How Shareholder Accusations of Managerial Misconduct Affect Sell-side Analysts

Jared Nelson Jennings

A dissertation
submitted in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy

University of Washington
2012

Reading Committee:
Dawn Matsumoto, Co-Chair
Terry Shevlin, Co-Chair
Mark Soliman

Program Authorized to Offer Degree:
Business Administration – Accounting

University of Washington

Abstract

How Shareholder Accusations of Managerial Misconduct Affect Sell-side Analysts

Jared Nelson Jennings

Chair of Supervisory Committee:
Professor Dawn Matsumoto, Co-Chair
Professor Terry Shevlin, Co-Chair

In this paper, I examine how the firm's information environment changes after an accusation of managerial misconduct associated with management disclosure. Filing a security class action lawsuit under SEC Rule 10(b)-5 is the primary mechanism that shareholders have to formally accuse management of intentionally misrepresenting or withholding firm disclosure. After the filing of the lawsuit, investors and other market participants likely question management's credibility and the quality of its disclosure. Investors likely demand additional information from other market participants to evaluate and/or substitute for management disclosure after the lawsuit is filed. I argue that sell-side equity analysts have the expertise and incentives to produce a portion of the additional information demanded by investors after the filing of the lawsuit. Using 565 security class action lawsuits obtained from Cornerstone Research and Stanford Law School, I find evidence consistent with sell-side analysts providing more services, using more private information during the forecasting process, and having more informative reports after the filing of a security class action lawsuit.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACKNOWLEDGMENTS

I thank my dissertation chairpersons, Dawn Matsumoto and Terry Shevlin, for their guidance in developing this paper. I also thank the other members of my committee, Jonathan Karpoff, Ed Rice, Lan Shi, and Mark Soliman. I also thank Linda Bamber, Brad Blaylock, Robert Bowen, Dave Burgstahler, Andy Call, Dane Christensen, Ed deHaan, Mike Drake, Alex Edwards, Leslie Eldenburg, Weili Ge, Frank Hodge, Allison Koester, D. Shores, Lloyd Tanlu, Jake Thornock, Charles Wasley, Amanda Winn, Jerry Zimmerman and workshop participants at the BYU Accounting Symposium, Duke University, Pennsylvania State University, Ohio State University, University of Arizona, University of Georgia, University of Illinois at Urbana-Champaign, University of Iowa, University of Rochester, University of Utah, University of Wisconsin, University of Washington, Washington University in St. Louis for their comments and suggestions. The securities class action lawsuit data was generously provided by Cornerstone Research and Stanford Law School. The views in this paper are my own and do not represent in any way the views of Cornerstone Research or Stanford Law School.

1. INTRODUCTION

Several notable firm scandals in the world economy have involved accusations of corporate misconduct associated with managerial disclosure (e.g. Worldcom, Enron, Tyco, Parmalat, Lehman Brothers). The primary mechanism shareholders have to formally accuse management of intentionally misrepresenting or withholding material disclosure is to file a security class action lawsuit under SEC Rule 10(b)-5.[1] The filing of a lawsuit likely causes investors and other market participants to reassess the credibility of management and its disclosure. Prior literature also suggests that the frequency, precision, and timeliness of management disclosure decrease after the filing of a lawsuit (Rogers and Van Buskirk 2009). As management credibility and disclosure decrease, investors likely reduce their weighting of managerial disclosure when assessing the firm's financial performance and condition, causing investors to demand additional information from other market participants to evaluate and/or substitute for management disclosure. In this paper, I argue that sell-side equity analysts have the appropriate expertise and incentives to provide a portion of the additional information demanded by investors after an accusation that management has intentionally withheld or misrepresented firm disclosure.

Sell-side analysts are important market participants who work to reduce information asymmetries between investors and managers (Barth et al. 2001). They have the ability to utilize and synthesize various data sources to produce useful information (Piotroski and Roulstone 2004; Bradshaw 2011). If one data source were to be diminished or devalued, then analysts likely have alternate data sources to use as substitutes in their analyses. Analysts also tend to

[1] The filing of a lawsuit, per se, does not validate the allegations described by the lawsuit. Approximately 38% of all shareholder class action lawsuits filed in the United States are dismissed prior to judgment or settlement, suggesting that the plaintiffs are not able to provide sufficient evidence that the manager intentionally misled investors (Cornerstone 2009).

focus on specific industries, allowing them to become experts in that particular industry and on a particular firm (Fisch and Sale 2003). Institutional investors consistently rank analyst knowledge of the industry as one of the most important analyst attributes.[2] Analysts' industry expertise and ability to aggregate data from various sources suggest that analysts could play a larger role in the firm's information environment as management's credibility and disclosure deteriorate after the filing of a lawsuit.

Using 565 lawsuits filed between 2001 and 2009, I specifically examine how analyst behavior changes and whether they produce more information useful to investors after the filing of a lawsuit. I first investigate whether the quantity of analyst services changes after the lawsuit is filed. If investors prefer more analyst services or substitute analyst services for management disclosure after the lawsuit, I expect analyst services to increase. However, if the cost for analysts to produce additional information from alternate information sources increases after the filing of the lawsuit, then I would expect analysts to provide fewer services to investors, *ceteris paribus*. Analysts likely shift their resources to provide services on those firms that are more profitable to the analyst (Maber et al. 2011). I proxy for analyst services using the number of analyst reports issued in aggregate and per analyst. I find evidence that the aggregate number of analyst revisions and number of analyst revisions per analyst increase after the filing of a lawsuit. This evidence is consistent with investors demanding more analyst services and analysts supplying those services after management has been accused of misrepresenting or withholding firm disclosure.

Second, I examine whether analysts use more private information to forecast earnings after the filing of a lawsuit. Diamond (1985) argues that other market participants use more

[2] The Institutional Investor Magazine surveys institutional investors on the importance of research attributes in sell-side analysts. The 2010 survey ranked industry expertise as the most desirable sell-side analyst attribute while the 2011 survey ranked industry expertise second, behind analyst integrity and professionalism.

private information when firm-provided disclosure decreases. As management's credibility and disclosure deteriorate after the filing of a lawsuit, I predict that analysts produce more private information, *ceteris paribus*. However, using more private information could result in analysts having less accurate forecasts, resulting in a loss of reputation among their clients and increase the likelihood of analyst turnover (Stickel 1992; Mikhail et al. 1999). Therefore, analysts may not elect to use more private information during the forecasting process if the costs of using additional private information are substantial. I proxy for changes in analysts' use of private information by examining whether analyst forecast dispersion increases or decreases after the filing of the lawsuit (Lang and Lundholm 1996; Barron et al. 1998; Barron et al. 2009).[3] I find that analyst dispersion increases after the lawsuit is filed, consistent with my hypothesis that analysts are using more private information. To reduce the likelihood that my results are reflecting changes in uncertainty, I explicitly control for uncertainty in the multivariate regression following Barron et al. (2002).

Finally, I investigate whether the informativeness of analyst reports increases or decreases after the filing of a lawsuit. Analyst reports are one of the main written forms of communication between analysts and their clients (Bradshaw 2011). Analyst reports produce qualitative and quantitative analyses on the firm's financial condition and performance. Frankel et al. (2006) provides evidence consistent with the informativeness of analyst reports increasing when investors demand more information. If investors demand more information and analysts are able to provide it, I anticipate that the informativeness of analyst reports increases after the filing of the lawsuit. However, the informativeness of analyst reports could decrease after the lawsuit is filed if (1) obtaining the additional information is too costly, (2) only a finite amount

[3] Barron et al. (2009) provides evidence that changes in analyst forecast dispersion are more reflective of changes in analysts' use of private information and the level of analyst forecast dispersion is more reflective of uncertainty.

of information is available to be produced by analysts, and (3) investors use analyst reports less when analyst estimates are more likely to deviate from actuals due to analysts' increased use of private information. Using changes in stock turnover to measure informativeness, I find evidence consistent with analyst reports becoming more informative in aggregate and individually after the filing of the lawsuit. I find similar results when using a returns-based proxy to measure the informativeness of analyst reports.

In additional cross-sectional tests, I find that analyst reports become more informative for both high surprise and low surprise lawsuits. However, the change in the informativeness of analyst reports is statistically greater for high surprise lawsuits. Since the filing of a lawsuit is a negative event, I define high surprise lawsuits as all lawsuits with a cumulative abnormal return around the filing of the lawsuit below the sample median. I also find that analysts increase the number of services for litigated firms that are more visible in the marketplace but not for those firms that are less visible. I define high visibility firms as firms with an average market value during the class period (i.e. the period of the alleged misconduct) greater than the sample median. Each of my main results is robust to controlling for other significant firm events that occur after the filing of the lawsuit such as management turnover and amended/consolidated lawsuit filings. In addition, my results are robust to various alternative model specifications.

This study contributes to the literature in three ways. First, this paper examines how the information environment develops to reduce information asymmetries and agency costs between investors and managers.[4] Specifically, my findings are consistent with analysts providing more information after the filing of a lawsuit in response to a change in investors' information demands. The prior literature has primarily focused on how security class action lawsuits affect

[4] The information environment is comprised of the accumulation of information generated by various market participants including managers, equity analysts, debt analysts, short-sellers, and the financial press.

management behavior (e.g. Skinner 1994; Rogers and Van Buskirk 2009; Kim and Skinner 2011). However, we have little evidence on how lawsuits affect the behavior and amount of information produced by other market participants. Beyer et al. (2010) suggest that "it is necessary to consider multiple aspects of the corporate information environment to conclude whether it becomes more or less informative in response to an exogenous change."

Second, this paper provides additional evidence to regulators and lawmakers describing the impact of security class action lawsuits on the firm's information environment. As reported in The Economist (2007), several European governments (e.g. U.K. and Germany) have begun to allow some form of class action lawsuits, while others have debated the effects and usefulness of these lawsuits. Several studies document the benefits of security class action lawsuits, while others document significant drawbacks, including the deterioration of management disclosure after the filing of a lawsuit.[5] I provide evidence that the deterioration of management credibility and disclosure after the filing of the lawsuit is at least partially offset by the production of information by sell-side analysts.

Third, I contribute to the accounting literature that documents the relation between the amount of information produced by analysts and managers. The prior literature has primarily documented a positive association between the number of analysts following a firm and management disclosure quality, suggesting that analyst-provided information complements management-provided information (e.g. Lang and Lundholm 1996). However, one must be careful how the association described above is interpreted. An increase in investors' demand for information could cause an increase in the amount of information produced by both analysts and managers, resulting in a perceived complementary relation. Security class action lawsuits

[5] Kim and Skinner (2011) document that firms are more likely to disclose bad news when litigation risk is higher. Niehaus and Roth (1999) provide evidence consistent with class action lawsuits increasing the likelihood of management turnover.

provide a setting where managers are unlikely to increase the amount of information they provide despite an increase in investors' demand for information. This study provides evidence that analyst-provided information can potentially substitute for management-provided information and that sell-side analysts are not just information disseminators but can act as information providers.

This paper is subject to several limitations. First, the marginal benefit and marginal cost for an analyst to provide additional information after other notable firm events likely varies based on the analyst's expertise and the firm's characteristics. Therefore, the results in this paper may not be generalizable to other settings, given the unique setting created by class action lawsuits. Second, whereas I explicitly control for uncertainty when examining analyst forecast dispersion, it is possible that my proxy does not fully capture all aspects of uncertainty. As a result, I cannot completely rule out the alternative explanation that the change in analyst forecast dispersion is a result of changes in uncertainty. Third, my sample includes large firms with relatively well-developed information environments. These results may not be generalizable to smaller firms or firms with less-developed information environments. Despite the above limitations, I believe that the results in this paper are informative in understanding how the information environment changes after the filing of a lawsuit.

The rest of the paper is organized as follows. In Section 2, I discuss the prior literature and develop my hypotheses. In Section 3, I outline the empirical models used to test each hypothesis. In Section 4, I describe the sample and discuss the results. I describe additional cross-sectional tests with the associated results in Section 5. I describe and provide the results of several additional robustness tests in Section 6. I conclude this study in Section 7.

2. HYPOTHESIS DEVELOPMENT

2.1 SECURITY CLASS ACTION LAWSUITS

The filing of a class action lawsuit under SEC Rule 10(b)-5 represents an accusation that management has intentionally misrepresented the firm's financial statements or withheld information from investors.[6] The filing of a security class action lawsuit, per se, does not validate the allegations of management misconduct. Cornerstone Research (2009) reports that approximately 38% of lawsuits filed between 1996 and 2006 were dismissed, suggesting that the evidence was insufficient to prove that management intentionally misled investors or that shareholders were injured as a result of management's disclosure decisions. For the plaintiffs to obtain a favorable settlement or judgment, the plaintiffs must prove that the misrepresentation or omission of firm disclosure was a "material fact made with intent that the plaintiff justifiably relied on causing injury in connection with the purchase or sale of a security" (Skinner 1994, pg. 41). As a result, investors likely demand information after the filing of the lawsuit to assess the validity and gravity of the allegations, thereby informing investors on management's propensity to mislead investors.

Shareholder litigation could have an adverse effect on the firm's information environment in two key ways. First, the accusation of management misconduct, which is represented by the filing of the lawsuit, likely affects the credibility of management and its disclosure. Investors question the extent to which management misrepresented the firm's current and past disclosures as well as whether management provided all necessary disclosure to

[6] Skinner (1997) suggests that case law has given parameters to the type of disclosure that must be disclosed to avoid a successful security class action lawsuit. Rule 10(b)-5 does not impose a general affirmative disclosure obligation outside of the following three situations. First, managers are required to provide disclosure when the SEC mandates disclosure (e.g. 10-K, 10-Q). Second, managers are required to disclose any trades made by insiders or the corporation. Third, managers are required to disclose when prior disclosure becomes inaccurate, incomplete, or misleading.

investors in a timely manner. The validity and gravity of the lawsuit allegations allow investors to assess the degree management is willing to mislead investors. As a result, investors likely put less weight on management disclosures when evaluating all available information useful in deciding how to allocate or reallocate their financial resources.

Second, Rogers and Van Buskirk (2009) provide evidence consistent with the filing of the lawsuit reducing the likelihood, timeliness, and precision of voluntary disclosure provided by management.[7] The deterioration of management disclosure likely occurs for two reasons. First, the firm's legal counsel likely discourages management from providing any unnecessary disclosure to investors after the filing of the lawsuit. Any subsequent disclosure could be used against the firm during the expert witness discovery period, which occurs after the filing of the lawsuit. Second, managers revise their beliefs on the expected litigation costs of providing disclosure to investors. Even if the disclosure is unbiased at the time of issuance, shareholders may view the disclosure as misleading if followed by a negative price reaction, potentially resulting in the filing of another lawsuit. As a result, management likely reduces its disclosure to avoid unnecessary litigation. Management's decision to provide firm disclosure is a function of the marginal cost and marginal benefit of providing the disclosure to investors. As the marginal cost of providing the disclosure increases, *ceteris paribus*, management likely reduces the quantity and quality of management disclosure.

As the credibility and quality of management disclosure deteriorate, investors likely look to other market participants who can provide additional information about the litigated firm's financial condition and performance. Beyer et al. (2010) suggest that the firm's information environment has the ability to adapt to changes in the quality and frequency of information

[7] Rogers and Van Buskirk (2009) provide evidence that the likelihood of management issuing a forecast or holding a conference call decreases after the filing of a lawsuit. They also find that the timeliness and precision of management forecasts decrease after the filing of the lawsuit.

provide by each of the firm's information providers. Other information providers likely have the ability to provide at least a portion of the information that managers are no longer able or willing to provide after the class action lawsuit is filed.

2.1 SELL-SIDE ANALYSTS

Investors likely demand the additional information after the filing of the lawsuit from those market participants who can produce the information at the lowest cost. I argue that sell-side analysts are particularly well suited to provide additional information to investors after the filing of a lawsuit for the following reasons. Sell-side analysts have the ability to aggregate data from many different data sources to provide information useful to investors when evaluating their investment decisions (Bradshaw 2011; Piotroski and Roulstone 2004; Ramnath 2002). Analysts do not have to rely on one data source to perform their analyses. In addition, sell-side analysts tend to concentrate on a small number of firms in a specific industry, allowing them to become experts in that industry (Fisch and Sale 2003). Analysts' knowledge of the industry is one of their most important attributes to institutional investors (Institutional Investor Magazine 2011). Dyck et al. (2010) also provide evidence that sell-side analysts are the market participants most likely to identify fraud other than internal employees. Next to the firm's management, this evidence suggest that analysts are able to provide additional information on the litigated firm's financial performance and condition to investors after the filing of the lawsuit.

2.2.1 SELL-SIDE ANALYST SERVICES

Analysts communicate the results of their services through various mediums such as analyst reports, telephone calls, email, etc.[8] Analyst reports are one of the primary forms of

[8] Several other communication mediums exist to communicate analyst services to their investors such as blast voicemails, communication with the press, and conferences. I do not formally discuss these communication mediums due to the lack of detail communicated through these mediums to the client. Analysts likely provide the most useful information directly to their clients through written or verbal communication.

written communication provided to analysts' clients (Bradshaw 2011). Analyst reports contain forecasts, stock recommendations, target prices, and other qualitative and quantitative analyses (Asquith et al. 2005) . Analysts also communicate with investors through telephone calls and other electronic communication mediums. Telephone calls and email give analysts the ability to tailor the communication to the client's individual needs (Maber et al. 2011). Analysts use telephone calls and email to discuss points that may or may not be part of the analyst report.

