) ***			(2.37) **	
Percent8K	–		-0.189	+		0.687	+		211.048
			(-5.42) ***			(6.28) ***			(4.69) **
NumAnalyst	–	0.000	0.000	+	0.003	0.002	+	4.237	4.254
		(-0.73)	(-0.32)		(3.88) ***	(3.29) ***		(8.95) ***	(8.85) ***
InstOwn	?	-0.028	-0.034	?	0.068	0.089	?	-47.757	-39.736
		(-8.80) ***	(-8.54) ***		(6.38) ***	(6.60) ***		(-9.03) ***	(-6.68) ***
LnNumMC		0.002	0.000		-0.002	0.005		-2.572	-2.658
		(2.12) **	(0.13)		(-0.61)	(1.66) *		(-1.30)	(-1.83) *
LnMVE	–	-0.038	-0.040	+	0.025	0.029	+	26.045	27.439
		(-41.06) ***	(-37.00) ***		(10.66) ***	(9.48) ***		(13.65) ***	(13.63) ***
NYSE		-0.019	-0.017		-0.114	-0.123		18.580	16.141
		(-10.10) ***	(-7.59) ***		(-17.80) ***	(-15.75) ***		(5.91) ***	(4.50) ***
AMEX		0.002	0.005		-0.051	-0.062		35.901	32.227
		(0.62)	(1.08)		(-8.55) ***	(-5.92) ***		(10.15) ***	(7.71) ***

Table 6 (cont'd)

LnPrice	0.016	0.015	0.004	0.006	0.963	1.935
	(12.41) ***	(10.28) ***	(1.18)	(1.36)	(0.33)	(0.64)
InvMills	0.028		-0.093		-16.361	
	(5.43) ***		(-6.19) ***		(-2.02) **	
Coefficients and t-statistics on fiscal year indicator variables and industry (two-digit SICCD code) indicator variables are suppressed.						
Adjusted R^2	0.647	0.487	0.205	0.063	0.486	0.309
Number of observations	10,043	10,043	10,504	10,504	10,414	10,414

*, **, ***: $p < 0.10$, $p < 0.05$ and $p < 0.01$, respectively, two-tailed tests. t-statistics for the pooled regressions have been adjusted for heteroskedasticity and firm-specific clustering in the panel data.

[a] This table is based on a sample period from 2001 to 2003. All the variables except *InvMills* are defined in Appendix D. *InvMills* is the inverse Mills ratio calculated from the economic determinants model with *Dummy8K* as the dependent variable. *InstOwn* has been winsorized at the top and bottom 1% of its distribution. Two-stage Heckman regressions are used to estimate the models with *Dummy8K* as the independent variable, while 2SLS instrumental variable regressions as suggested by Wooldridge (2002) are used to estimated the models with *Percent8K* as the independent variable. Industry indicator variables (based on two-digit SICCD code) and fiscal year indicator variables are included in all the models.

Table 7

Descriptive Information on Form 8-K Disclosure of Material Contracts after the 2004 Regulatory Change[a]

	2005
Panel A: Firm Level	
Number of Firms	4,000
Number of Material Contracts per Firm	
Mean	8.1
Median	6
Percentage of Firms Choosing Form 8-K for At Least One Material Contract	73.4%
Panel B: Contract Level	
Percentage of Material Contracts Filed through Form 8-K, by Contract Type	
Business-Related	36.9%
Leases-Related	33.5%
Asset Acquisition or Disposition	54.2%
Equity-Related	61.8%
Business Structure Changes	56.3%
Debt-Related	51.8%
Employment-Related	45.8%
Other	41.7%
Total	46.8%
Total Number of Material Contracts	32,468

[a] This table is based on the fiscal year 2005. In Panel A, the 4000 sample firms are selected as they (1) are in the COMPUSTAT/CRSP merged database for the fiscal years 2005; (2) are not in the banking industry; (3) are traded on NYSE, AMEX or NASDAQ; (4) can be linked to the EDGAR system; and (5) have filed at least one material contract for the fiscal year 2005. Panel B includes all the unique material contracts filed as exhibits in various SEC reports (i.e., current reports, periodic reports and registration statements) by sample firms for their fiscal year 2005.

Table 8

Determinants and Capital Market Implications of Choosing Form 8-K over Other SEC Reports for Material Contracts Disclosure after the 2004 Regulatory Changes[a]

Panel A: Determinants of Choosing Form 8-K over Other SEC Reports for Material Contracts Disclosure

		Probit Regressions (DV=*Dummy8K*)			Fractional Response Variable Regressions (DV=*Percent8K*)		
		2001-2003 (Table 5 Column (3))	2005	Difference	2001-2003 (Table 5 Column (3))	2005	Difference
Variables	**Pred. Sign**	**Coeff. (Z-stat)**	**Coeff. (Z-stat)**	**Coeff. (Z-stat)**	**Coeff. (Z-stat)**	**Coeff. (Z-stat)**	**Coeff. (Z-stat)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Intercept		-1.505	-0.349	1.156	-1.491	-0.265	1.226
		(-10.13) ***	(-2.01) **	(5.17) ***	(-10.31) ***	(-2.12) **	(6.54) ***
ERC	–	-0.003	-0.002	0.001	-0.002	-0.003	-0.001
		(-2.38) **	(-0.73)	(0.36)	(-1.98) **	(-1.73) *	(-0.41)
AdjRSQR	–	0.040	0.213	0.174	-0.012	0.150	0.162
		(0.66)	(1.98) **	(1.42)	(-0.22)	(2.07) **	(1.82) *
NumAnalyst	?	-0.013	-0.004	0.010	-0.010	-0.004	0.006
		(-2.75) ***	(-0.74)	(1.36)	(-2.06) **	(-1.07)	(1.14)
InstOwn	?	-0.283	0.182	0.465	-0.376	0.059	0.435
		(-3.73) ***	(1.88) *	(3.93) ***	(-5.02) ***	(0.97)	(4.69) ***
EquityIssue	+	0.355	0.065	-0.290	0.242	0.052	-0.190
		(6.4) ***	(0.64)	(-2.52) **	(4.71) ***	(0.88)	(-2.47) **
DebtIssue	+	0.077	0.066	-0.012	0.090	0.037	-0.053
		(0.94)	(0.50)	(-0.07)	(1.17)	(0.51)	(-0.51)
M&A	+	0.214	0.149	-0.064	0.201	0.058	-0.144
		(5.87) ***	(2.76) ***	(-1.01)	(5.96) ***	(1.69) *	(-3.03) ***

Table 8 (cont'd)

PCMargin	+	0.407	0.108	-0.299	0.486	0.090	-0.396
		(3.95) ***	(1.10)	(-2.15) **	(4.78) ***	(1.15)	(-3.13) ***
LnPPE	–	-0.008	-0.023	-0.015	-0.017	-0.015	0.002
		(-0.97)	(-1.88) *	(-1.00)	(-1.94) *	(-1.78) *	(0.18)
IPIntens	–	-0.105	0.020	0.125	-0.044	-0.042	0.002
		(-2.48) **	(0.34)	(1.80) *	(-1.10)	(-1.12)	(0.03) *
ROA		-0.194	-0.348	-0.154	-0.149	-0.240	-0.090
		(-4.47) ***	(-2.17) **	(-0.94)	(-3.91) ***	(-2.65) ***	(-0.94)
Loss		0.116	-0.139	-0.255	0.064	-0.089	-0.154
		(3.02) ***	(-1.87) *	(-3.06) ***	(1.78) *	(-1.89) *	(-2.62) ***
LnMVE		-0.062	-0.012	0.049	-0.066	-0.016	0.050
		(-5.05) ***	(-0.58)	(2.09) **	(-5.77) ***	(-1.18)	(2.95) ***
LnNumMC		0.404	0.609	0.205	0.101	0.121	0.020
		(21.27) ***	(19.96) ***	(5.78) ***	(5.42) ***	(5.89) ***	(0.74) ***
Coefficients and z-statistics on fiscal year indicator variables are suppressed.							
Pseudo R^2		0.106	0.129		0.052	0.022	
% of correct classification		82.04%	76.81%				
Number of observations		10,504	3,428		10,504	3,428	

Table 8 (cont'd)

Panel B: Capital Market Implications of Choosing Form 8-K over Other SEC Reports for Material Contracts Disclosure

