

Implicit Communication and Enforcement of Corporate Disclosure Regulation

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Abstract

The communication of non-public information in private meetings between corporate officials and financial analysts presents a distinctive regulatory challenge. One reason is that there typically is no record of what transpires in a private meeting. A second is that information may be communicated both explicitly and through implicit communication -- qualitative statements, tone, and non-verbal cues. The private meeting context is particularly conducive to the use of implicit communication. The SEC adopted Regulation Fair Disclosure (Reg FD) specifically to address selective disclosures in private meetings, but subsequently a federal court rejected the SEC's attempt to impose liability for optimistic statements by a corporate official in private meetings with investors that contrasted with the negative tone of the company's public statements. We provide empirical evidence examining the information content of analyst reports before and after the court's ruling and suggesting that selective disclosure from managers to financial analysts increased significantly. To explore the mechanism responsible for this change, we survey securities lawyers who advise corporate officials regarding Reg FD compliance. Our survey responses indicate that this increase in disclosure is most likely due to an increase in implicit communication. Our results highlight the challenges associated with enforcing corporate disclosure regulation in the context of implicit communication.

Keywords: Implicit Communications, Corporate Disclosure Regulation, SEC Enforcement, Regulation Fair Disclosure

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ABSTRACT

The communication of non-public information in private meetings between corporate officials and financial analysts presents a distinctive regulatory challenge. One reason is that there typically is no record of what transpires in a private meeting. A second is that information may be communicated both explicitly and through implicit communication -- qualitative statements, tone, and non-verbal cues. The private meeting context is particularly conducive to the use of implicit communication. The SEC adopted Regulation Fair Disclosure (Reg FD) specifically to address selective disclosures in private meetings, but subsequently a federal court rejected the SEC's attempt to impose liability for optimistic statements by a corporate official in private meetings with investors that contrasted with the negative tone of the company's public statements. We provide empirical evidence examining the information content of analyst reports before and after the court's ruling and suggesting that selective disclosure from managers to financial analysts increased significantly. To explore the mechanism responsible for this change, we survey securities lawyers who advise corporate officials regarding Reg FD compliance. Our survey responses indicate that this increase in disclosure is most likely due to an increase in implicit communication. Our results highlight the challenges associated with enforcing corporate disclosure regulation in the context of implicit communication.

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Implicit Communication and Enforcement of Corporate Disclosure Regulation

“Selective disclosure of earnings information cannot come in the form of *indirect guidance, the meaning of which is apparent though implied.*” (SEC Director of Enforcement Richard Walker 2000) (emphasis added)

“The SEC has scrutinized at an extremely heightened level, every particular word used in the statement, including the tense of verbs and the general syntax of each sentence.... Such an approach places an unreasonable burden on a company's management and spokespersons to become linguistic experts, or otherwise live in fear of violating Regulation FD.” (U.S. District Court’s Ruling in *SEC v. Siebel Systems, Inc.*)

1. Introduction

Disclosure regulation and enforcement focus primarily on explicit quantitative disclosures. Corporations and corporate officials also make extensive use of implicit communication, however, such as qualitative information, tone, and non-verbal cues. Several recent studies show that implicit communication can convey significant market-sensitive information (see, e.g., Loughran and McDonald 2011; Mayew and Venkatachalam 2012a, 2012b). These findings underscore the importance of examining issues associated with enforcing corporate disclosure regulations when information is communicated in an implicit manner.

These prior studies demonstrate that implicit communication is an important component of corporate officials’ public statements and securities filings. Implicit communication is potentially more significant in the context of private meetings in which there are only a select few market participants and non-scripted portions are more likely (Durney 2020). In particular, private meetings offer attendees a better opportunity to observe not just what is said, but how it is said (Solomon and Soltes 2015; Soltes 2014). As one hedge fund manager explains, “You can pick up clues if you are looking people in the eye.”¹ The scope of potential liability exposure that corporate officials face for such private communication has a critical effect on the effectiveness of corporate disclosure regulations. Using a unique federal court case as our empirical setting, we examine this

¹ Ng and Troianovski (2015) quoting hedge fund manager about the role of body language, emphasis and tone in conveying information to investors in private meetings.

issue in the context of Regulation Fair Disclosure (Reg FD), which prohibits publicly traded companies from disclosing material non-public information selectively to a limited number of investors.

Reg FD provides an appropriate empirical setting for the purpose of our study since, at the time of the adoption of the regulation, the SEC was firmly of the view that managers could violate Reg FD not just by what they said but also by how they said it (see, e.g., SEC 1999, 2000; Fisch 2013). Subsequently, the SEC's broad interpretation of the scope of Reg FD was challenged in court. In the 2005 Siebel Systems case, a federal court rejected the SEC's attempt to impose liability for optimistic statements by a corporate official in private meetings with investors that contrasted with the negative tone of the issuer's public statements.

In this study, we use the Siebel decision as an opportunity to explore the role of implicit communication on the information environment in the capital markets. First, we examine changes in the information content of analyst information outputs after the court's ruling. We use a sample of analyst earnings forecasts and stock recommendations issued from September 1, 2004, to August 31, 2006, the two-year period around the court's ruling. Following Gintschel and Markov's (2004) approach, we find that the effect on stock returns due to analyst information outputs (earnings forecasts and stock recommendations) is significantly greater in the one-year period after the court's ruling than that in the one-year period before the court's ruling, 7.6% versus 5.3% absolute standardized stock returns.

We then investigate the extent to which we can attribute this change to selective disclosure. Supporting the idea of increased non-public information leakage from managers to analysts in private meetings following the court's ruling, we find that the increase in the information content of analyst information outputs is more pronounced when analyst outputs are issued following analyst/investor days (AI Days) that allow managers to informally interact with analysts and investors in private settings (see, e.g., Kirk and Markov 2016).

To rule out an alternative explanation that the change in the informativeness of analyst information outputs around the court ruling is due to other contemporaneous macroeconomic events, we provide additional evidence using ADR firms as a control sample. ADR firms are not subject to Reg FD; therefore, we would not expect the Siebel decision to affect the information content of analyst reports concerning ADR firms. Our results are consistent with our prediction; we show that there is no change in market response to analyst information outputs when we estimate the effect of the court's ruling for ADR firms. Further, using ADR firms as the control group, we examine the effect of the court's ruling in a difference-in-differences (DiD) research design with U.S. firms as the treatment group. We find that the increase in the information content of analyst information outputs after the court ruling is significantly greater for U.S. firms than for ADR firms, suggesting that other concurrent macroeconomic events are not responsible for our findings (Francis, Nanda, and Wang 2006).

We conduct several additional analyses to establish the reliability of our conclusions. First, to mitigate the concern that the above results are due to an unspecified time trend, we perform a pseudo-event test (e.g., Kross and Suk 2012). We divide the sample period into three overlapping one-year sub-periods (Sept. 1, 2004 – Aug. 31, 2005; Mar. 1, 2005 – Feb. 28, 2006; and Sept. 1, 2005 – Aug. 31, 2006), and use March 1, 2005 and March 1, 2006 as pseudo-event dates for the first and third sub-period, respectively. For the pseudo-event dates, we do not observe a significant change in the information content of analyst information outputs. However, using the actual date of the court's ruling, September 1, 2005, as the event date for the second sub-period, we find results similar to those observed for the full sample. This analysis helps us rule out the time trend explanation for our main results. Second, we examine changes in the information content of analyst information outputs over a much shorter sample period, specifically, two months around the court's ruling. We find consistent results, showing a significant increase in the information content of analyst information outputs after the court's ruling. This analysis further suggests that our main finding is likely driven by the court's ruling.

Third, we carry out a cross-sectional analysis for further identification of the reason behind our findings. Prior studies have shown that managers discriminate among analysts by granting better private information access to analysts who hold a more favorable view of their firm (e.g., Gintschel and Markov 2004; Chen and Matsumoto 2006). If the increase in the information content of analyst information outputs after the court's ruling is indeed due to an increase in managers' selective disclosure to the analysts, then this increase should be more pronounced if an analyst tends to hold a more favorable view of the firm. We show that, after the court's ruling, the increase in the information content of analyst information outputs related to a firm is more pronounced for those analysts who tend to hold a more favorable view of the firm.

Fourth, we use an alternative methodology to examine the effect of the court's ruling on firms' selective disclosure to analysts. We follow Mohanram and Sunder's (2006) approach, which is based on the notion that an increase in selective disclosure from managers to analysts would reduce the analyst's workload per firm. They measure analyst workload using the average number of firms covered by an analyst as well as the average number of analysts following a firm. We find a significant increase in the average number of firms covered by an analyst and the average number of analysts following a firm in the one-year period after the court's ruling relative to the one-year period before the ruling, and these effects are of similar order of magnitude as those documented by Mohanram and Sunder (2006). These results further suggest that analyst access to selective disclosure increased after the court's ruling.

Our analysis is limited because the very nature of private meetings prevents us from directly documenting the nature of the information that was conveyed.² Although our empirical results suggest an increase in the information communicated by corporate officials to analysts, they do

² Currently, companies are not required to disclose publicly the discussions in their private meetings with analysts or investors (Soltes 2018). Soltes (2014), Solomon and Soltes (2015), and Park and Soltes (2018) overcome this data limitation to some extent by obtaining proprietary records of private meetings from one or two companies. They are able to address several interesting questions with that data. However, due to potential legal concerns with possessing records of management's responses, they could not obtain permission to analyze information that was disclosed by management (cf. Park and Soltes, 2018).

not allow us to distinguish between explicit and implicit communications.³ To explore this issue, we utilize survey evidence. We survey disclosure lawyers who have both specific expertise in Reg FD and familiarity with the Siebel case. We focus on disclosure lawyers rather than investment professionals because legal advice forms the basis for the compliance policies adopted by corporations and corporate officials, and lawyers are the source of that advice (Soltes 2018). We select lawyers who have been directly involved in advising clients with respect to Reg FD compliance.

Our survey results support our hypotheses. Survey respondents report both an increase in information flow between corporate officials and analysts in response to the Siebel decision. They also report that the most likely explanation for our empirical results is an increase in implicit rather than explicit communication between officials and analysts.

