PRIVATE ENFORCEMENT OF SECURITIES LAWS AND FINANCIAL REPORTING CHOICES

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Abstract:

This study examines whether an unexpected shock to the risk of class-action lawsuits filed under securities laws affects the level of discretionary revenues, the market reaction to unexpected revenues, and the likelihood of restatements. I identify a court decision that reduced the risk of shareholder litigation for firms headquartered within a single jurisdiction. Subsequent to the decision, the likelihood of a restatement and the level of discretionary revenues increased while the market reaction to unexpected revenues declined for firms headquartered in this jurisdiction relative to firms headquartered in other jurisdictions. Further, these changes were driven primarily by firms that faced the highest risk of shareholder litigation. Overall, results indicate that the risk of shareholder litigation constrains managers from making opportunistic reporting choices. This study is relevant to the global policy debate about class-action litigation as a mechanism to regulate securities markets.

Key words: Private Securities Litigation Reform Act, litigation risk, accounting choice, restatements, discretionary revenues, private securities enforcement, class-action lawsuits

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1.0 Introduction

Shareholder lawsuits for violations of securities fraud (class actions) impose a tremendous burden on the U.S. economy and judicial system, but provide uncertain benefits. In the average year, investors file 200 lawsuits alleging losses of hundreds of billions, while firms pay billions to settle and defend these claims (Research, 2009).[1] Further, many liken settlement payments to "extortion" and allege that these lawsuits are frivolous, inhibit the competitiveness of U.S. financial markets and endanger thousands of jobs and billions of revenues for U.S. firms (Forum, 2007; Romano, 1991; Bloomberg & Schumer, 2007; Pritchard, 2009). Yet, given the substantial costs, it is not clear whether these lawsuits accrue important benefits in terms of financial market regulation. Some claim that these lawsuits "[deter] fraud"[2], and are "an essential supplement to [public enforcers]".[3] However, others suggest "private class actions move a lot of money around, but add little to deterrence at the margin" (Pritchard, 2009). Accordingly, this paper examines the alleged benefits of class actions by testing whether an unexpected decline in litigation risk affects the levels of discretionary revenues, the market reactions to unexpected revenues and the likelihood of restatements.

This question is timely as policy makers around the world are debating and adopting legal reforms to encourage class-action litigation in all areas of law.[4] Restoring confidence in and strengthening the stability of financial markets is a major impetus behind this movement. Hence, in light of the tremendous costs class actions impose and the global trend to encourage this litigation, whether

[1] In this paper I refer only to class-action lawsuits brought by shareholders under the Securities Act of 1933 and the Securities and Exchange Act of 1934 and subsequent amendments. Hence, when referring to lawsuits or class-action lawsuits I refer specifically to lawsuits filed by shareholders under securities laws as opposed to other types of class-action lawsuits or lawsuits brought by public regulators under securities laws.
[2] See Justice Kennedy in Dura Pharmaceuticals, Inc. v. Broudo (544 U.S. 336, 2005).
[3] See Justice Ginsberg in Tellabs Inc, v. Makor Issues & Rights Ltd. 551 U.S. 308.
[4] In the U.S. see, for instance, The Liability for Aiding and Abetting Securities violations Act of 2009, S. 1551, 111th Cong (2009), Restoring American Financial Stability Act of 2009, S., 111th Cong 2009, Securities Litigation Attorney Accountability and Transparency Act, HR 5491 (2006). For examples in other jurisdictions, see Taiwan (Lin, 2008), South Korea (Chung 2004), Italy (Comolli, De Santis, Lo Passo, 2010), Canada (Berenblut, Heys and Starykh, 2009), Japan (Ikeya and Kishitani, 2010) and Australia (Houston et al., 2009). For descriptions of legal reforms recently adopted in Argentina, Denmark, England and Wales, Finland, Germany, Indonesia, Israel, Netherlands, Portugal, Spain and Sweden see Behrens, et al. (2009) for details.

these lawsuits improve the financial reporting process by constraining managers from adopting aggressive reporting practices is an important and timely topic.

Furthermore, whether class actions affect financial reporting choices is not apparent for the following reasons. First, the corporation and insurance companies pay the majority of the costs of litigation. In fact, individual directors and executives, on average, personally only contribute around 0.4% of the total settlements. Their personal costs may be too low to prevent managers from reporting opportunistically relative to the gains they can accrue (Coffee, 1986). For instance, Gary Winnick, founder of Global Crossing, personally paid $55 million to the settlement, which was one of the largest sums ever paid by an individual. However, he earned over $730 million by selling stock prior to the collapse (Morgenson, 2005). Second, many class actions may be baseless allegations unrelated to the reliability or accuracy of firm disclosures (Pritchard, 2009; Alexander, 1991; Grundfest, 1995). Third, plaintiffs' attorneys arguably have no incentive to structure settlements in order to punish those culpable. In fact, these attorneys could actually gain from future securities violations by representing shareholders in subsequent lawsuits. Fourth, shareholders are widely dispersed and recover only 2-3% of losses which may be insufficient to provide incentives to vigorously monitor management. Since it is not clear whether class actions affect financial reporting choices, empirical studies are needed to guide policy debates.