DV=*MonthlyTurnover*

		Two-Stage Heckman Regressions (IV=*Dummy8K)*			**2SLS Instrumental Variable Regressions (IV=*Percent8K)***	
	Pred. Sign	**2001-2003 (Table 6 Column (5))**	**2005**	**Difference**	**2001-2003 (Table 6 Column (6))**	**2005**
Variables		**Coeff. (t-stat)**	**Coeff. (t-stat)**	**Coeff. (t-stat)**	**Coeff. (t-stat)**	**Coeff. (t-stat)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Intercept		-0.086	0.098	0.184	-0.126	0.051
		(-3.57) ***	(1.54)	(3.43) ***	(-5.62) ***	(0.72)
Dummy8K	+	0.184	-0.042	-0.227		
		(6.78) ***	(-0.65)	(-3.24) ***		
Percent8K	+				0.687	0.072
					(6.28) ***	(0.59)
NumAnalyst	+	0.003	0.004	0.001	0.002	0.004
		(3.88) ***	(4.00) ***	(1.21)	(3.29) ***	(3.97) ***
InstOwn	?	0.068	0.029	-0.038	0.089	0.024
		(6.38) ***	(1.23)	(-1.55)	(6.60) ***	(0.99)
LnNumMC		-0.002	0.024	0.026	0.005	0.013
		(-0.61)	(1.97) **	(2.09) **	(1.66) *	(1.99) **
LnMVE	+	0.025	-0.011	-0.036	0.029	-0.011
		(10.66) ***	(-1.40)	(-4.49) ***	(9.48) ***	(-1.32)
NYSE		-0.114	-0.064	0.050	-0.123	-0.064
		(-17.80) ***	(-6.77) ***	(5.11) ***	(-15.75) ***	(-6.72) ***

Table 8 (cont'd)

AMEX	-0.051	-0.110	-0.059	-0.062	-0.112
	(-8.55) ***	(-7.43) ***	(-3.87) ***	(-5.92) ***	(-6.94) ***
LnPrice	0.004	0.018	0.013	0.006	0.018
	(1.18)	(1.85) *	(1.36)	(1.36)	(1.85) *
InvMills	-0.093	0.020	0.113		
	(-6.19) ***	(0.54)	(2.86) ***		
Coefficients and t-statistics on fiscal year indicator variables and industry (two-digit SICCD code) indicator variables are suppressed.					
Adjusted R^2	0.205	0.089		0.063	0.078
Number of observations	10,504	3,428		10,504	3,428

*, **, ***: $p < 0.10$, $p < 0.05$ and $p < 0.01$, respectively, two-tailed tests. z-statistics and t-statistics for the pooled regressions have been adjusted for heteroskedasticity and firm-specific clustering in the panel data.

[a] This table is based on a pre-regulation sample period 2001-2003 and a post-regulation sample period 2005. All the variables except *InvMills* are defined in Appendix. *InvMills* is the inverse Mills ratio calculated from the economic determinants model with *Dummy8K* as the dependent variable. *ERC*, *InstOwn*, *ROA* have been winsorized at the top and bottom 1% of their respective distribution. In Panel A, probit regressions are used to estimate the models with *Dummy8K* as the dependent variable, while fractional response variable regressions developed by Papke and Wooldridge (1996) are used to estimated the models with *Percent8K* as the dependent variable. Fiscal year indicator variables are included in all the models. In Panel B, two-stage Heckman regressions are used to estimate the models with *Dummy8K* as the independent variable, while 2SLS instrumental variable regressions as suggested by Wooldridge (2002) are used to estimated the models with *Percent8K* as the independent variable. Industry indicator variables (based on two-digit SICCD code) and fiscal year indicator variables are included in all the models. In both panels, results on the pre-regulation period 2001-2003 are presented in Column (2) and (5). Results on the post-regulation period 2005 are presented in Column (3) and (6). The differences between the pre-regulation and post-regulation period are tested using a pooled regression with both pre- and post-regulation periods on a model with full levels and interactions (i.e., interaction with an indicator variable for post-regulation) and are presented in Column (4) and (7). The difference results on the economic consequence model with *Percent8K* as the independent variable are not calculated due to the impossibility of including the interaction term on *Percent8K* in the 2SLS instrumental variable regression.

Table 9

Disclosure Medium Choice and Redaction Decision for Material Contracts Disclosure[a,b,c]

Panel A: Replication of Verrechia and Weber (2006) on Determinants of Redaction (DV = *DummyRedact*)

		Intercept	*Equity Issue*	*Compustat_ DebtIssue*	*Hindex*	*ROA*	*Loss*	*LnMVE*	*LnNum MC*	Pseudo R^2 Num. Obs.
My Replication Results	Coeff.	-3.671	-0.318	-0.345	-0.002	-0.067	0.480	0.511	0.470	0.164
	(Z-stat)	(-2.40) **	(-0.62)	(-2.15) **	(-3.19) ***	(-1.00)	(2.61) ***	(1.47)	(5.04) ***	436
VW (2006) Table 6 Results	Coeff.	-1.770	0.120	-0.410	-0.002	0.050	0.500	0.360	0.390	0.162
	(Z-stat)	(-1.05)	(0.62)	(-2.50) ***	(-3.66) ***	(0.44)	(2.49) ***	(0.24)	(4.41) ***	450

Panel B: Replication of Verrechia and Weber (2006) on Capital Market Implications of Redaction

		My Replication Results		VW (2006) Table 7 Results	
Dependent Variable		*Dummy Redact*	Adj. R^2 Num. Obs.	*Dummy Redact*	Adj. R^2 Num. Obs.
MonthlyTurnover	Coeff.	0.007	0.158	0.004	0.208
	(t-stat)	(0.13)	436	(1.04)	450
DollarDepth	Coeff.	-35.820	0.411	-27.920	0.551
	(t-stat)	(-2.19) **	436	(-2.51) **	427
PIN	Coeff.	-0.043	0.351		
	(t-stat)	(-0.88)	413		

Coefficients and t-statistics on control variables are suppressed.

Table 9 (cont'd)

Panel C: Determinants of Redaction 2001-2003

Dependent Variable		Intercept	*ERC*	*AdjRSQR*	*Num Analyst*	*InstOwn*	*Equity Issue*	*Debt Issue*	*M&A*	Pseudo R^2 / Num. Obs.
	Coeff.	-1.786	-0.001	-0.020	-0.009	-0.166	0.133	-0.414	-0.030	
	(Z-stat)	(-11.54) ***	(-0.92)	(-0.29)	(-2.18) **	(-2.04) **	(2.13) **	(-4.59) ***	(-0.78)	
DummyRedact										0.105

		PCMargin	*LnPPE*	*IPIntens*	*ROA*	*Loss*	*LnMVE*	*LnNum MC*	
	Coeff.	-0.448	0.004	0.142	-0.282	0.276	0.058	0.392	10,504
	(Z-stat)	(-3.85) ***	(0.39)	(3.23) ***	(-6.22) ***	(6.55) ***	(4.57) ***	(19.17) ***	

Coefficients and z-statistics on fiscal year indicator variables are suppressed.