Our conclusion that our results are primarily due to officials' increasing use of implicit communication in private meetings is further supported by the fact that SEC Rule 10b-5, as well as Reg FD, subjects corporate officials to potential liability for their communications. This potential liability is most acute for communication through *public* disclosures. This liability can be enforced by private litigants through class actions in addition to SEC enforcement actions. Indeed, studies have found that corporate officials' use of optimistic tone in public disclosures can subject them to increased litigation risk (Rogers, Van Buskirk, and Zechman 2011; Cazier, Merkley, and Treu 2019). In contrast, corporate officials are unlikely to be subject to 10b-5 liability for statements made *privately* both because such disclosures are made to a limited audience, rendering them unsuitable for a class-action lawsuit, and because a private claim would require proof by the plaintiffs that the private disclosures materially altered the total mix of information

³ We note that prior studies on the effect of Reg FD also rely on indirect evidence. Studies that address whether Reg FD reduced private disclosure by firms of non-public information to analysts arrive at their conclusions by examining the change in the properties of analysts' forecasts and analysts' workload (Gintschel and Markov 2004; Mohanram and Sunder 2006; Kross and Suk 2012;). Studies that address the existence of private disclosures of non-public information under Reg FD by firms to analysts, also rely on indirect evidence. For example, Green, Jame, Markov, and Subasi (2014) examine whether access to management at broker-hosted investor conferences is associated with more informative research output by analysts.

available, proof that would implicitly concede that the plaintiffs had received material non-public information.⁴ In addition, the Siebel opinion focused on explicit statements and the extent to which those statements “add, contradict, or significantly alter the material information available to the general public.” Siebel thus suggested that implicit communication would not be subject to a similarly exacting degree of judicial scrutiny.⁵

Our study provides two main contributions. First, our findings provide evidence on how case law has affected private disclosure in the post-Reg FD environment. Specifically, our evidence suggests the Siebel decision resulted in a significant increase in private information leakage. This is important in understanding the effectiveness of Reg FD in “leveling the playing field.” Second, we investigate a plausible mechanism for this effect based on the wording and fact pattern of the Siebel case. The Siebel decision revealed the inherent difficulty associated with enforcing a disclosure regulation like Reg FD when information can be conveyed through implicit communication. Correspondingly, we provide evidence that increase in implicit communication is an important driver of the increased private information leakage after the court ruling. To the best of our knowledge, our study is the first to focus on the challenge of implicit communication to the effectiveness of enforcing a corporate disclosure regulation. Our empirical and survey findings together suggest that private implicit communication between managers and analysts increased significantly after the Siebel decision, thereby reducing the effectiveness of Reg FD.⁶

Our findings also have implications for other corporate disclosure regulations such as federal securities laws that prohibit misrepresentation of material information and trading on insider

⁴ If plaintiffs acknowledged receiving material non-public information and trading on that information, they would face potential liability for illegal insider trading.

⁵ The change in management perceptions, as suggested by our results, is consistent with the change in the SEC’s behavior. After the Siebel Systems decision, SEC enforcement actions were confined to cases in which an issuer’s private statements were explicitly contrary to its public statements. Specifically, SEC brought six such enforcement actions in the years 2007, 2009, 2010, 2011, and 2013 (Bengtzen 2017).

⁶ Several recent studies show that private communication with management remains an important source of information for analysts (see, e.g., Green et al. 2014; Solomon and Soltes 2015; Bushee, Gerakos, and Lee 2018). These studies typically use sample periods that are post-2005. The significantly greater difficulty faced by SEC in enforcing Reg FD on implicit communication after the 2005 Siebel Systems decision could be an important factor driving the results of these studies.

information, such as Rule 10b-5. Specifically, they highlight the risk that managers may mislead investors not merely through explicit quantitative statements but also through qualitative statements and information conveyed through their tone and demeanor. Enforcement efforts directed to these actions may face similar challenges. Notably, although studies document that private plaintiffs tend to file securities fraud litigation based on optimistic qualitative public disclosures (see, e.g., Rogers et al. 2011; Cazier et al. 2019), courts may not find qualitative disclosures material.⁷ Corporate officials can further reduce the prospect of 10b-5 litigation by making optimistic statements in private rather than in public communication in which both the precise statement and the accompanying tone may be difficult to establish. We therefore identify the increased likelihood that corporate officials will be less attentive to the risk of providing misleading information through implicit communication in private meetings. Our findings document a plausible mechanism for studies finding that such meetings continue to result in information asymmetries (e.g., Solomon and Soltes 2015).

The rest of the paper is organized as follows. Section 2 describes Reg FD and the Siebel decision, Section 3 discusses prior studies, Section 4 present the results of our empirical analyses, Section 5 summarizes our survey approach and provides corresponding results, and Section 6 concludes.

2. Regulation FD and the Siebel Decision

2.1 Regulation FD

The SEC adopted Reg FD on August 10, 2000, with the goal of reducing information asymmetry in the market. The regulation was intended to respond to the Supreme Court’s decision in *SEC. v. Dirks*, which held that a research analyst who received material non-public information from a corporate insider was not liable for insider trading unless the insider’s tip constituted a

⁷ See, e.g. Hoffman (2006), who describes that such cases are frequently dismissed as un-actionable “puffery.”

breach of his fiduciary duty. The rule was highly controversial. Although many commentators believed the rule would level the playing field for small investors, others expressed concern that it would have a chilling effect on the flow of information from issuers to the market (Kobi 2002).

One reason for this concern was uncertainty about the applicable standard of materiality. As adopted, Reg FD prohibits selective disclosure of material information. The rule did not define materiality, however; instead it incorporated a fairly vague judicially-promulgated definition that has been extensively criticized. To assist firm in assessing materiality, the SEC provided detailed interpretive guidelines, which included identifying seven categories of information that “have a higher probability of being considered material” (see, e.g., SEC 1999, 2000; Maco 2000; Walker 2000).

The task of evaluating materiality is complicated by the fact that issuers convey information through quantitative as well as qualitative statements, through the tone they use as well as the time they devote to discussing certain topics, and through implicit communication. Since the early years after the adoption of Reg FD, the SEC was of the view that managers could convey material information through implicit communication, and this view was reflected in compliance guidance provided by the SEC and its staff members. For example, Walker (2000) states that “the adopting release [of Reg FD] makes clear that selective disclosure of earnings information cannot come in the form of indirect guidance, the meaning of which is apparent though implied.” Thus, issuers who engaged in private communication with analysts and investors after the adoption of Reg FD had to determine the extent to which those meetings could be interpreted as conveying material non-public information.

2.2 *The Siebel Decision*

Following its adoption of Reg FD and prior to the U.S. federal district court’s ruling on *SEC v. Siebel Systems, Inc.* on September 1, 2005, the SEC took two enforcement actions involving implicit communications (Hanley 2003; Fisch 2013). Notably, these early actions were resolved through settlement, so they did not involve judicial evaluations of the conduct at issue. First, in

2002, the SEC penalized Siebel Systems, Inc. and its CEO for selectively disclosing material non-public information using optimistic statements. Specifically, the SEC charged that during a public earnings call on October 17, 2001, the CEO characterized the IT market as “soft” and stated that “things will be quite tough through the remainder of the year.” At an invitation-only technology conference on November 5, 2001, however, the CEO stated to nearly 200 attendees that “we are pretty optimistic about what we’re seeing at this time...we’re seeing a return to normal behavior in IT buying patterns,” without making a simultaneous public disclosure. The SEC deemed the selective disclosure to be material by noting that the CEO’s statements had an effect on trading behavior, stock price and trading volume.⁸

Second, in 2003, the SEC penalized Schering-Plough and its CEO for selectively disclosing negative material non-public information to financial analysts. Specifically, during the week of September 30, 2002, Schering-Plough’s CEO and senior vice president of investor relations met privately with analysts and portfolio managers of four investment companies. The SEC charged that at each of the meetings with the investment companies, “through a combination of spoken language, tone, emphasis, and demeanor,” Schering-Plough’s CEO disclosed negative material non-public information regarding the firm’s earnings prospects. As in the Siebel case, the statements by Schering-Plough’s CEO resulted in trading by meeting attendees, a stock price decline of more than 17 percent and increased trading volume. Through the enforcement action, the SEC reinforced its view about the role that various forms of implicit communication can play in a Reg FD violation (Hanley 2003).

The SEC’s approach to addressing selective disclosure made through implicit communication was challenged, however, when in 2005 the U.S. Federal District Court for the Southern District of New York dismissed the SEC’s (second) lawsuit brought against Siebel Systems.⁹ The SEC alleged that the CFO Kenneth Goldman selectively disclosed material non-

⁸ See *SEC v. Siebel Systems, Inc.* (SEC 2002) for more details. The SEC’s complaint and administrative proceeding are available here: <https://www.sec.gov/litigation/admin/34-46896.htm>; <https://www.sec.gov/litigation/litreleases/lr17860.htm>.

⁹ *SEC v. Siebel Sys., Inc.*, 384 F. Supp. 2d 694 (S.D.N.Y. 2005).

public information by using positive statements and tone in private investor meetings. The SEC noted that prior to the meetings, the company publicly provided a negative outlook about the company's business activity, whereas, at the meetings, Goldman provided an optimistic outlook, which materially contrasted with the negative tone of the company's public disclosures.

The SEC's allegations were based on two private meetings in New York between officials at Siebel Systems, Inc., Kenneth A. Goldman, Siebel's CFO, and Mark Hanson, a senior executive, and investors. The first was a one-on-one meeting with Alliance Capital Management. The second was an invitation-only dinner hosted by Morgan Stanley. At these private meetings, Goldman made statements that, in the view of the SEC, more positively characterized the company's business activity and sales pipeline.

The investors that attended the meetings promptly purchased the company's stock, its trading volume doubled the next day, and its price increased by 8% (see Figure 1). Immediately following the CFO's comments, two Alliance portfolio managers who attended the meeting placed orders to purchase 114,200 shares of the company's stock. Prior to the meeting, the portfolio managers had not held the stock for approximately 12 months in the funds that they managed. Within 24 hours after the meeting, Alliance Capital Management's net position on Siebel stock increased by 222,400 shares. At least two of the attendees at the Morgan Stanley dinner bought the company's stock next morning and Morgan Stanley disseminated the CFO's positive statements to select investors. For example, a Morgan Stanley institutional sales trader called a client and said that the Morgan Stanley "analyst's take" on the dinner was "the body language was positive...the pipeline is building and expected to grow," and characterized the information as "positive data points." Morgan Stanley also communicated the CFO's positive comments by e-mail to hundreds of investors, many of whom bought Siebel stock on the morning of May 1, 2003. On May 1, the stock price closed roughly 8% higher than the prior day's close. Trading volume on May 1 was nearly double the average daily volume for the preceding 12 months (see Figure 2).

However, on September 1, 2005, the court held that the SEC had been too demanding. The court focused on a close reading of the text of the official's statements rather than the official's tone to conclude that his private disclosures were "equivalent in substance to the information publicly disclosed [by the company]." ¹⁰ Explaining that "The regulation does not prohibit persons speaking on behalf of an issuer, from providing mere positive or negative characterizations, or their optimistic or pessimistic subjective general impressions, based upon or drawn from the material information available to the public," the court concluded that Reg FD required a material difference between the company's public statements and those made in the private meetings, and that there was no material difference in the case before it. ¹¹ Significantly, although the court noted in a footnote that corporate officials could violate Reg FD through "Tacit communications, such as a wink, nod, or a thumbs up or down gesture," the court limited its analysis in the case to the specific statements made by Goldman in private. The court observed that Reg FD does not require that the statements made by corporate officials privately match their public statements "verbatim", observing that "To require a more demanding standard, in the context of Reg FD, could compel companies to discontinue any spontaneous communications so that the content of any intended communication may be examined by a lexicologist to ensure that the proposed statement discloses the exact information in the same form as was publicly disclosed."