Despite the ubiquity of class actions and their growing importance in regulating securities markets, sparse empirical evidence exists regarding whether lawsuits improve the financial reporting process. Extant literature focuses on the relation between litigation and management earnings forecasts (Johnson, Kasznik, & Nelson, 2001; Baginski, Hassell, & Kimbrough, 2002; Francis, Philbrick, & Schipper, 1994; Field, Lowry, & Shu, 2005; Skinner, 1994; Rogers & Van Buskirk, 2009) or how the level of discretionary accruals differ before and after a firm in the same industry faces SEC investigations and class-action litigation (Jennings, Kedia, & Rajgopal, 2011). In contrast, this study examines whether an unexpected change in litigation risk affects financial reporting choices reflected in mandatory disclosures. Hence, it provides evidence of the possible financial reporting consequences of policy reforms affecting class-action litigation.

My research design focuses on a specific court decision, Re: Silicon Graphics Inc. Securities Litigation (SGI), which reduced the risk of shareholder litigation under securities laws for firms headquartered within the United States Court of Appeals for the Ninth Circuit (Ninth Circuit).[5,6] Prior literature has empirically demonstrated that the SGI decision affected legal outcomes such as dismissals (Pritchard & Sale, 2005). Further, as discussed below, since SGI was unexpected, widely publicized in popular media, unlikely to be driven by environmental factors and only affected firms headquartered in the Ninth Circuit, it provides a strong setting to test the research question.[7]

I examine the changes in the levels of discretionary revenues, the market reactions to unexpected revenues, and the likelihood of a restatement for firms headquartered in the Ninth Circuit relative to firms headquartered in other federal circuits. The empirical tests focus on the revenue account because a majority of lawsuits allege manipulations in this account (Cornerstone Research, 2005) and a recent study concludes that 60% of fraud in public companies involves revenue (Beasley, Carcello, Hermanson, & Neal, 2010). I also focus on firms that face the highest level of litigation risk as prior research has demonstrated that this may vary by firm characteristics (Rogers & Van Buskirk, 2009; Kim & Skinner, 2010; Cao & Narayanamoorthy, 2009; Francis, Philbrick, & Schipper, 1994; Kasznik & Lev, 1995).[8]

Results indicate that a decline in litigation risk is detrimental to quality of the financial reporting process. Before the decision, firms facing a high risk of litigation in the Ninth Circuit reported low levels of discretionary revenues relative to firms headquartered elsewhere. This is consistent with prior literature suggesting that firms headquartered in the Ninth Circuit faced a more punitive legal regime during this period (Grundfest & Pritchard, 2002; Sale, 1998; Gibney, 2001; Perino, 2003). After the decision,

[5] The following reasons are some that motivate Johnson et al. (1999) to examine the same setting to test the valuation implications of shareholder lawsuits under securities laws.

[6] The Silicon Graphics decision reduced litigation risk by requiring that plaintiffs provide evidence that the defendant acted with "deliberate recklessness". The prior standard, established by GlenFed, Inc. Securities Litigation (42 F.3d 1541), held that "plaintiffs may aver scienter generally, just as the rule states - that is, simply by saying that scienter existed". This standard required one of the lowest levels of proof among all circuits. Hence, in one decision, the Ninth Circuit moved from among the least restrictive in terms of evidence required to demonstrate scienter to among the most restrictive. See the following section for more detail.

[7] While shareholders may file lawsuits in any federal jurisdiction, as elucidated below, the vast majority of lawsuits are consolidated and moved to the district where the firm is headquartered (Cox, Randall, & Bai, 2009). See section 2.2 for further details.

[8] As discussed in section 4.4, I use industry and size to identify firms that face a high risk of litigation.

however, the level of discretionary revenues increased to a level on par with firms located in other jurisdictions, and the market response to unexpected revenues declined for this subset of firms indicating that the reporting change was opportunistic in nature. Lastly, the likelihood of a restatement increased for the average firm headquartered within the Ninth Circuit relative to firms headquartered elsewhere, and this result is driven by firms that face a high risk of litigation.

This paper demonstrates that the risk of private securities litigation constrains managers from adopting opportunistic and aggressive accounting choices. Accordingly, it suggests that class-action lawsuits filed under securities laws serve an important role to regulate securities markets, and are not just frivolous allegations as many have argued. As such, it contributes to the literature that examines the determinants and consequences of litigation risk in terms of accounting outcomes (Baginski, Hassell, & Kimbrough, 2002; Field, Lowry, & Shu, 2005; Francis, Philbrick, & Schipper, 1994; Johnson, Kasznik, & Nelson, 2001; Johnson, Nelson & Pritchard 2007; Kasznik & Lev 1995; Palmrose & Scholz, 2004; Rogers & Stocken 2005; Skinner, 1994; Skinner, 1997; Rogers & Van Buskirk, 2009). Further, it contributes to the literature in law and economics that examines the economic benefits of class actions (La Porta, Lopez-de-Silanes, & Shleifer, 2006; Coffee, 2006; Jackson & Roe, 2009; Cox & Thomas, 2009).