Panel D: Capital Market Implications of Disclosure Medium Choice (IV = *Dummy8K*) after Controlling for Redaction 2001-2003

Dependent Variable		Intercept	*Dummy8K*	*Num Analyst*	*InstOwn*	*LnNum MC*	*LnMVE*	*NYSE*	Adj. R^2 / Num. Obs.
MonthlyTurnover	Coeff.	-0.091	0.175	0.003	0.067	-0.004	0.024	-0.110	
	(t-stat)	(-4.05) ***	(6.40) ***	(3.97) ***	(6.38) ***	(-1.13)	(10.35) ***	(-17.36) ***	
MonthlyTurnover	Coeff.	-0.070	0.019	0.003	0.068	-0.009	0.019	-0.107	
	(t-stat)	(-3.07) ***	(3.62) ***	(4.39) ***	(6.59) ***	(-3.19) ***	(8.23) ***	(-16.9) ***	
DollarDepth	Coeff.	-32.269	35.941	4.223	-47.690	-2.111	26.244	17.625	
	(t-stat)	(-1.16)	(2.54) **	(8.93) ***	(-9.03) ***	(-1.06)	(13.63) ***	(5.64) ***	
DollarDepth	Coeff.	-26.418	6.115	4.084	-50.587	3.239	26.440	17.180	
	(t-stat)	(-0.96)	(2.50) **	(8.89) ***	(-9.61) ***	(2.23) **	(13.27) ***	(5.51) ***	

Table 9 (cont'd)

PIN	Coeff.	0.477	-0.051	0.000	-0.028	0.003	-0.038	-0.020
	(t-stat)	(16.90) ***	(-5.55) ***	(-0.80)	(-8.80) ***	(2.53) **	(-41.07) ***	(-10.56) ***
PIN	Coeff.	0.471	-0.003	0.000	-0.028	0.005	-0.037	-0.021
	(t-stat)	(16.57) ***	(-1.92) *	(-1.28)	(-9.04) ***	(4.29) ***	(-38.33) ***	(-11.20) ***

		AMEX	***LnPrice***	***Dummy***	***IMills_***	***IMills_***	
MonthlyTurnover	Coeff.	-0.048	0.005	0.032	-0.089		0.209
	(t-stat)	(-8.17) ***	(1.37)	(4.99) ***	(-5.92) ***		10,504
MonthlyTurnover	Coeff.	-0.046	0.010	0.278		-0.138	0.214
	(t-stat)	(-7.83) ***	(2.55) **	(8.99) ***		(-8.38) ***	10,504
DollarDepth	Coeff.	35.279	0.775	-8.429	-17.357		0.487
	(t-stat)	(9.84) ***	(0.26)	(-3.66) **	(-2.15) **		10,414
DollarDepth	Coeff.	35.116	-0.455	-35.614		15.419	0.487
	(t-stat)	(9.68) ***	(-0.15)	(-2.46) **		(2.03) **	10,414
PIN	Coeff.	0.002	0.015	-0.008	0.027		0.648
	(t-stat)	(0.44)	(12.29) ***	(-4.70) ***	(5.24) ***		10,043
PIN	Coeff.	0.001	0.014	-0.089		0.045	0.650
	(t-stat)	(0.29)	(10.67) ***	(-8.74) ***		(7.98) ***	10,043

Coefficients and t-statistics on fiscal year indicator variables and industry (two-digit SICCD code) indicator variables are suppressed.

Table 9 (cont'd)

Panel E: Capital Market Implications of Disclosure Medium Choice (IV = *Percent8K*) after Controlling for Redaction 2001-2003

Dependent Variable		Intercept	*Percent8K*	*Num Analyst*	*InstOwn*	*LnNum MC*	*LnMVE*	*NYSE*	Adj. R^2 Num. Obs.
MonthlyTurnover	Coeff.	-0.128	0.683	0.002	0.089	0.004	0.029	-0.121	
	(t-stat)	(-5.86) ***	(6.18) ***	(3.34) ***	(6.60) ***	(1.46)	(9.31) ***	(-15.41) ***	
DollarDepth	Coeff.	-47.407	216.862	4.219	-39.594	-1.465	27.816	14.338	
	(t-stat)	(-1.79) *	(4.72) ***	(8.80) ***	(-6.63) ***	(-1.04)	(13.68) ***	(3.90) ***	
PIN	Coeff.	0.488	-0.188	0.000	-0.034	0.000	-0.040	-0.017	
	(t-stat)	(17.51) ***	(-5.34) ***	(-0.35)	(-8.55) ***	(0.40)	(-36.93) ***	(-7.63) ***	

		AMEX	*LnPrice*	*Dummy*	
MonthlyTurnover	Coeff.	-0.062	0.007	0.011	0.064
	(t-stat)	(-5.83) ***	(1.43)	(1.25)	10,504
DollarDepth	Coeff.	30.981	1.556	-15.515	0.301
	(t-stat)	(7.25) ***	(0.52)	(-5.06) ***	10,414
PIN	Coeff.	0.004	0.015	-0.003	0.490
	(t-stat)	(1.01)	(10.29) ***	(-1.30)	10,043

Coefficients and t-statistics on fiscal year indicator variables and industry (two-digit SICCD code) indicator variables are suppressed.

Table 9 (cont'd)

*, **, ***: $p < 0.10$, $p < 0.05$ and $p < 0.01$, respectively, two-tailed tests. z-statistics and t-statistics for the pooled regressions have been adjusted for heteroskedasticity and firm-specific clustering in the panel data.

[a] This table is based on a sample period from 2001 to 2003. All the variables except *IMills_8K* and *IMills_Redact* are defined in Appendix. *IMills_8K* is the inverse Mills ratio calculated from the economic determinants model with Dummy8K as the dependent variable. *IMills_Redact* is the inverse Mills ratio calculated from the economic determinants model with *DummyRedact* as the dependent variable. *ERC*, *InstOwn*, *ROA* have been winsorized at the top and bottom 1% of their respective distribution.

[b] Panel A (B) presents the results from replication of Verrecchia and Weber (2006) on the economic determinants (consequences) of firms' redation decision. The sample is constructed by requiring that firms (1) are in the COMPUSTAT/CRSP merged database for the fiscal year 2001; (2) have a market value of equity between $50 and $100 million as of December 31, 2001; (3) are not in the banking industry; (4) are traded on NYSE, AMEX or NASDAQ; (5) can be linked to the EDGAR system; (6) have filed at least one material contract for the fiscal year 2001; and (7) have all the test variables available. In Panel A, Verrecchia and Weber (2006) results are directly copied from their Table 6. To faciliate comparison, I convert the reported Chi-squareds to z-statistics by taking the square root. In Panel B, Verrecchia and Weber (2006) results are directly copied from their Table 7. Industry indicator variables (based on two-digit SICCD code) are included in the model.

[c] In Panel C, probit regression is used to estimate the model. Fiscal year indicator variables are included in the model. In Panel D (E), two-stage Heckman (2SLS instrumental variable) regressions are used to estimate the models. In both panels, industry indicator variables (based on two-digit SICCD code) and fiscal year indicator variables are included in the models.

APPENDICES

APPENDIX A

MATERIAL CONTRACTS DISCLOSURE AND FORM 8-K REGULATION

A.1 Material Contracts Disclosure

Paragraph (30) of Schedule A under the Securities Act of 1933 and Section 12-b under the Exchange Act of 1934 require that registrants disclose any material contracts as exhibits in their filings with the SEC. This disclosure requirement became mandatory with the passage of the Securities Acts Amendments of 1964 (1964 Amendments).[41] Item 601 of Regulation S-K of 1982 (and the comparable item of Regulation S-B) defines a material contract as a definitive agreement that is "*not* made in the ordinary course of business which is material to the registrant and is to be performed in whole or in part" (emphasis added).[42] Item 601 identifies several types of contracts as reportable material contracts. The details are provided in Appendix C.

Prior to the 2004 amendment to Form 8-K, registrants were not required to file or disclose information on material contracts immediately through a Form 8-K report. After entering into a material contract, registrants could wait until the next periodic report or registration statement, whichever came first, to file the entire contract with the SEC. The only requirement was that registrants had to include, in their 10-Ks and registration statements, all unexpired material contracts as exhibits to such filings. Registrants normally fulfill this requirement by filing all unreported contracts as exhibits and incorporating all previously filed ones by reference. Alternatively, registrants could have

[41] Prior to the 1964 Amendments, disclosure of material contracts and keeping such disclosure "reasonably current" was not mandatory for SEC registrants, except that the 1959 "Amendments to Rule 133 and Adoption of New Registration Form S-14" required companies to report all material contracts with their registration statements (1959 SEC LEXIS 320; 1964 SEC LEXIS 101, 29 FR 13455). The 1964 Amendments mandate the filing of material contracts that are not wholly performed prior to July 1, 1962.

[42] As the SEC does not provide guidance on what constitutes "material," registrants have to follow existing case law as well as statements of the views of the SEC and its staff regarding materiality (such as Staff Accounting Bulletin No. 99, August 1999). According to the Supreme Court, information is material if "there is substantial likelihood that a reasonable stockholder would consider it important in making an investment decision about the company; or the information would have been viewed by the reasonable investor as having significantly altered the total mix of information that is available about the company." (See Gehr et al., 2004)

chosen to voluntarily file a material contract as Item 5 "Other important event"[43] on Form 8-K. Although this item had no specific deadline (Carter and Soo, 1999), registrants typically filed it within several days of the effective date of the material contract (see Chapter IV).