The court's ruling in *Siebel Systems* revealed the difficulty associated with enforcing Regulation FD. First, in the context of private meetings, there is typically no transcript or verbatim record of the information conveyed. Second, private meetings provide an opportunity for corporate officials to convey information both explicitly and implicitly through the use of more or less positive language, emphasis and non-verbal cues. Third, the court ruled that SEC's approach of monitoring implicit communication places an "unreasonable burden" on managers.

¹⁰ *Siebel* at 704.

¹¹ Disclosure regulations under the U.S. federal securities laws and Reg FD define information as material if "there is a substantial likelihood that the information would have been viewed by a reasonable investor as having significantly altered the total mix of information made available" based on the U.S. case laws, *TSC Industries v. Northway Inc.* (1976) and *Basic, Inc. v. Levinson* (1988).

Fourth, Siebel conveyed to market participants the message that, even a significant stock price reaction or trading activity by select investors following a private meeting was not, by itself, sufficient to demonstrate that Regulation FD had been violated.

Siebel was both a high-profile decision and the first opportunity for a court to weigh in on the scope of behavior covered by Reg FD. As a result, the court case generated national attention even in its preliminary stages (Page and Yang 2005). The Chamber of Commerce of the United States filed an *amicus brief* in support of Siebel's motion to dismiss.¹² A group of 24 securities law professors filed *amicus briefs* in opposition to the motion. The court's ruling was promptly and widely publicized by major news media outlets.¹³ In reporting on the decision, the Wall Street Journal described it as "closely watched" and quoted a practitioner as characterizing the decision as "a big warning shot across the bow of the SEC" (Solomon 2005). Subsequent commentary described Siebel as a "landmark" decision and noted that, in the two years following the decision, the SEC did not bring another Reg FD case (Morgan 2007).

3. Related Literature

3.1 Regulation FD

Reg FD has been the subject of extensive empirical study. Initial studies of its effect found that the regulation succeeded in significantly reducing selective disclosure of non-public information to analysts (see, e.g., Gintschel and Markov 2004; Mohanram and Sunder 2006; Wang 2007; Kross and Suk 2012). More recent studies show, however, that private communication with management remains an important source of non-public information for analysts (see, e.g., Soltes 2014; Green et al. 2014; Solomon and Soltes 2015; Bushee et al. 2018). Brown, Call, Clement, and Sharp (2018) report survey data indicating that seventy percent of firms provide investors with private access to executives. Solomon and Soltes (2015) report that when investors meet privately

¹² Available here: <http://www.uschamber.com/nclc/caselist/briefsrtoz.htm>. The Chamber and others argued that Reg FD was an unconstitutional restriction of free speech. See Norris (2005).

¹³ The Wall Street Journal (Solomon 2005), the New York Times (Labaton 2005), the Washington Post (Johnson 2005), and the Financial Times (Parker 2005) featured the ruling the next day.

with management, they make more informed trading decisions. A recent study suggests ambiguity concerning the nature of the information that managers may disclose privately (Soltes 2018). Our paper builds on this analysis by demonstrating how Siebel likely affected not just the willingness of managers to meet privately but also the informativeness of those meetings.¹⁴

A contemporaneous study by Allee, Bushee, Kleppe, and Pierce (2020) corroborates our results. Allee, et al. conclude, as do we, that the Siebel decision increased selective disclosure by managers. The Allee et al. (2020) paper relies on a different empirical approach, documenting increased informed trading by transient institutional investors after Siebel.¹⁵ Our findings complement theirs in that we identify two critical explanatory mechanisms for their results – the likelihood that Siebel generated greater use of implicit communication in private meetings and the increased informativeness of analyst reports resulting from that communication. We also document a mechanism that can potentially explain the broader results associated with selective disclosure such as an effect on trading volume and stock prices.

3.2 Implicit Disclosure

A separate body of literature explores the use of implicit communication and finds that such communication affects capital market behavior. Loughran and McDonald (2011) show that the proportion of negative words in 10-K reports is associated with abnormal returns, abnormal trading volume, and return volatility. Davis, Piger, and Sedor (2012) document significant positive market response to earnings press releases containing net positive language, i.e., the difference between the percentage of positive words and the percentage of negative words. Also, net positive language predicts firms' future performance. Mayew and Venkatachalam (2012a) document that even managers' non-verbal cues convey value-relevant information. They argue that managers' vocal

¹⁴ Our paper therefore stands in contrast to the conclusion offered by Bushee, Jung, and Miller (2011) that managers do not disclose new information in private meetings.

¹⁵ Note that prior studies that examine the effects of Reg FD also tend to focus on the effect on just one type of market participant at a time. The findings of these studies then reinforce each other's conclusions. For example, to document the effectiveness of Reg FD, a set of studies examined changes in financial analyst outputs (e.g., Arya, Glover, Mittendorf, and Narayanamoorthy 2005; Gintchel and Markov 2004; Irani and Karamanou 2003; Mohanram and Sunder 2006) whereas others investigated changes in equity investor behavior (e.g., Ke, Petroni, and Yu 2008; Li, Radhakrishnan, Shin, and Zhang 2011; Sinha and Gadarowski 2010).

dissonance reflects managers' emotional state and that managers' positive and negative emotional states during the question-and-answer portion of earnings conference calls are associated with contemporaneous stock returns.

The literature also documents that managers can strategically manipulate market perception through implicit communication. Davis and Tama-Sweet (2012) document that managers with stronger incentives to report strategically, e.g., managers who habitually meet or beat analysts' forecasts, reduce the use of negative language in earnings press releases relative to the use in the corresponding MD&A. Huang, Teoh, and Zhang (2014) show that the language in earnings press releases is more positive (or negative) when firms have a stronger incentive to bias investor perceptions upward (or downward), e.g., at the time of equity offerings and merger and acquisition (or stock option grants).

Notably, implicit communication in public disclosures can subject corporations and corporate officials to potential liability for securities fraud under Rule 10b-5. Rule 10b-5 is subject to both private enforcement by the SEC and public enforcement through class action litigation. Rogers et al. (2011) and Cazier et al. (2019) show that firms with more positive language in earnings announcements are more likely to experience class action lawsuits when compared to other firms in the same industry. These studies thus document a potential motivation for corporate officials to make optimistic statements in private rather than public communication, to avoid the prospect of 10b-5 litigation.

Because these studies do not have access to private communication between managers and analysts, they cannot evaluate the role of implicit communication in that context. Private meetings present greater potential for the use of implicit communication in that meeting attendees can better observe a corporate official's demeanor, tone, and expression. Reg FD was specifically targeted at private communication between corporate managers and analysts. Interestingly, in its one-year special study evaluating the effectiveness of Reg FD, the SEC reported evidence indicating that issuer use of private meetings had declined substantially (SEC 2001). More recent academic

studies document, however, that the use of such private communication continues to be widespread following the adoption of Reg FD. One recent study, Brown, Call, Clement, and Sharp (2019), reports that 70 percent of firms grant investors private access to corporate officials. Studies also document that managers use those private meetings to convey subtle yet market-valuable information (Solomon and Soltes 2015; Bengtzen 2017; Bushee et al. 2018). Our study documents the importance of the Siebel Systems case in facilitating the use of implicit communications in private meetings.

4. Empirical Analyses

4.1 Research Design

To address the effect on U.S. firms' selective disclosure behavior due to the Siebel Systems decision, we examine changes in the flow of non-public information from managers to analysts, by following an approach that is similar to Gintschel and Markov (2004). Their study examines whether the flow of private information from managers to analysts decreases following the passage of Reg FD by estimating the change in the incremental absolute stock returns around analyst information outputs. As in Gintschel and Markov (2004), we consider the following two-step process:

$$|\text{RETURN}|_{i,t} = \alpha_t + \beta_t \text{ANALY_OUT}_{i,t} + \varepsilon \quad (1)$$

$$\alpha_t = a_1 + a_2 \text{POST_RULING}_t + e \quad (2)$$

$$\beta_t = b_1 + b_2 \text{POST_RULING}_t + e \quad (3)$$

where Equation (1) is a cross-sectional regression. It is run separately for each trading day in our two-year sample period. The dependent variable $|\text{RETURN}|_{i,t}$ is absolute standardized stock returns for firm i on date t . To control for cross-sectional variation in the stock price volatility across different firms, each individual firm's time-series daily stock returns are standardized to a mean of zero and a standard deviation of one over the sample period. $\text{ANALY_OUT}_{i,t}$ equals to one for firm i on date t if at least one analyst earnings forecast or one stock recommendation exists

for the firm around date t . If an analyst information output is announced within two calendar days following the firms' public disclosures such as earnings announcements or management earnings forecasts, then these days are excluded from the definition of $ANALY_OUT_{i,t}$, because it is not possible to determine the incremental effect of each of the events on stock returns (Gintschel and Markov 2004).

To determine the window for measuring the information content of analyst information outputs, Gintschel and Markov (2004) examine stock market reactions on each of -10 to +5 days around analyst information outputs for their two-year sample period around the implementation of Reg FD in 2000. They find that absolute standardized stock returns are significantly positive for each of the -5, -4, -3, -2, -1, 0, and +1 days around analyst information output. Accordingly, they use [-5, +1] days window around each analyst information output to measure the information content of analyst information outputs. We carry out a similar analysis for the two-year sample period around the U.S. federal district court's ruling on *SEC v. Siebel Systems, Inc.* (2005) on September 1, 2005. We find that the absolute standardized stock market reactions are significantly positive for each of the days -1, 0, and +1 around analyst information outputs. Thus, we use [-1, +1] days window around analyst information outputs to examine the change in the information content of analyst information outputs.¹⁶

In Equation (1), α_t captures absolute standardized stock returns for firm-date observations without analyst information outputs. β_t captures the incremental absolute standardized stock returns due to analyst information outputs. We regress 505 daily estimates of α_t and β_t on $POST_RULING$ (Equation (2) and Equation (3), respectively). $POST_RULING$ equals one if a trading day is after the U.S. federal district court's ruling on *SEC v. Siebel Systems, Inc.* (2005) on September 1, 2005, and zero otherwise. Thus, the estimated coefficient on $POST_RULING$ in Equation (2), i.e. a_2 , captures the average change in the absolute standardized stock returns for

¹⁶ The three-day window has been commonly used in the literature (e.g., Francis and Soffer 1997; Lin and McNichols 1998; and Park and Stice 2000). In any case, we show that our results are robust to using the [-5, +1] window in Table 7.

days without analyst information outputs. The estimated intercept in Equation (3), i.e. b_1 , captures the incremental absolute standardized stock returns due to analyst information outputs in the one-year period before the court's ruling. The estimated coefficient on POST_RULING in Equation (3), i.e. b_2 , captures the average change in the incremental absolute standardized stock returns due to analyst information outputs following the court's ruling. If the flow of private information from managers to analysts increases after the court's ruling, then we expect the estimated coefficient on POST_RULING in Equation (3) to be positive.¹⁷

4.2 Data and Sample

Table 1 reports the sample selection procedure and descriptive statistics. The sample includes stocks issued by U.S. firms with analyst earnings forecasts and stock recommendations available from September 1, 2004, to August 31, 2006, in International Brokers' Estimate System (IBES). Following Gintschel and Markov (2004), we require each stock to have at least one analyst earnings forecast and at least one stock recommendation in each of the one-year periods before and after the court's ruling on September 1, 2005. We also require each stock to have a complete series of stock returns over the sample period, which includes 505 trading days, available in CRSP. We exclude stocks with missing data in Compustat for net sales, total assets, and market capitalization, for the fiscal year 2003. Our final sample contains 3,172 stocks and 1,601,860 (= 3,172 stocks x 505 trading days) daily stock returns observations. The mean (median) of absolute standardized stock returns, |RETURN|, is 0.707 (0.525). The mean value of ANALY_OUT is 0.208 suggesting that 20.8% of the 1,601,860 firm-date observations in our final sample have at least one analyst earnings forecast or one stock recommendation within [-1, +1] days.