This paper is organized in six sections. The next section provides institutional detail on securities litigation. The third reviews related literature and outlines the hypotheses. The fourth details the empirical model of the tests. The fifth interprets the empirical results, and the last concludes.

2.0 Institutional Background on Securities Laws

2.1 Private Securities Litigation Reform Act

Congress passed the Private Securities Litigation Reform Act of 1995 (PSLRA) in response to complaints that class-action lawsuits filed under securities laws impose significant costs on the economy. The PSLRA included several provisions to reduce baseless lawsuits and ease the legal burden on corporations and third party actors such as law and accounting firms. One of the key areas of reform

heightened the standards plaintiffs must plead in order to enter into the discovery phase and gather evidence of fraud.

Prior to PSLRA, shareholders could file a lawsuit against a corporation with relatively little evidence of misrepresentation on the part of the corporation. The plaintiffs could gather evidence during the discovery process. Congress sought to limit these "fishing expeditions" by delaying discovery until the plaintiff survived pretrial defense motions. Specifically, PSLRA requires that, in order to pass pretrial motions to dismiss, plaintiffs must "state with particularity facts giving rise to a *strong inference* that the defendant acted with the required state of mind" (§78u-Fb2).

Subsequently, circuits interpreted the phrase "strong inference" differently. The Second and Third Circuits held that Congress intended to codify their pre PSLRA standard of demonstrating either (1) motive and opportunity or (2) strong circumstantial evidence of recklessness or conscious misbehavior (as illustrated in Shields v. Citytrust Bancorp, 25 F. 3d 1124, 1128, 2d Cir. 1994).[9] Other circuits (the First, Fourth, Fifth, Sixth, Seventh, Eighth and Tenth) determined that Congress intended to raise the pleading requirement above that which existed in the Second and Third Circuits prior to PSLRA. Finally, the Ninth Circuit interpreted PSLRA's pleading provision in the strictest manner. In Re: Silicon Graphics Inc. Securities Litigation (SGI) the Ninth Circuit required plaintiffs to "plead, at a minimum, particular facts giving rise to a strong inference of *deliberate recklessness*." (See Figure 1 for a geographic representation of the structure of the federal court system.)

2.2 Re:Silicon Graphics, Inc., Securities Litigation

The intent of this paper is to test whether a change in litigation risk, such as those currently debated around the globe, affect managers' financial reporting choices. As such, the setting is critical as it must replicate, to the closest degree possible, an actual policy intervention. In this respect, the Silicon Graphics decision is nearly ideal for the following six reasons.

[9] Regarding the interpretation of the Second Circuit, see Press v. Chemical Inv. Servs. Corp., 166 F. 3d 529, ("The [PSLRA] heightened the requirement for pleading scienter to the level used by the Second Circuit.") Regarding the third Circuit, see Meckenstock v. International Heritage, Inc., 1998 U.S. Dist. LEXIS 21042, *17 (E.D.N.C. 1998).

First, it interpreted the pleading requirement, which can dramatically affect the outcome of the case. Judge Nygaard called these requirements the "key that opens access to courts".[10] Empirically, studies demonstrate that these differences had a material effect on both the rate that courts dismiss claims (Pritchard & Sale, 2005) as well as the amount of claims filed (Perino, 2003). Hence, the SGI decision is a powerful setting as it led to a strong shift in litigation risk.

Second, the SGI decision primarily affects firms headquartered in a single jurisdiction, the Ninth Circuit, which is a critical element of the research design. Shareholders can file a securities class-action lawsuit in any district where the corporation has an economic presence. However, over 85% of class actions are ultimately consolidated and litigated in the federal district where the corporation maintains its headquarters (Cox, Thomas, & Bai, 2009).[11] Therefore, the litigation risk managers face is apparent at the time they make financial reporting choices. Furthermore, since only public firms headquartered in the Ninth Circuit are affected by the decision, the remaining firms can be utilized as a control group. This design creates a natural control for changes in the business environment, such as macro economic shocks, which enhances the validity of the study.

Third, the SGI decision was widely publicized and coverage clearly articulated how it would affect firms.[12] The AP newswire covered the decision the day of the announcement, July 2, 1999. Then, the San Francisco Chronicle, the San Jose Mercury News and the Los Angeles Times reported on the

[10] Phillips v. Allegheny (515 F.3d 224).

[11] Shareholders from multiple jurisdictions are likely to file a lawsuit on any given occasion. When this occurs, a multijurisdictional legal panel will consolidate the lawsuits and, most likely, convene the proceedings in the most convenient jurisdiction, which is where the witnesses and documents are located. Further, even if only one shareholder filed a lawsuit in a circuit favorable to the plaintiff, the defendant can move to relocate the lawsuit to the district where the firm is headquartered. It is costly and time consuming for the plaintiff to argue against this motion. Since most witnesses and documentation will be located in this district, the courts do not look favorably upon plaintiffs who "venue shop".