Investors and shareholders likely demand additional services from sell-side analysts after the filing of the lawsuit to validate management disclosure, substitute for management disclosure, and/or assess the validity and gravity of the lawsuit.[9] A shift to the right in the demand curve for analyst services would occur if (1) investors prefer more analyst services and/or (2) substitute analyst services for management disclosure after the filing of the lawsuit, *ceteris paribus*.[10] Investors compensate analysts for the additional services by either directly paying for the additional services or by directing future trades through the brokerage division of the bank where the analyst is employed.[11] To encourage sell-side analysts to produce useful information, firms connect analyst compensation to the commissions generated by the stock the

[9] There are several examples of how analysts provide additional information to assess the impact of the lawsuit on the firm. For example, an analyst following the BISYS group used industry, firm, and market data to provide an in depth discussion of the firm's litigation expenses, reflecting the validity and gravity of the lawsuit. Another analyst following Bank of America suggested that the filing of the lawsuit played a significant role in her analysis. Analysts following China Valves Technology and Kenexa Corporation lowed their target value after the revelation of the lawsuit. Anecdotal evidence suggests that analysts provide additional analyses associated with security class action lawsuits.

[10] Analysts may not explicitly state in their written communication (e.g. analyst reports) the reason for the increased analyst services after the filing of the lawsuit. It is more likely that analysts observe the change in investors' demand for information and react by providing more services useful in assessing the firm's financial performance and condition after the lawsuit's filing.

[11] Cowen, Groysberg, and Healy (2006) discuss the various ways a sell-side analyst is compensated. Retail investors generally pay for analyst research directly through bank commissions, which include research and trade execution fees. Institutional investors pay for analyst research by either paying commissions directly to the bank or through "soft dollaring". Commission are directly paid to the bank when institutional investors direct future security trades through the brokerage division of the firm. "Soft dollaring" is achieved when the institutional investors executes the trade through a third party but a portion of the commissions are channeled to the analyst's bank that provided the analyst research. The "soft dollars" are generally tied to specific research provided by the analyst, allowing the bank to compensate the responsible analyst.

analyst covers (Cowen et al. 2006; Maber et al. 2011). Therefore, if investors demand more analyst services, I predict that analysts provide more services after the filing of the lawsuit. I formally state my hypothesis below.

H1a – Sell-side analysts provide *more* services after the filing of a security class action lawsuit.

Analysts' cost to obtain and evaluate management disclosure may prevent analysts from providing additional services after the filing of a lawsuit. As previously mentioned, analysts use firm, industry, and market data to produce information useful to investors. As the inputs to analyst services become more difficult or costly to obtain and/or evaluate, then the supply curve of analyst services likely shifts to the left, resulting in a decrease in analyst services provided, *ceteris paribus*. Therefore, the reduction in the frequency and quality of management disclosure after a lawsuit (Rogers and Van Buskirk 2009) likely causes the supply curve of analyst services to shift to the left. Lang and Lundholm (1996) provide evidence consistent with analysts relying on management disclosure to process and transmit information to investors. Based on the above discussion, I expect analysts to reduce the quantity of services provided after the filing of the lawsuit. I formally state this hypothesis below.

H1b – Sell-side analysts provide *fewer* services after the filing of a security class action lawsuit.

It is difficult to predict, *ex ante*, whether the shift to the right in the demand curve (H1a) or the shift to the left in the supply curve (H1b) dominates; therefore, I do not make a prediction on which hypothesis will prevail. It is possible that H1a and H1b are occurring simultaneously, having no effect on the quantity of analyst services provided after the lawsuit.

2.2.2 ANALYSTS USE OF PRIVATE INFORMATION

In addition to sell-side analysts changing the quantity of services provided after the filing of a security class action lawsuit, sell-side analysts likely change what information they rely on during the forecasting process. Similar to investors, the filing of a lawsuit decreases the credibility and quality of management disclosure to analysts, likely reducing the extent to which analysts rely on and/or use management disclosure during the forecasting process. To produce the same quantity and quality of information after the filing of the lawsuit, the analyst likely needs to independently obtain and analyze other firm, industry, and market data to validate or substitute for management disclosure. Diamond (1985) provides a model suggesting that the lack of firm-provided disclosures increases the incentives for analysts to collect private information. Barth et al. (2001) also argue that analysts acquire more private information when firm-specific information is less accessible. Therefore, if investors demand the same or higher amounts of information from analysts after the filing of the lawsuit, I predict that sell-side analysts use more private information during the forecasting process. I formally state my hypothesis below.

H2a – After the filing of the security class action lawsuit, sell-side analysts use *more* private information during the forecasting process.

Alternatively, sell-side analysts could use less private information after the filing of a lawsuit if the marginal cost of producing the additional private information increases while the marginal benefit is held constant. The deterioration of management disclosure and credibility likely increases analysts' costs to produce private information. Management disclosure is an input to analysts' process of generating additional private information. If analysts expend additional resources to evaluate or substitute for managerial disclosure after the filing of lawsuit, then analysts likely reduce the amount of resources available for the analysis of other firms followed by the firm. Holding the marginal benefits constant, analysts likely shift resources used

to produce private information away from the litigated firm toward other firms followed by the analyst (Maber et al. 2011). I formally state my hypothesis below.

H2b – After the filing of the security class action lawsuit, sell-side analysts use *less* private information during the forecasting process.

2.2.3 INFORMATIVENESS OF ANALYST REPORTS

Finally, I examine whether investors use analyst reports more or less when assessing their investment positions after the filing of a lawsuit. As previously mentioned, the analyst report is one of the primary mediums that analyst use to communicate with investors. Asquith et al. (2005) provides empirical evidence that both the quantitative and qualitative components of analyst reports provide information useful to investors.

The informativeness of analyst reports likely increases after the filing of a lawsuit for two reasons. First, the informativeness of analyst reports increases if analysts are providing additional analyses in response to investors' increased demand for information. Frankel et al. (2006) provide evidence consistent with analyst reports being more informative to investors when potential brokerage profits are higher, which is consistent with investors' demand for information affecting the informativeness of analyst reports. Second, analysts could be performing similar analyses before and after the filing of the lawsuit; however, investors could change their use of the reports by placing more weight on the reports when allocating or reallocating their financial resources. If investors demand additional analyses or change their weighting of the analyst report after the lawsuit's filing, I expect the informativeness of analyst reports to increase. I formally state my hypothesis in alternative form below.[12]

[12] In this paper, I do not attempt to distinguish between the two reasons why the informativeness of analyst reports might increase. This hypothesis examines whether investors change how they use analyst reports and not necessarily whether analysts change their behavior after the filing of the lawsuit. I examine the behavior of analysts in my first and second hypotheses.

H3a – Sell-side analyst reports are *more* informative to investors after the filing of the security class action lawsuit.

There are three reasons analyst reports could be *less* informative after the filing of the lawsuit. First, security class actions lawsuits could increase herding behavior among sell-side analysts. If the marginal cost of producing an analyst report increases after the filing of the lawsuit, *ceteris paribus*, analysts will be less likely to engage in individual analysis of the firm and be more likely to mimic other analysts following the firm.[13] If investors are able to identify the mimicking analysts, then I expect the mimicking analyst reports to have little to no information content.

Second, analysts may only have the ability to produce a finite amount of information before and after the lawsuit, resulting in no increase to the *aggregate* amount of information produced by analyst reports. If investors demand more timely information after the lawsuit's filing, then competition among analysts to provide more timely information increases, resulting in analysts increasing the frequency of their reports to avoid being preempted by other analysts following the firm. Increasing the frequency of reports without increasing the overall quantity of information likely lowers the informativeness of the individual analyst report.

Third, as sell-side analysts use more private information during the forecasting process, the likelihood of sell-side analysts' estimates deviating from actuals increases. Investors have the ability to observe historical trends in analyst estimates. Therefore, if analyst estimates are more likely to deviate from actuals after the filing of the lawsuit, investors could discount the analyses, forecasts, and recommendations contained in the analyst report, possibly decreasing the

[13] Theoretical and empirical evidence in the accounting and finance literature have documented herding behavior among sell-side analysts. Trueman (1994) provides a model that suggests analyst following is not an unbiased estimate of information produced by analysts but could be a result of analyst herding behavior. Hong, Kubik, and Solomon (2000) provide empirical evidence that herding behavior exists among inexperienced analysts.

informativeness of the report to investors. Based on the above three reasons, it is reasonable to hypothesize that analyst reports are less informative after the filing of a lawsuit. See my formal hypothesis below.

H3b – Sell-side analyst reports are *less* informative to investors after the filing of the security class action lawsuit.

It is an empirical question whether sell-side analyst reports are more or less informative after the filing of the lawsuit. It is important to note that finding evidence consistent with analysts supplying more (less) services and using more (less) private information does not imply that I will find evidence consistent with analysts having more (less) informative reports. Despite analysts' best efforts to increase the quantity and quality of their services, the information content of analyst reports may still decrease if investors are able to find an information source more useful when assessing their financial position in the firm.

3. RESEARCH DESIGN

3.1 TEST OF HYPOTHESIS 1

I first examine whether sell-side analysts change the quantity of services provided after the filing of a security class action lawsuit (H1a & H1b). I specifically examine whether analysts change the aggregate quantity of services provided and the quantity of services provided per analyst after the lawsuit is filed. I proxy for aggregate analyst services using the number of analyst forecast revisions issued for firm *i* during quarter *q* ($\#REVISIONS_{i,q}$).[14] Analyst revisions are generally accompanied by additional qualitative and quantitative analysis that is communicated to investors through analyst reports, telephone calls, or email (Maber et al. 2011).[15] I define quarter *q* to be the time period between the earnings announcement of quarter *q-1* and the earnings announcement of quarter *q*.

To examine whether analysts individually provide more services to investors after the filing of a lawsuit, I divide the aggregate number of analyst revisions ($\#REVISIONS_{i,q}$) by the number of analysts providing services during quarter *q* for firm *i*. An increase (decrease) in the number of revisions per analyst ($\#REV/ANAL_{i,q}$) suggests that the analysts are individually providing more (less) services after the filing of the lawsuit.

I use the following model to examine whether the $\#REV/ANAL_{i,q}$ and $\#REVISIONS_{i,q}$ variables increase after the filing of the lawsuit.

[14] When calculating the number of analyst forecast revisions ($\#REVISIONS_{i,q}$) issued for firm *i* during quarter *q*, I delete all analyst forecast revisions that are issued on the same date by the same analyst for the same firm. In other words, I only include unique analyst forecast revision dates in my calculation of $\#REVISIONS_{i,q}$.

[15] Frankel et al. (2006) uses analyst revisions as a proxy for analyst reports. Maber et al. (2011) also provide univariate results that the change in analyst reports, the change in telephone calls to the analyst's clients, the change in the number of EPS forecasts, and the change in recommendations are all positively correlated. As a result, the aggregate number of revisions is likely a reasonable proxy for aggregate analyst services.

$$\begin{aligned} DEP\ VAR_{i,q} = {} & \alpha_0 + \alpha_1\ CLASS_{i,q} + \alpha_2\ INTERIM_{i,q} + \alpha_3\ FILING_{i,q} + \alpha_4\ POST\text{-}FILING_{i,q} \\ & + \alpha_5\ SIZE_{i,q} + \alpha_6\ SALES\ GROWTH_{i,q} + \alpha_7\ BK/MKT_{i,q} + \alpha_8\ \%INST_{i,q} + \alpha_9 \\ & ROA_{i,q} + \alpha_{10}\ MGMT\ FOR_{i,q} + \alpha_{11}\ UNCERTAINTY_{i,q} + \Sigma_q\ QTR/YEAR_q + \\ & \Sigma_j\ INDUSTRY_j + \varepsilon_{i,q} \end{aligned} \quad (1)$$

The $DEP\ VAR_{i,q}$ variable is either $\#REV/ANAL_{i,q}$ or $\#REVISIONS_{i,q}$. To test my hypothesis, I identify five litigation periods for each class action lawsuit. Figure 1 illustrates the litigation periods and the median number of days for each period in my sample. The pre-class period is the four quarters prior to the class period, which is when the managers allegedly misled investors. In my analysis, I only include firm/quarter observations that are part of one of the five litigation periods; therefore, the intercept represents the average number of analyst reports issued for the firm during the pre-class period after controlling for other firm characteristics included in Equation 1.[16] The $CLASS_{i,q}$ variable is an indicator variable set to one for all firm/quarters that are between the start and end date of the class period. The $INTERIM_{i,q}$ variable is an indicator variable set to one for each quarter between the end of the class period and the quarter of the lawsuit's filing. The $FILING_{i,q}$ variable is an indicator variable set equal to one in the quarter the lawsuit is filed. The $POST\text{-}FILING_{i,q}$ variable is an indicator variable set to one for each of the four quarters following the quarter in which the lawsuit is filed.

Each of the coefficients on the $CLASS_{i,q}$, $INTERIM_{i,q}$, $FILING_{i,q}$, and $POST\text{-}FILING_{i,q}$ variables represents the average change in the $\#REVISIONS_{i,q}$ and $\#REV/ANAL_{i,q}$ variables from the pre-class period to each litigation period specified in the model. The coefficient on the $POST\text{-}FILING_{i,q}$ variable is the primary coefficient of interest. A significant and positive (negative)

[16] I perform two additional robustness tests in Section 6.3 to ensure that the model specification is not inducing the results. I first include all firm/quarter observations in the sample and examine whether the dependent variable changes from the pre-class period to the post-filing period for the litigated firm. Second, I compare the change from the pre-class period to the post-filing period in the dependent variables for the litigated firms to the change for a matched sample of firms. See Section 6.3 for a more detailed explanation of the alternative model specifications.

coefficient on the $POST\text{-}FILING_{i,q}$ variable suggests analysts are providing more (less) services after the filing of the lawsuit relative to the pre-class period.

I do not compare the dependent variable in the post-filing period to the class, interim, or filing periods for three reasons. First, during the class period sell-side analysts potentially identify firm characteristics that might suggest an increased likelihood of corporate misconduct, resulting in a potential increase in analyst services.[17] Kim and Skinner (2010) identify several observable firm characteristics during the class period that increase the likelihood of a class action lawsuit. Dyck et al. (2010) also provide evidence that sell-side analysts are instrumental in detecting firm misconduct, possibly resulting in analysts providing more services during the class period.[18] Second, the interim period is an information-gathering period in which analysts assess the likelihood of a class action lawsuit being filed. Third, the filing of the lawsuit is a notable firm event in which investors learn of the alleged misconduct, likely increasing the attention of all market participants. Therefore, my primary comparison is between the pre-class period (i.e. the period prior to the firm's alleged misconduct) and the post-filing period, reducing the likelihood that the pre-period is influenced by other significant firm events.[19]

To mitigate the possibility of correlated omitted variables and increase the power of my tests, I also include several control variables, as discussed in the prior literature (e.g. Bhushan 1989; Lang and Lundholm 1996). The $SIZE_{i,q-1}$ variable represents the natural log of firm *i*'s market value in quarter *q-1*. I anticipate that more analysts provide more services for larger

[17] Nevertheless, I test whether the coefficient on $POST\text{-}FILING_{i,q}$ variable is significantly different from the coefficient on the $CLASS_{i,q}$ variable and find similar evidence as reported in Tables 3, 4, and 5.
[18] Dyck et al. (2010) provide evidence that the firm's employees are the only group that consistently identifies a higher percentage of firm frauds than sell-side analysts. See Table 2 of Dyck et al. (2010).
[19] Comparing the change in the dependent variable from the class, interim, or filing periods to the post-filing period could bias my tests toward finding no results or a significant decrease in the quality of analyst services provided during the post-filing period. Increased analyst attention during the class, interim, and filing periods could increase analyst services and increase the likelihood of either finding no change or a significant decrease in analyst services after the filing of the lawsuit.

firms. The $SALES\ GROWTH_{i,q-1}$ variable represents the percentage change in sales for firm *i* from quarter *q-5* to quarter *q-1* and controls for growth. I anticipate that analysts likely provide more services for higher growth firms. The $BK/MKT_{i,q-1}$ variable represents the book-to-market ratio for firm *i* in quarter *q-1* and controls for differences between value and glamour firms and is an additional control for firm growth. The $\%INST_{i,q-1}$ variable is equal to the percentage of shares owned by institutional owners. I anticipate that higher institutional ownership is associated with a higher frequency of analyst revisions. The $ROA_{i,q-1}$ variable represents the return on assets for firm *i* in quarter *q-1* and helps control for firm performance. Hayes (1998) suggests that analysts are more likely to follow firms that are performing well; therefore, I predict a positive coefficient on the $ROA_{i,q}$ variable. I include the lagged values of the previously mentioned variables because analysts do not have the firm's current quarter financial information until the earnings announcement for quarter *q*. I also include the number of management forecasts ($\#MGMT\ FOR_{i,q}$) issued for firm *i* in quarter *q* to control for management-produced information. I anticipate that firms with more voluntary disclosure will have a higher number of analyst revisions (Lang and Lundholm 1996). I also control for analyst uncertainty following Barron et al. (1998). The $UNCERTAINTY_{i,q}$ variable is equal to the squared error in individual forecasts averaged across analysts following firm *i* during quarter *q*.

For this model specification and all subsequent model specifications (unless indicated differently), I include calendar year/quarter dummy variables ($QTR/YEAR_q$), industry dummy variables ($INDUSTRY_j$), and cluster the standard errors by firm. The calendar year/quarter dummy variables help control for macroeconomic factors that could influence the number of analyst revisions issued over time. Industry dummy variables, defined by four-digit SIC code,

control for fundamental differences between industries. I cluster the standard errors by firm to correct the standard errors for potential serial-correlation (Petersen 2009).