4.3 Main Results

Table 2 reports results for the test of changes in the information content of analyst outputs after the court's ruling. Panel A reports a change around the court's ruling in the absolute

¹⁷ We repeat the analysis by combining Equation (1) and (2) into a single model using an interaction term and the results are similar.

standardized stock returns for firm-date observations without analyst information outputs. The estimated coefficient on POST_RULING is 0.018 (t-statistic = 1.37), indicating an insignificant change. Panel B reports a change due to the court's ruling in the incremental absolute standardized stock returns for firm-date observations with analyst information outputs within [-1, +1] days. The estimated intercept is 0.053 (t-statistic = 12.53) suggesting that the absolute standardized stock returns are significantly greater on days with than without analyst information outputs in the period prior to the court ruling. The estimated coefficient on POST_RULING is 0.023 (t-statistic = 3.80). It suggests that the stock market reaction to analyst information outputs increases to 0.076 (= 0.053 + 0.023) absolute standardized stock returns following the court ruling. These results suggest that the information content of analyst information outputs increased significantly after the court's ruling on *SEC v. Siebel Systems, Inc.* (2005). This finding is consistent with managers significantly increasing selective disclosure to analysts after the court's ruling. This change in managers' disclosure behavior implies that the ruling revised market participants' beliefs about the difficulty the SEC would face in the future in enforcing the corporate disclosure regulation on private communication.

4.4 Effect of Analyst/Investor Days

To investigate the extent to which we can attribute the result in Table 2 to selective disclosure, we examine change in the information content of analyst information outputs after the court ruling, conditional on whether the outputs followed Analyst/Investor Days (AI Days). AI Days, which typically range from half a day to one-and-a-half days, offer unique opportunities for managers and analysts/investors to interact privately at various informal events, such as lunches, dinners, and cocktail hours, thereby facilitate the transfer of non-public information from managers to analysts (see, e.g., Kirk and Markov 2016). If our findings in Table 2 are indeed driven by increased leakage of non-public information through private channels following the court's

decision on *SEC v. Siebel Systems, Inc.* (2005), then we would expect the findings to be more pronounced for analyst information outputs for firms that recently hosted AI Days.¹⁸

We retrieve all corporate events between the period 2004 and 2006 from the Bloomberg database and filter the events using the following search terms in event descriptions: “analyst* day*”, “investor* day*”, “analyst* meet*”, and “investor* meet*”. We use the corporate name and ticker symbol in the Bloomberg and Compustat to match the AI Day observations to our main sample. The merged sample includes 807 AI Days hosted by 544 unique firms over the two-year sample period around the court’s ruling. We estimate Equation (1) separately for each trading day in our two-year sample period, as in Table 2, except that ANALY_OUT is an indicator for an analyst output that is not issued within 30 calendar days after the corresponding firm hosts AI Day. We obtain 505 daily estimates of β_t , which represents the incremental absolute standardized stock returns due to analyst information outputs that do not follow AI Days. We estimate Equation (1) again for each trading day in our two-year sample period, but now ANALY_OUT is an indicator for an analyst output that is issued within 30 calendar days after the corresponding firm hosts AI Day. If the number of firm-date observations on a given calendar day is less than 20, we do not estimate Equation (1) for that day. We obtain 273 daily estimates of β_t , representing the incremental absolute standardized stock returns due to analyst information outputs that follow AI Days.¹⁹

Using a total of 778 estimates from Equation (1) as dependent variables, we estimate the following Equations :

$$\alpha_t = a_1 + a_2 \text{POST_RULING}_t + a_3 \text{POST_RULING}_t \times \text{AI DAY}_t + a_4 \text{AI DAY}_t + e \quad (4)$$

$$\beta_t = b_1 + b_2 \text{POST_RULING}_t + b_3 \text{POST_RULING}_t \times \text{AI DAY}_t + b_4 \text{AI DAY}_t + e \quad (5)$$

¹⁸ Given the high cost of AI Days, Kirk and Markov (2006) report that on average firms host 2.2 AI Days over the ten year sample period when restricting the sample to firms that hosted at least one AI Day during the sample period.

¹⁹ Our results are similar when we extend the 30-day window following AI Days to 90 days, and also when we require 30 observations for the Equation (1) estimation.

where AI_DAY_t is an indicator variable that equals one if the estimates from Equation (1), i.e. α_t and β_t , are from the AI Day sample, and zero otherwise. In Panel A, as in Table 2, we do not find a significant change around the court's ruling in the absolute standardized stock returns for firms on days without analyst information outputs. In Panel B, the estimated coefficient on $POST_RULING \times AI_DAY$ is significantly positive, 0.050 (t-statistic = 2.00). This result suggests that the increase in the incremental absolute standardized stock returns due to analyst information outputs following the court's ruling, documented in Table 2, is more pronounced for analyst outputs issued for firms that recently hosted AI Days. These results further support the notion that the increase in the information content of analyst information outputs after the court's ruling is due to managers' selective disclosure to analysts in private meetings.

4.5 ADR Firms as Controls

One concern is that our results may be driven by macroeconomic events or systemic changes in disclosures practices unrelated to the Siebel decision. To test for this possibility, in Table 4, we present results from estimating Equations (1)-(3) after restricting our sample to ADR firms. ADR firms are not subject to Reg FD and, as a result, disclosure practices in such firms should be unaffected by the Siebel case. If our findings in Table 2 are driven by concurrent macroeconomic events that affect all firms traded in the U.S. stock market, we should also observe a significant change in the informativeness of analyst outputs for the ADR firms (Francis et al. 2006). In Panel A, the estimated coefficient on $POST_RULING$ is -0.003 (t-statistic = -0.23), indicating the change in stock market reactions to analyst information outputs around the court's ruling is not significant. This finding mitigates the concern that our findings in Table 2 and 3 are due to other contemporaneous macroeconomic events around the court's ruling.

In Panel B, we implement a difference-in-differences (DiD) research design to further corroborate our conclusions. For the DiD approach, we estimate Equation (1) separately for U.S. firms (1,496,315 firm-date observations for 2,963 unique firms) and ADR firms (105,545 firm-date observations for 209 unique firms). After merging 505 daily estimates of the coefficients in

Equation (1) for the U.S. firms with the corresponding 505 estimates for the ADR firm, we estimate the following Equation:

$$\beta_t = b_1 + b_2 \text{POST_RULING}_t + b_3 \text{TREAT}_t + b_4 \text{POST_RULING}_t \times \text{TREAT}_t + e \quad (6)$$

where TREAT equals one for Equation (1) coefficients for the U.S. firms, and zero otherwise. The coefficient on $\text{POST_RULING}_t \times \text{TREAT}_t$ in Equation (6), i.e. b_4 , captures the change in the incremental absolute standardized stock returns in response to analyst information outputs following the court's ruling for U.S. firms beyond the equivalent change for ADR firms. The coefficient on $\text{POST_RULING}_t \times \text{TREAT}_t$ is positive and significant, 0.028 (t-statistic = 2.08). This result suggests that increase in the informativeness of analyst outputs after the court ruling is significantly greater for U.S. firms than for ADR firms. In sum, our findings suggest that our results are unlikely to be explained by other macroeconomic events concurrent to the court ruling.

4.6 Pseudo-Event Tests

To mitigate the concern that our results may be driven by a time trend, we perform a pseudo-event test. We divide our two-year sample period into three partially-overlapping one-year sub-periods: i) the first sub-period is from September 1, 2004 to August 31, 2005, and is entirely before the court's ruling; ii) the second sub-period straddles the court's ruling, and is from March 1, 2005 to February 28, 2006; and iii) the third sub-period is from September 1, 2005 to August 31, 2006, and is entirely after the court's ruling.

Panel A1 in Table 5, column 2, reports results for the second sub-period, using the actual date of the court's ruling, i.e. September 1, 2005, as the event date. We find results that are similar to that of the full sample. In Panel A, the estimated coefficient on POST_RULING is 0.001 (t-statistic = 0.06), indicating an insignificant change in the absolute standardized stock returns for firm-date observations without analyst information outputs. In Panel B, the estimated coefficient on POST_RULING is 0.024 (t-statistic = 2.86), suggesting a significant increase in the information

content of analyst information outputs from the six-month period before to the six-month period after the court's ruling. Columns 1 and 3 of Table 3 report results for the first and third sub-periods, using March 1, 2005, and March 1, 2006, as pseudo-event dates, respectively. The results show an insignificant change in the information content of analyst information outputs from the period before to the period after the pseudo-event dates. These results suggest that our main findings are unlikely to be driven by a time trend.

4.7 Shorter Sample Period

Our analyses so far are based on a two-year sample period, comprising of one year before and one year after the court's ruling, and thus it is possible that unspecified macro events during that two-year sample period may be responsible for our results. To address this concern, we examine a shorter sample period, specifically, two months around the court's ruling. Table 5, Panel A, reports a change after the court's ruling in the absolute standardized stock returns for observations without analyst information outputs. The estimated coefficient on POST_RULING is 0.006 (t-statistic = 0.019), indicating an insignificant change in the absolute standardized stock returns for firm-date observations without analyst information outputs. Panel B reports a change in the incremental absolute standardized stock returns for firm-date observations with analyst information outputs within [-1, +1] days. The estimated coefficient on POST_RULING is 0.080 (t-statistic = 4.37), suggesting that after the court's ruling, there was a significant increase in the absolute standardized stock returns due to analyst information outputs. These results mitigate the concern that some unspecified macro event²⁰ is responsible for the observed change in the information content of analyst output after the court's ruling.²¹

²⁰ The New York Times provides a news archive that covers the two-month period around the court's ruling: https://query.nytimes.com/search/sitesearch/#/*from20050801to20050930/allresults/90/allauthors/oldest/Business/. We searched business news articles published in the New York Times during the two-month period around the court's ruling. We reviewed 1,677 articles, one of which is Labaton (2005), which features the court's ruling. We did not find any other event that can alternatively explain the change in the information content of analyst information outputs.