[12] Many decisions were important in establishing precedence and determining future legal outcomes in all jurisdictions. However, since I examine the managerial response to changes in the litigation environment, it is important that managers are also informed of the decision and its potential effect on future outcomes of shareholder security litigation. Consistent with law literature on PSLRA, I searched factiva and found that none of the following decisions were covered in the business press that might have reached corporate reporting decision makers: Dura Pharmaceuticals, Inc. v. Broudo, 544 U.S. 336, Wright v. Ernst & Young 152 F.3d, and South Ferry LP #2 v. Killinger F.3d, 2008. Hence, I focus my examination on the SGI decision as it was heavily covered in the business press.

decision the next day, a Saturday. The following Monday it was covered in the Wall Street Journal.[13] Furthermore, writers indicated the effect of the decision on litigation risk suggesting that "future lawsuits against high-tech firms in Silicon Valley appear to have little chance of success " (Holding & Carlsen, 1999). Since this paper examines the effect of court decisions on managerial reporting choices, it is critical that managers were aware of these decisions and their effect on the risk of class-action litigation.

Fourth, given the judicial history of the Ninth Circuit the manner in which it interpreted the pleading provision of PSLRA was a surprise. Prior to PSLRA, the Ninth Circuit adopted among the lowest pleading provisions of all circuits (Gibney, 2001).[14] In contrast to the plaintiff-friendly environment that existed prior to PSLRA, the Ninth Circuit adopted the highest standard of all circuits after the PSLRA (Grundfest & Pritchard, 2002). Thus, with one split decision, the Ninth Circuit unexpectedly moved from one of the easiest circuits to certify a class action to one of the most difficult. Since it was not anticipated, firms could not gradually phase in changes to reporting regimes making it a powerful setting to examine changes in financial reporting choices.

Fifth, the process of judge selection and the manner in which judges decide cases suggests that the outcome of the SGI decision was not driven by contemporaneous financial reporting choices. The Ninth Circuit's policy for selecting judges is based on "random draw from the circuit-wide pool of senior and active judges".[15] Also, recent research indicates that judges decide cases in accordance with personal beliefs and characteristics suggesting that environmental factors did not affect the outcome (Altieri, Apple, Marquette, & Moore, 2001; Schneider, 2002).[16] Further, corporate fraud occurred regularly in the Ninth Circuit at the time of the SGI decision (Beasley, Carcello, & Hermanson, 1999). Hence, if judges

[13] Further, this decision prompted the San Francisco Chronicle to conduct a five-part series on ethical lapses in the Silicon Valley and corporate fraud.
[14] See Re: Glenfed Securities Litigation 42 F.2d 1059 1985.
[15] See section 3.2.1 of The General Orders for the U.S. Court of Appeals for the Ninth Circuit (Circuit 2010).
[16] At the time of the SGI decision, 23 active judges sat on the Ninth Circuit. The panel which decided the SGI case was composed of 3 judges: Browning, Sneed and Rhoades. Based on measures of judicial ideology, Sneed and Rhoades were two of the most conservative judges in the circuit while Browning was one of the most liberal judges (Nixon 2004). Their decisions reflected those preferences: Browning voted for greater shareholder protection while Sneed and Rhoades voted to constrain litigation. This suggests, at least in the case of the SGI decision, that judicial preferences reflect deeper personal accords and beliefs and not just a response to the environment.

were responding to the environment, the decision would have been to encourage, not constrain, private litigation. These factors all indicate that reverse causality is less of an issue in this setting.

Sixth, it is well recognized that, at the time of the SGI decision, the Ninth Federal Circuit was the most important venue in terms of the volume of class-action securities lawsuits (Pritchard & Sale, 2005). Hence, an examination of securities lawsuits must emphasize this important legal jurisdiction.

In summary, this study contributes to the debate as to whether class actions should be encouraged or stymied. As such, the setting should mirror a policy change as closely as possible. The SGI decision is a good setting as it was well publicized, unexpected, important to judicial outcomes, unlikely to be caused by environmental factors and its affect on firms' litigation risk was unambiguous and known at the time managers made reporting choices.

3.0 Related Literature and Hypotheses

3.1 Literature Review

This paper examines how the risk of class-action lawsuits filed under securities laws affects discretionary revenues, market reactions and restatements. Thus, it is related to literatures examining the consequences of shareholder litigation in terms of economic and accounting outcomes as well as the determinants and consequences of financial restatements. This section reviews these studies below.

One stream of literature, grounded in law and economics, examines the economic effects of private enforcement of securities laws (via shareholder lawsuits and market disciplinary actions) and public enforcement mechanisms (via regulators). La Porta et al. (2006) theorize that regulators cannot marshal the resources necessary to adequately discipline corporations and lack financial incentives to vigorously pursue violators of securities laws. They survey legal experts in 49 countries and find that the private enforcement mechanisms (liability standards and disclosure requirements) are positively related to financial development while the public enforcement measures are not. Coffee (2007) argues that these results are misleading as they only measure the "laws on the books" and not the strength of the regulator. Jackson and Roe (2009) follow by examining the relation between measures capturing the strength of the

regulator and financial development. They find that both public and private mechanisms of enforcement lead to financial development. The current study contributes to this literature by examining one channel through which private securities litigation might affect financial market development: by enhancing the veracity of firm-specific accounting information.