3.2 TEST OF HYPOTHESIS 2

I use equation 2 to examine whether sell-side analysts change the amount of private information (i.e. information specific to the individual analyst) used during the forecasting process after the filing of a lawsuit (H2a & H2b).

$$\begin{aligned} ANALYST\ DISP_{i,q} = {} & \alpha_0 + \alpha_1\ CLASS_{i,q} + \alpha_2\ INTERIM_{i,q} + \alpha_3\ FILING_{i,q} + \alpha_4\ POST\text{-} \\ & FILING_{i,q} + \alpha_5\ SIZE_{i,q} + \alpha_6\ SALES\ GROWTH_{i,q} + \alpha_7\ BK/MKT_{i,q} + \\ & \alpha_8\ \%INST_{i,q} + \alpha_9\ ROA_{i,q} + \alpha_{10}\ MGMT\ FOR_{i,q} + \alpha_{11}\ \#ANALYSTS_{i,q} \\ & + \alpha_{12}\ UNCERTAINTY_{i,q} + \Sigma_q\ QTR/YEAR_q + \Sigma_j\ INDUSTRY_j + \varepsilon_{i,q} \end{aligned} \qquad (2)$$

I proxy for the amount of private information used by sell-side analysts during the forecasting process with the standard deviation of analyst forecasts scaled by the absolute value of the mean analyst forecast for firm *i* during quarter *q*. Lang and Lundholm (1996) argue that analyst forecast dispersion reflects the use of private information by analysts during the forecasting process. They argue that analysts are more likely to deviate from the consensus forecast as they use more private information to forecast firm performance. Barron et al. (1998) also mathematically separate analyst forecast errors into errors resulting from analysts' use of common and private information. They find that analyst dispersion reflects analysts' idiosyncratic forecast errors, resulting from analysts' use of private information.

Similar to the test for H1, I test whether the coefficient on the $POST\text{-}FILING_{i,q}$ variable is significantly different from zero. A positive (negative) coefficient would suggest that analyst use more (less) private information after the filing of the lawsuit. I anticipate that better firm information environments result in analysts using less private information during the forecasting

process either due to analyst lack of ability to produce more private information or a lack of investors' demand for analyst produced information. As a result, I anticipate that firm size ($SIZE_{i,q-1}$), institutional ownership ($\%INST_{i,q-1}$), firm performance ($ROA_{i,q-1}$), and the number of management forecasts ($\#MGMT\ FOR_{i,q-1}$) are negatively associated with analyst dispersion ($ANALYST\ DISP_{i,q}$). I also include the number of analysts following the firm ($\#ANALYSTS_{i,q}$) as an additional control variable and do not have a prediction for the sign of the coefficient. I expect that the sign of the coefficient is a function of how much sell-side analysts rely on other sell-side analysts during the forecasting process. I expect a negative (positive) coefficient if sell-side analysts rely heavily (little) on other sell-side analysts during the forecasting process.

Several studies argue that analyst dispersion reflects both analysts' uncertainty and their use of private information (e.g. Barron et al. 2009, Abarbanell et al. 1995). Similar to Barron et al. (2002), I explicitly control for uncertainty by including the $UNCERTAINTY_{i,q}$ variable in Equation 2. I expect the $UNCERTAINTY_{i,q}$ variable to have a positive coefficient, suggesting that more uncertainty leads to analysts using more private information. Barron et al. (2009) provide evidence that the level of analyst dispersion is more reflective of uncertainty and that changes in analyst dispersion is more reflective of analysts' use of private information.[20] In my model, I implicitly examine whether analyst forecast dispersion changes after the filing of the lawsuit, which is more likely to be a result of changes in analysts' use of private information.

3.3 TEST OF HYPOTHESIS 3

I proxy for the informativeness of analyst reports by examining changes in abnormal stock turnover around analyst forecast revisions after the filing of a lawsuit.[21] Bamber et al.

[20] Barron et al. (2009) examine changes in analyst forecast dispersion from one quarter to the next.
[21] As an additional robustness check in Section 6.1, I examine changes in the absolute value of stock prices to examine the information content of analyst revisions. All results presented in Table 8 are qualitatively similar. I

(2010) suggest that changes in stock turnover are reflective of investor belief revisions. Cready and Hurtt (2002) also argue that a change in stock turnover is a powerful indicator for information content.[22] Similar to my tests of H1a and H1b, I specifically examine whether lawsuits affect the aggregate informativeness of analyst reports and the informativeness of individual analyst reports. I investigate both aggregate and individual informativeness of analyst reports because it is possible for analysts to provide more (less) information in aggregate but less (more) information per analyst report. I follow Equation 3 to calculate the proxy for the aggregate informativeness of analyst reports ($INFO{:}VOL_{i,q}$).

$$INFO:VOL_{i,q} = \sum_{a}^{A} \left\{ \underbrace{\left[\left(\frac{VOL_{i,d}}{SHS_{i,d}} \right)_{firm} - \left(\frac{VOL_{exch,d}}{SHS_{exch,d}} \right) \right]}_{PART\ A} - \underbrace{\sum_{d=0}^{60} \left[\left(\frac{VOL_{i,d}}{SHS_{i,d}} \right)_{firm} - \left(\frac{VOL_{exch,d}}{SHS_{exch,d}} \right) \right] \Big/ 60}_{PART\ B} \right\} * 100 \qquad \textbf{(3)}$$

To calculate the $INFO{:}VOL_{i,q}$ variable, I first identify the raw stock turnover ($VOL_{i,d}$ / $SHS_{i,d}$) for all days that an analyst revision is issued during quarter q for firm i. $VOL_{i,d}$ is the number of shares traded and $SHS_{i,d}$ is the number of shares outstanding on the day that the analyst revision is issued. Following Garfinkel (2009), I perform two adjustments to the raw stock turnover for each analyst revision. First, I subtract the average stock turnover for the stock exchange on which the stock is listed ($VOL_{exch,d}$ / $SHS_{exch,d}$) from the raw stock turnover to adjust for macroeconomic shocks, which is denoted as *PART A* of Equation 3. Second, I subtract the average exchange adjusted stock turnover for firm i during quarter q to help control for

---

focus my discussion on the stock turnover proxy because it is easier to understand the economic magnitude of changes in trading volume versus changes in the absolute value of aggregate returns.

[22] Several papers in the accounting literature use stock turnover as a measure for informativeness. Beaver (1968) is among the first to use abnormal trading volume to capture the information content of earnings announcements. Landsman and Maydew (2002), Kiger (1972), and Morse (1981) all use trading volume reactions to measure the information content of earnings announcements.

systematic changes in the firm's stock turnover over time, which is denoted as *PART B* of Equation 3. Before summing the abnormal stock turnovers that occur on the analyst revision days for firm *i* during quarter *q*, I delete all days that fall within the three-day window of an earnings announcement, a management forecast, or the filing date of the lawsuit. I delete these days to reduce the likelihood of misattributing the information produced by other information providers to sell-side analysts. I also delete these days when calculating the average stock turnover for firm *i* during quarter *q* to obtain a more accurate estimate of the firm's inherent stock turnover for the quarter. If more than one analyst revision is issued on the same day, the daily stock turnover is only included once in the calculation of the $INFO{:}VOL_{i,q}$ variable.[23] Finally, I sum the abnormal stock turnovers for firm *i* during quarter *q* and multiply it by 100. I denote each analyst revision that occurs for firm *i* during quarter *q* with the subscript *a* and the total number of revisions that occurred for firm *i* during quarter *q* with the subscript *A*.

I calculate the proxy for the informativeness of individual analyst revisions ($INFO{:}VOL/\#REV_{i,q}$) by dividing the $INFO{:}VOL_{i,q}$ variable by the total number of revisions used to calculate the $INFO{:}VOL_{i,q}$ variable. Similar to the $\#REVISIONS_{i,q}$ variable, all analyst revisions issued on the same day as another revision by the same analyst for the same firm are counted as one analyst revision. An increase in the $INFO{:}VOL/\#REV_{i,q}$ variable suggests that the average analyst revision has become more informative after the filing of the lawsuit.

I use the following model to examine whether the informativeness of analyst revisions in aggregate and individually change after the filing of the lawsuit.

[23] The issuance of analyst revisions may cluster in time; therefore, I delete all duplicate days to avoid double counting days that exist in the three-day window surrounding more than one analyst revision.

$$DEP\ VAR_{i,q} = \alpha_0 + \alpha_1 CLASS_{i,q} + \alpha_2 INTERIM_{i,q} + \alpha_3 FILING_{i,q} + \alpha_4 POST\text{-}FILING_{i,q} + \alpha_5 SIZE_{i,q} + \alpha_6 SALES\ GROWTH_{i,q} + \alpha_7 BK/MKT_{i,q} + \alpha_8 \%INST_{i,q} + \alpha_9 ROA_{i,q} + \alpha_{10} MGMT\ FOR_{i,q} + \alpha_{11} \#ANALYSTS_{i,q} + \alpha_{12} UNCERTAINTY_{i,q} + \Sigma_q QTR/YEAR_q + \Sigma_j INDUSTRY_j + \varepsilon_{i,q} \quad (4)$$

The $DEP\ VAR_{i,q}$ is equal to either the $INFO{:}VOL_{i,q}$ or $INFO{:}VOL/\#REV_{i,q}$ variables. Similar to the preceding tests, I examine the coefficient on the $POST\text{-}FILING_{i,q}$ variable to determine whether analyst revisions are more informative after the filing of the lawsuit. Similar to Equation 2, I include several control variables, as previously defined. I expect sell-side analyst revisions to be more informative for high growth firms ($SALES\ GROWTH_{i,q-1}$). I expect larger firms ($SIZE_{i,q-1}$) to have better information environments, which improve the timeliness of information revealed to investors and result in less informative analyst revisions. I expect institutional ownership ($\%INST_{i,q-1}$) to be positively associated with the informativeness of analyst revisions. Analysts are more likely to have more informative revisions if institutional investors are demanding more information. Similar to Frankel et al. (2006), I anticipate analyst following ($\#ANALYSTS_{i,q}$) to be negatively associated with the average informativeness of analyst revisions ($INFO{:}VOL/\#REV_{i,q}$). I do not have a directional prediction for the coefficient on the $\#MGMT\ FOR_{i,q}$ variable. To the extent that management forecasts and analyst reports are substitutes, I expect management forecasts ($\#MGMT\ FOR_{i,q}$) to reduce the informativeness of analyst reports. However, Lang and Lundholm (1996) suggest that analyst-produced information is a complement to management-produced information, suggesting a positive coefficient on the $MGMT\ FOR_{i,q}$ variable. Neither do I have a directional prediction for coefficients on the $ROA_{i,q-1}$ nor $BK/MKT_{i,q-1}$ variables, but I include them in the model for completeness.

4. MAIN RESULTS

4.1 SAMPLE

I start my sample after the passage of Regulation FD because sell-side equity analysts are restricted from obtaining private information from management that is not timely disclosed to all other market participants. By starting my sample after Regulation FD, I reduce the likelihood of the alternative explanation that management simply uses sell-side analysts as an alternative information conduit to communicate management-produced information to investors after the filing of the lawsuit. Post-Regulation FD, the information content of analyst reports is more likely to be based on the analyst's ability to assimilate firm, industry, and market data. Mohanram and Sunder (2006) provide evidence consistent with analysts using more private information after the passage of Regulation FD.

I obtain a sample of security class action lawsuits from Cornerstone Research and Stanford Law School. Similar to Kim and Skinner (2010), I exclude all IPO and analyst lawsuits that are common around 2001.[24] My final sample consists of 565 security class action lawsuits that were filed between 2001 and 2009. Panel A of Table 1 provides descriptive statistics on the number of lawsuits filed in each year. The number of lawsuits appears to be fairly well distributed across years. Panel B of Table 1 provides descriptive statistics on the number of firms subject to litigation by industry, defined by two-digit SIC code. Similar to Rogers and Van Buskirk (2009), the lawsuits in my sample tend to be concentrated in SIC code 73, 28, and 36.

[24] I exclude all IPO and analyst lawsuits around 2001 given the unique type of lawsuit brought during these time periods. These firms likely have significantly different firm characteristics and could influence the inferences of this study. As an additional robustness check, I eliminate 15 lawsuits related to mergers, changes in firm operations, and mutual funds and find qualitative similar results as those reported in Table 3, 4, and 5. Mergers and changes in firm operations likely increase investors' demand for information, possibility resulting in analysts changing their behavior and having more informative reports.

All financial statement data are obtained from COMPUSTAT and all stock return data are obtained from CRSP. Institutional ownership data are obtained from Thomson Reuters. Following Piotroski and Roulstone (2004), I set the institutional ownership variable to zero if missing. All sell-side analyst data are obtained from I/B/E/S. To be included in the dataset, I require each firm-quarter observation to have an earnings announcement for quarter *q-1* and *q*. I delete all observations with insufficient data to calculate the independent and dependent variables. My final sample includes 7,730 firm/quarter observations.

I include descriptive statistics in Table 2. Several descriptive statistics are useful in understanding the type of firm included in my sample. First, the firms included in the sample are relatively large with a mean (median) market value of approximately 12.7 (1.7) billion dollars. The mean (median) number of analysts following the firm on a quarterly basis is 11.5 (10) and the percent of shares held by institutional investors is approximately 52% (62%). The mean and median return on assets are also positive. Each of the previously mentioned descriptive statistics suggests that the average (median) firm included in my sample is relatively large with a well-established information environment. Therefore, the results in this paper are not likely generalizable to all firms subject to a security class action lawsuit. These results are applicable to larger firms with relatively high institutional ownership and high analyst following.

4.2 H1 RESULTS

In Figure 2, I graph the mean number of analyst revisions issued ($\#REVISIONS_{i,q}$) in each of the five litigation periods (i.e. pre-class, class, interim, filing, and post-filing periods). The average number of analyst revisions increases from 19.636 revisions in the pre-class period to 21.636 revisions in the post-filing period. The change in the $\#REVISIONS_{i,q}$ variable from the pre-class period to the post-filing period is significant at the 1% level. It also appears that the

number of revisions increases from the pre-class period to each of the other litigation periods. This result is not that surprising given the alleged misconduct and the significant firm events that are occurring during the class, interim, and filing periods.

I present the multivariate regression results with the $\#REVISIONS_{i,q}$ variable as the dependent variable in column 1 of Table 3. Consistent with the univariate test, I find the coefficient on the $POST\text{-}FILING_{i,q}$ variable is significantly positive at the 1% level and equal to 1.959. This result suggests that 1.96 more analyst revisions are issued during average quarter following the lawsuit's filing relative to the pre-class period. After controlling for size, growth, performance, uncertainty, and other firm characteristics, this evidence is consistent with sell-side analysts increasing the number of aggregate services provided to investors after the filing of a lawsuit.[25] In addition, the coefficient on the $CLASS_{i,q}$ variable is insignificant, suggesting no change in the $\#REVISIONS_{i,q}$ variable from the pre-class period to the class period. The coefficients on the $INTERIM_{i,q}$ and $FILING_{i,q}$ variables are significant at the 1% level and consistent with analysts providing more services during quarters of notable firm events. The coefficient on the $POST\text{-}FILING_{i,q}$ variable is greater than the coefficient on the $CLASS_{i,q}$ variable at the 1% level, suggesting a significant increase in the aggregate number of services from the class period to the post-filing period.

In Figure 3, I univariately examine whether the average number of analyst revisions issued per analyst ($\#REV/ANAL_{i,q}$) changes from the pre-class period to the post-filing period. The number of analyst revisions issued per analyst increases from 1.755 during the pre-class

[25] The intercept in column 1 of Table 3 represents the number of analyst revisions issued for the litigated firm during the pre-class period after controlling for size, growth, value/glamour, institutional ownership, performance, and voluntary disclosure. The intercept in column 1 of Table 3 is negative and significant at the 1 percent level. To evaluate the average number of analyst revisions issued for the firm during the pre-class period, I first multiply the coefficients of each control variable by the average control variable values. I then sum the fitted control variables and the intercept to obtain the average number of analyst revisions issued for the average quarter during the pre-class period, which is equal to 18.933. This suggests that 18.933 analyst revisions are issued during the average firm-quarter included in the pre-class period.

period to 1.797 during the filing and post-filing periods. This change is significant at the 5% level. Similar to the preceding test, there appears to be an increase in the $\#REV/ANAL_{i,q}$ variable from the pre-class period to the interim and filing periods.

The multivariate results in column 2 of Table 3 are consistent with the univariate results. The coefficient on the $POST\text{-}FILING_{i,q}$ variable is equal to 0.074 and significant at the 1% level. Similar to column 1, the coefficient on the $CLASS_{i,q}$ variable is insignificant and the coefficients on the $INTERIM_{i,q}$ and $FILING_{i,q}$ variables are significant at the 1% level. The coefficient on the $POST\text{-}FILING_{i,q}$ variable is greater than the coefficient on the $CLASS_{i,q}$ variable at the 1% level, suggesting that average individual analyst provides more services during the post-filing period relative to the class period. The evidence described above is consistent with the individual analyst providing more services to investors after the filing of the lawsuit.

The majority of the coefficients on the control variables in each regression discussed above are consistent with expectations. In each regression, the coefficient on the $SIZE_{i,q-1}$ variable is positive and significant, suggesting that analysts issue more reports in aggregate and individually for larger firms. The coefficients on the $\#MGMT\ FOR_{i,q}$ variable is significantly positive and consistent with Lang and Lundholm (1996). The coefficients on the $UNCERTAINTY_{i,q}$ variable is positive and significant, suggesting that analysts provide more revisions in aggregate and individually when uncertainty is greater.

4.3 H2 RESULTS

In Figure 4, I graph the mean $ANALYST\ DISP_{i,q}$ variable for each of litigation period. Analyst dispersion increases from 0.195 in the pre-class period to 0.349 during the post-filing period. The change from the pre-class period to the post-filing period is significant at the 1% level. In addition, the $ANALYST\ DISP_{i,q}$ variable seems to increase from the pre-class period to

the interim and filing periods. This is consistent with analysts using more private information when investors are demanding additional information around significant firm events.

I also provide multivariate evidence on the increase in the $ANALYST\ DISP_{i,q}$ variable after the filing of the lawsuit in Table 4. The coefficient on the $POST\text{-}FILING_{i,q}$ variable is significant at the 1% level and equal to 0.075, which is 27% of the mean $ANALSYT\ DISP_{i,q}$ variable. This evidence is consistent with analysts using more private information after the filing of a lawsuit. The coefficient on the $CLASS_{i,q}$ variable is insignificant, suggesting no change in the $ANALYST\ DISP_{i,q}$ variable from the pre-class period to the class period. I also test and find evidence that the coefficient on the $CLASS_{i,q}$ variable is significantly less than the coefficient on the $POST\text{-}FILING_{i,q}$ variable, suggesting an increase in analysts' use of private information from the class period to the post-filing period. The coefficient on the $INTERIM_{i,q}$ and $FILING_{i,q}$ variables are significant at the 1% level and consistent with the previous explanation that analysts use more private information during periods of increased investor demand.