²¹ We note that the information environment for research analysts was affected by the Research Analyst scandal and the subsequent Global Research Settlement (Fisch 2007). The scandal was initially revealed to the public through a press release by the NY State Attorney General in April 2002. The Global Research Settlement received court approval on Oct. 31, 2003. See <https://www.sec.gov/litigation/litreleases/lr18438.htm>. Because the Settlement predates the start

4.8 Favorable Analysts

Gintschel and Markov (2004) argue that managers reward financial analysts who hold a more favorable view of their firms by granting them more access to private information. If the court's ruling on *SEC v. Siebel Systems, Inc.* (2005) made it more difficult for the SEC to enforce Reg FD on managers' selective disclosure through private communication, then more favorable analysts should benefit more from the increase in selective disclosure following the court's ruling. We examine whether, after the court's ruling, the increase in the information content of analyst information outputs is more pronounced for analysts with a more favorable view of the firm. Following Gintschel and Markov (2004), for this test, we use the following regression models:

$$|\text{RETURN}|_{i,t} = \alpha_t + \beta_t \text{ANALY_OUT}_{i,t} + \gamma_t \text{FAVORABLE}_{i,t} \times \text{ANALY_OUT}_{i,t} + \varepsilon \quad (7)$$

$$\alpha_t = a_1 + a_2 \text{POST_RULING}_t + e \quad (8)$$

$$\beta_t = b_1 + b_2 \text{POST_RULING}_t + e \quad (9)$$

$$\gamma_t = c_1 + c_2 \text{POST_RULING}_t + e \quad (10)$$

where $\text{FAVORABLE}_{i,t}$ equals one for firm i on date t if at least one earnings forecast or one stock recommendation issued by an analyst affiliated with a favorable brokerage firm, falls within $[-1, +1]$ days around date t . A brokerage firm is defined as favorable on a firm-date if the average of analyst earnings forecasts or stock recommendations issued by the brokerage firm during the past six months is above the median of all brokerage firms that follow the firm.²² Equation (4) is estimated separately for each of the 505 trading days in our sample period. The coefficient β_t captures the incremental absolute stock returns due to analyst information outputs, and the coefficient γ_t captures the additional effect for analysts belonging to a favorable brokerage firm. In Equations (5), (6), and (7), 505 estimates of α_t , β_t , and γ_t from Equation (4) are regressed on the

of our sample period, September 1, 2004, to August 31, 2006, by almost a year, the effect that we observe is more plausibly attributed to the Siebel decision, which occurred in the middle of our sample period.

²² Note that we do not include FAVORABLE in Equation (4) because it is a complete subset of ANALY_OUT . Also, for the same reason, we cannot estimate Equation (1) separately for favorable analysts as we do for the AI Day and ADR samples.

variable POST_RULING, which equals one if the trading day is after the court's ruling on September 1, 2005, and zero otherwise. The coefficient on POST_RULING in Equation (5) captures the change following the court's ruling in the absolute standardized stock returns for firm-dates without analyst information outputs. The coefficient on POST_RULING in Equation (6) captures the change following the court's ruling in the incremental absolute standardized stock returns due to analyst information outputs issued by non-favorable analysts. The coefficient on POST_RULING in Equation (7) captures the change following the court's ruling in the additional incremental absolute standardized stock returns due to analyst information outputs issued by favorable analysts as compared other analysts.

In Table 7 Panel A, the estimated coefficient on POST_RULING is 0.018 (t-statistic = 1.37), indicating an insignificant change after the court's ruling in the absolute standardized stock returns for firm-date observations without analyst information outputs. Panel B reports a change after the court's ruling in the incremental absolute standardized stock returns due to analyst information outputs issued by non-favorable analysts. The coefficient on POST_RULING is 0.018 (t-statistic = 3.07), suggesting a significant increase in the information of analyst outputs issued by non-favorable analysts. Panel C reports the additional incremental absolute standardized stock returns due to analyst information outputs issued by favorable analysts as compared non-favorable analysts. Specifically, the estimated intercept c_1 , is 0.061 (t-statistic = 12.76), suggesting that the information content of analyst information outputs is greater for analysts affiliated with favorable brokerage firms than for analysts affiliated with non-favorable brokerage firms. This result is consistent with the evidence in the literature that managers discriminate among analysts by granting more private information access to analysts who hold a more favorable view of their firm (e.g., Gintschel and Markov 2004; Chen and Matsumoto 2006). Further, the estimated coefficient on POST_RULING is 0.012 (t-statistic = 1.77), suggesting that after the court's ruling the increase in information content of analyst information outputs is greater for analysts from more favorable brokerage firms than for analysts from other brokerage firms. This finding suggests that more

favorable analysts are bigger beneficiaries of the increase in managers' selective disclosure behavior after the court's ruling.²³ This cross-sectional evidence helps further identify that after the court's ruling, the increase in information content of analyst information outputs is due to an increase in selective disclosure from managers to analysts.

4.9 Analyst Workload Per Firm

The preceding analysis uses the Gintchel and Markov (2004) methodology, which is based on the notion that the increase in managers' selective disclosure through private communication to analysts would make analysts outputs more informative. We examine the sensitivity of our resulting conclusions using an alternative methodology. Mohanram and Sunder (2006) argue that when access to firms' private information reduces, analysts have to spend greater effort on gathering and discovering information, and consequently analysts have to significantly decrease their coverage. To show the effectiveness of Reg FD in curbing selective disclosure by firms to analysts, Mohanram and Sunder (2006) show that the average number of firms covered by an analyst and the average number of analysts following a firm decreased significantly after Reg FD. We follow Mohanram and Sunder's approach, and to provide evidence for the change in selective disclosure behavior of firms due to the court's ruling on *SEC v. Siebel Systems, Inc.* (2005), we examine its effect on analysts' workload, measured as the average number of firms covered by an analyst and the average number of analysts following a firm.

In Panel A of Table 9, we provide the sample selection procedure for this analysis. We restrict our sample to analysts that follow at least one U.S. firm in each of the one-year periods before and after the court's ruling on September 1, 2005 (Mohanram and Sunder 2006). Our final sample includes 3,434 analysts. Panel B shows that following the court's ruling, the average number of firms covered by an analyst increases by 0.84 (t-statistic = 4.53), from 10.30 firms to 11.14 firms, suggesting that analysts' workload per firm decreased after the court's ruling, presumably due to an increase in selective disclosure to analysts by managers. In Panel C, we provide the sample

²³ This distinction becomes more meaningful in light of the Global Research Settlement, which led to more balanced recommendations (Fisch, 2007).

selection procedure for the sample examining a change in the average number of analysts following a firm, before versus after the court's ruling. For this analysis, we restrict our sample to U.S. firms that are followed by at least one analyst in each of the one-year periods before and after the court's ruling. Our final sample includes 4,588 firms. Panel D shows that the average number of analysts following a firm increases by 0.34 (t-statistic = 2.03), from 8.49 analysts to 8.83 analysts. These results further suggest that analysts' workload per firm decreased following the court's ruling, presumably due to an increase in selective disclosure from managers to analysts. Note that the effects reported in Table 7 are of similar order of magnitude to that observed by Mohanram and Sunder (2006) underscoring the economic significance of the effect of the court's ruling on managers' selective disclosure behavior.

5. Securities Lawyer Survey Results

An inherent difficulty in examining private communication is that those disclosures between managers and investors/analysts are unobservable. As a result, we can neither document the exact information communicated by managers to investors in private meetings nor distinguish between their use of explicit and implicit communications. To explore the precise mechanism by which information is likely to be communicated, we survey law firm partners with relevant expertise in securities law, generally, and Reg FD, specifically. We ask these experts about the reasons that they perceive to be driving the effect we find in section 4 of this paper. These securities lawyers are uniquely positioned to provide this perspective for two reasons. First, securities lawyers directly follow case decisions such as the Siebel case and adjust their advice to clients based on case analysis. Second, securities lawyers inform and advise managers about the impact of such cases on compliance standards.

Our decision to survey securities lawyers rather than investor relations professionals or in-house counsel was informed by the results of several preliminary interviews of both. We found that although IR professionals are well versed in current disclosure practices, they are less

informed about specific court cases and how current disclosure practices are developed by case law. Additionally, in-house general counsels are limited by their experiences with just one company. On the other hand, securities law experts at law firms routinely advise many different client firms and firm executives. By examining their experiences, we are able to draw upon a broader range of data.

These observations are supported by our interviews, as one of our interviewees (from the same population of lawyers as in our survey) noted: *“I am a securities lawyer and I regularly advise public company issuers with their ongoing reporting obligations and with their ongoing corporate governance ... Regulation FD issues come up a lot with all of our clients. I have done training on Regulation FD for all of our public company clients.”* Another noted that the *“day-to-day counseling and advising that corporate lawyers give their public company clients”* positions such lawyers to provide especially informative data on the effect of *Siebel Systems* because such an effect likely impacted managers *“indirectly in the sense that I think their lawyers read it ... and the lawyers give their clients the do’s and don’ts.”*

5.1 Participants and Survey Distribution

We compile a hand-collected database of contact information for securities lawyers with relevant expertise by searching the internet for law firm memos written about Reg FD and recording the names and email addresses of the memos’ authors. The purpose for which these memos is created is to market the relevant lawyers’ expertise, to counsel existing clients, and to attract potential clients. Our final pool of potential survey respondents totals 307 lawyers from 74 different law firms.

To distribute the survey, we email out a Qualtrics survey link to potential participants followed by a reminder email one week later. We open the survey on 6/22/2020 and close it on 7/20/2020. We receive a total of 76 completed responses for a response rate of 24.8 percent, which is higher than similar surveys of experienced professionals conducted via emails such as the survey of investor relations officers (IROs) by Brown et al. (2019) with a response rate of 14.5 percent

and the survey of chief financial officers (CFOs) by Dichev, Graham, Harvey, and Rajgopal (2013) with a response rate of 5.4 percent.

Of the 76 completed responses, 16 participants fail one or both initial screening questions and therefore complete the survey without answering any additional questions. As shown in Table 9 Panels A and B, 75 percent of participants identify as a law firm partner and 82 percent report more than 20 years of experience.

5.2 Survey Questions

The survey consists of two screening questions (referenced previously) followed by the main survey question, which has five parts, and then two questions about participants' experience practicing law, which are displayed in Table 10 Panels A and B.²⁴ The two screening questions allow the lawyers to self-report their (1) Reg FD-related experience and (2) familiarity with the *SEC v. Siebel Systems, Inc.* case. Both are yes-no questions and a 'no' response to either question results in the termination of the survey without the opportunity to respond to any additional questions.

To ensure clear understanding, the survey next differentiates between two sets of terms: (a) implicit and explicit communication and (b) public and private disclosure settings (see Figure 3 Panel A). Then, after explaining the existence of the effect we observe in our archival analyses, the survey asks participants to rate the likelihood of five potential explanations (which are shown in random order) on a 5-pt scale with scale points ranging from 0 = 'Not at all likely' to 4 = 'Extremely likely.' Figure 3 Panel B displays this main survey question.

The five explanations that participants rate in the main survey question are different possible explanations for the results we observe in our archival analyses in sections 3 and 4 of this paper. The effect could be occurring because managers engaged in more explicit *or* more implicit communication post-Siebel and managers might be doing this intentionally *or* unintentionally. Or,

²⁴ We received and incorporated feedback from three law firm partners before administering the survey.

the results could be driven by another reason entirely. Each of these possible explanations is shown in Figure 3 Panel B.