A significant literature examines how litigation risk affects firm-specific information in terms of the occurrence, frequency, timing, precision and accuracy of management earnings forecasts. These papers suggest that litigation risk does not affect the accuracy of management forecasts (Johnson, Kasznik, & Nelson, 2001; Rogers & Van Buskirk, 2009). But, the propensity of a firm to issue an earnings forecast is decreasing in litigation risk (Rogers & Van Buskirk, 2009; Baginski, Hassell, & Kimbrough, 2002). Alternatively, some studies suggest that litigation risk may create incentives for managers to preempt bad news which might discourage litigation (Skinner, 1994; Field, Lowry, & Shu, 2005; Kasznik & Lev, 1995), and reduce the costs of litigation (Skinner, 1997). However, other studies indicate that voluntary disclosures do not deter litigation (Francis, Philbrick, & Schipper, Shareholder litigation and corporate disclosures, 1994; Johnson, Kasznik, & Nelson, 2001).

While these papers examine the link between litigation risk and voluntary disclosure, they do not address the effect of litigation risk on mandatory financial reports as opposed to announcements or descriptions of the reports. Yet, mandatory financial statements are fundamentally different from voluntary earnings guidance. For example, the accuracy of managerial estimates will be readily verified shortly after the forecast when earnings are released. Hence, misrepresentations or errors will be quickly discovered while erroneous or fraudulent accounting estimates may take years to be revealed. Further, voluntary forecasts are less affected by contractual incentives than actual financial data. Overall, this literature makes significant contributions, but does not examine the effect of litigation risk on financial reporting choices reflected in mandatory disclosures. Alternatively, the following two papers examine financial reporting choices in different contexts.

Qiang (2007) examines the interrelated roles of conditional and unconditional conservatism under costs induced by contracting, litigation, regulation and taxes. She finds that conditional and unconditional

conservatism for 633 firms over the period 1988-1999 are unique and firms tradeoff one for the other. Further, both conditional and unconditional conservatism are related to litigation risk.

In concurrent research, Jennings et al. (2011) compare the level of discretionary accruals two years before and two years after either the SEC publicly discloses an investigation of a firm in the same industry or a firm in the same industry faces class-action litigation. Their setting allows them to examine specific features of the SEC's enforcement regime and make interesting comparisons of public enforcement (via SEC investigations) and private enforcement (via lawsuits) of securities laws. They find that discretionary accruals decline in the periods following both public SEC investigations and class-action litigation.

While these papers are interesting, the current study features a unique setting with two important characteristics that enhance the validity of the research design over other research. First, the SGI decision represents an unexpected shift in litigation risk. This is critical because studies suggest that causality can also run from accounting outcomes to litigation (Johnson, Nelson, & Pritchard, 2006; Palmrose & Scholz, 2004). However, as noted in section 2.2, the institutional features of the current setting make reverse causality unlikely. Further, the SGI decision primarily affected only a subset of firms determined by geography. The difference-in-differences design featured in this study tests changes in financial reporting practices *within industries*. This is important as accounting outcomes are driven by innate factors that are affected by routine business cycles and industry norms (Francis, LaFond, Olsson, & Schipper, 2005). Overall, since I focus exclusively on the financial reporting consequences of shareholder litigation (as opposed to comparing litigation with SEC enforcements as in Jennings et al. (2011)) I can examine a sharper setting and construct finer tests that naturally rule out many alternative explanations.

Finally, the sharp rise in restatements and accounting scandals after PSLRA spurred scholars to study the underlying causes and consequences of financial statement irregularities. These studies attribute diverse factors to the rise in restatements such as: market pressures to maintain or grow share prices, managerial compensation incentives, outdated standards ill equipped to guide complex transactions, proliferation of new standards, internal error and earnings management (Palmrose & Scholz, 2004;

Plumlee & Yohn, 2010; GAO, 2002). In terms of consequences of restatements, a few studies demonstrate that restatements increase the likelihood of a class-action lawsuit. (Johnson, Nelson, & Pritchard, 2007; Palmrose & Scholz, 2004). While interesting, these studies do not examine whether the risk of litigation deters restatements.[17] Thus, this paper is unique because it provides evidence of the role of private litigation in affecting the frequency of restatements.

3.2 Arguments for Alternative Hypotheses

Whether class actions constrain managers from adopting aggressive reporting policies is an open question. Some argue that shareholder lawsuits are an integral component of the regulatory structure of the financial markets. Justice Ginsburg reflects "This Court has long recognized that meritorious private actions to enforce federal antifraud securities laws are *an essential supplement* to criminal prosecutions and civil enforcement actions brought, respectively, by the Department of Justice and the Securities and Exchange Commission (SEC) [emphasis added]" (Tellabs Inc, v. Makor Issues & Rights Ltd. 551 U.S. 308). On the other hand, an expert in securities law testified before the Senate suggesting "private class actions [lawsuits] move a lot of money around, but add little to deterrence at the margin" (Pritchard, 2009). While private litigation, as an enforcement mechanism, may constrain managers' financial reporting choices, there are five reasons why it may not.