A.2 The 2004 Regulatory Change

Effective August 23, 2004, Form 8-K was amended so that the entry into a material contract was added to the list of events that trigger a *mandatory* Form 8-K filing. Under the revised disclosure requirements, Item 1.01 is used to report any newly entered material contracts or any contracts that have become material after an amendment.[44] However, registrants can initially provide a summarized narrative disclosure of material contracts in a Form 8-K (i.e., the entry or amendment date, identity of the parties, and a brief description of the terms and conditions), but the entire contract must be filed with the immediately following periodic report.[45] The Form 8-K filing deadline for items 1.01 is four business days after the effective date. Due to the potential economic significance of material contracts, these disclosure requirements in the 2004 Current Report Rule are considered "probably the most important for most companies" (Fried, Frank, Harris, Shriver & Jacobson LLP, 2004).[46]

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[43] This voluntary disclosure item number has since been changed to 8.01 under the 2004 Current Report Rule.

[44] Although the 2004 Current Report Rule uses the term "material definitive agreement" rather than "material contract," it specifies in Section 1 that "[t]he item parallels Items 601(b)(10) of Regulation S-K with regard to the types of agreements that are material to a company, a standard already familiar to reporting companies." Thus, these two terms are interchangeable from a regulation perspective.

[45] The requirement in the Proposing Rule to file the entire material contract as an exhibit to Form 8-K was eliminated in the Final Rule.

[46] As shown in Chapter IV, in each year of my sample period, approximately 70% of the registrants listed on NYSE, AMEX or NASDAQ had at least one material contract.

The SEC adopted these regulatory changes to implement Section 409 of the Sarbanes-Oxley Act "Real Time Issuer Disclosure," and to allow the market to assimilate "unquestionably or presumptively" material information into the securities prices on a more rapid fashion. In response to the Proposing Rule, commentators expressed concerns that registrants would face potential liability under the Exchange Act Section 10(b) and Rule 10b-5 for failing to quickly assess the materiality of contracts.[47] In response to these concerns, the Final Rule provides a limited safe harbor from public and private claims under Section 10(b) and Rule 10b-5 solely for failing to file or disclose information on material contracts in a timely fashion as Item 1.01 or 1.02. The safe harbor extends only until the due date of the next periodic filing or registration statement. However, the SEC explicitly "encourage[s] companies to file the exhibit with the Form 8-K when feasible" (Final Rule).

More importantly, the safe harbor does not protect registrants against liability for failure to meet disclosure obligations under other provisions of the securities laws (Sena, 2004). First, registrants are not shielded from meeting disclosure obligations under sections13(a) and 15(d) of the Exchange Act, which require issuers to file periodic and current reports with the SEC and keep them accurate and current. For example, the limited safe harbor does not extend to Section 13(a), and therefore, a registrant could face an SEC enforcement action for failing to report material contracts on a timely basis. Second, any material misstatements or omission in a Form 8-K filing would still be subject to Rule 10b-5 liability. Third, the safe harbor for material contracts does not

[47] See the comment letters from National Association of Real Estate Investment Trusts dated August 26, 2002; Association of the Bar of the City of New York dated August 26, 2002; and Shearman & Sterling dated August 30, 2002.

release registrants from their obligation under Exchange Act Rules 13a-15(a) and 15d-15(a) to establish an efficient disclosure control system that ensures timely Form 8-K reports. Taken together, although the 2004 Current Report Rule offers a limited safe harbor, it brings considerable pressure and provides incentives for registrants to file material contracts on a more timely basis through Form 8-K.

Another institutional aspect of material contracts disclosures that is relevant to my research is that registrants can request confidential treatment of portions of material contracts pursuant to Rule 406 under the Securities Act of 1933 and Rule 24b-2 under the Securities Exchange Act of 1934. Registrants are required to seek and receive the SEC's approval for confidential treatment, and the time granted for preserving confidentially rarely exceeds five years (Overdahl, 1991). In order to provide registrants with sufficient time for requesting confidential treatment, the Final Rule does not mandate the disclosure of the entire contract with the Form 8-K filing. As discussed above, the SEC does encourage registrants to file material contracts immediately as exhibits to Form 8-K filings, especially when they do not require confidential treatment.

APPENDIX B

STEPS TO IDENTIFY MATERIAL CONTRACTS

This appendix explains the details of identifying the material contracts filed by a firm. For each of the NYSE/AMEX/NASDAQ firms in my sample period, I first download from EDGAR all the current reports, periodic reports, registration statements and any related amendment reports ever filed by the firm. Current report refers to 8-K. Periodic reports include 10-K, 10-Q, 10-KSB, 10-QSB, 10-K405, and 10-KSB40. Registration statements include S-1, S-2, S-3, S-4, S-8, SB-2, SC 13D, POS AM, 425, 10-12B, and 10-12G. Second, within each filed report, I use a PERL program to search for a line with the string "<TYPE>EX-10" as the beginning of a material contract and the next "</TEXT>" as the end of the contract. This is because the EDGAR system always adds several head lines (e.g., <TYPE>EX-10, <SEQUENCE>, <FILENAME>, and <DESCRIPTION>) on the top of each reported material contract to provide an index and summary for the associated contract. Third, if there is more than one material contracts found in a report, I assign index 1, 2, 3 ... to them according to the sequence of their appearance in the document. I also save each identified material contract as a separate file. All the special characters in the format of <...> and <&...>, which are used extensively in SEC XML format documents, are replaced with blanks. Any material contract filed in Form 8-K is labeled as 8-K disclosed.

APPENDIX C

STEPS TO EXTRACT INFORMATION FROM MATERIAL CONTRACTS

This appendix explains the details of extracting the contract description, name/title, entry/amendment date, status of redaction, and contract type information from each saved material contract.

Description

I search for the head line starting with the string "<DESCRIPTION>" and save the information to the right of such a string as the description of the contract. This description will normally give brief information on the type of the agreement (e.g., Employment Agreement or Credit Agreement).

Name/Title

Right below the EDGAR-system-generated head lines, the first line with certain key word such as "AGREEMENT", "CONTRACT", "PLAN", etc in the content will generally be the title of the contract and I save this line as the name of the material contract.

Entry/Amendment Date

The entry/amendment date of an agreement can be specified in three different ways. First, it can be presented on a separate line below the title of the contract. An example is as the follows:

CREDIT AGREEMENT
by and between
SOMERA COMMUNICATIONS, INC., a Delaware corporation
and
WELLS FARGO HSBC TRADE BANK, N.A.
Dated as of
February 9, 2001

Second, it can be disclosed by sentences in the first paragraph below the title. For example, it can take the form as either "THIS AGREEMENT is made and entered into as of the 15th day of November, 2001" or "THIS STOCK PURCHASE AGREEMENT (this

"Agreement"), dated as of December 20, 2001." Third, it can be shown in the signature section on the bottom of the contract. For instance, it can take the form as "By: /s/ John Smith Date: 10/12/2001". I accommodate all three ways of presentation with my PERL program. In addition, things can be a bit more complex for amendment agreements as the dates of the original agreement and all the subsequent amendments will all be mentioned. An example can be "THIS AGREEMENT was originally made and entered into as of the 12th day of July 1998, ..., as first amended on this 15th day of November, 2001". My PERL program is flexible enough to capture the entry/amendment date of the last amendment.

Status of Redaction

I search for the string "confidential treatment" or "redacted" in the first 20 lines of the contract as the indicator of whether some portion of the contract has been redacted. This is because Rule 406(b) [17 CFR 230.406(b)] and Rule 24b-2(b) [17 CFR 240.24b-2(b)] require that registrant clearly indicate within the material contract that the confidential part has been omitted from the publicly accessible version. Most of the firms who redact information will place such notification at the top of the document. An example is as the follows:

CONFIDENTIAL TREATMENT REQUESTED

Confidential Portions of this Agreement Which Have Been Redacted Are Marked with Brackets ([***]). The Omitted Material Has Been Filed With The Securities and Exchange Commission.