Though our main interest is to distinguish between company officials' increased use after the court ruling of explicit versus implicit communications in private meeting, we thought of including in the list of possible explanations whether managers change in behavior is intentional or unintentional, after conducting interviews with three securities lawyers who have expertise in Reg FD. The lawyers noted that managers may not intend to violate Reg FD in private meetings, but that, after the Siebel decision, they may have become less concerned about the possibility of communicating non-public information through implicit communication, since the court ruled that SEC's approach of monitoring implicit communication places an "unreasonable burden" on managers. One lawyer noted: *"before Siebel there was such a fear of enforcement that there was a chilling effect and Siebel removed that chilling effect ... The takeaway from Siebel is that people felt a little more comfortable."* Another spoke about personal experience advising clients as a result of the *Siebel Systems* case: *"In light of the Siebel case, I tell them to you know, kind of relax. Because I don't want them to feel like communications are chilled. That was the whole point of the case is that communication should not be chilled. You should be allowed to talk without fear that, you know, people are going to take all kinds of things out of the tone of your voice. I give people comfort on that."*

5.3 Survey Results

Table 10 Panel C displays the results to the main survey question. Survey participants' responses indicate the most likely explanation for the effect is that managers unintentionally increased implicit communication in private meetings with analysts after the *SEC v. Siebel Systems, Inc.* (2005) court case ruling. This explanation is rated by the lawyers as significantly more likely than any other explanation, including the catchall possibility of "another

explanation.”²⁵ Further, the lawyers rate both types (unintentional and intentional) of increases in implicit communication as significantly more likely than increases in either type (unintentional or intentional) of explicit communication. These results, from highly experienced professionals uniquely qualified to weigh in on the subject, support the conclusion that managers’ increases in implicit communication are most likely responsible for the increases in information content of analyst reports post-Siebel.²⁶

The survey results further suggest that the lawyers consider an increase in unintentional implicit communication to be a significantly more likely explanation for the effect than an increase in intentional implicit communication. This finding is consistent with the notion that, after the Siebel decision, managers may have become more relaxed and less concerned about unknowingly communicating non-public information through implicit communication in private meetings.

Our survey results also suggest that the lawyers did not rule out an increase in intentional implicit communication as a possible explanation for the increase in information content of analyst reports post-Siebel. This finding is consistent with the notion that the court ruling may have also signaled to the market participants that circumstantial evidence such as a significant stock price reaction or trading activity by select investors following a private meeting may not be sufficient proof that management intentionally disclosed material non-public information. Thus, the ruling could also have increased managers’ incentives to take chances and intentionally make selective disclosures through their tone or body language, if they perceive potential benefits from doing so, such as better relations with important analysts and less price volatility.

²⁵ The averages of explanation likelihood shown in Table 10 Panel C indicates that the lawyers were generally reluctant to rate any explanation, including “another explanation,” very high. Thus, relative statistical differences, rather than absolute averages, are especially informative.

²⁶ This interpretation is also consistent with the contemporaneous advice that securities experts were conveying to their clients. For example, one disclosure lawyer wrote: “The court’s decision seems to say that issuers who speak privately to analysts and other stock market insiders should not be penalized for inconsistencies in tone and mood, so long as the hard facts imparted to the private audience do not depart from the hard facts imparted to the public audience.” (Ericson 2005).

6. Conclusion

This study examines the effectiveness of enforcing corporate disclosure regulation in policing private information leakage from managers to analysts. We posit that private disclosures present particular challenges when information is communicated in an implicit manner. In a unique federal court case, *SEC v. Siebel Systems, Inc.* (2005), the court took a literal approach in determining when a corporate official engaged in selective disclosure and thereby violated Reg FD. The court focused on a close reading of the text of the official's statements rather than the official's tone and demeanor to conclude that his private disclosures were equivalent in substance to the information publicly disclosed by the company. We posit that the Siebel decision resulted in an increase in private information leakage from managers to analysts and that this effect occurred primarily because the case operated as a signal that Reg FD could not be enforced against corporate officials who privately communicated information through positive or negative language, tone, and non-verbal cues. In other words, the Siebel decision opened the door for officials to convey information selectively through implicit communication. Using a variety of tests, we provide evidence consistent with conclusion that the court's ruling led to a statistically and economically significant increase in managers' selective disclosure to financial analysts. Our results from the survey of lawyers suggest that the most likely explanation for the effect of the Siebel decision is increase in managers' implicit communication. By documenting the effect of the Siebel decision on the behavior of market participants and on the effectiveness of the disclosure regulation, our study sheds light on the challenges associated with regulatory enforcement of a disclosure regulation, when information is conveyed in an implicit manner.

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Appendix: Variable definitions

Variable	Definition
RETURN	Absolute standardized stock returns. Each individual firm's time-series daily stock returns are standardized to a mean of zero and a standard deviation of one over the sample period to control for cross-sectional variation in the stock price volatility across different firms (Gintchel and Markov, 2004).
ANALY_OUT	Indicator variable that equals one if a trading day is within [-1, +1] days around at least one analyst earnings forecast or one stock recommendation, and zero otherwise.
POST_RULING	Indicator variable that equals one if a trading day is after the U.S. federal district court's ruling on <i>SEC v. Siebel Systems, Inc</i> (2005) on September 1, 2005, and zero otherwise.
AIDAY	Indicator variable that equals one if the intercept and coefficient in Equation (1) are estimated using AI Day sample, and zero otherwise. The AI Day sample includes firm-date observations for firms that hosted an AI Day event within the past 30 calendar days.
TREAT	Indicator variable that equals one if the intercept and coefficient in Equation (1) are estimated using the treatment sample, and zero otherwise. The treatment sample includes firm-date observations for U.S. firms that are subject to Reg FD. The control sample includes firm-date observations for ADR firms that are exempted from Reg FD.
FAVORABLE	Indicator variable that equals one if a trading day is within [-1, +1] days around at least one analyst earnings forecast or one stock recommendation announced by one or more favorable analysts, and zero otherwise.

Figure 1

Siebel's stock price movements around private meetings on April 30

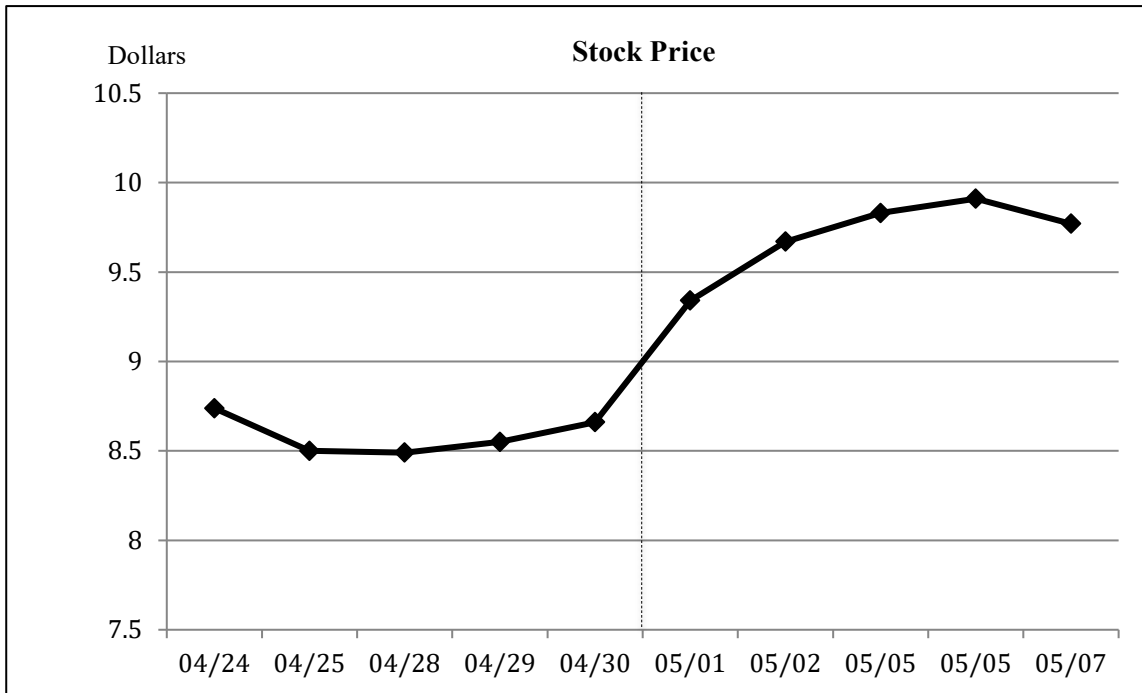


Figure 2

Siebel's trading volume movements around private meetings on April 30

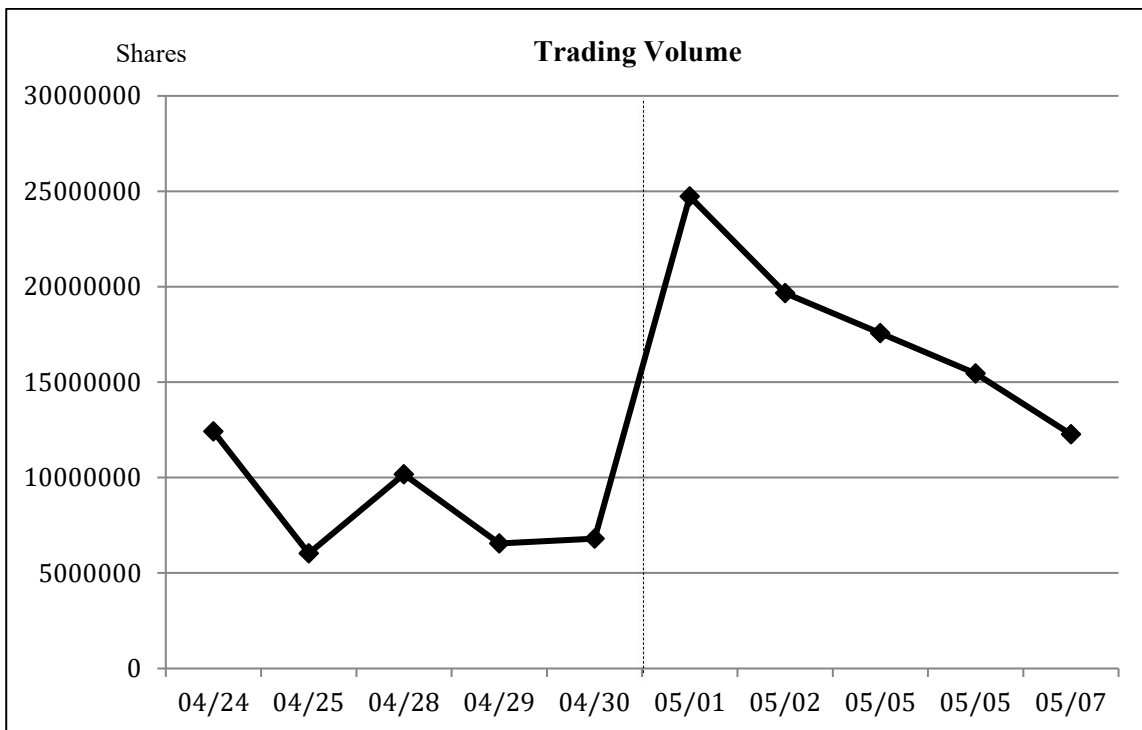


Figure 3

Panel A: Survey Introduction

Survey Introduction

In this survey, we ask about the 2005 Siebel Systems case. You indicated that you were at least “generally familiar,” but feel free to refresh your memory by referring to the [case decision](#).