First, the costs any individual bears may be too low to discipline managers from violating securities laws (Coffee, 2006). In the aggregate, individual executives or directors contribute only around 0.4% of total settlements whereas insurance companies and the corporation bear the majority of the cost (Dunbar, Foster, Juneja, & Martin, 1995).[18] This is what prompts Coffee (1986) to suggest that private securities litigation is simply a wealth transfer from current to past shareholders less considerable legal fees. And, this circularity makes it impossible to hold managers accountable for misdeeds.

[17] For the reasons noted in the next section, it does not follow that litigation reduces restatements just because restatements may increase the likelihood of litigation.

[18] Consider, for instance, that the largest sum that an individual ever paid in regards to settling a class action suit was the Chairman of Global Crossing, Gary Winnick, who paid $55 million. However, this was less than 10% of the $734 million he earned by selling stock at an inflated level (Morgenson, 2005).

Empirically, it is not clear whether class actions levy reputational penalties on managers, executives and directors. Helland (2006) finds that directors actually gain more directorships in other firms after serving on the board of a firm sued for violating securities laws. He suggests that lawsuits are so commonplace that they actually improve director's human capital in a meaningful way. Srinivasan (2005) samples 135 class actions that follow a restatement and finds that only 5.5% of the outside directors and audit committee members are named in the lawsuit. This suggests that directors do not face explicit penalties. However, Fich and Shivdasani (2007) find that outside directors of firms that face class action securities lawsuits reduce board seats in other firms. And, the departure at the interconnected firm is viewed positively by investors.

Overall, this literature does not provide strong evidence that managers face implicit penalties, suggesting that they may not respond to changes in litigation risk. Furthermore, even if managers did face career concerns, the "final period problem" suggests that the greater the likelihood that the manager will be dismissed, the less he or she can be dissuaded from committing fraud (Gulati, 1999).

Second, if class actions are meritless, managers may not have the ability to prevent them through their financial reporting choices. And, some argue that many lawsuits have no merit (Alexander, 1991; Grundfest, 1995; Pritchard, 2009; O'Brien, 1993). Furthermore, if directors and shareholders perceive that lawsuits are frivolous they may be less likely to penalize financial officers and those culpable.

Third, the institutional structure of lawsuits may preclude any deterrence effect. Plaintiffs' attorneys have strong profit motives to file and litigate class actions. However, they have no incentive to structure settlements to deter future violations. In fact, these attorneys can actually gain from future securities violations by representing injured shareholders.

Fourth, the dispersed nature of shareholders and low recover values lead to collective action problems. In aggregate, shareholders only recover 2-3% of losses incurred by alleged wrongdoings (Milev, Patton, & Starykh, 2011). Furthermore, dispersed ownership reduces incentives for shareholders to monitor executives and hold individuals accountable for infractions of laws that reduce shareholder values (Berle & Means, 1932; Jackson & Roe, 2009).

Fifth, managers with financial reporting responsibilities may be simply unaware of the actual risk of shareholder litigation. Under these conditions, changes in litigation risk cannot affect firm choices.

In conclusion, it is not clear whether private litigation affects financial reporting outcomes. While some, such as Justice Ginsburg, suggest that these lawsuits accrue important benefits, others disagree. The next section details the hypotheses tested in this paper to provide empirical evidence on the debate.

3.3 Hypotheses

Given the possibility that litigation risk may not affect accounting outcomes, I focus on the most powerful setting, which is the revenue account in the subset of firms most likely to respond to changes in litigation risk. Revenues are important because, as the Director of Enforcement at the SEC noted, "revenue recognition remains the recipe of choice for cooking the books" (Holding, 1999). Furthermore, prior research suggests that the likelihood of shareholder litigation varies based on firm characteristics (Rogers & Van Buskirk, 2009; Kim & Skinner, 2010; Cao & Narayanamoorthy, 2009; Francis, Philbrick, & Schipper, 1994). In the context of the Silicon Graphics decision, I argue that size and industry are especially relevant identifiers of litigation risk.[19]

In contrast to the arguments in the prior section, a long line of research in accounting suggests that managers alter financial reporting practices in response to changes in incentives and opportunities (Jones J., 1991; Christie, 1990; Dechow, Ge, & Schrand, 2010). And, several studies suggest that litigation risk does affect managers' choices as they relate to voluntary disclosures (Johnson, Kasznik, & Nelson, 2001; Baginski, Hassell, & Kimbrough, 2002; Skinner, 1994; Francis, Philbrick, & Schipper, 1994; Rogers & Van Buskirk, 2009). Therefore, I believe that this enforcement mechanism may affect financial reporting choices, especially for the subset of firms most likely to face shareholder litigation.

Given that the Silicon Graphics decision reduced the risk of shareholder litigation, I hypothesize, in alternative form:

H1a: In the post-SGI period, high-risk firms headquartered in the Ninth Circuit recorded more discretionary revenues than in the pre-SGI period relative to firms headquartered in other jurisdictions.

[19] I examine this design choice in greater detail in section 4.4.

Recording revenues more aggressively after the SGI decision, as suggested in the prior hypothesis, may suggest managerial opportunism. If this occurs, the market response, in terms of abnormal returns, to revenue surprises should decline indicating that investors are more suspicious of the levels of revenues reported. Accordingly, I hypothesize, in alternative form:

H2a: In the post-SGI period, the market response to unexpected revenues for high-risk firms headquartered in the Ninth Circuit was lower than in the pre-SGI period relative to firms headquartered in other jurisdictions.