The majority of the control variables appear to have reasonable coefficients and signs. The coefficient on the $SIZE_{i,q-1}$ variable is negative and significant, suggesting that sell-side analysts use less private information when evaluating larger firms. This negative relation seems reasonable since larger firms have better information environments, making it more difficult for analysts to produce useful private information. Consistent with Barron et al. (2009), the coefficient on the $UNCERTAINTY_{i,q}$ variable is positive and significant at the 1 percent level, suggesting that uncertainty increases analyst forecast dispersion.

4.4 H3 RESULTS

Figure 5 provides the mean $INFO\text{:}VOL_{i,q}$ variable for each of the five litigation periods. The $INFO\text{:}VOL_{i,q}$ variable is equal to 2.179 during the pre-class period and 2.939 in the post-

filing period. This change is significant at the 1% level. The average $INFO{:}VOL_{i,q}$ appears to also increase from the pre-class period to the interim and filing periods, which is consistent with analysts providing more information in aggregate around significant firm events.

I present the multivariate regression results in column 1 of Table 5. Consistent with the univariate results, the coefficient on the $POST\text{-}FILING_{i,q}$ variable is positive and significant at the 1% level. The coefficient is equal to 1.074, which is 38% of the mean $INFO{:}VOL_{i,q}$ variable. A coefficient of 1.07 suggests that approximately 1% more shares are traded around analyst revisions during the average quarter following the filing of the lawsuit. These results also suggest that the change in the aggregate informativeness of analyst revisions is economically significant. The coefficients on the $CLASS_{i,q}$ variable is insignificant, providing no evidence that the $INFO{:}VOL_{i,q}$ variable changes from the pre-class period to the class period. The coefficients on the $INTERIM_{i,q}$ and $FILING_{i,q}$ variables are significantly positive and consistent with analyst reports becoming more informative around the revelation of potential misconduct. The coefficient on the $POST\text{-}FILING_{i,q}$ variable is significantly greater than the coefficient on the $CLASS_{i,q}$ variable at the 1% level, suggesting that the aggregate informativeness of analyst reports increases from the class period to the post-filing period.

In Figure 6, I graph the mean $INFO{:}VOL/\#REV_{i,q}$ during each of the five litigation periods. The mean $INFO{:}VOL/\#REV_{i,q}$ variable increases from 0.271 during the pre-class period to 0.348 during the post-filing period, which is significant at the 1% level. Similar to the preceding test, it appears that the $INFO{:}VOL/\#REV_{i,q}$ increases from the pre-class period to the interim and filing periods, as well.

The multivariate results using the $INFO{:}VOL/\#REV_{i,q}$ variable are found in column 2 of Table 5. Similar to the results in column 1, the coefficient on the $POST\text{-}FILING_{i,q}$ variable is

significantly positive at the 1% level and equal to 0.147, which is 43% of the mean $INFO:VOL/\#REV_{i,q}$ variable. The coefficient of 0.147 on the $POST\text{-}FILING_{i,q}$ variable suggests that 0.15% more shares are traded around the average analyst revision issued during the post-filing period relative to the pre-class period. This evidence is consistent with an individual analyst report being more informative after the filing of the lawsuit. The coefficient on the $CLASS_{i,q}$ ($INTERIM_{i,q}$) [$FILING_{i,q}$] variables are all significant at the 10% (1%) [1%] level. These results are not surprising since investors likely demand more information from sell-side analysts during periods of heightened scrutiny and significant firm events. In untabulated results, I find that the coefficient on the $POST\text{-}FILING_{i,q}$ variable is greater than the coefficient on the $CLASS_{i,q}$ variable at the 1% level, suggesting a significant increase in the informativeness of individual analyst reports from the class period to the post-filing period.

The majority of the control variables in each regression behave as expected. The coefficients on the $SALES\ GROWTH_{i,q-1}$ variable is significantly positive, suggesting that analyst revisions in aggregate and individually are more informative for high growth firms. The coefficients on the $SIZE_{i,q-1}$ and $\#MGMT\ FOR_{i,q}$ variables are significantly negative in each regression, suggesting that better information environments reduce the informativeness of analyst reports in aggregate and individually.

5. CROSS-SECTIONAL RESULTS

In the previous tests, I provide evidence consistent with analysts providing more services, using more private information, and providing more informative reports after the filing of a lawsuit. I expect that the prior results vary in the cross-section based on firm and lawsuit characteristics. I examine whether (1) the surprise of the lawsuit to investors and (2) the visibility of the firm affect the level of services provided by analysts, the amount of private information used by analysts, and the amount of information provided by analyst reports after the filing of the lawsuit.

5.1 SURPRISE OF CLASS ACTION LAWSUIT

The magnitude of the lawsuit's surprise to the market is a function of the expected likelihood of the validity and gravity of the allegations prior to the filing of the lawsuit. Gande and Lewis (2009) argue that an increased likelihood of litigation prior to the lawsuit's filing decreases the magnitude of shareholder losses around the lawsuit's filing date. If the likelihood and gravity of the allegations are largely unanticipated by investors, I expect a greater increase in (1) the number of analyst revisions in aggregate and individually, (2) analysts' use of private information, and (3) the informativeness of analyst reports in aggregate and individually. If analysts are anticipating litigation, they are more likely to be providing more services, using more private information, and providing more informative reports prior to the filing of the lawsuit.

I proxy for the surprise of the lawsuit's filing to the marketplace using the cumulative abnormal return (CAR) starting five days prior through five days following the filing of the lawsuit, allowing me to obtain both the immediate market reaction to the lawsuit as well as additional information produced during the week before and the week after the filing. Since the

filing of a lawsuit is a negative event, I posit that a more negative CAR is more of a surprise to the market. I define a high (low) surprise lawsuit as an announcement CAR lower (higher) than the median announcement CAR of all class action lawsuits included in my sample. All observations associated with a high surprise lawsuit have the $HIGH\ SURP_{i,q}$ variable set equal to one. I use Equation 5 to examine whether analysts provide more services, use more private information, and have more informative reports when the lawsuit is more of a surprise to investors.

$$\begin{aligned} \textbf{DEP VAR}_{i,q} = \quad & \alpha_0 + \alpha_1 \textbf{CLASS}_{i,q} + \alpha_2 \textbf{INTERIM}_{i,q} + \alpha_3 \textbf{FILING}_{i,q} + \alpha_4 \textbf{POST-FILING}_{i,q} + \alpha_5 \textbf{HIGH SURP}_{i,q} + \alpha_6 \textbf{HIGH SURP}_{i,q} * \textbf{CLASS}_{i,q} + \alpha_7 \textbf{HIGH SURP}_{i,q} * \textbf{INTERIM}_{i,q} + \alpha_8 \textbf{HIGH SURP}_{i,q} * \textbf{FILING}_{i,q} + \alpha_9 \textbf{HIGH SURP}_{i,q} * \textbf{POST-FILING}_{i,q} + \lambda_j \textbf{CONTROLS}_{j,i,q} + \textbf{HIGH SURP}_{i,q} * \lambda_j \textbf{CONTROLS}_{j,i,q} + \varepsilon_{i,q} \end{aligned} \tag{5}$$

I run separate regressions for each of the five dependent variables (i.e. $\#REVISIONS_{i,q}$, $\#REV/ANAL_{i,q}$, $ANALYST\ DISP_{i,q}$, $INFO:VOL_{i,q}$, and $INFO:VOL/\#REV_{i,q}$) previously examined. The coefficient on the $POST\text{-}FILING_{i,q}$ variable represents the change in the dependent variable from the pre-class period to the post-filing period for low surprise lawsuits. The sum of the coefficients on the $POST\text{-}FILING_{i,q}$ variable and the $HIGH\ SURP_{i,q}$ * $POST\text{-}FILING_{i,q}$ interaction represent the change in the dependent variable from the pre-class period to the post-filing period for the high surprise lawsuits.[26] The coefficient on the $HIGH\ SURP_{i,q}$ * $POST\text{-}FILING_{i,q}$ interaction represents the incremental difference in the change for the dependent

[26] The average $DEP\ VAR_{i,q}$ for low surprise lawsuits is equal to α_0 in the pre-class period, $\alpha_0 + \alpha_4$ in the post-filing period. The average $DEP\ VAR_{i,q}$ for the high surprise lawsuits is equal to $\alpha_0 + \alpha_5$ in the pre-class period and $\alpha_0 + \alpha_5 + \alpha_4 + \alpha_9$ in the post-filing period. To calculate the change in the $DEP\ VAR_{i,q}$ for the high surprise lawsuits from the pre-class to the post-filing period, I subtract the average $DEP\ VAR_{i,q}$ in the pre-class period ($\alpha_0 + \alpha_5$) from the average $DEP\ VAR_{i,q}$ in the post-filing period ($\alpha_0 + \alpha_5 + \alpha_4 + \alpha_9$). Therefore, the average change in the $DEP\ VAR_{i,q}$ for the high surprise lawsuits is represented by $\alpha_4 + \alpha_9$. A similar calculation can be performed to examine the change in the $DEP\ VAR_{i,q}$ from the pre-class period to the class, interim, or filing periods.

variable from the pre-class period to the post-filing period for high surprise lawsuits relative to low surprise lawsuits.

Table 6 presents the empirical results examining each of the three hypotheses previously discussed. I suppress the coefficients for the control variables and their interactions with the $HIGH\ SURP_{i,q}$ variable for brevity. The coefficient on the $POST\text{-}FILING_{i,q}$ variable is significantly positive in each regression. This evidence suggests that analysts provide more services, use more private information, and have more informativeness revisions after the filing of a low surprise lawsuit.

As previously mentioned, the coefficient on the interaction between the $POST\text{-}FILING_{i,q}$ and the $HIGH\ SURP_{i,q}$ variables tests whether the change in the dependent variable is greater for the high surprise lawsuits relative to the low surprise lawsuits. The interaction is significantly positive at the 5% level for the $INFO{:}VOL_{i,q}$ and $INFO{:}VOL/\#REV_{i,q}$ regressions. This evidence is consistent with the informativeness of analyst revisions increasing more for high surprise lawsuits relative to low surprise lawsuits. The coefficient on the interaction between the $POST\text{-}FILING_{i,q}$ and $HIGH\ SURP_{i,q}$ variables is insignificant in the $\#REVISIONS_{i,q}$, $\#REV/ANAL_{i,q}$, and $ANALYST\ DISP_{i,q}$ regressions. The lack of significance of the coefficient on these coefficients could be due to the lack heterogeneity in the dataset. As discussed in Section 4.1, the firms included in my sample have relatively high market values, high institutional ownership, and high analyst following. Lawsuits targeting these types of firms may be significant firm events regardless of the impact of the lawsuit on the stock price.

5.2 FIRM VISIBILITY

The visibility of the firm subject to litigation likely impacts whether analysts provide more services, use more private information, and have more informative reports after the filing

of the lawsuit. A more visible firm is likely given more attention by the media and analysts due to the increased investor and shareholder following (Bhushan 1989, Soltes 2010, and Bushee et al. 2010). Therefore, the filing of a lawsuit for a highly visible firm will likely attract more attention and have a greater impact on investors' demand for information, resulting in analysts providing more services after the lawsuit. I also expect analysts to respond to the increased demand for information by using more private information during the forecasting process. Lastly, it is ambiguous whether the informativeness of analyst revisions increases or decreases after the filing of the lawsuit. On one hand, the added attention and use of private information by analysts could result in more informative reports. On the other hand, more visible firms likely have better information environments with more market participants producing information about the firm, potentially decreasing the incremental informativeness of analyst revisions for more visible firms.

I proxy for firm visibility using the average market value of the litigated firm during the class period (period of the alleged misconduct). The firm's market value is likely reflective of the visibility of the firm in the marketplace. Larger firms are more likely to have more media coverage and higher analyst following (Bhushan 1989, Soltes 2010, and Bushee et al. 2010). I define high visibility firms as having a market value during the class period above the sample median. High visibility firms are designated with the $VISIBLE_{i,q}$ indicator variable. For each of my hypotheses, I examine whether the magnitude of the prediction for each of my hypotheses is greater for more visible firms. I use the following equation to perform the empirical tests.

$$DEP\ VAR_{i,q} = \alpha_0 + \alpha_1 CLASS_{i,q} + \alpha_2 INTERIM_{i,q} + \alpha_3 FILING_{i,q} + \alpha_4 POST\text{-}FILING_{i,q} + \alpha_5 VISIBLE_{i,q} + \alpha_6 VISIBLE_{i,q} * CLASS_{i,q} + \alpha_7 VISIBLE_{i,q} * INTERIM_{i,q} + \alpha_8 VISIBLE_{i,q} * FILING_{i,q} + \alpha_9 VISIBLE_{i,q} * POST\text{-}FILING_{i,q} + \lambda_j CONTROLS_{j,i,q} + VISIBLE_{i,q} * \lambda_j CONTROLS_{j,i,q} + \varepsilon_{i,q} \quad (6)$$

The interpretation of the coefficients in Equation 6 is similar to the interpretation of the coefficients in Equation 5. Results are reported in Table 7. The coefficient on the *POST-FILING*$_{i,q}$ variable is positive and significant in the *INFO:VOL*$_{i,q}$ and *INFO:VOL/#REV*$_{i,q}$ regressions. This evidence suggests that the informativeness of analyst revisions increases after the filing of the lawsuit for less visible firms. The coefficients on the *POST-FILING*$_{i,q}$ variable is insignificant in the *#REVISIONS*$_{i,q}$, *#REV/ANAL*$_{i,q}$, and *ANALYST DISP*$_{i,q}$ regressions, providing no evidence that analysts provide more services or use more private information after the filing of a lawsuit for less visible firms.

The coefficient on the interaction between the *POST-FILING*$_{i,q}$ and *VISIBLE*$_{i,q}$ variables is significantly positive in the *#REVISIONS*$_{i,q}$ and *#REV/ANAL*$_{i,q}$ regressions. This evidence suggests that analysts provide more services after the filing of a lawsuit for highly visible firms and not necessarily for less visible firms. In the *ANALYST DISP*$_{i,q}$ regression, neither the coefficient on the *POST-FILING*$_{i,q}$ variable nor the coefficient on the *VISIBLE*$_{i,q}$ * *POST-FILING*$_{i,q}$ interaction are significant. However, in untablulated results the sum of the coefficients on the *POST-FILING*$_{i,q}$ variable and *VISIBLE*$_{i,q}$ * *POST-FILING*$_{i,q}$ interaction is positive and significant at the 1% level, which suggests that the increase in the *ANALYST DISP*$_{i,q}$ variable is concentrated in the high visibility firms. Turning to column 4 and 5, I find that the coefficient on the interaction between the *POST-FILING*$_{i,q}$ and *VISIBLE*$_{i,q}$ variables is insignificant in column 4 and significantly negative at the 10% level in column 5. This suggests that the increase in the

informativeness of individual analyst reports is smaller for more visible firms relative to less visible firms. However, in untabulated results I find that the sum of the coefficients on the *POST-FILING*$_{i,q}$ variable and the *POST-FILING*$_{i,q}$ * *VISIBLE*$_{i,q}$ interaction is still significantly positive, suggesting that individual analyst reports still become more informative after the filing of the lawsuit for more visible firms.

6. ROBUSTNESS CHECKS

I perform several robustness checks to ensure that my results are not spurious. I examine whether the previously reported results are robust when using an alternative information content proxy, when controlling for other significant firm events that may occur during the post-filing period, and when using several alternative model specifications.

6.1 ALTERNATIVE INFORMATION CONTENT PROXY

I first replace the stock turnover proxy, described in Section 3.3, with a similar proxy using the absolute value of stock returns to examine whether the informativeness of analyst revisions changes in aggregate and individually after the filing of the lawsuit. Bamber et al. (2010) identify a distinct informational difference between changes in price and changes in stock turnover. They suggest that "price reactions primarily reflect the change in the aggregate market's expectation of firm value, whereas volume reactions also reflect differential belief revisions." Despite the informational differences between returns and stock turnover, I calculate a return proxy to measure the aggregate informativeness of analyst revisions and include it as Equation 7.

$$INFO:RET_{i,q} = \sum_{a}^{A} \left| RET_{i,d} - RET_{mkt,d} \right| * 100 \qquad (7)$$

Similar to the $INFO:VOL_{i,q}$ variable, I first identify all days that an analyst revision is issued during quarter q for firm i.[27] I then market adjust the returns by subtracting the equally weighted market return from the raw return. Finally, I sum the absolute value of the abnormal returns for firm i during quarter q to calculate the $INFO:RET_{i,q}$ variable. I then calculate the

[27] Similar to the $INFO:VOL_{i,q}$ and $INFO:VOL/\#REV_{i,q}$ variables, I delete all dates that are part of the three day window surrounding management forecasts, earnings announcements, and lawsuit filings.

INFO:RET/#REV$_{i,q}$ variable by dividing the *INFO:RET*$_{i,q}$ variable by the total number of revisions issued by analysts during quarter *q* for firm *i*.

I have tabulated the results using the *INFO:RET*$_{i,q}$ and *INFO:RET/#REV*$_{i,q}$ variables as the dependent variables in Table 8. Similar to the stock turnover results in Table 5, the coefficient on the *POST-FILING*$_{i,q}$ variable is significant and positive, suggesting that analyst revisions are more informative in aggregate and individually after the filing of the lawsuit. I do not report the results using the abnormal returns proxy with my main results due to the difficulty in interpreting the economic magnitude of changes in the absolute value of abnormal returns.

6.2 OTHER SIGNIFICANT FIRM EVENTS

It is possible that other significant firm events are more likely to occur after the filing of a lawsuit, potentially increasing analysts' attention around those firm events. In additional robustness tests, I control for amended lawsuit filing dates and manager turnover to reduce the likelihood of other significant firm events inducing the results previously reported in this paper.