SUPPLY AGREEMENT

Contract Type

Item 601 of Regulation S-K (and the comparable item of Regulation S-B) identifies the following as reportable material contracts:

- Any contract that is critical to registrants' business, such as significant agreements to sell products or services to a large customer, significant supply agreements, and licenses to use a patent, formula or trade secret, etc.;

- Any material lease agreement relating to an important property described in the registrants' registration statement or periodic reports;

- Any contracts relating to the acquisition or disposition of any property, plant, or equipment whose transaction value exceeds 15 percent of the registrant's consolidated fixed assets (as of the end of the most recent fiscal period);

- Any contracts with security holders or underwriters, such as rights agreements, stock purchase or sale agreements, option arrangements, or voting share agreement covered by Regulation 14-D;

- Any ancillary contracts relating to acquisition, liquidation, etc., that are not the actual merger agreement;

- Any significant loan agreements, waivers, guarantees, and other debt-related contracts; and

- Any management contracts, compensatory plans, and other arrangement agreements with any directors or any of the five most highly paid executives (identified in the proxy statement).

Accordingly, I classify material contracts into eight types (including an "Other" category) based on the key words in their descriptions or titles. The table on the next page shows the details.

Contract Type	**Key Words in Contract Description or Title**
Business-Related	Advertising, Advisory, Alliance, Collaboration, Commission, Competition, Construction, Consultation, Cooperation, Customer, Dealer, Development, Exploration, Facility, Factoring, Fee, Franchise, Intellectual Property, Inventory, Joint Venture, License, Lobbyist, Loss Reinsurance, Maintenance, Manufacturing, Marketing, Mortgage, OEM, Operating, Outsource, Patent, Pricing, Processing, Product, Production, Rent, Research, Reseller, Royalty, Subcontract, Supplier, Supply, Tax, Tenancy, Trademark,

	Transaction
Lease-Related	Lease, Leasing, Leaser, Leasee
Asset Acquisition or Disposition	Asset Purchase, Asset Sale, Asset Disposition, Real Estate, Escrow
Equity-Related	Equity, Lock up, Placement Agent, Preferred Stock, Rights, Security, Shareholder, Shelf Registration, Stock Issuance, Stock Purchase, Stock Sale, Stockholder, Subscription, Support, Underwrite, Vote, Voting, Warrant
Business Structure Change	Acquisition, Affiliation, Limited Liability, Merge, Partner, Reorganization, Restructuring, Separation, Takeover
Debt-Related	Assignment and Assumption, Assumption, Bond, Collateral, Commitment, Covenant, Credit, Custodial, Debenture, Debt, Deposit, Forbearance, Guarantee, Guarantor, Guaranty, Indenture, Interest Rate, Lender, Loan, Note, Pledge, Subordination, Trust, Waiver
Employment-Related	401(k), Award, Benefit Plan, Bonus, Change in Control, Compensation, Defined Benefit, Defined Contribution, Director, Employ, Engagement, Executive, Incentive, Indemnity, Labor, Life Insurance, Management Continuity, Management Contract, Management Retention, Management Stability, Offer Letter, Officer, Omnibus, Option Grant, Pension, Performance Plan, Performance Share, Performance Stock, Profit Sharing, Promotion, Reimbursement, Resignation, Restricted Share, Retention, Retirement, Salary, Severance, Split Dollar, Stock benefit, Stock Plan, Union
Other	All the others

APPENDIX D

DEFINITION OF VARIABLES

Dummy8K is the dummy variable indicating whether the firm filed at least one material contract through Form 8-K during the twelve-month period ending four months after the end of the fiscal year, zero otherwise.

Percent8K is the percentage of material contracts that the firm filed through Form 8-K during the twelve-month period ending four months after the end of the fiscal year.

ERC is the sum of the estimated coefficients ($\hat{\alpha}_1 + \hat{\alpha}_2$) from the regression $ABRET_t = \alpha_0 + \alpha_1 EARN_t + \alpha_2 \Delta EARN_t + \varepsilon_t$ over the 20 quarters prior to the beginning of the current fiscal year. *ABRET* is measured as the difference between the buy-and-hold return of the firm and that of the CRSP value-weighted market index over a window spanning from 2 trading days after the prior quarter's earnings release date to 1 trading day after the current quarter's earnings release date. *EARN* is the quarterly earnings before extraordinary items (*DATA8*) deflated by market capitalization as of the beginning of the current quarter. $\Delta EARN$ is the seasonally differenced quarterly earnings before extraordinary items deflated by market capitalization as of the beginning of the current quarter. This is the model suggested by Easton and Harris (1991).[48]

AdjRSQR is the adjusted R-squared from the regression specified in the definition of *ERC*.

NumAnalyst is the number of equity analysts covering the firm as reported on I/B/E/S in the month immediately preceding the current fiscal year (if a firm is not covered by I/B/E/S, it is set to zero).

InstOwn is the percent of shares held by institutions as reported on Spectrum by the end of the calendar quarter immediately preceding the current fiscal year (if a firm is not covered by Spectrum, it is set to zero).

EquityIssue is the dummy variable indicating whether the firm issued equity during the twelve-month period ending four months after the end of the fiscal year as reported on SDC, zero otherwise.

DebtIssue is the dummy variable indicating whether the firm issued public debt during the twelve-month period ending four months after the end of the fiscal year as reported on SDC, zero otherwise.

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[48] Using CRSP equally-weighted market index instead yields similar results. Earnings release is defined as either a press release or a periodic SEC filing through which earnings information is released to the public for the first time. I use earnings release date rather than earnings press release date because, subsequent to the calendar year 1999, COMPUSTAT would have included the SEC filing date as the "earnings announcement" date (*RDQE*) for firms that did not issue a press release or issued a press release later than the SEC filing date. See Li and Ramesh (2007a) for details. Following Lougee and Marquardt (2004), I also tried a model without the level term (i.e., *EARN*) as a robustness check and found similar results.

M&A is the dummy variable indicating whether the firm engaged in mergers and acquisitions during the twelve-month period ending four months after the end of the fiscal year as reported on SDC, zero otherwise.

PCMargin is measured as the aggregated sales (*DATA12*) divided by the aggregated operating costs (including cost of goods sold (*DATA41*), selling, general, and administrative expenses (*DATA189*), and depreciation, depletion, and amortization (*DATA14*)) in a particular industry (four-digit *SICCD* code) for the fiscal year.

LnPPE is measured as the weighted average gross value of the cost of property, plant and equipment (*DATA7*) for a particular industry (four-digit *SICCD* code), weighted by each firm's market share (identified by sales) for the fiscal year.

IPIntens is the dummy variable indicating the membership in industries which likely have high intellectual property investment—the CRSP standard industrial classification code (*SICCD*) at the end of the fiscal year is 2833-2836 (Drugs), 8731-8734 (R&D services), 7371-7379 (Programming), 3570-3577 (Computers), 3600-3674 (Electronics), or 3810-3845 (Precise Measurement Instruments), zero otherwise.

ROA is the net income (*DATA172*) deflated by the average of the beginning and ending total assets (*DATA6*) of the fiscal year.

Loss is the dummy variable indicating whether the firm had a loss for the fiscal year (negative *DATA172*), zero otherwise.

LnMVE is the natural logarithm of the firm's market value of equity at the end of the calendar year ending during the fiscal year (*DATA24*DATA25*).

LnNumMC is the total number of material contracts filed by the firm within the twelve months window ending four months after the fiscal year end.

PIN is calculated as the average of the four calendar-quarter Probability of Informed Trade measures downloaded from the personal website of Professor Stephen Brown, who calculated PIN according to the Easley et al. (1997) microstructure model. The four calendar quarters are identified as the calendar quarters the beginnings of which fall into the twelve-month period ending four months after the end of the fiscal year.

MonthlyTurnover is measured as the mean monthly trading volume deflated by total shares outstanding during the twelve-month period ending four months after the end of the fiscal year.

DollarDepth is measured using the TAQ quote files by keeping only the quotes that meet all of the following criteria: (1) quotes occurred on the NYSE, AMEX or NASDAQ (*EX* = "A", "N" or "T"); (2) quotes were made under normal market conditions (*MODE* = 12); (3) quotes were made within the normal trading hours (09:30:00<=*TIME*<=16:00:00); (4) quotes were not aggregate ones (*NMID* is not "AA", "AI", "IA" or "II"); (5) the ask price is strictly higher than bid price; (6) the bid price is

positive; (7) the relative spread, calculated as (ask price – bid price)/((ask price + bid price)/2), is not higher than 20%. I first calculate the dollar depth of each quote as $\frac{(BID * BIDSIZ + OFR * OFRSIZ)}{2}$ and get the daily median dollar depth as the median value of the dollar depths of all valid quotes within each firm/trading day. The final *DollarDepth* variable is the average of the daily median dollar depths during the twelve-month period ending four months after the end of the fiscal year.