Finally, I examine the likelihood of a restatement as it adds a different dimension of the financial reporting process. The prior empirical measures capture more subtle variations in accounting choices across the entire cross section of firms. However, the restatement construct captures more egregious violations of GAAP.[20] In this sense, this measure is closest to the "unethical and unsafe practices" against which the Securities Acts of 1933 and 1934 were intended to protect.[21] I hypothesize, in alternative form:

H3a: In the post-SGI period, the likelihood of a restatement for high-risk firms headquartered in the Ninth Circuit was higher than in the pre-SGI period relative to firms headquartered in other jurisdictions.

4.0 Empirical Design:

This paper examines whether the SGI ruling affects the subsequent financial reporting decisions of managers in firms headquartered in the Ninth Federal Circuit that face the greatest risk of shareholder litigation. Hence, research design choices include selecting an appropriate proxy to measure financial reporting decisions, modeling the change in this proxy around the SGI decision, and identifying the high-risk subset of firms. This section discusses these choices.

4.1 Proxies for Financial Reporting Choices:

The ideal dependent variable would capture whether a firm's financial reporting choices violated securities laws. However, this variable does not exist because one can only judge compliance with

[20] Restatements occur for a variety of reasons such as changes in accounting principles. However, I follow a method similar to Hennes et al. (2008) and only include the most severe restatements. See section 4.5 for further detail.
[21] As a definition of the purpose of the Securities Acts of 1933 and 1934, see the message from President Franklin Delano Roosevelt to the Committee on Interstate and Foreign Commerce (73d Congress, 1st Sess., H.R. Rep 85, 1933).

securities laws after careful ex post analysis of the facts and circumstances of each case. Instead, I examine three variables, each capturing a unique aspect of financial reporting.

4.1.1 Discretionary Revenues

First, I examine discretionary revenues as measured by Stubben (2010). Conceptually, this variable measures the level of premature revenue recognition. Intuitively, it measures the speed by which firms recognize revenue, relative to industry peers, controlling for changes in receivables. Hence, it allows for an analysis of how litigation risk affects the aggressiveness of revenue recognition across the entire cross section of firms. And, to the extent that lawmakers are concerned with aggressive revenue recognition, it closely reflects the construct of interest.

This variable is applicable for the following reasons. First, according to Cornerstone (2005), over half of all class action suits filed in 2004 and 2005 alleged that the firm fraudulently recognized revenue. Revenue recognition was, by far, the most widespread allegation of accounting malfeasance. Further, a recent study concludes that 60% of fraud in public companies affects revenue (Beasley, Carcello, Hermanson, & Neal, 2010). In fact, the Director of Enforcement at the SEC acknowledged that "revenue recognition remains the recipe of choice for cooking the books" (Holding, 1999). Hence, for purposes of this paper, the sharpest indicator of securities laws violation would be to examine the revenue account.

Second, Stubben (2010) demonstrates that this measure is more effective in detecting revenue manipulation than either the modified Jones model or the Dechow-Dichev measure of accruals. In fact, the discretionary revenue model detects over 20% of the instances of revenue manipulation when 1% of assets is added to the change in fourth quarter revenues and the receivables accrual. On growth firms, many of which may be in my sample, this measure demonstrates less bias (in the form of lower abnormal accruals) than other measures of discretionary accruals models on samples where no manipulation is induced.

Finally, this measure outperformed accruals measures in tests against actual financial reporting outcomes. Stubben examines 173 firms subject to SEC enforcement for improper revenue recognition and

concludes that his model has both higher power and lower bias in detecting improper revenue recognition policies than accruals models.

I follow Stubben (2010) and estimate this cross-sectional model by industry and quarter:

$$(AR_{i,q} + AR_{i,q-1} + AR_{i,q-2} + AR_{i,q-3}) - (AR_{i,q-4} + AR_{i,q-5} + AR_{i,q-6} + AR_{i,q-7}) = \alpha_0 + \beta_1(REV_{i,q} - REV_{i,q-4}) + \beta_2[(REV_{i,q-1} + REV_{i,q-2} + REV_{i,q-3}) - (REV_{i,q-5} + REV_{i,q-6} + REV_{i,q-7})] + \varepsilon \quad (1)$$

Where:
$AR_{i,q}$ = *Net accounts receivable for firm i in quarter q measured from the statement of cash flow.*
$REV_{i,q}$ = *Total revenues (REVTQ) of firm i in quarter q.*

The intercept is allowed to vary over the most recent quarter because sales initiated in this period are more likely to remain uncollected than those initiated in prior quarters. The residual represents the level of discretionary revenues as it is the portion of the change in accounts receivable that cannot be explained by the change in revenues. All variables are scaled by average total assets (ATQ_q+ATQ_{q-4}/2).