The date that the lawsuit is amended or consolidated could be a significant firm event that reveals added information about the revised class action period (i.e. period of the alleged misconduct), lawsuit allegations, and/or plaintiffs affected by the lawsuit. In this sample, the median number of days between the filing of the original lawsuit and the amended/consolidated filing is 188 days. In Panel A of Table 9, I present the multivariate regression results with an additional indicator variable that is set to one during the quarter in which the lawsuit is amended or consolidated. When the *AMEND*$_{i,q}$ variable is set to one, I reset the *POST-FILING*$_{i,q}$ variable equal to zero. The results in Panel A of Table 9 are very similar to those previously presented in Table 3, 4, and 5. The coefficient on the *POST-FILING*$_{i,q}$ variable is significant in the *#REVISIONS*$_{i,q}$, *#REV/ANAL*$_{i,q}$, *ANALYST DISP*$_{i,q}$, *INFO:VOL*$_{i,q}$, and *INFO:VOL/#REV*$_{i,q}$

regressions, suggesting that my inferences are unchanged after controlling for the quarter the amended/consolidated lawsuit is filed. As expected, the coefficient on the $AMEND_{i,q}$ variable is significant in each regression, with exception to the $ANALYST\ DISP_{i,q}$ regression in column 3.

Niehaus and Roth (1999) provide evidence that the likelihood of CEO turnover increases after the filing of a lawsuit. A change in CEO may cause investors to demand additional information from sell-side analysts to assess the manager's impact on the firm. To ensure that the previous results are not driven by changes in CEO turnover, I include two additional indicator variables that are set equal to one during the quarter that the CEO turnover occurs ($CHG\ CEO_{i,q}$) and another variable that is set equal to one during the four quarters after the new CEO is appointed ($POST\text{-}CHG\ CEO_{i,q}$). The results are presented in Panel B of Table 9. The $POST\text{-}FILING_{i,q}$ variable is significant in each of the five regressions, suggesting that my results are not significantly influenced by CEO turnover. Interestingly, neither the coefficient on the $CHG\ CEO_{i,q}$ nor $POST\text{-}CHG\ CEO_{i,q}$ variable is significant at any conventional level.

6.3 ALTERNATIVE MODEL SPECIFICATIONS

6.3.1 ALL OBSERVATIONS WITH SUFFICIENT DATA

I have identified several additional model specifications that help to reduce the likelihood that the results in this paper are induced by the model specifications detailed in Section 3.1, 3.2, and 3.3. In my first robustness test, I include all other firm/quarter observations with sufficient data to calculate the dependent and independent variables in the sample. In my main results, I include industry and calendar year/quarter dummy variables to control for systematic differences in the dependent variable across industry and over time. However, litigated firms may not be fully representative of how the dependent variables are changing across industries and over time. Therefore, I include all firm/quarter observations with sufficient data to calculate the dependent

and independent variables in the regression to more fully control for systematic changes across industry and over time.

Panel A in Table 10 presents the results with all firm quarter observations included in the sample. The $LAWSUIT_{i,q}$ variable is set equal to one for all firm/quarter observations that are part of one of the five litigation periods. All other variables are as previously defined. I interact the $LAWSUIT_{i,q}$ variable with each control variable, not including the industry and calendar year/quarter dummy variables. Similar to the prior model specifications, the $POST\text{-}FILING_{i,q}$ variable still represents the change in the dependent variable from the pre-class period to the post-filing period for the litigated firm. Consistent with the results previously reported, the $POST\text{-}FILING_{i,q}$ variable is significant and positive in each regression presented in Panel A of Table 10.

6.3.2 MATCHED SAMPLE

As a second robustness check, I identify a set of control firms by matching each litigated firm to a non-litigated firm with the closest market value.[28, 29] I then compare the change in the dependent variable for the litigated firm to that of the matched firm. This model specification is an alternative method to control for unidentifiable intertemporal changes in the dependent variable. I exclude calendar year/quarter dummy variables when running this model specification.

In Panel B of Table 10, I present the results comparing the change in the dependent variable for the litigated firms to the change for the matched non-litigated firms. The $MATCH_{i,q}$

[28] Identifying a matched sample based on firm and industry characteristics may reduce the power of my tests in two ways. First, sell-side analysts may follow other firms with similar characteristics more closely to produce relevant information about the litigated firm. Second, sell-side analysts may follow other firms with similar firm characteristics more closely to determine whether or not the other firms have engaged in similar misconduct. Firms with similar characteristics to the litigated firm may have similar disclosure or accounting procedures.

[29] Since the litigated firm's market value changes from quarter to quarter, I match the market value of the litigated firm during the first quarter the firm is included in any of the five litigation periods (i.e. pre-class, class, interim, filing, or post-filing) to the market value of a non-litigated firm during the same calendar year/quarter.

variable is set equal to one for all firm/quarter observations that are associated with the matched firm. The *MATCH CLASS*$_{i,q}$, *MATCH INTERIM*$_{i,q}$, *MATCH FILING*$_{i,q}$, and *MATCH POST-FILING*$_{i,q}$ variables are indicator variables set equal to one during the same calendar year/quarter as the corresponding litigation period. The interpretation of the coefficient on the *MATCH CLASS*$_{i,q}$, *MATCH INTERIM*$_{i,q}$, *MATCH FILING*$_{i,q}$, and *MATCH POST-FILING*$_{i,q}$ variables is the average change in the dependent variable from the pre-class period to the class, interim, filing, and post-filing periods for the matched firm. Consistent with the main results presented in Table 3, 4, and 5, the coefficient on the *POST-FILING*$_{i,q}$ variable is positive and significant in each of the five regressions presented in Panel B of Table 10. The coefficient on the *MATCH POST-FILING*$_{i,q}$ variable is insignificant in each of the five regressions, providing little evidence that the dependent variable changes for the matched firm from the pre-class period to the post-filing period. Using F-tests, presented toward the bottom of Panel B, I find that the coefficient on the *POST-FILING*$_{i,q}$ variable is greater than the coefficient on the *MATCH POST-FILING*$_{i,q}$ variable. This evidence suggests that analysts provide more services, use more private information, and have more informative reports when a firms is subject to a lawsuit compared to a control firm matched by market value.

6.3.3 FIRMS INCLUDED IN THE POST-FILING PERIOD

In the previously reported results, I do not require the litigated firm to be represented in each of the five litigation periods to be included in the sample. If the filing of the lawsuit increases the likelihood of delisting or bankruptcy, it is possible that my results are a reflection of a change in the type of firm included in my sample. For example, it is possible that smaller

litigated firms are more likely to go bankrupt or delist after the lawsuit.[30] Since Bhushan (1989) provides evidence that smaller firms are more likely to have a lower analyst following, it is possible that smaller firms that have fewer analyst services are dropping out of my sample in the post-filing period, biasing my results in favor of finding an increase in analyst services after the lawsuit is filed.

To reduce the likelihood that these results are biased toward finding an increase in analyst services, I perform an additional robustness check in which I only include firm/quarter observations associated with a lawsuit that is represented in the post-filing period. I present these results in Panel C of Table 10. All results are qualitatively similar to those reported in Table 3, 4, and 5.

6.3.4 CLUSTERING BY TIME AND FIRM

In the main results presented in Table 3, 4, and 5, I cluster the standard errors by firm, include industry dummy variables, and include calendar year/quarter dummy variables. Petersen (2009) argues that calendar year/quarter dummy variables only correct the standard errors for fixed cross-sectional correlation. It is possible that some non-fixed cross-sectional correlation is present in the data and could be deflating the standard errors to induce a significant coefficient on the $POST\text{-}FILING_{i,q}$ variable. In Panel D of Table 10, I run an additional robustness check where I cluster the standard errors by firm and calendar year/quarter but do not include calendar year/quarter or industry dummy variables. The coefficient on the $POST\text{-}FILING_{i,q}$ variable in each of the five regressions is significant and positive and consistent with the results in Table 3, 4, and 5.

[30] Ohlson (1980) provides evidence that the likelihood of bankruptcy is positively associated with firm size. Luez, Triantis, and Wang (2008) also provide evidence that the likelihood of delisting or going private is higher for smaller firms.

7. CONCLUSION

The filing of a lawsuit under SEC Rule 10(b)-5 represents an accusation that management has misrepresented or withheld useful firm disclosures from investors. In response to the accusations of misconduct, investors and other market participants likely call into question the credibility of management and its disclosure. Prior literature has also found that management also reduces the frequency, precision, and timeliness of voluntary disclosure after the lawsuit is filed. The changes in management credibility and disclosure likely cause investors to demand additional information from other market participants to either assess or substitute for management disclosure. In this paper, I argue that sell-side analyst have the expertise and incentives to provide the additional information demanded by investors after the filing of the lawsuit.

I specifically examine whether security class action lawsuits affect analyst behavior and the informativeness of their reports. I find that sell-side analysts provide more services, use more private information during the forecasting process, and have more informative reports after the filing of the lawsuit. This paper provides additional insight on how the firm's information environment develops to reduce information asymmetries and agency costs between investors and managers. This evidence suggests that sell-side analysts are able to provide at least a portion of the additional information demanded by investors after the filing of a lawsuit.

Foreign regulators and lawmakers have debated the usefulness of class action lawsuits in their economies (The Economist 2007). Several academic studies have provided evidence on how the information environment is both positively and negatively affected by security class action lawsuits (e.g. Romano 1991; Niehaus and Roth 1999; Rogers and Van Buskirk 2009). This study provides additional evidence on how the firm's information environment changes

after the filing of the lawsuit. Beyer et al. (2010) suggests that it is important to understand how firm events affect all market participants when assessing the overall improvement or deterioration of the information environment.

While I provide evidence consistent with sell-side equity analysts becoming incrementally more important after the filing of a security class action lawsuit, I do not provide evidence on whether the firm's overall information environment improves or deteriorates after the lawsuit is filed. Therefore, future research could investigate the effects of class action lawsuits on the firm's overall information environment. In addition, future research might consider investigating the effects of security class action lawsuits on the information environment of those firms not directly targeted by the lawsuit to better understand the effect of litigation on the information environment as a whole. The role of sell-side equity analysts and other market participants (e.g. the financial press, debt analysts, and short-sellers) likely changes as the threat of litigation varies by firm and industry.

REFERENCES

Abarbanell, J., Lanen, W., Verrecchia, R., 1995. Analysts Forecasts as Proxies for Investor Beliefs in Empirical Research. Journal of Accounting and Economics 20, 31-60.

Asquith, P., Mikhail, M., Au, A., 2005. Information Content of Equity Analyst Reports. Journal of Financial Economics 75, 245-282.

Bamber, L., Barron, O., Stevens, D., 2010. Trading Volume around Earnings Announcements and Other Financial Reports: Theory, Research Design, Empirical Evidence, and Directions for Future Research. Contemporary Accounting Research 28, 431-471.

Barron, O., Byard, D., Kile, C., Riedl, E., 2002. High-Technology Intangibles and Analyst Forecasts. Journal of Accounting Research 40, 289-312

Barron, O., Kim, O., Lim, S., Stevens, D., 1998. Using Analysts' Forecasts to Measure Properties of Analysts' Information Environment. The Accounting Review 73, 421-433.

Barron, O., Stanford, M, Yu, Y., 2009. Further Evidence on the Relation between Analyst Forecast Dispersion and Stock Returns. Contemporary Accounting Research 26, 327-357.

Barth, M., Kasznik, R., McNichols, M., 2001. Analyst Coverage and Intangible Assets. Journal of Accounting Research 39, 1-33.

Beaver, W. 1968. The Information Content of Annual Earnings Announcements. Journal of Accounting Research 6, 67-92.

Beyer, A., Cohen, D., Lys, T., Walther, B., 2010. The Financial Reporting Environment: Review of the Recent Literature. Journal of Accounting and Economics 50, 296-343.

Bhushan, R. 1989. Firm Characteristics and Analyst Following. Journal of Accounting and Economics 11, 255-274.

Bradshaw, M. 2011. What Do We Know After Decades of Work? Unpublished Working Paper. Boston College.

Bushee, B., Core, J., Guay, W., Hamm, S., 2010. The Role of the Business Press as an Information Intermediary. Journal of Accounting Research 48, 1-19.

Cornerstone Research. 2009. http://securities.stanford.edu/clearinghouse_research/2009_YIR 33/Cornerstone_Research_Filings_2009_YIR.pdf

Cowen, A., Groysberg, B., Healy, P., 2006. Which Types of Analyst Firms are More Optimistic? Journal of Accounting and Economics 41, 119-146.

Cready, W., Hurtt, D., 2002. Assessing Investor Response to Information Events Using Return and Volume Metrics. The Accounting Review 77, 891-909.

Diamond, D. 1985. Optimal Release of Information by Firms. The Journal of Finance 40, 1071-1094.

Dyck, A., Morse, A., Zingales, L., 2010. Who Blows the Whistle on Corporate Fraud? The Journal of Finance 65, 2213-2253.

Fisch, J., Sale, H., 2003. The Security Analyst as Agent: Rethinking the Regulation of Analysts. Iowa Law Review 88, 1035-1098.

Frankel, R., Kothari, S., Weber, J., 2006. Determinants of the Informativeness of Analyst Research. Journal of Accounting and Economics 41, 29-54.

Gande, A., Lewis, C., 2009. Shareholder-Initiated Class Action Lawsuits: Shareholder Wealth Effects and Industry Spillovers. Journal of Financial and Quantitative Analysis 44, 823-850.

Garfinkel, J. 2009. Measuring Investors' Opinion Divergence. Journal of Accounting Research 47, 1317-1348.

Hayes, R. 1998. The Impact of Trading Commission Incentives on Analysts' Stock Coverage Decisions and Earnings Forecasts. Journal of Accounting Research 36, 299-320.

Hong, H., Kubik, J., Soloman, A., 2000. Security analysts' career concerns and herding of earnings forecasts. RAND Journal of Economics 31, 121-144.

Institutional Investors Magazine. 2011. http://www.institutionalinvestor.com/Research/961/What-Investors-Really-Want.html.

Kiger, J. 1972. An Empirical Investigation of NYSE Volume and Price Reactions to the Announcement of Quarterly Earnings. Journal of Accounting Research 10, 113-128.

Kim, I., Skinner, D., 2010. Measuring Securities Litigation Risk. Unpublished Working Paper. George Washington University.

Landsman, W., Maydew, E., 2002. Has the Information Content of Quarterly Earnings Announcements Declined in the Past Three Decades? Journal of Accounting Research 40, 797-808.

Lang, M., Lundholm, R., 1996. Corporate Disclosure Policy and Analyst Behavior. The Accounting Review 71, 467-492.

Leuz, C., Triantis, A., Wang, T., 2008. Why do Firms Go Dark? Causes and Economic Consequences of Voluntary SEC Deregistrations. Journal of Accounting and Economics 45, 181-208.

Maber, D., Groysberg, B., Healy, P., 2011. Sell-side Analysts' Informational Outputs and Commissions from Covered Stocks. Unpublished Working Paper. University of Southern California.

Mikhail, M., Walther, B., Willis, R., 1999. Does Forecast Accuracy Matter to Security Analysts? The Accounting Review 74, 185-200.

Mohanram, P., Sunder, S., 2006. How Has regulation FD Affected the Operations of Financial Analysts? Contemporary Accounting Research 23, 491-525.

Morse, D. 1981. Price and trading volume reaction surrounding earnings announcements: A closer examination. Journal of Accounting Research 19, 374-383.

Niehaus, G., Roth, G., 1999. Insider Trading, Equity Issues, and CEO Turnover in Firms Subject to Securities Class Action. Financial Management 28, 52-72.

Ohlson, J. 1980. Financial Ratios and Probabilistic Prediction of Bankruptcy. Journal of Accounting Research 18, 109-131.

Petersen, M. 2009. Estimating Standard Errors in Finance Panel Data Sets: Comparing Approaches. Review of Financial Studies, 22-1, pg. 435-480.

Piotroski, J., Roulstone, D., 2004. The Influence of Analysts, Institutional Investors, and Insiders on the Incorporation of Market, Industry, and Firm-Specific Information into Stock Prices. The Accounting Review 79, 1119-1151.

Ramnath, S. 2002. Investor and Analyst Reactions to Earnings Announcements of Related Firms: An Empirical Analysis. Journal of Accounting Research 40, 1351-1376.

Rogers, J., Van Buskirk, A., 2009. Shareholder litigation and changes in disclosure behavior. Journal of Accounting and Economics 47, 136-156.

Romano, R. 1991. The shareholder suit: litigation without foundation? The Journal of Law, Economics and Organizations 7, 55–87.

Skinner, D. 1994. Why Firms Voluntarily Disclose Bad News. Journal of Accounting Research 32, 38-60.

Skinner, D. 1997. Earnings Disclosures and Stockholder Lawsuits. Journal of Accounting and Economics 23, 249-282.

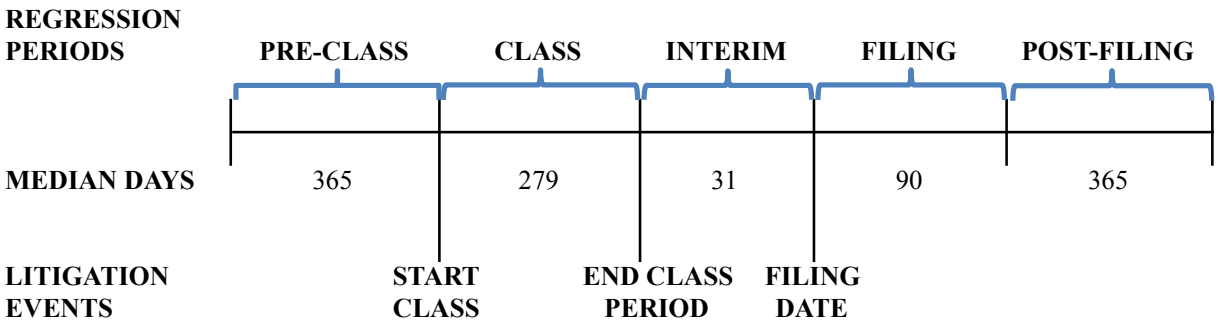
Soltes, E., 2010. Disseminating Firm Disclosures. Unpublished Working Papers. Harvard Business School.