Additionally, we distinguish between two types of disclosure: **private meetings** and **public statements**.

Private meetings occur between company officials and investors/analysts and include in-person meetings, phone calls and any other communications that are not simultaneously disseminated to the general public via a website, press release, or SEC filing.

Information disclosed by company officials in **private meetings** can differ from a company’s **public statements** in several ways. The information disclosed in **private meetings** might:

1. Contain different facts than those contained in the company’s **public statements**.
2. Not contain facts different than those contained in the company’s **public statements**, but the same facts are delivered
 - o using different words or characterizations,
 - o using a different tone – more upbeat, etc., or
 - o using different body language, facial expressions, etc.

We refer to the first type (1) as **explicit communication** of non-public information and the second type (2) as **implicit communication** of non-public information.

Figure 3 (continued)

Panel B: Main Survey Question

Survey Question

Recent research finds a significant change in the capital market information environment after the 2005 Siebel Systems case decision. Specifically, sell-side analyst earnings forecasts and buy/sell recommendations issued just after the decision are significantly more informative to the market (i.e., induce a greater stock price reaction) compared to sell-side analyst outputs issued just before the decision. The study shows the effect exists in the one-year *and* one-month periods immediately before and after the decision, indicating the effect is likely not due to something other than the decision.

Below, shown in random order, are several potential explanations for these findings. Keeping in mind that these explanations are not mutually exclusive, please rate the likelihood that each contributed to these findings. (Please feel free to refer to definitions of *implicit* and *explicit* communication and *private meetings* using the back button on the survey below.)

Not at all likely **Somewhat likely** **Moderately likely** **Very likely** **Extremely likely**

After the Siebel Systems decision, corporate officials *intentionally* increased **explicit communication** of non-public information during private meetings with analysts.

After the Siebel Systems decision, corporate officials *intentionally* increased **implicit communication** of non-public information during private meetings with analysts.

After the Siebel Systems decision, corporate officials *unintentionally* increased **implicit communication** of non-public information during private meetings with analysts.

After the Siebel Systems decision, corporate officials *unintentionally* increased **explicit communication** of non-public information during private meetings with analysts.

Another explanation (select "Not at all likely" if you do not have another explanation):

Table 1

Sample selection and summary statistics

Panel A: Sample selection

Filter	Number of Obs.	Data Source
U.S. stocks with at least one stock recommendation or analyst earnings forecast from 9/1/2004 to 8/31/2005 and from 9/1/2005 to 8/31/2006, the one-year period before and the one-year period after the court's ruling on 9/1/2005, respectively.	3,910	IBES
Stocks with complete stock return series during the sample period from 9/1/2004 to 8/31/2006 (505 trading days).	3,358	CRSP
Stocks with non-missing and non-negative sales, assets, and market capitalization at the beginning of the fiscal year 2004.	3,172	Compustat
The final sample includes 1,601,860 observations: 3,172 stocks x 505 trading days		

Panel B: Summary statistics for full sample

	N	Mean	25 th percentile	Median	75 th percentile	St. Dev.
RETURN	1,601,860	0.707	0.232	0.525	0.968	0.706
ANALY_OUT	1,601,860	0.208	0.000	0.000	0.000	0.406
POST_RULING	505	0.499	0.000	0.000	1.000	0.500

Panel C: Summary statistics for U.S. firm and ADR firm subsamples

	U.S. Firms			ADR Firms		
	N	Mean	St. Dev.	N	Mean	St. Dev.
RETURN	1,496,315	0.704	0.708	105,545	0.740	0.670
ANALY_OUT	1,496,315	0.209	0.407	105,545	0.193	0.394
POST_RULING	505	0.499	0.500	505	0.499	0.500

Panel A reports the sample selection procedure. The sample period is from September 1, 2004, to August 31, 2006, the two-year period around the U.S. federal district court's ruling on *SEC v. Siebel Systems, Inc* (2005) on September 1, 2005. Panel B reports summary statistics. Variable definitions are in the Appendix.

Table 2

Effect of the court's ruling on the information content of analyst information outputs

$$|\text{RETURN}|_{i,t} = \alpha_t + \beta_t \text{ANALY_OUT}_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$\alpha_t = a_1 + a_2 \text{POST_RULING}_t + e \quad (2)$$

$$\beta_t = b_1 + b_2 \text{POST_RULING}_t + e \quad (3)$$

Panel A: Absolute returns on days without analyst information outputs

Dependent Variable: α_t	Coefficient	t-statistic
a_1 : Before the court's ruling	0.684***	73.17
a_2 : Change following the court's ruling	0.018	1.37
Adj-R ²	0.0017	
Number of observations	505	

Panel B: Incremental absolute returns due to analyst information outputs

Dependent Variable: β_t	Coefficient	t-statistic
b_1 : Before the court's ruling	0.053***	12.53
b_2 : Change following the court's ruling	0.023***	3.80
Adj-R ²	0.0260	
Number of Observations	505	

This table reports changes in the information content of analyst information outputs following the U.S. federal district court's ruling on *SEC v. Siebel Systems, Inc.* (2005) on September 1, 2005. In Equation (1), the dependent variable $|\text{RETURN}|_{i,t}$ is absolute standardized stock returns for firm i on date t . To control for cross-sectional variation in the stock price volatility across different firms, each individual firm's time-series daily stock returns are standardized to a mean of zero and a standard deviation of one over the sample period. ANALY_OUT is an indicator variable that equals one if a trading day is within $[-1,+1]$ days of at least one analyst earnings forecast or one stock recommendation, and zero otherwise. The estimated daily intercepts and coefficients from Equation (1) are regressed on the indicator variable POST_RULING that equals one if a trading day is after the U.S. federal district court's ruling on 9/1/2005, and zero otherwise. The coefficient on POST_RULING in Equation (2), i.e. a_2 , captures the change after the court's ruling in absolute standardized stock returns for days without analyst information outputs. The coefficient on POST_RULING in Equation (3), i.e. b_2 , captures the change after the court's ruling in the information content of analyst information outputs. The t-statistics are based on heteroscedasticity-robust standard errors. ***, ** and * indicate statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 3

Analyst Outputs Following AI Days

$$|\text{RETURN}|_{i,t} = \alpha_t + \beta_t \text{ANALY_OUT}_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$\alpha_t = a_1 + a_2 \text{POST_RULING}_t + a_3 \text{POST_RULING}_t \times \text{AI DAY}_t + a_4 \text{AI DAY}_t + e \quad (4)$$

$$\beta_t = b_1 + b_2 \text{POST_RULING}_t + b_3 \text{POST_RULING}_t \times \text{AI DAY}_t + b_4 \text{AI DAY}_t + e \quad (5)$$

Panel A: Absolute returns on days without analyst information outputs

Dependent Variable: α_t	Coefficient	t-statistic
a ₁ : Before the court's ruling	0.685***	63.71
a ₂ : Change following the court's ruling	0.018	1.18
a ₃ : Change following the court's ruling x AI Day	-0.002	-0.07
a ₄ : AI Day	-0.023	-1.30
Adj-R ²		0.0035
Number of observations		778

Panel B: Incremental absolute returns due to analyst information outputs

Dependent Variable: β_t	Coefficient	t-statistic
b ₁ : Before the court's ruling	0.053***	5.08
b ₂ : Change following the court's ruling	0.022	1.49
b ₃ : Change following the court's ruling x AI Day	0.050**	2.00
b ₄ : AI Day	-0.025	-1.43
Adj-R ²		0.0153
Number of Observations		778

This the effect of AI Days on changes in the information content of analyst information outputs following the U.S. federal district court's ruling on *SEC v. Siebel Systems, Inc.* (2005) on September 1, 2005. In Equation (1), the dependent variable $|\text{RETURN}|_{i,t}$ is absolute standardized stock returns for firm i on date t . To control for cross-sectional variation in the stock price volatility across different firms, each individual firm's time-series daily stock returns are standardized to a mean of zero and a standard deviation of one over the sample period. We estimate Equation (1) separately for each trading day, as in Table 2, except that ANALY_OUT is an indicator for an analyst output that is not issued within 30 calendar days after the corresponding firm hosts AI Day. We obtain 505 daily estimates of β_t , which represents the incremental absolute standardized stock returns due to analyst information outputs that do not follow AI Days. We estimate Equation (1) again for each trading day but now ANALY_OUT is an indicator for an analyst output that is issued within 30 calendar days after the corresponding firm hosts AI Day. If the number firm-date observations on a given day is less than 20, we do not estimate Equation (1) for that day. We obtain 273 daily estimates of β_t , representing the incremental absolute standardized stock returns due to analyst information outputs that follow AI Days. Using the total of 778 estimates from Equation (1) as dependent variables, we estimate the following Equations (4) and (5). The t-statistics are based on heteroscedasticity-robust standard errors. ***, ** and * indicate statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 4

Using ADR firms as a control group

$$|\text{RETURN}|_{i,t} = \alpha_t + \beta_t \text{ANALY_OUT}_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$\beta_t = b_1 + b_2 \text{POST_RULING}_t + e \quad (3)$$

$$\beta_t = b_1 + b_2 \text{POST_RULING}_t + b_3 \text{TREAT}_t + b_4 \text{POST_RULING}_t \times \text{TREAT}_t + e \quad (6)$$

Panel A: ADR firms only

Dependent Variable: β_t	Coefficient	t-statistic
b ₁ : Before the court's ruling	0.045***	5.29
b ₂ : Change following the court's ruling	-0.003	-0.23
Adj-R ²		-0.0019
Number of Observations		505

Panel B: DiD estimation using ADR firms as a control group

Dependent Variable: β_t	Coefficient	t-statistic
b ₁ : Before the court's ruling	0.045***	6.64
b ₂ : Change following the court's ruling	-0.003	-0.29
b ₃ : Treatment group	0.008	0.85
b ₄ : Change following the court's ruling x Treatment group	0.028**	2.08
Adj-R ²		0.0145
Number of Observations		1010

In this table, we repeat our analysis using ADR firms that are not subject to Reg FD and also conduct difference-in-differences (DiD) estimation using ADR firms as a control group. In Panel A, we repeat the analysis in Table 2 after restricting our sample to ADR firms that are not subject to Reg FD. In Panel B, we implement DiD research design using ADR firms as a control group. We estimate Equation (1) separately for U.S. firms and ADR firms. After merging 505 daily estimates of the coefficients in Equation (1) for the U.S. firms with the corresponding 505 estimates for the ADR firm, we estimate the Equation (6). TREAT equals one for Equation (1) coefficients for the U.S. firms, and zero otherwise. The t-statistics are based on heteroscedasticity-robust standard errors. ***, ** and * indicate statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 5