NYSE is the dummy variable indicating whether the firm is traded on NYSE at the end of the fiscal year, zero otherwise.

AMEX is the dummy variable indicating whether the firm is traded on AMEX at the end of the fiscal year, zero otherwise.

LnPrice is the natural logarithm of the median price per share for the twelve-month period ending four months after the end of the fiscal year.

DummyRedact is the dummy variable indicating whether the firm filed a request for confidential treatment on at least one material contract during the twelve-month period ending four months after the end of the fiscal year, zero otherwise.

Compustat_DebtIssue is the dummy variable indicating whether the firm issued any public or private debt during the fiscal year (non-zero *DATA111*), zero otherwise.

Hindex is the rank of the industries Herfindahl-Hirschman index on the Verrecchia and Weber (2006) replication sample. The index is the sum of the squared market share (identified by sales) of each publicly traded firm in a particular industry (two-digit *SICCD* code).

Table A1

Determinants of Choosing Form 8-K over Other SEC Reports for Material Contracts Disclosure: Heckman Probit Regression[a]

	First Stage Probit Regression (DV=*DummyMC*)		Second Stage Probit Regression (DV=*Dummy8K*)	
Variables	**Pred. Sign**	**Coeff. (Z-stat)**	**Pred. Sign**	**Coeff. (Z-stat)**
	(1)	**(2)**	**(3)**	**(4)**
Intercept		0.483		-1.194
		(6.73) ***		(-5.57) ***
ERC			–	-0.003
				(-2.38) **
AdjRSQR			–	0.038
				(0.67)
NumAnalyst			?	-0.013
				(-2.67) ***
InstOwn			?	-0.277
				(-3.83) ***
EquityIssue	+	0.320	+	0.281
		(12.97) ***		(4.21) ***
DebtIssue	+	0.111	+	0.054
		(3.27) ***		(0.68)
M&A	+	0.186	+	0.167
		(12.43) ***		(3.99) ***
PCMargin	–	-0.388	+	0.466
		(-7.48) ***		(4.64) ***
LnPPE	?	0.000	–	-0.008
		(0.07)		(-0.97)
IPIntens	?	0.007	–	-0.101
		(0.31)		(-2.47) **
ROA	–	-0.311		-0.137
		(-14.30) ***		(-2.58) ***
Loss	+	0.287		0.045
		(15.92) ***		(0.87)
LnMVE	?	0.115		-0.082
		(23.45) ***		(-6.02) ***
LnNumMC				0.383
				(14.23) ***
Coefficients and z-statistics on fiscal year indicator variables are suppressed.				
Wald test ($\chi^2(16)$)		577.52 ($p<0.001$)		
Number of observations (*DummyMC* = 0 / 1)		13,136 (2,631 / 10,504)		

Table A1 (cont'd)

*, **, ***: $p < 0.10$, $p < 0.05$ and $p < 0.01$, respectively, two-tailed tests. z-statistics for the pooled regressions have been adjusted for heteroskedasticity and firm-specific clustering in the panel data.

[a] This table is based on a sample period from 2001 to 2003. All the variables except *DummyMC* are defined in Appendix D. *DummyMC* is the dummy variable indicating whether the firm filed at least one material contract during the twelve-month period ending four months after the end of the fiscal year, zero otherwise. *ERC*, *InstOwn*, *ROA* have been winsorized at the top and bottom 1% of their respective distribution. Heckman probit regression is used to estimate the two-stage model with *DummyMC* as the first-stage dependent variable and *Dummy8K* as the second-stage dependent variable. Result on the first-stage selection model is presented in Column (2). Result on the second-stage determinants model is presented in Column (4). Fiscal year indicator variables are included in both models.

Table A2

Determinants of Choosing Form 8-K over Other SEC Reports for Material Contracts Disclosure: Robustness Test after Controlling for Contract Type[a]

Variables	Pred. Sign	Probit Regression After Controlling For Contract Type (DV=*Dummy8K*) Coeff. (Z-stat)
	(1)	(2)
Intercept		-1.360
		(-7.28) ***
ERC	–	-0.003
		(-2.08) **
AdjRSQR	–	0.053
		(0.86)
NumAnalyst	?	-0.010
		(-1.87) *
InstOwn	?	-0.178
		(-2.29) **
EquityIssue	+	0.309
		(5.32) ***
DebtIssue	+	0.073
		(0.86)
M&A	+	0.179
		(4.75) ***
PCMargin	+	0.292
		(2.82) ***
LnPPE	–	-0.004
		(-0.43)
IPIntens	–	-0.116
		(-2.65) ***
ROA		-0.129
		(-2.80) ***
Loss		0.089
		(2.22) **
LnMVE		-0.039
		(-3.09) ***
LnNumMC		0.438
		(21.77) ***
%BusinessMC		-0.204
		(-1.50)
%LeaseMC		-0.759
		(-4.62) ***
%AssetAcquiDisposMC		0.967
		(6.40) ***

Table A2 (cont'd)

%EquityMC	0.988
	(7.02) ***
%StructureChangeMC	0.472
	(2.46) **
%DebtMC	-0.069
	(-0.57)
%EmploymentMC	-0.844
	(-7.08) ***
Coefficients and z-statistics on fiscal year indicator variables are suppressed.	
Pseudo R^2	0.174
Number of observations	10,504

*, **, ***: $p < 0.10$, $p < 0.05$ and $p < 0.01$, respectively, two-tailed tests. z-statistics for the pooled regressions have been adjusted for heteroskedasticity and firm-specific clustering in the panel data.

[a] This table is based on a sample period from 2001 to 2003. *%BusinessMC*, *%LeaseMC*, *%AssetAcquiDisposMC*, *%EquityMC*, *%StructureChangeMC*, *%DebtMC*, *%EmploymentMC* are the proportions of all material contracts that the firm filed during the twelve-month period that are Business-related, Lease-related, Asset Acquisition or Disposition-related, Equity-related, Business Structure Change-related, Debt-related, Employment-related, respectively. All other variables are defined in Appendix D. *ERC*, *InstOwn*, *ROA* have been winsorized at the top and bottom 1% of their respective distribution. Probit regressions are used to estimate the models with *Dummy8K* as the dependent variable. Fiscal year indicator variables are included in the model.

Table A3

Capital Market Implications of Choosing Form 8-K over Other SEC Reports for Material Contracts Disclosure: Robustness Tests after Controlling for Contract Types[a]

	DV=*PIN*		DV=*MonthlyTurnover*		DV=*DollarDepth*	
		Two-Stage Heckman Reg. (IV=*Dummy8K*)		Two-Stage Heckman Reg. (IV=*Dummy8K*)		Two-Stage Heckman Reg. (IV=*Dummy8K*)
Variables	**Pred. Sign**	**Coeff. (t-stat)**	**Pred. Sign**	**Coeff. (t-stat)**	**Pred. Sign**	**Coeff. (t-stat)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Intercept		0.477		-0.094		-30.244
		(16.77) ***		(-3.83) ***		(-1.09)
Dummy8K	–	-0.051	+	0.176	+	33.691
		(-5.52) ***		(6.44) ***		(2.38) **
NumAnalyst	–	0.000	+	0.003	+	4.233
		(-0.70)		(3.88) ***		(8.89) ***
InstOwn	?	-0.028	?	0.070	?	-47.998
		(-8.95) ***		(6.62) ***		(-9.04) ***
LnNumMC		0.002		-0.002		-2.598
		(2.02) **		(-0.54)		(-1.31)
LnMVE	–	-0.038	+	0.025	+	25.864
		(-40.77) ***		(10.70) ***		(13.61) ***
NYSE		-0.019		-0.111		18.199
		(-10.28) ***		(-17.46) ***		(5.73) ***
AMEX		0.002		-0.050		35.761
		(0.60)		-8.49 ***		(10.020 ***
LnPrice		0.016		0.005		1.008
		(12.32) ***		(1.30)		(0.34)
%BusinessMC		-0.005		0.027		-4.571
		(-1.00)		(2.10) **		(-0.76)
%LeaseMC		-0.008		0.048		-10.210
		(-1.28)		(2.94) ***		(-1.98) **
%AssetAcquiDisposMC		-0.016		0.047		-3.801
		(-2.31) **		(2.85) ***		(-0.67)
%EquityMC		-0.011		0.027		1.329
		(-1.93) *		(1.99) **		(0.23)
%StructureChangeMC		-0.010		0.016		1.289
		(-1.40)		(0.88)		(0.14)
%DebtMC		0.003		-0.007		-4.091
		(0.71)		(0.68)		(-0.91)
%EmploymentMC		-0.004		0.001		1.039
		(-1.04)		(0.11)		(0.24)
InvMills		0.027		-0.090		-16.279
		(5.24) ***		(-6.01) ***		(-2.01) **

Table A3 (cont'd)

Coefficients and t-statistics on fiscal year indicator variables and industry (two-digit SICCD code) indicator variables are suppressed.