Stickel, S. 1992. Reputation and Performance Among Security Analysts. The Journal of Finance 47, 1811-1836.

The Economist, 2007. If you can't beat them, join them—class actions. February 17.

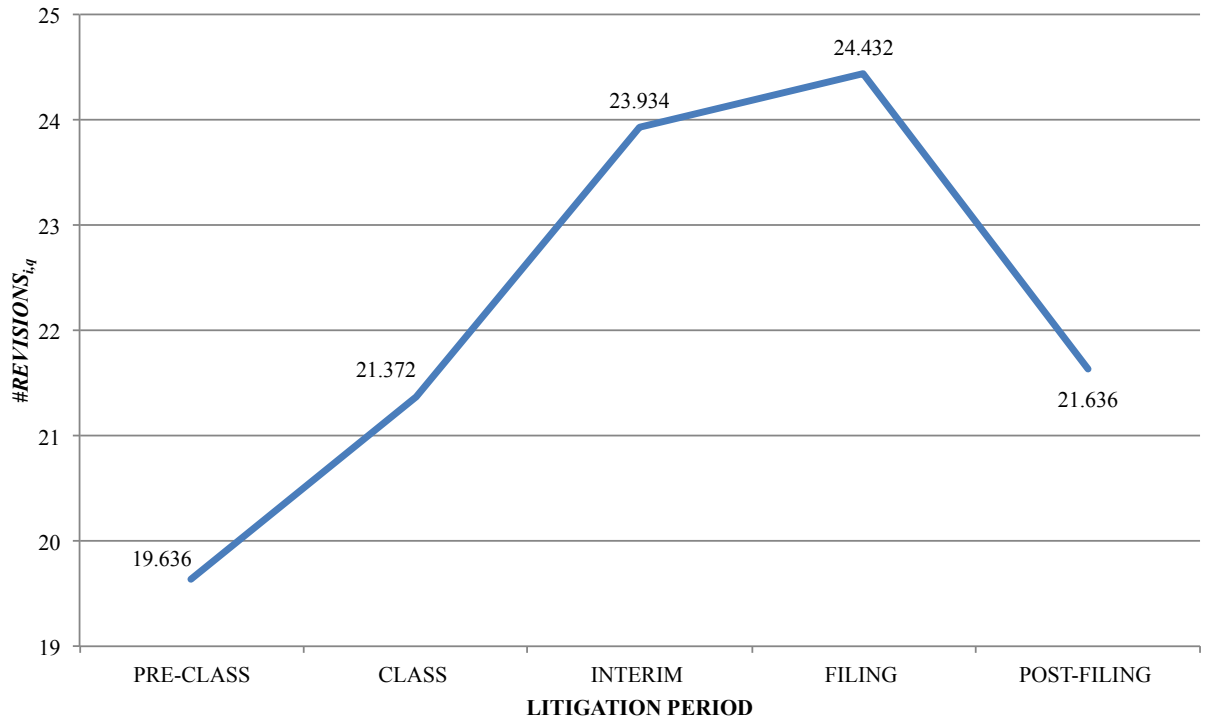
Trueman, B. 1994. Analyst Forecasts and Herding Behavior. The Review of Financial Studies 7, 97-124.

FIGURE 1
LITIGATION TIMELINE



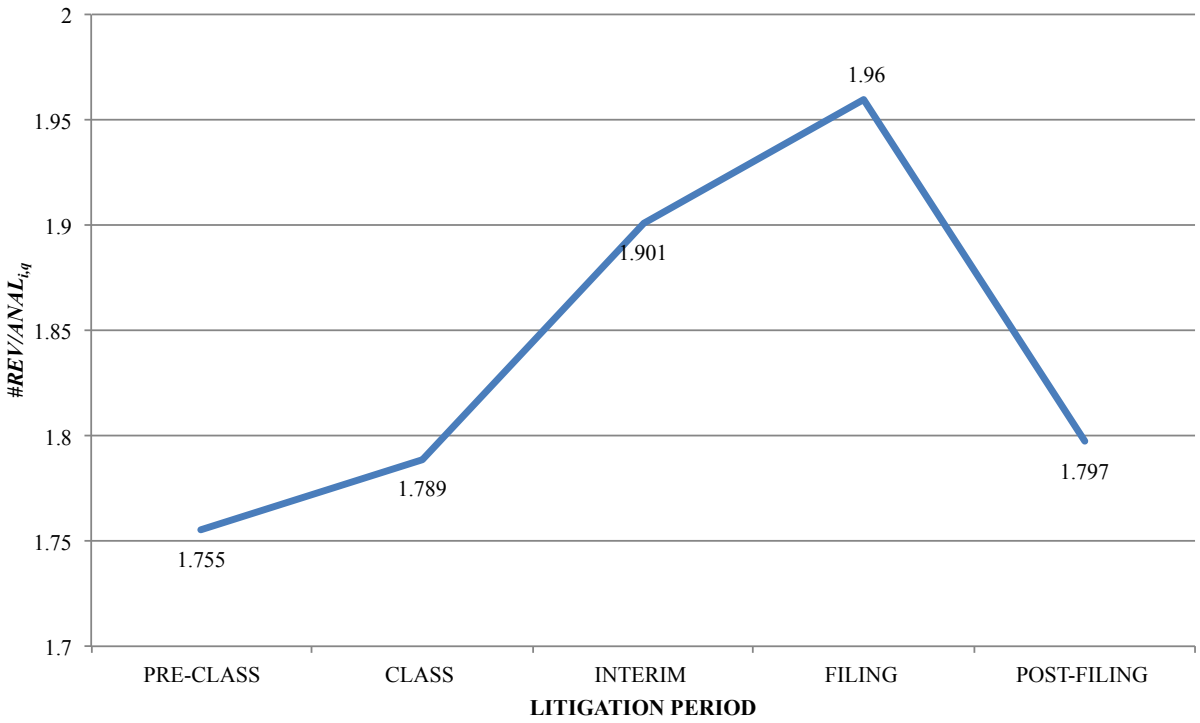
The "REGRESSION PERIODS" are the various periods specified in this study. The PRE-CLASS period represents the four quarters prior to the CLASS period, which is the period of the alleged misconduct. The INTERIM period is period in between the end of the class period and the filing of the lawsuit. The FILING period is the quarter of the lawsuit's filing. The POST-FILING period is the four quarters after the quarter in which the lawsuit is filed. The "MEDIAN DAYS" represents the median number of days for each "REGRESSION PERIOD". The "LITIGATION EVENTS" are identified using the litigation database provide by Cornerstone Research and the Stanford Law School.

FIGURE 2
AGGREGATE ANALYST SERVICES (*#REVISIONS*$_{i,q}$) BY LITIGATION PERIOD



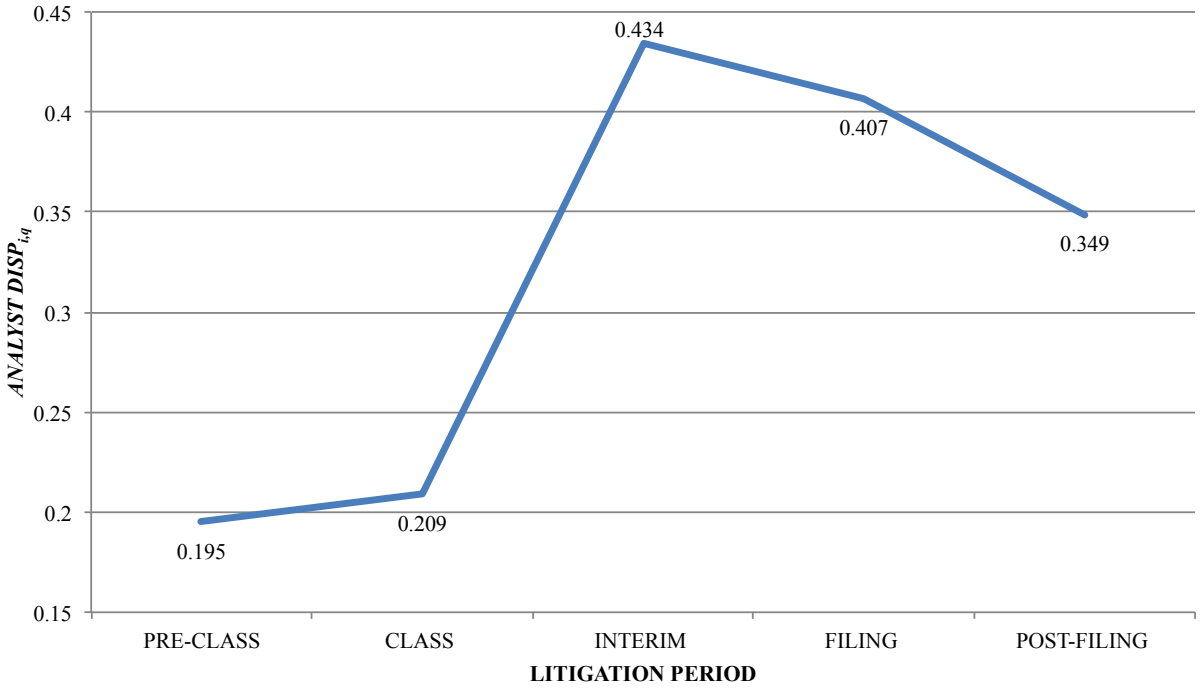
This figure graphs the aggregate amount of analyst services (*#REVISIONS*$_{i,q}$) provided for firm *i* during quarter *q* for each of the litigation periods, as defined in Table 2.

FIGURE 3
ANALYST SERVICES PER ANALYST (*#REV/ANAL*$_{i,q}$) BY LITIGATION PERIOD



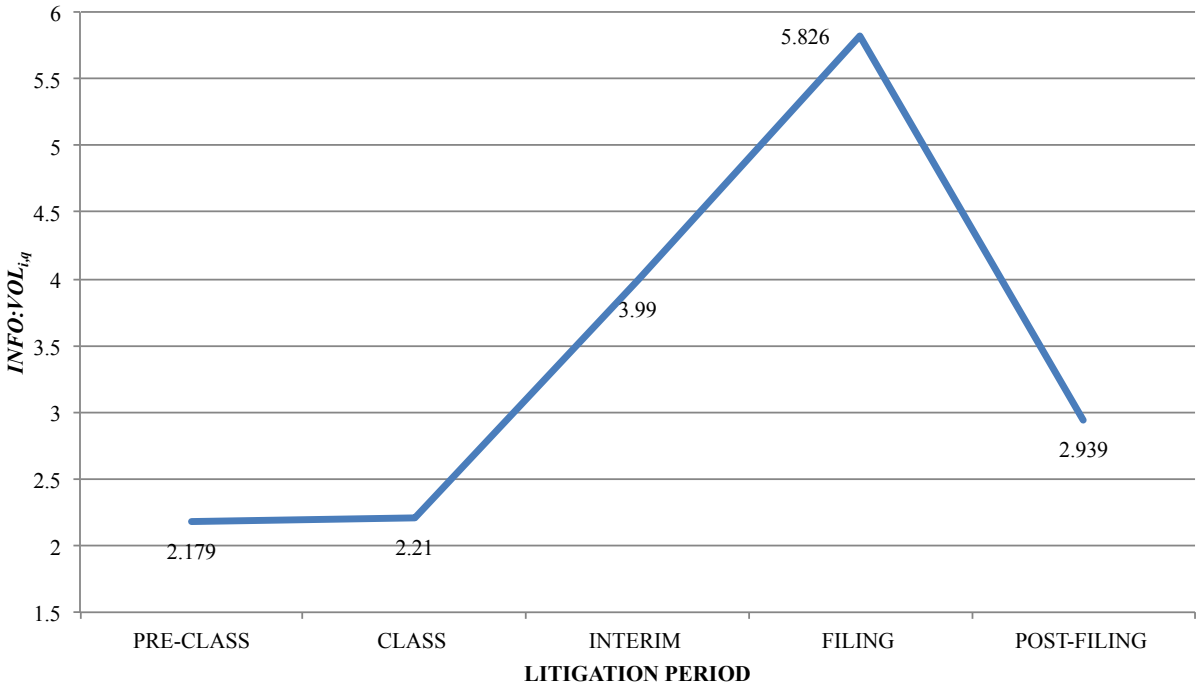
This figure graphs the amount of analyst services provided per analyst (*#REV/ANAL*$_{i,q}$) for firm *i* during quarter *q* for each of the litigation periods, as defined in Table 2.

FIGURE 4
ANALYST'S USE OF PRIVATE INFORMATION (*ANALYST DISP*$_{i,q}$) BY LITIGATION PERIOD



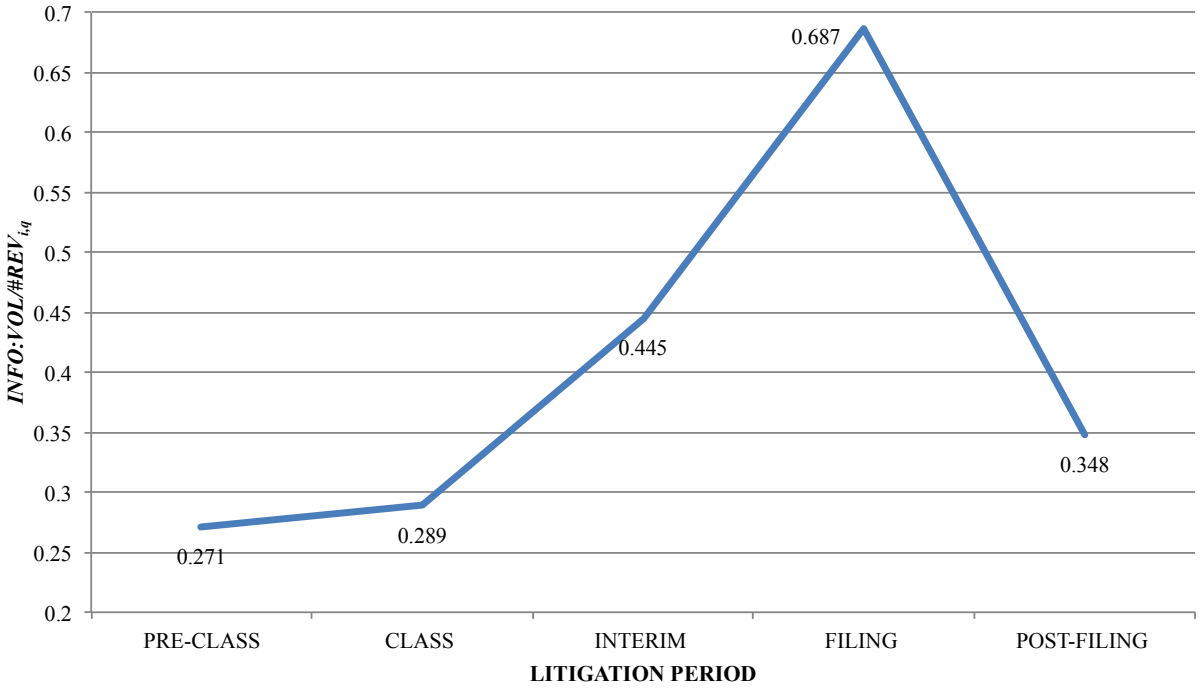
This figure graphs analyst's use of private information (*ANALYST DISP*$_{i,q}$) for firm *i* during quarter *q* for each of the litigation periods, as defined in Table 2.

FIGURE 5
AGGREGATE INFORMATION CONTENT OF ANALYST REPORTS
($INFO{:}VOL_{i,q}$) BY LITIGATION PERIOD



This figure graphs the aggregate information content of all analyst reports ($INFO{:}VOL_{i,q}$) issued during quarter q for firm i in each of the litigation periods, as defined in Table 2.

FIGURE 6
INFORMATION CONTENT OF THE AVERAGE ANALYST REPORT
(*INFO:VOL/#REV*$_{i,q}$) BY LITIGATION PERIOD



This figure graphs the information content of the average analyst report (*INFO:VOL/#REV*$_{i,q}$) issued during quarter *q* for firm *i* in each of the litigation periods, as defined in Table 2.

TABLE 1

LAWSUIT DESCRIPTIVE STATISTICS

The class-action lawsuit sample consists of all lawsuits that occur between 2001 and 2009. I exclude all IPO allocation and analyst lawsuits that are common around 2001.