Pseudo-event test and Shorter sample period

Panel A: Absolute returns on days without analyst information outputs

	First One-Year Period 9/1/04 – 8/31/05 (1)		Middle One-Year Period 3/1/05 – 2/28/06 (2)		Last One-Year Period 9/1/05 – 8/31/06 (3)	
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
a ₁ : Before the court's ruling	0.691***	60.88	0.679***	56.29	0.680***	45.06
a ₂ : Change following the court's ruling	-0.012	-0.75	0.001	0.06	0.045**	2.12
Adj-R ²	-0.0017		-0.0040		0.0137	
Number of Observations	253		252		252	

Panel B: Incremental absolute returns due to analyst information outputs

	First One-Year Period: 9/1/04 – 8/31/05 (1)		Middle One-Year Period: 3/1/05 – 2/28/06 (2)		Last One-Year Period: 9/1/05 – 8/31/06 (3)	
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
b ₁ : Before the court's ruling	0.051***	9.19	0.055***	9.23	0.079***	12.13
b ₂ : Change following the court's ruling	0.004	0.49	0.024***	2.86	-0.007	-0.74
Adj-R ²	-0.0030		0.0278		-0.0018	
Number of Observations	253		252		252	

In this table, we break the full sample period into three overlapping one-year sub-periods: 9/1/2004-8/31/2005, 3/1/2005-2/28/2006, and 9/1/2005-8/31/2006. For the first (third) sub-period, the pseudo-event date is 3/1/2005 (3/1/2006). For the second sub-period, the event date is 9/1/2005, which is the actual date of the U.S. federal district court's ruling on *SEC v. Siebel Systems, Inc.* (2005). The t-statistics are based on heteroscedasticity-robust standard errors. ***, ** and * indicate statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 6

Short sample period

Panel A: Absolute returns on days without analyst information outputs

Dependent Variable: α_t	Coefficient	t-statistic
a_1 : Before the court's ruling	0.640***	27.62
a_2 : Change following the court's ruling	0.006	0.19
Adj-R ²		-0.0229
Number of Observations		44

Panel B: Incremental absolute returns due to analyst information outputs

Dependent Variable: β_t	Coefficient	t-statistic
b_1 : Before the court's ruling	0.044***	3.42
b_2 : Change following the court's ruling	0.080***	4.37
Adj-R ²		0.2957
Number of Observations		44

In this table, we repeat the analysis in Table 2 after replacing the two-year sample period with a two-month sample period around the U.S. federal district court's ruling on *SEC v. Siebel Systems, Inc.* (2005) on September 1, 2005. The t-statistics are based on heteroscedasticity-robust standard errors. ***, ** and * indicate statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 7

Cross-sectional test: Favorable vs. non-favorable analysts

$$|\text{RETURN}|_{i,t} = \alpha_t + \beta_t \text{ANALY_OUT}_{i,t} + \gamma_t \text{ANALY_OUT}_{i,t} \times \text{FAVORABLE}_{i,t} + \varepsilon \quad (8)$$

$$\alpha_t = a_1 + a_2 \text{POST_RULING}_t + e \quad (9)$$

$$\beta_t = b_1 + b_2 \text{POST_RULING}_t + e \quad (10)$$

$$\gamma_t = c_1 + c_2 \text{POST_RULING}_t + e \quad (11)$$

Panel A: Absolute returns on days without analyst information outputs

Dependent Variable: α_t	Coefficient	t-statistic
a ₁ : Before the court's ruling	0.684***	73.17
a ₂ : Change following the court's ruling	0.018	1.37
Adj-R ²		0.0017
Number of Observations		505

Panel B: Incremental absolute returns due to non-favorable analyst information outputs

Dependent Variable: β_t	Coefficient	t-statistic
b ₁ : Before the court's ruling	0.029***	6.89
b ₂ : Change following the court's ruling	0.018***	3.07
Adj-R ²		0.0165
Number of Observations		505

Panel C: The effect of favorable analysts

Dependent Variable: γ_t	Coefficient	t-statistic
c ₁ : Before the court's ruling	0.061***	12.76
c ₂ : Change following the court's ruling	0.012*	1.77
Adj-R ²		0.0042
Number of Observations		505

This table reports the effect of the court's ruling on *SEC v. Siebel Systems, Inc.* (2005) on the information content of information outputs of analysts who are favorable versus non-favorable to the firm. In Equation (4), the dependent variable $|\text{RETURN}|_{i,t}$ is the natural log of absolute standardized stock returns for firm i on date t . ANALY_OUT is an indicator variable that equals one if a trading day is within $[-1,+1]$ days of at least one analyst earnings forecast or one stock recommendation, and zero otherwise. FAVORABLE is an indicator variable that equals to one if a trading day is within $[-1,+1]$ days of at least one analyst earnings forecast or one stock recommendation issued by an analyst who is affiliated with a more favorable brokerage firm, and zero otherwise. A brokerage firm is defined as favorable on a firm-date if the average of analyst earnings forecasts or stock recommendations issued by the brokerage firm during the past 180 days is above the median of all brokerage firms following the firm. In Equations (5), (6), and (7), 505 observations of α_t , β_t , and γ_t estimates from Equation (4) are regressed on the indicator variable POST_RULING that equals one if a trading day is following the court's ruling on 9/1/2005, and zero otherwise. The coefficient on POST_RULING in Equation (6), i.e. b_2 , captures the change after the court's ruling on the incremental information content of information outputs issued by analysts affiliated with non-favorable brokerage firms. The coefficient on POST_RULING in Equation (7), i.e. c_2 , captures the change after the court's ruling on the additional incremental information content of analyst information outputs issued by analysts affiliated with favorable as against non-favorable brokerage firms. The t-statistics are based on heteroscedasticity-robust standard errors. ***, ** and * indicate statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 8

Robustness test: Alternate windows for measuring information content

Panel A: Absolute returns on days without analyst information outputs -- [-5, +1] window

Dependent Variable: α_t	Coefficient	t-statistic
a ₁ : Before the court's ruling	0.690***	73.91
a ₂ : Change following the court's ruling	0.016	1.19
Adj-R ²		0.0008
Number of Observations		505

Panel B: Incremental absolute returns due to analyst information outputs -- [-5, +1] window

Dependent Variable: β_t	Coefficient	t-statistic
b ₁ : Before the court's ruling	0.016***	3.93
b ₂ : Change following the court's ruling	0.021***	3.60
Adj-R ²		0.0232
Number of Observations		505

Panel C: Absolute returns on days without analyst information outputs -- [0, 0] window

Dependent Variable: α_t	Coefficient	t-statistic
a ₁ : Before the court's ruling	0.685***	73.29
a ₂ : Change following the court's ruling	0.020	1.50
Adj-R ²		0.0025
Number of Observations		505

Panel D: Incremental absolute returns due to analyst information outputs -- [0, 0] window

Dependent Variable: β_t	Coefficient	t-statistic
b ₁ : Before the court's ruling	0.111***	21.06
b ₂ : Change following the court's ruling	0.026***	3.49
Adj-R ²		0.0217
Number of Observations		505

In this table, we report results using alternate windows for measuring the information content of analyst information outputs. We repeat the analysis in Table 2 after replacing the [-1, +1] window with [-5, +1] and [0, 0], respectively. [-5, +1] window is consistent with that in Gintchel and Markov (2004). The t-statistics are based on heteroscedasticity-robust standard errors. ***, ** and * indicate statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 9

Additional test: Effect of the court's ruling on analysts' workload

Panel A: Sample selection for the sample examining the number of firms covered by an analyst

Filter	Number of Obs.	Data Source
Analysts who issued at least one EPS forecast for U.S. firms from 9/1/2004 to 8/31/2005, the one-year period prior to the court's ruling on 9/1/2005.	4,402 Analysts	IBES
Analysts who also issued at least one EPS forecast for U.S. firms from 9/1/2005 to 8/31/2006, the one-year period following the court's ruling on 9/1/2005.	3,434 Analysts	IBES

Panel B: Number of firms covered by an analyst before and after the court's ruling

	Pre	Post	H ₀ : Pre = Post
Mean	10.297	11.135	(t-statistic = 4.53)

Panel C: Sample Selection for the sample examining the number of analysts covering a firm

Filter	Number of Obs.	Data Source
U.S. firms that have at least one EPS forecast available from 9/1/2004 to 8/31/2005, the one-year period prior to the court's ruling on 9/1/2005.	5,084 Firms	IBES
U.S. firms that also have at least one EPS forecast available firms from 9/1/2005 to 8/31/2006, the one-year period following to the court's ruling on 9/1/2005.	4,588 Firms	IBES

Panel D: Number of analysts covering a firm before and after the court's ruling

	Pre	Post	H ₀ : Pre = Post
Mean	8.488	8.831	(t-statistic = 2.03)

This table presents the change in analysts' workload as reflected by the number of firms covered by an analyst and the number of analysts covering a firm. Panel A reports the sample selection procedure for the sample examining the number of firms covered by an analyst. Panel B reports the average number of firms covered by an analyst in the period before and in the period after the U.S. federal district court's ruling on *SEC v. Siebel Systems, Inc.* (2005). Panel C reports the sample selection procedure for the sample examining the number of analysts covering a firm. Panel D reports the average number of analysts covering a firm in the period before and in the period after the court's ruling. ***, ** and * indicate statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 10

Survey results

Panel A: Job titles of survey participants

Job Title	Percent of Participants
Partner/Law Firm Partner/Managing Partner	75.0
Counsel/Of Counsel/Senior Counsel	11.7
Other/Blank	13.3

Panel B: Survey participants' years of law practice

Years of Law Practice	Percent of Participants
More than 20 years	81.7
Between 15 and 20 years	8.3
Between 10 and 15 years	6.7
Between 5 and 10 years	1.7
Less than 5 years	1.7

Panel C: Main survey question results

Explanation	Average (SD) likelihood rating	Significantly greater than
(1) <i>Unintentional</i> increase in <i>implicit</i> communication	1.4	2-5
(2) <i>Intentional</i> increase in <i>implicit</i> communication	0.9	3-4
(3) <i>Unintentional</i> increase in <i>explicit</i> communication	0.8	4
(4) <i>Intentional</i> increase in <i>explicit</i> communication	0.5	-
(5) Another explanation	0.7	-

Column 1 reports the average likelihood ratings on 5-pt scales ranging from 0 = “Not at all likely” to 4 = “Extremely likely” for five explanations of the effect documented in sections 3 and 4 of this paper. Column 2 reports the results of pairwise t-tests testing the null hypothesis that the average likelihood ratings are equivalent for each set of two explanations. We report the explanations for which a given explanation is significantly greater than another explanation at the 10% level using the Bonferroni-Holm method to adjust for multiple comparisons.

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