Adjusted R^2	0.648	0.209	0.487
Number of observations	10,043	10,504	10,414

*, **, ***: $p < 0.10$, $p < 0.05$ and $p < 0.01$, respectively, two-tailed tests. t-statistics for the pooled regressions have been adjusted for heteroskedasticity and firm-specific clustering in the panel data.

[a] This table is based on a sample period from 2001 to 2003. *%BusinessMC*, *%LeaseMC*, *%AssetAcquiDisposMC*, *%EquityMC*, *%StructureChangeMC*, *%DebtMC*, *%EmploymentMC* are the proportions of all material contracts that the firm filed during the twelve-month period that are Business-related, Lease-related, Asset Acquisition or Disposition-related, Equity-related, Business Structure Change-related, Debt-related, Employment-related, respectively. *InvMills* is the inverse Mills ratio calculated from the economic determinants model with *Dummy8K* as the dependent variable. All other variables are defined in Appendix D. *InstOwn* has been winsorized at the top and bottom 1% of its distribution. Two-stage Heckman regressions are used to estimate the models with *Dummy8K* as the independent variable. Industry indicator variables (based on two-digit SICCD code) and fiscal year indicator variables are included in all the models.

Table A4

Determinants of Choosing Form 8-K over Other SEC Reports for Material Contracts Disclosure: Robustness Tests on Sub-Samples[a]

		Probit Regressions (DV=*Dummy8K*) after		
	Pred. Sign	Dropping Employment-Related Contracts	Dropping AAD or BSC-Related Contracts	Dropping Turn-of-Month Contracts
Variables		Coeff. (Z-stat)	Coeff. (Z-stat)	Coeff. (Z-stat)
	(1)	(2)	(3)	(4)
Intercept		-1.376	-1.515	-1.394
		(-8.87) ***	(-10.03) ***	(-8.97) ***
ERC	–	-0.002	-0.003	-0.003
		(-1.80) *	(-2.17) **	(-2.73) ***
AdjRSQR	–	0.053	0.029	0.019
		(0.86)	(0.48)	(0.31)
NumAnalyst	?	-0.013	-0.012	-0.013
		(-2.29) **	(-2.49) **	(-2.59) ***
InstOwn	?	-0.203	-0.272	-0.256
		(-2.46) **	(-3.51) ***	(-3.19) ***
EquityIssue	+	0.303	0.341	0.317
		(5.24) ***	(5.95) ***	(5.58) ***
DebtIssue	+	0.078	0.109	0.081
		(0.86)	(1.30)	(0.93)
M&A	+	0.219	0.187	0.207
		(5.64) ***	(5.02) ***	(5.39) ***
PCMargin	+	0.389	0.355	0.365
		(3.56) ***	(3.42) ***	(3.38) ***
LnPPE	–	-0.006	-0.007	-0.007
		(-0.61)	(-0.83)	(-0.80)
IPIntens	–	-0.102	-0.098	-0.113
		(-2.27) **	(-2.28) **	(-2.58) ***
ROA		-0.182	-0.194	-0.176
		(-4.04) ***	(-4.42) ***	(-4.06) ***
Loss		0.083	0.131	0.078
		(2.05) **	(3.34) ***	(1.92) **
LnMVE		-0.048	-0.059	-0.065
		(-3.73) ***	(-4.74) ***	(-5.22) ***
LnNumMC		0.421	0.396	0.451
		(21.11) ***	(20.12) ***	(22.5) ***
Coefficients and z-statistics on fiscal year indicator variables are suppressed.				
Pseudo R^2		0.105	0.101	0.114
Number of observations		8,658	10,371	9,611

Table A4 (cont'd)

*, **, ***: $p < 0.10$, $p < 0.05$ and $p < 0.01$, respectively, two-tailed tests. z-statistics for the pooled regressions have been adjusted for heteroskedasticity and firm-specific clustering in the panel data.

[a] This table is based on a sample period from 2001 to 2003. All the variables are defined in Appendix D. *ERC*, *InstOwn*, *ROA* have been winsorized at the top and bottom 1% of their respective distribution. Probit regressions are used to estimate the models with *Dummy8K* as the dependent variable. Dropping Employment-Related Contracts refers to the sub-sample without any Employment-related material contracts. Dropping AAD or BSC-Related Contracts refers to the sub-sample without any Asset Acquisition or Disposition-related or Business Structure Change-related material contracts. Dropping Turn-of-Month Contracts refers to the sub-sample without any material contracts entered or amended on the first or last day of any calendar month. Fiscal year indicator variables are included in the models.

Table A5

Capital Market Implications of Choosing Form 8-K over Other SEC Reports for Material Contracts Disclosure: Robustness Tests on Sub-Samples[a]

	DV=*PIN*			DV=*MonthlyTurnover*			DV=*DollarDepth*		
	Two-Stage Heckman Reg. (IV=*Dummy8K*) after			Two-Stage Heckman Reg. (IV=*Dummy8K*) after			Two-Stage Heckman Reg. (IV=*Dummy8K*) after		
	Dropping Employment-Related Contracts	Dropping AAD or BSC-Related Contracts	Dropping Turn-of-Month Contracts	Dropping Employment-Related Contracts	Dropping AAD or BSC-Related Contracts	Dropping Turn-of-Month Contracts	Dropping Employment-Related Contracts	Dropping AAD or BSC-Related Contracts	Dropping Turn-of-Month Contracts
Variables	Pred. Sign	Coeff. (t-stat)	Coeff. (t-stat)	Coeff. (t-stat)	Pred. Sign	Coeff. (t-stat)	Coeff. (t-stat)	Coeff. (t-stat)	Pred. Sign	Coeff. (t-stat)	Coeff. (t-stat)	Coeff. (t-stat)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Intercept		0.472	0.478	0.473		-0.081	-0.090	-0.091		-26.390	-33.188	-33.334
		(16.49) ***	(16.63) ***	(16.46) ***		(-3.42) ***	(-3.65) ***	(-3.77) ***		(-0.96)	(-1.19)	(-1.20)
Dummy8K	–	-0.048	-0.060	-0.040	+	0.150	0.206	0.200	+	26.634	28.234	24.887
		(-5.61) ***	(-6.53) ***	(-4.64) ***		(6.41) ***	(7.43) ***	(8.02) ***		(3.02) ***	(2.01) **	(2.06) **
NumAnalyst	–	0.000	0.000	0.000	+	0.003	0.003	0.003	+	3.988	4.214	4.188
		(-1.79) *	(-0.71)	(-0.90)		(4.19) ***	(3.82) ***	(3.89) ***		(8.50) ***	(8.83) ***	(8.50) ***
InstOwn	?	-0.024	-0.028	-0.027	?	0.054	0.070	0.066	?	-39.659	-48.204	-48.688
		(-6.91) ***	(-8.92) ***	(-8.21) ***		(4.66) ***	(6.55) ***	(5.99) ***		(-7.09) ***	(-9.10) ***	(-8.75) ***
LnNumMC		0.002	0.003	0.001		0.003	-0.005	-0.004		-1.186	-1.741	-1.221
		(1.85) *	(2.68) ***	(0.91)		(0.87)	(-1.39)	(-1.27)		(-0.84)	(-0.89)	(-0.67)
LnMVE	–	-0.038	-0.038	-0.038	+	0.025	0.026	0.026	+	22.985	26.278	26.069
		(-36.59) ***	(-40.64) ***	(-38.98) ***		(10.02) ***	(10.83) ***	(10.51) ***		(14.10) ***	(13.71) ***	(12.93) ***
NYSE		-0.019	-0.019	-0.019		-0.111	-0.115	-0.115		23.037	18.474	19.143
		(-8.82) ***	(-9.92) ***	(-9.68) ***		(-16.18) ***	(-17.76) ***	(-16.92) ***		(7.15) ***	(5.83) ***	(5.82) ***