PANEL A - NUMBER OF LAWSUITS BY YEAR

YEAR	# OF LAWSUITS	PERCENT
2001	45	7.96%
2002	85	15.04%
2003	64	11.33%
2004	85	15.04%
2005	74	13.10%
2006	30	5.31%
2007	66	11.68%
2008	70	12.39%
2009	46	8.14%
TOTAL	**565**	

PANEL B - NUMBER OF LAWSUITS BY INDUSTRY (TWO-DIGIT SIC CODE)

INDUSTRY (TWO-DIGIT SIC CODE)		# OF LAWSUITS	PERCENT
73	- Business Services	77	13.63%
28	- Chemicals and Allied Products	61	10.80%
36	- Electronic, Elctrcl Eqpmnt & Cmpnts	56	9.91%
38	- Mesr/Anlyz/Cntrl Inst; Photo/Med/Opt Gds	37	6.55%
60	- Depository Institutions	29	5.13%
63	- Insurance Carriers	29	5.13%
35	- Ind and Commercial Machinery and Comp Equip	28	4.96%
59	- Miscellaneous Retail	18	3.19%
48	- Communications	17	3.01%
49	- Electric, Gas and Sanitary Services	16	2.83%
80	- Health Services	16	2.83%
62	- Security & Comm Brokers, Dealers, Exch & Serv	15	2.65%
OTHER INDUSTRIES (LESS THAN 2% OF THE SAMPLE)		166	29.38%
TOTAL		**565**	

TABLE 2
SAMPLE DESCRIPTIVE STATISTICS

All variables in this table are defined as follows. $\#REVISIONS_{i,q}$ equals the number of analysts reports issued during quarter q for firm i. $\#REV/ANAL_{i,q}$ equals to $\#REVISIONS_{i,q}$ divided by the number of analyst following the firm ($\#ANALYSTS_{i,q}$) during quarter q for firm i. $ANALYST\ DISP_{i,q}$ equals the standard deviation of analyst forecasts scaled by the absolute value of the mean analyst forecast for firm i in quarter q. $INFO:VOL_{i,q}$ equals the sum of the abnormal stock turnover for each day an analyst forecast is issued for firm i in quarter q. Following Garfinkel (2009), the daily stock turnover is adjusted for the average daily exchange turnover and the average turnover for firm i in quarter q. All daily turnovers that overlap with the three-day period surrounding the lawsuit-filing date, management forecasts, and earnings announcements are deleted. All duplicate daily returns are deleted. $INFO:VOL/\#REV_{i,q}$ is equal the $INFO:VOL_{i,q}$ variable divided by the $\#REVISIONS_{i,q}$ variable. $ROA_{i,q-1}$ is equal to net income before extraordinary items for firm i in quarter $q-1$ scaled by total assets at quarter $q-5$. $SALES\ GROWTH_{i,q-1}$ is equal to sales for firm i in quarter $q-1$ divided by sales in quarter $q-5$. $BK/MKT_{i,q-1}$ is equal to the book value of equity divided by market value for firm i in quarter $q-1$. $MKT\ VAL_{i,q-1}$ is equal to the market value for firm i in quarter $q-1$. $SIZE_{i,q-1}$ is equal to the natural log of $MKT\ VAL_{i,q-1}$. $\%INST_{i,q-1}$ is equal to the total shares owned by institutions divided by total shares outstanding for firm i in quarter $q-1$. $MGMT\ FOR_{i,q}$ is equal to the number of management forecasts issued for firm i in quarter q. $\#ANALYSTS_{i,q}$ equals the number of analysts issuing a forecast for firm i in quarter q. Following Barron, Kim, Lim, Stevens (1998), $UNCERTAINTY_{i,q}$ is equal to the squared individual analyst forecast error averaged for firm i during quarter q. The $PRE\text{-}CLASS_{i,q}$ variable is equal to one if quarter q for firm i occurs during the 4 quarters prior to the start of the class period and zero otherwise. The $CLASS_{i,q}$ variable is equal to one if quarter q for firm i is part of class action period and zero otherwise. The $INTERIM_{i,q}$ variable is equal to one if quarter q for firm i is neither part of the class period nor the litigation period but between the two periods and zero otherwise. The $FILING_{i,q}$ variable is equal to one if the filing date occurs in quarter q for firm i and zero otherwise. The $POST\text{-}FILING_{i,q}$ variable is equal to one if quarter q for firm i occurs during the 4 quarters subsequent to the quarter of the filing date. All continuous variables are winsorized at the 1% and 99% levels.

VARIABLE	N	Mean	Std Dev	25th Pctl	50th Pctl	75th Pctl
$\#REVISIONS_{i,q}$	7,730	21.550	15.801	9.000	17.000	30.000
$\#REV/ANAL_{i,q}$	7,730	1.808	0.561	1.385	1.706	2.143
$ANALYST\ DISP_{i,q}$	7,730	0.280	0.667	0.032	0.076	0.210
$INFO:VOL_{i,q}$	7,564	2.841	6.724	-0.077	0.783	3.038
$INFO:VOL/\#REV_{i,q}$	7,564	0.346	0.859	-0.010	0.094	0.375
$ROA_{i,q-1}$	7,730	0.001	0.063	-0.002	0.009	0.026
$SALES\ GROWTH_{i,q-1}$	7,730	1.215	0.533	0.981	1.114	1.312
$BK/MKT_{i,q-1}$	7,730	0.514	0.491	0.218	0.386	0.647
$MKT\ VAL_{i,q-1}$	7,730	12,703	33,290	580	1,718	8,480
$SIZE_{i,q-1}$	7,730	7.731	1.814	6.363	7.449	9.045
$\%INST_{i,q-1}$	7,730	0.522	0.368	0.000	0.619	0.843
$\#MGMT\ FOR_{i,q}$	7,730	0.918	1.307	0.000	0.000	2.000
$UNCERTAINTY_{i,q}$	7,730	0.246	1.249	0.001	0.007	0.036
$\#ANALYSTS_{i,q}$	7,730	11.503	6.895	6.000	10.000	16.000
$PRE\text{-}CLASS_{i,q}$	7,730	0.217	0.412	0.000	0.000	0.000
$CLASS_{i,q}$	7,730	0.344	0.475	0.000	0.000	1.000
$INTERIM_{i,q}$	7,730	0.102	0.303	0.000	0.000	0.000
$FILING_{i,q}$	7,730	0.073	0.260	0.000	0.000	0.000
$POST\text{-}FILING_{i,q}$	7,730	0.263	0.440	0.000	0.000	1.000

TABLE 3
ANALYST SERVICES

This table includes all firm/quarter observations from 2001 to 2009 with sufficient data to calculate the dependent and independent variables. Firm/quarter observations are only included if part of one of the five litigation periods (i.e. pre-class, class, interim, filing, or post-filing periods). In column 1, the dependent variable is $\#REVISIONS_{i,q}$. In column 2, the the dependent variable is $\#REV/ANAL_{i,q}$. All variables are defined in Table 2. Quarter/year and industry (defined as four-digit SIC code) fixed effects are included as additional independent variables. The coefficients on the quarter/year and industry indicator variable are suppressed. Standard errors are clustered by firm. All continuous variables are winsorized at the 1% and 99% levels. *, **, and *** represent significance at the 10%, 5%, and 1% levels, respectively.

	[1]		[2]	
VARIABLES	***#REVISIONS$_{i,q}$***		***#REV/ANAL$_{i,q}$***	
LITIGATION VARIABLES:				
INTERCEPT	-35.261	***	1.107	***
	-17.710		16.326	
CLASS$_{i,q}$	0.400		0.017	
	1.006		1.031	
INTERIM$_{i,q}$	3.181	***	0.129	***
	4.721		4.669	
FILING$_{i,q}$	3.900	***	0.205	***
	7.148		7.892	
POST-FILING$_{i,q}$	**1.959**	***	**0.074**	***
	3.743		**3.852**	
CONTROL VARIABLES:				
ROA$_{i,q-1}$	-7.764	**	0.209	*
	-2.228		1.801	
SALES GROWTH$_{i,q-1}$	0.442		0.057	***
	1.418		4.156	
BK/MKT$_{i,q-1}$	2.814	***	-0.001	
	5.204		-0.036	
SIZE$_{i,q-1}$	6.535	***	0.061	***
	27.883		9.094	
% INST$_{i,q-1}$	0.429		-0.069	**
	0.489		-2.497	
#MGMT FOR$_{i,q}$	1.551	***	0.084	***
	9.200		12.828	
UNCERTAINTY$_{i,q}$	0.214	*	0.017	***
	1.799		2.954	
#OBSERVATIONS	7,730		7,730	
R^2	0.632		0.301	

TABLE 4
ANALYST'S USE OF PRIVATE INFORMATION

This table includes all firm/quarter observations from 2001 to 2009 with sufficient data to calculate the dependent and independent variables. Firm/quarter observations are only included if part of one of the five litigation periods (i.e. pre-class, class, interim, filing, or post-filing periods). The dependent variable is the $ANALYST\ DISP_{i,q}$ variable. All variables are defined in Table 2. Quarter/year and industry (defined as four-digit SIC code) fixed effects are included as additional independent variables. The coefficients on the quarter/year and industry indicator variable are suppressed. Standard errors are clustered by firm. All continuous variables are winsorized at the 1% and 99% levels. *, **, and *** represent significance at the 10%, 5%, and 1% levels, respectively.

VARIABLES	$\boldsymbol{ANALYST\ DISP_{i,q}}$
LITIGATION VARIABLES:	
INTERCEPT	0.519 ***
	5.708
$CLASS_{i,q}$	-0.014
	-0.712
$INTERIM_{i,q}$	0.150 ***
	4.205
$FILING_{i,q}$	0.119 ***
	3.685
$\boldsymbol{POST\text{-}FILING_{i,q}}$	**0.075** ***
	3.378
CONTROL VARIABLES:	
$ROA_{i,q-1}$	-0.124
	-0.660
$SALES\ GROWTH_{i,q-1}$	-0.007
	-0.394
$BK/MKT_{i,q-1}$	-0.032
	-1.025
$SIZE_{i,q-1}$	-0.040 ***
	-3.602
$\%\ INST_{i,q-1}$	-0.040
	-1.285
$\#MGMT\ FOR_{i,q}$	-0.007
	-1.043
$\#ANALYSTS_{i,q}$	0.003
	1.408
$UNCERTAINTY_{i,q}$	0.230 ***
	11.462
#OBSERVATIONS	7,730
R^2	0.282

TABLE 5
INFORMATIVENESS OF ANALYST REPORTS - STOCK TURNOVER

This table includes all firm/quarter observations from 2001 to 2009 with sufficient data to calculate the dependent and independent variables. Firm/quarter observations are only included if part of one of the five litigation periods (i.e. pre-class, class, interim, filing, or post-filing periods). In column 1, the dependent variable is $INFO{:}VOL_{i,q}$. In column 2, the the dependent variable is $INFO{:}VOL/\#REV_{i,q}$. All variables are defined in Table 2. Quarter/year and industry (defined as four-digit SIC code) fixed effects are included as additional independent variables. The coefficients on the quarter/year and industry indicator variable are suppressed. Standard errors are clustered by firm. All continuous variables are winsorized at the 1% and 99% levels. *, **, and *** represent significance at the 10%, 5%, and 1% levels, respectively.

	[1]	[2]
VARIABLES	***INFO:VOL$_{i,q}$***	***INFO:VOL/#REV$_{i,q}$***
LITIGATION VARIABLES:		
INTERCEPT	4.573 ***	0.748 ***
	5.144	7.166
$CLASS_{i,q}$	0.148	0.052 **
	0.761	2.048
$INTERIM_{i,q}$	2.205 ***	0.267 ***
	5.786	5.297
$FILING_{i,q}$	3.667 ***	0.447 ***
	7.942	8.031
POST-FILING$_{i,q}$	**1.074** ***	**0.147** ***
	4.565	**4.705**
CONTROL VARIABLES:		
$ROA_{i,q-1}$	1.436	-0.011
	0.680	-0.040
$SALES\ GROWTH_{i,q-1}$	1.261 ***	0.112 ***
	4.730	3.498
$BK/MKT_{i,q-1}$	-1.032 ***	-0.162 ***
	-3.064	-4.617
$SIZE_{i,q-1}$	-0.741 ***	-0.079 ***
	-7.389	-6.983
$\%\ INST_{i,q-1}$	0.446	0.078 *
	1.273	1.694
$\#MGMT\ FOR_{i,q}$	-0.388 ***	-0.031 ***
	-5.892	-3.858
$\#ANALYSTS_{i,q}$	0.133 ***	-0.007 ***
	6.088	-2.913
$UNCERTAINTY_{i,q}$	0.537 ***	0.053 ***
	4.536	7.166
#OBSERVATIONS	7,564	7,564
R^2	0.142	0.155

TABLE 6
CROSS-SECTIONAL REGRESSION RESULTS - HIGH SURPRISE LAWSUITS

This table includes all firm/quarter observations from 2001 to 2009 with sufficient data to calculate the dependent and independent variables. Firm/quarter observations are only included if part of one of the five litigation periods (i.e. pre-class, class, interim, filing, or post-filing periods). *#REVISIONS*$_{i,q}$, *#REV/ANAL*$_{i,q}$, *ANALYST DISP*$_{i,q}$, *INFO:VOL*$_{i,q}$, and *INFO:VOL/#REV*$_{i,q}$ are the dependent variabls in column 1, 2, 3, 4, and 5, respectively. The *HIGH SURP*$_{i,q}$ variable is equal to one when the 11-day CAR surrounding the filing of the lawsuit is less than it median. All other variables are defined in Table 2. I include all the same control variables that were included in the previous tests. I also interact each of these control variables with the *HIGH SURP*$_{i,q}$ variable. Quarter/year and industry (defined as four-digit SIC code) fixed effects are also included as independent variables. The coefficient estimates on all the control variables and there interactions are suppressed for brevity. Standard errors are clustered by firm. All continuous variables are winsorized at the 1% and 99% levels. *, **, and *** represent significance at the 10%, 5%, and 1% levels, respectively.

VARIABLES	[1] *#REVISIONS*$_{i,q}$	[2] *#REV/ANAL*$_{i,q}$	[3] *ANALYST DISP*$_{i,q}$	[4] *INFO:VOL*$_{i,q}$	[5] *INFO:VOL/#REV*$_{i,q}$
INTERCEPT	-32.953 ***	1.111 ***	0.502 ***	3.782 ***	0.687 ***
	-13.128	13.251	4.516	3.686	5.756
CLASS$_{i,q}$	1.086 *	0.004	0.001	0.152	0.060 *
	1.904	0.154	0.044	0.590	1.767
INTERIM$_{i,q}$	3.045 ***	0.110 ***	0.180 ***	2.059 ***	0.227 ***
	3.700	3.162	3.969	4.746	3.867
FILING$_{i,q}$	3.865 ***	0.181 ***	0.100 **	2.733 ***	0.340 ***
	5.175	5.033	2.267	4.982	4.861
***POST-FILING*$_{i,q}$**	**2.129** ***	**0.053** **	**0.055** *	**0.559** **	**0.088** **
	3.044	**2.010**	**1.951**	**2.043**	**2.383**
HIGH SURP$_{i,q}$	-7.992 ***	-0.139	-0.060	1.288	0.051
	-2.727	-1.320	-0.442	0.860	0.289
HIGH SURP$_{i,q}$ * *CLASS*$_{i,q}$	-1.252 *	0.019	-0.040	0.125	0.002
	-1.666	0.562	-0.985	0.318	0.028
HIGH SURP$_{i,q}$ * *INTERIM*$_{i,q}$	1.305	0.052	-0.101	0.485	0.132
	0.958	0.881	-1.352	0.549	1.156
HIGH SURP$_{i,q}$ * *FILING*$_{i,q}$	0.182	0.054	0.026	2.035 **	0.236 **
	0.172	1.048	0.399	2.197	2.147
***HIGH SURP*$_{i,q}$ * *POST-FILING*$_{i,q}$**	**-0.096**	**0.039**	**0.027**	**1.206** **	**0.141** **
	-0.098	**1.030**	**0.570**	**2.487**	**2.302**
#OBSERVATIONS	7,542	7,542	7,542	7,382	7,382
R^2	0.641	0.308	0.294	0.151	0.163

TABLE 7
CROSS-SECTIONAL REGRESSION RESULTS – FIRM VISIBILITY

This table includes all firm/quarter observations from 2001 to 2009 with sufficient data to calculate the dependent and independent variables. Firm/quarter observations are only included if part of one of the five litigation periods (i.e. pre-class, class, interim, filing, or post-filing periods). *#REVISIONS*$_{i,q}$, *#REV/ANAL*$_{i,q}$, *ANALYST DISP*$_{i,q}$, *INFO:VOL*$_{i,q}$, and *INFO:VOL/#REV*$_{i,q}$ are the dependent variabls in column 1, 2, 3, 4, and 5, respectively. The *VISIBLE*$_{i,q}$ variable is equal to one when average market value during the CLASS period is greater than its median. All other variables are defined in Table 2. I include all the same control variables that were included in the previous tests. I also interact each of these control variables with the *VISIBLE*$_{i,q}$ variable. Quarter/year and industry (defined as four-digit SIC code) fixed effects are also included as independent variables. The coefficient estimates on all the control variables and there interactions are suppressed for brevity. Standard errors are clustered by firm. All continuous variables are winsorized at the 1% and 99% levels. *, **, and *** represent significance at the 10%, 5%, and 1% levels, respectively.

VARIABLES	[1] *#REVISIONS*$_{i,q}$	[2] *#REV/ANAL*$_{i,q}$	[3] *ANALYST DISP*$_{i,q}$	[4] *INFO:VOL*$_{i,q}$	[5] *INFO:VOL/#REV*$_{i,q}$
INTERCEPT	6.177 ***	1.560 ***	0.226 ***	-0.367	0.253 **
	4.258	28.156	2.911	-0.482	2.438
CLASS$_{i,q}$	0.103	-0.014	-0.052	0.791 *	0.158 ***
	0.154	-0.542	-1.103	1.934	2.851
INTERIM$_{i,q}$	1.729 *	0.090 *	0.080	3.671 ***	0.601 ***
	1.695	1.797	1.203	4.429	4.700
FILING$_{i,q}$	1.201	0.112 ***	0.098	5.442 ***	0.841 ***
	1.361	2.577	1.299	5.660	6.645
***POST-FILING*$_{i,q}$**	**-1.436**	**-0.036**	**0.038**	**1.443** ***	**0.237** ***
	-1.479	**-1.117**	**0.719**	**2.965**	**3.556**
VISIBLE$_{i,q}$	19.037 ***	0.076	-0.015	-0.209	-0.105
	9.013	1.234	-0.171	-0.218	-0.850
VISIBLE$_{i,q}$ * *CLASS*$_{i,q}$	2.502 **	0.069 **	0.042	-0.823 *	-0.143 **
	2.569	2.066	0.836	-1.831	-2.400
VISIBLE$_{i,q}$ * *INTERIM*$_{i,q}$	3.529 **	0.067	0.090	-2.483 ***	-0.510 ***
	2.266	1.111	1.083	-2.778	-3.883
VISIBLE$_{i,q}$ * *FILING*$_{i,q}$	4.990 ***	0.149 ***	0.008	-2.481 **	-0.562 ***
	4.118	2.737	0.096	-2.285	-4.107
***VISIBLE*$_{i,q}$ * *POST-FILING*$_{i,q}$**	**4.117** ***	**0.139** ***	**0.040**	**-0.496**	**-0.131** *
	3.373	**3.464**	**0.680**	**-0.931**	**-1.862**
#OBSERVATIONS	7,129	7,129	7,129	6,983	6,983
R^2	0.485	0.296	0.278	0.145	0.166

TABLE 8
INFORMATIVENESS OF ANALYST REPORTS - RETURNS

This table includes all firm/quarter observations from 2001 to 2009 with sufficient data to calculate the dependent and independent variables. Firm/quarter observations are only included if part of one of the five litigation periods (i.e. pre-class, class, interim, filing, or post-filing periods). In column 1, the dependent variable is $INFO{:}RET_{i,q}$. In column 2, the the dependent variable is $INFO{:}RET/\#REV_{i,q}$. All variables are defined in Table 2. Quarter/year and industry (defined as four-digit SIC code) fixed effects are included as additional independent variables. The coefficients on the quarter/year and industry indicator variable are suppressed. Standard errors are clustered by firm. All continuous variables are winsorized at the 1% and 99% levels. *, **, and *** represent significance at the 10%, 5%, and 1% levels, respectively.

	[1]		[2]	
VARIABLES	$INFO{:}RET_{i,q}$		$INFO{:}RET/\#REV_{i,q}$	
LITIGATION VARIABLES:				
INTERCEPT	46.976	***	6.222	***
	10.137		18.255	
$CLASS_{i,q}$	-0.283		0.109	
	-0.273		1.580	
$INTERIM_{i,q}$	7.255	***	0.334	***
	3.797		2.841	
$FILING_{i,q}$	11.077	***	0.809	***
	6.927		6.904	
***POST-FILING*$_{i,q}$**	**3.675**	***	**0.232**	***
	3.019		**2.703**	
CONTROL VARIABLES:				
$ROA_{i,q-1}$	-35.322	***	-2.610	***
	-3.418		-3.935	
$SALES\ GROWTH_{i,q-1}$	7.809	***	0.388	***
	7.461		5.392	
$BK/MKT_{i,q-1}$	7.217	***	0.613	***
	3.845		4.623	
$SIZE_{i,q-1}$	-3.075	***	-0.210	***
	-5.692		-6.410	
$\%\ INST_{i,q-1}$	-3.151	*	-0.337	***
	-1.760		-2.913	
$\#MGMT\ FOR_{i,q}$	-1.993	***	-0.177	***
	-6.268		-7.613	
$\#ANALYSTS_{i,q}$	2.391	***	-0.088	***
	17.766		-11.773	
$UNCERTAINTY_{i,q}$	3.076	***	0.238	***
	6.643		6.673	
#OBSERVATIONS	7,554		7,554	
R^2	0.474		0.450	

TABLE 9
ROBUSTNESS TESTS - OTHER SIGNIFICANT FIRM EVENTS

This table includes all firm/quarter observations from 2001 to 2009 with sufficient data to calculate the dependent and independent variables. Firm/quarter observations are only included if part of one of the five litigation periods (i.e. pre-class, class, interim, filing, or post-filing periods). For each panel, $\#REVISIONS_{i,q}$, $\#REV/ANAL_{i,q}$, $ANALYST\ DISP_{i,q}$, $INFO:VOL_{i,q}$, and $INFO:VOL/\#REV_{i,q}$ are the dependent variabls in column 1, 2, 3, 4, and 5, respectively. In Panel A, the $AMEND_{i,q}$ variable is equal to one if the lawsuit is amended or consolidated in quarter q for firm i. In Panel B, the $CHG\ CEO_{i,q}$ variable is equal to one if there was a change in the CEO for firm i in quarter q. The $POST\text{-}CHG\ CEO_{i,q}$ variable is equal in each of the four quarters following the change in the CEO. All other variables are defined in Table 2. I include all the same control variables that were included in the previous tests. Quarter/year and industry (defined as four-digit SIC code) fixed effects are also included as independent variables. The coefficient estimates on all the control variables and there interactions are suppressed for brevity. Standard errors are clustered by firm. All continuous variables are winsorized at the 1% and 99% levels. *, **, and *** represent significance at the 10%, 5%, and 1% levels, respectively.

PANEL A - MULTI-VARIATE REGRESSION ANALYSIS WITH AMENDED LAWSUIT INDICATOR VARIABLE

	[1]	[2]	[3]	[4]	[5]
VARIABLES	***#REVISIONS$_{i,q}$***	***#REV/ANAL$_{i,q}$***	***ANALYST DISP$_{i,q}$***	***INFO:VOL$_{i,q}$***	***INFO:VOL/#REV$_{i,q}$***
INTERCEPT	-35.252 ***	1.105 ***	0.520 ***	4.586 ***	0.746 ***
	-17.711	16.327	5.712	5.158	7.146
CLASS$_{i,q}$	0.407	0.017	-0.014	0.147	0.052 **
	1.023	1.045	-0.717	0.754	2.057
INTERIM$_{i,q}$	3.183 ***	0.129 ***	0.150 ***	2.204 ***	0.267 ***
	4.721	4.658	4.204	5.781	5.302
FILING$_{i,q}$	3.902 ***	0.205 ***	0.119 ***	3.666 ***	0.448 ***
	7.146	7.883	3.681	7.935	8.037
POST-FILING$_{i,q}$	**1.975** ***	**0.069** ***	**0.076** ***	**1.094** ***	**0.148** ***
	3.717	**3.479**	**3.435**	**4.591**	**4.668**
AMEND$_{i,q}$	**1.834** ***	**0.098** ***	**0.065**	**0.856** *	**0.142** **
	2.659	**2.947**	**1.613**	**1.945**	**2.502**
#OBSERVATIONS	7,730	7,730	7,730	7,562	7,562
R^2	0.632	0.301	0.282	0.142	0.155

TABLE 9 (continued)
ROBUSTNESS TESTS - OTHER SIGNIFICANT FIRM EVENTS

PANEL B - MULTI-VARIATE REGRESSION ANALYSIS WITH CEO CHANGE AND POST-CEO CHANGE VARIABLES

	[1]	[2]	[3]	[4]	[5]
VARIABLES	***#REVISIONS$_{i,q}$***	***#REV/ANAL$_{i,q}$***	***ANALYST DISP$_{i,q}$***	***INFO:VOL$_{i,q}$***	***INFO:VOL/#REV$_{i,q}$***
INTERCEPT	-35.278 ***	1.104 ***	0.361 ***	4.545 ***	0.745 ***
	-17.717	16.272	7.381	5.117	7.140
CLASS$_{i,q}$	0.393	0.017	0.006	0.145	0.052 **
	0.991	1.032	0.525	0.743	2.037
INTERIM$_{i,q}$	3.177 ***	0.130 ***	0.070 ***	2.206 ***	0.267 ***
	4.729	4.686	3.369	5.797	5.301
FILING$_{i,q}$	3.861 ***	0.204 ***	0.097 ***	3.641 ***	0.445 ***
	7.085	7.840	5.244	7.882	7.977
POST-FILING$_{i,q}$	**1.938** ***	**0.076** ***	**0.067** ***	**1.072** ***	**0.148** ***
	3.716	**3.920**	**5.018**	**4.511**	**4.683**
CHG CEO$_{i,q}$	**1.143**	**0.053**	**-0.034**	**0.891**	**0.074**
	1.384	**1.377**	**-1.532**	**1.505**	**1.035**
POST-CHG CEO$_{i,q}$	**0.128**	**-0.029**	**0.021**	**-0.091**	**-0.017**
	0.199	**-1.198**	**1.574**	**-0.315**	**-0.575**
#OBSERVATIONS	7,730	7,730	7,730	7,564	7,564
R^2	0.632	0.301	0.282	0.143	0.156

TABLE 10
ROBUSTNESS TESTS - MODEL SPECIFICATION

This table includes all firm/quarter observations from 2001 to 2009 with sufficient data to calculate the dependent and independent variables. For each panel, $\#REVISIONS_{i,q}$, $\#REV/ANAL_{i,q}$, $ANALYST\ DISP_{i,q}$, $INFO{:}VOL_{i,q}$, and $INFO{:}VOL/\#REV_{i,q}$ are the dependent variabls in column 1, 2, 3, 4, and 5, respectively. In Panel A, all firm/quarter observations with sufficient data to calculate the dependent and independent variables are included in the sample. The $LAWSUIT_{i,q}$ variable is set equal to one for all firm/quarter observations that are part of one of the 5 litigation periods (i.e. pre-class, class, interim, filing, and post-filing periods). All control variables including firm/quarter and industry indicator variables are included in the regression. $LAWSUIT_{i,q}$ is interacted with all control variables with exception to the industry and calendar year/quarter dummy variables. In Panel B, all firm/quarter observations that are part of one of the five litigation periods and the matched firms are included in the sample. Matched firms are chosen as the non-litigated firm that is closest in market value to the litgated firm during the first firm/quarter the litigated firm is included in the sample. The $MATCH_{i,q}$ variable is set equal to one for all firm/quarter observations that are associated with the matched firm. The $MATCH\ CLASS_{i,q}$ variables is set equal to one for all matched firm/quarter observations are matched to the class period for the litigated firm. The $MATCH\ INTERIM_{i,q}$ variables is set equal to one for all matched firm/quarter observations are matched to the interim period for the litigated firm. The $MATCH\ FILING_{i,q}$ variables is set equal to one for all peer firm/quarter observations are matched to the filing period for the litigated firm. The $MATCHED\ POST\text{-}FILING_{i,q}$ variable is set equal to one for all matched firm/quarter observations are matched to the post-filing period for the litigated firm. All control variables (excluding the industry indicator variables) included in previous regression specifications are interacted with the $MATCH_{i,q}$ variable. Industry indicator variables are included as independent variables. In Panel C, all firms with sufficient data to calculate the dependent and independent variables in the post-filing period and are part of one of the 5 litigation periods are included in the sample. All control variables including firm/quarter and industry indicator variables are included in the regression. In Panel D, all firm/quarters with sufficient data to calculate the dependent and independent variables and are part of one of the 5 litigation periods are included in the sample. Standard errors are clustered by both firm and firm/quarter. Neither industry nor quarter/year indicator variables are included as independent variables. All other variables are defined as previously defined. The coefficient estimates on all the control variables and there interactions are suppressed for brevity. Standard errors are clustered by firm in each specification. All continuous variables are winsorized at the 1% and 99% levels. *, **, and *** represent significance at the 10%, 5%, and 1% levels, respectively.

PANEL A - ALL OBSERVATIONS WITH SUFFICIENT DATA

	[1]	[2]	[3]	[4]	[5]
VARIABLES	***#REVISIONS$_{i,q}$***	***#REV/ANAL$_{i,q}$***	***ANALYST DISP$_{i,q}$***	***INFO:VOL$_{i,q}$***	***INFO:VOL/#REV$_{i,q}$***
INTERCEPT	-27.438 ***	1.158 ***	0.551 ***	1.487 ***	0.321 ***
	-30.804	43.895	18.054	8.633	13.971
$LAWSUIT_{i,q}$	-4.296 ***	0.019	-0.066	2.405 ***	0.327 ***
	-2.802	0.357	-0.935	4.857	5.061
$CLASS_{i,q}$	0.260	0.013	-0.009	0.067	0.033 *
	0.655	0.792	-0.536	0.491	1.775
$INTERIM_{i,q}$	2.513 ***	0.101 ***	0.141 ***	1.357 ***	0.183 ***
	3.717	3.667	3.809	5.429	4.870
$FILING_{i,q}$	3.730 ***	0.189 ***	0.100 ***	2.467 ***	0.321 ***
	7.433	7.552	3.154	8.668	8.358
POST-FILING$_{i,q}$	**1.932** ***	**0.055** ***	**0.060** ***	**0.623** ***	**0.082** ***
	4.042	**3.059**	**2.624**	**3.903**	**3.717**
#OBSERVATIONS	77,775	77,775	77,775	75,534	75,534
R^2	0.581	0.299	0.293	0.093	0.082

TABLE 10 (continued)
ROBUSTNESS TESTS - MODEL SPECIFICATION

PANEL B - MATCHED SAMPLE

	[1]	[2]	[3]	[4]	[5]
VARIABLES	***#REVISIONS$_{i,q}$***	***#REV/ANAL$_{i,q}$***	***ANALYST DISP$_{i,q}$***	***INFO:VOL$_{i,q}$***	***INFO:VOL/#REV$_{i,q}$***
INTERCEPT	-34.407 ***	1.189 ***	0.463 ***	4.685 ***	0.814 ***
	-19.204	19.604	6.277	7.014	10.064
CLASS$_{i,q}$	0.379	0.015	-0.011	0.080	0.036
	0.941	0.893	-0.610	0.487	1.631
INTERIM$_{i,q}$	2.991 ***	0.117 ***	0.140 ***	1.820 ***	0.228 ***
	4.156	4.106	4.062	5.869	5.122
FILING$_{i,q}$	4.019 ***	0.196 ***	0.097 ***	3.029 ***	0.386 ***
	7.290	7.435	3.348	8.453	8.238
POST-FILING$_{i,q}$	**2.060** ***	**0.058** ***	**0.063** ***	**0.879** ***	**0.117** ***
	3.883	**2.988**	**3.003**	**4.472**	**4.385**
MATCH$_{i,q}$	0.783	-0.007	-0.183	-3.351 ***	-0.474 ***
	0.253	-0.077	-1.538	-4.278	-4.847
MATCH CLASS$_{i,q}$	-0.274	-0.012	0.020	-0.018	0.021
	-0.572	-0.647	1.212	-0.149	1.352
MATCH INTERIM $_{i,q}$	-0.688	-0.045	0.033	0.148	0.032
	-0.926	-1.595	1.275	0.803	1.376
MATCH FILING$_{i,q}$	-0.672	-0.047 *	-0.018	0.058	0.023
	-1.198	-1.777	-0.842	0.348	1.050
MATCH POST-FILING$_{i,q}$	**-0.169**	**-0.028**	**0.007**	**0.056**	**0.023**
	-0.297	**-1.339**	**0.354**	**0.426**	**1.408**
#OBSERVATIONS	13,156	13,156	13,156	13,156	13,156
R^2	0.604	0.282	0.307	0.138	0.151
F-TESTS	**F-STAT**	**F-STAT**	**F-STAT**	**F-STAT**	**F-STAT**
POST-FILING$_{i,q}$ = MATCH POST-FILING$_{i,q}$	8.243 ***	9.016 ***	4.232 **	12.184 ***	8.784 ***

TABLE 10 (continued)
ROBUSTNESS TESTS - MODEL SPECIFICATION

PANEL C - LAWSUITS WITH AT LEAST ONE OBSERVATION IN THE POST-FILING PERIOD

	[1]	[2]	[3]	[4]	[5]
VARIABLES	***#REVISIONS***$_{i,q}$	***#REV/ANAL***$_{i,q}$	***ANALYST DISP***$_{i,q}$	***INFO:VOL***$_{i,q}$	***INFO:VOL/#REV***$_{i,q}$
INTERCEPT	-37.537 ***	1.050 ***	0.465 ***	4.452 ***	0.763 ***
	-16.342	13.381	4.846	4.288	6.400
CLASS$_{i,q}$	0.733	0.029	-0.014	0.300	0.050 *
	1.553	1.486	-0.747	1.325	1.706
INTERIM$_{i,q}$	4.287 ***	0.151 ***	0.131 ***	2.292 ***	0.250 ***
	5.809	5.119	3.769	5.271	5.190
FILING$_{i,q}$	4.487 ***	0.219 ***	0.135 ***	3.650 ***	0.424 ***
	7.588	7.919	4.159	7.451	7.408
POST-FILING$_{i,q}$	**2.433** ***	**0.088** ***	**0.072** ***	**1.031** ***	**0.133** ***
	4.188	**4.110**	**3.259**	**4.150**	**3.969**
#OBSERVATIONS	6,382	6,382	6,382	6,245	6,245
R^2	0.639	0.298	0.334	0.158	0.169

TABLE 10 (continued)
ROBUSTNESS TESTS - MODEL SPECIFICATION

PANEL D - STANDARD ERRORS ARE CLUSTERED BY FIRM AND QUARTER

VARIABLES	**[1]** ***#REVISIONS$_{i,q}$***	**[2]** ***#REV/ANAL$_{i,q}$***	**[3]** ***ANALYST DISP$_{i,q}$***	**[4]** ***INFO:VOL$_{i,q}$***	**[5]** ***INFO:VOL/#REV$_{i,q}$***
INTERCEPT	-28.631 ***	1.012 ***	0.568 ***	5.284 ***	0.935 ***
	-15.990	14.841	9.177	6.242	9.331
CLASS$_{i,q}$	0.660	0.021	-0.004	0.004	0.036
	1.323	0.898	-0.252	0.026	1.492
INTERIM$_{i,q}$	3.618 ***	0.125 ***	0.170 ***	1.916 ***	0.225 ***
	4.165	3.039	4.496	4.827	4.706
FILING$_{i,q}$	4.291 ***	0.191 ***	0.125 ***	3.553 ***	0.434 ***
	7.785	6.782	3.864	6.914	8.502
POST-FILING$_{i,q}$	**2.695** ***	**0.059** ***	**0.082** ***	**0.945** ***	**0.129** ***
	4.659	**2.819**	**3.402**	**4.609**	**4.497**
#OBSERVATIONS	7,730	7,730	7,730	7,564	7,564
R^2	0.457	0.119	0.220	0.078	0.089

VITA

Jared Jennings was born in Las Vegas, NV. In 2004, he earned a Bachelor of Science in accounting and a Master of Accountancy with an emphasis in Taxation from Brigham Young University. He worked as an auditor for Deloitte, LLP in Costa Mesa, CA before starting his Doctor of Philosophy in Business Administration – Accounting at the University of Washington-Seattle. After graduating with his Ph.D., he worked as an assistant professor of accounting at Washington University in St. Louis.