Table A5 (cont'd)

AMEX	0.003	0.003	0.001	-0.046	-0.052	-0.051	36.364	35.564	36.077
	(0.83)	(0.93)	(0.21)	(-6.98) ***	(-8.70) ***	(-8.20) ***	(9.05) ***	(11.10) ***	(9.58) ***
LnPrice	0.016	0.015	0.016	0.005	0.005	0.005	2.337	0.525	0.694
	(11.34) ***	(12.04) ***	(12.26) ***	(1.23)	(1.19)	(1.36)	(0.80)	(0.18)	(0.22)
InvMills	0.025	0.032	0.021	-0.074	-0.108	-0.101	-13.222	-13.548	-11.116
	(5.22) ***	(6.21) ***	(4.28) ***	(-5.88) ***	(-7.04) ***	(-7.60) ***	(-2.69) ***	(-1.68) *	(-1.63)
Coefficients and t-statistics on fiscal year indicator variables and industry (two-digit SICCD code) indicator variables are suppressed.									
Adjusted R^2	0.632	0.648	0.643	0.203	0.205	0.203	0.485	0.487	0.479
Number of observations	8,270	9,916	9,194	8,658	10,371	9,611	8,594	10,282	9,534

*, **, ***: $p < 0.10$, $p < 0.05$ and $p < 0.01$, respectively, two-tailed tests. t-statistics for the pooled regressions have been adjusted for heteroskedasticity and firm-specific clustering in the panel data.

[a] This table is based on a sample period from 2001 to 2003. All the variables except *InvMills* are defined in Appendix D. *InvMills* is the inverse Mills ratio calculated from the economic determinants model with *Dummy8K* as the dependent variable. *InstOwn* has been winsorized at the top and bottom 1% of its distribution. Two-stage Heckman regressions are used to estimate the models with *Dummy8K* as the independent variable. Dropping Employment-Related Contracts refers to the sub-sample without any Employment-related material contracts. Dropping AAD or BSC-Related Contracts refers to the sub-sample without any Asset Acquisition or Disposition-related or Business Structure Change-related material contracts. Dropping Turn-of-Month Contracts refers to the sub-sample without any material contracts entered or amended on the first or last day of any calendar month. Industry indicator variables (based on two-digit SICCD code) and fiscal year indicator variables are included in all the models.

Table A6

Capital Market Implications of Choosing Timely Disclosure of Material Contracts[a]

	DV=*PIN*		DV=*MonthlyTurnover*		DV=*DollarDepth*	
		Two-Stage Heckman Reg. (IV=*Dummy8K*)		Two-Stage Heckman Reg. (IV=*Dummy8K*)		Two-Stage Heckman Reg. (IV=*Dummy8K*)
Variables	**Pred. Sign**	**Coeff. (t-stat)**	**Pred. Sign**	**Coeff. (t-stat)**	**Pred. Sign**	**Coeff. (t-stat)**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Intercept		0.473		-0.081		-33.076
		(16.5) ***		(-3.30) ***		(-1.19)
DummyDLag10	–	-0.044	+	0.158	+	32.215
		(-5.39) ***		(6.21) ***		(2.44) **
NumAnalyst	–	0.000	+	0.002	+	4.229
		(-0.85)		(3.71) ***		(8.78) ***
InstOwn	?	-0.027	?	0.066	?	-47.383
		(-8.53) ***		(6.15) ***		(-8.92) ***
LnNumMC		0.002		-0.001		-2.881
		(1.83) *		(-0.26)		(-1.45)
LnMVE	–	-0.038	+	0.025	+	26.032
		(-40.59) ***		(10.52) ***		(13.53) ***
NYSE		-0.019		-0.114		18.790
		(-9.83) ***		(-17.54) ***		(5.90) ***
AMEX		0.002		-0.050		35.769
		(0.58)		(-8.43) ***		(10.09) ***
LnPrice		0.016		0.004		0.853
		(12.45) ***		(1.13)		(0.29)
InvMills		0.022		-0.079		-15.534
		(5.03) ***		(-5.73) ***		(-2.12) **
Coefficients and t-statistics on fiscal year indicator variables and industry (two-digit SICCD code) indicator variables are suppressed.						
Adjusted R^2		0.646		0.202		0.485
Number of observations		9,915		10,373		10,286

*, **, ***: $p < 0.10$, $p < 0.05$ and $p < 0.01$, respectively, two-tailed tests. t-statistics for the pooled regressions have been adjusted for heteroskedasticity and firm-specific clustering in the panel data.

[a] This table is based on a sample period from 2001 to 2003. *DummyDLag10* is the dummy variable indicating whether the firm filed at least one material contract withing 10 calendar days after its event date during the twelve-month period. *InvMills* is the inverse Mills ratio calculated from the economic determinants model with *DummyDLag10* as the dependent variable. All other variables are defined in Appendix D. *InstOwn* has been winsorized at the top and bottom 1% of its distribution. Two-stage Heckman regressions are used to estimate the models with *DummyDLag10* as the independent variable. Industry indicator variables (based on two-digit SICCD code) and fiscal year indicator variables are included in all the models.

Table A7

Determinants of Choosing Form 8-K over Other SEC Reports for Material Contracts Disclosure: Alternative Measures of Earnings Informativeness[a]

Variables	Pred. Sign	Two Alternative Measures (DV=*Dummy8K*) Coeff. (Z-stat)	All Four Measures (DV=*Dummy8K*) Coeff. (Z-stat)
	(1)	(2)	(3)
Intercept		-1.583	-1.564
		(-10.54) ***	(-10.41) ***
ERC	–		-0.003
			(-2.40) **
AdjRSQR	–		0.043
			(0.71)
Intangible	+	0.314	0.310
		(3.25) ***	(3.22) ***
SaleGrowth	+	0.065	0.061
		(2.17) **	(2.05) **
NumAnalyst	?	-0.013	-0.013
		(-2.68) ***	(-2.60) ***
InstOwn	?	-0.282	-0.280
		(-3.71) ***	(-3.68) ***
EquityIssue	+	0.364	0.361
		(6.53) ***	(6.49) ***
DebtIssue	+	0.090	0.084
		(1.10)	(1.03)
M&A	+	0.204	0.206
		(5.58) ***	(5.64) ***
PCMargin	+	0.453	0.442
		(4.33) ***	(4.23) ***
LnPPE	–	-0.006	-0.007
		(-0.72)	(-0.80)
IPIntens	–	-0.109	-0.109
		(-2.56) **	(-2.56) **
ROA		-0.179	-0.177
		(-4.08) ***	(-4.03) ***
Loss		0.123	0.117
		(3.20) ***	(3.05) ***
LnMVE		-0.068	-0.067
		(-5.56) ***	(-5.48) ***
LnNumMC		0.401	0.400
		(21.06) ***	(21.00) ***

Coefficients and z-statistics on fiscal year indicator variables are suppressed.

Table A7 (cont'd)

Pseudo R^2	0.107	0.108
Number of observations	10,398	10,398

*, **, ***: $p < 0.10$, $p < 0.05$ and $p < 0.01$, respectively, two-tailed tests. z-statistics for the pooled regressions have been adjusted for heteroskedasticity and firm-specific clustering in the panel data.

[a] This table is based on a sample period from 2001 to 2003. All the variables except *Intangible* and *SaleGrowth* are defined in Appendix D. *Intangible* is calculated as the intangible assets (*DATA33*) deflated by the total assets (*DATA6*) at the beginning of the fiscal year. *SaleGrowth* is calculated as the change rate of the sales (*DATA12*) for the current fiscal year over that of the prior year. *ERC*, *InstOwn*, *ROA* have been winsorized at the top and bottom 1% of their respective distribution. Probit regression is used to estimate the model with *Dummy8K* as the dependent variable. Fiscal year indicator variables are included in both models.

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