4.1.2 Discretionary Revenues Specification

Consistent with all main empirical analyses in this paper, I examine discretionary revenues in a differences-in-differences specification. This model controls for cross-sectional variations in firm-specific characteristics that also affect accounting outcomes and are relatively stationary over time. Such characteristics could be related to the fundamental earnings process or unobservable characteristics such as governance. Further, it also controls for any time-period effects, such as boom or bust cycles. Therefore, this model provides a more clear analysis of litigation risk on accounting outcomes than other models, such as those examining litigation risks in the cross section.

To test hypothesis 1, I estimate the following cross-sectional model quarterly over the four-year window centered on the event date (July 2, 1999) separately for the high-risk and non-high-risk groups:

$$DiscRev_{i,q} = \alpha_0 + \beta_1 Circuit9_i + \beta_2 Post_q + \beta_3 Circuit9_i * Post_q + \beta_i Controls_{i,q} + \varepsilon \quad (2)$$

Where:

$DiscRev_{i,q}$ = The level of discretionary revenues for firm i in quarter q as defined by Stubben (2010) as the residual from equation (1).

$Circuit9_i$ = (1) if firm i is headquartered within the Ninth Federal Circuit and (0) otherwise.

$Post_q$ = (1) for report dates (RDQ) after the Silicon Graphics decision on July 2, 1999 and (0) otherwise.

$Controls_{i,q}$= A vector of controls described below.

The coefficient of interest is β_3, which measures the change in discretionary revenues for firms headquartered in the Ninth Circuit over the event period relative to the change in discretionary revenues of other firms. Hypothesis 1 suggests that it is positive and significant over high-risk firms, indicating that high-risk firms headquartered within the Ninth Circuit altered revenue recognition policy subsequent to the SGI decisions.[22]

For control variables I use SaleGrowth, ROA and MTB as proxies for growth opportunities that may affect the receivable-revenue relation independent of litigation risk. I use Size and BigSix as larger firms and those audited by a big six auditor may have different opportunities and abilities to alter revenue recognition policies. All variables are defined in Exhibit 1.

4.2.1 Market Reaction to Unexpected Revenues:

In order to examine whether investors became more suspicious of unexpected revenues after the SGI decision, I examine the relation between short-window abnormal returns and revenue surprises.[23]

I follow Jegadeesh and Livnat (2006) and model the expectation of revenue surprises as a seasonal random walk with a drift using the following methodology:

$$Surge_{i,q} = \frac{Rev_{i,q} - E(Rev_{i,q})}{\sigma Rev_{i,q}} \quad (3)$$

[22] I winsorize all continuous variables including DiscRev at the 1% level to reduce the influence of outliers.

[23] The advantage of this test is that it uses the market as a reference construct to discern a changing pattern in revenue recognition policy. In this sense, it complements the other tests which only examine accounting outcomes (discretionary revenues and restatements). The drawback to this test is that it requires modeling market expectations and measuring abnormal returns, both of which are surely estimated with error. Hence, I expect this measure to be noisy.

$Surge_{i,q}$ is the standardized unexpected revenue growth for firm i in quarter q. The standard deviation of revenues ($\sigma Rev_{i,q}$) is taken over the prior 8 quarters and the expectation of revenues is modeled following a seasonal random walk with a drift:

$$E(Rev_{i,q}) = Rev_{i,q-4} + \delta_{i,q} \quad (4)$$

Where Rev is the quarterly revenue per share and the drift ($\delta_{i,q}$) is modeled as:

$$\delta_{i,q} = (\sum_{j=1}^{8}(Rev_{i,q-j} - Rev_{i,q-j-4}))/8 \quad (5)$$

I also follow Jegadeesh and Livnat (2006) and model abnormal returns as:

$$AR_{i,q} = \prod_{j=q-1}^{q+1}(1 + R_{i,q} - BR_{i,j}) - 1 \quad (6)$$

Where $R_{i,j}$ is the actual return compounded over the three-day period beginning one day prior to the earnings announcement. $BR_{i,j}$ is the return on the size-matched decile portfolio.

4.2.2 Market Reaction Specification

To test whether the SGI decision affected the market reaction to unexpected revenues and whether the effect is concentrated in the high-risk group, I estimate the following cross-sectional model quarterly over the four-year window centered on the event date separately for the high-risk and non-high risk groups:

$$CAR_{i,q} = \alpha_0 + \beta_1 Circuit9_i + \beta_2 Post_q + \beta_3 Surge_{i,q} + \beta_4 Circuit9_i * Surge_{i,q} + \beta_5 Post_q * Surge_{i,q} + \beta_6 Circuit9_i * Post_q + \beta_7 Circuit9_i * Post_q * Surge_{i,q} + \beta_i Controls_{i,q} + \beta_k Controls_{i,q} * Surge_{i,q} + \varepsilon_{i,q} \quad (7)$$

Where:
$CAR_{i,q}$ = The cumulative abnormal return for the three-day event window centered on the earnings announcement date calculated as the actual return less the portfolio based on year-end size decile and compounded over the event period.[24]
$Circuit9_i$ = (1) if firm i was headquartered within the Ninth Circuit and (0) otherwise.
$Post_q$ = (1) for report dates (RDQ) after the Silicon Graphics decision on July 2, 1999 and (0) otherwise.
$Surge_{i,q}$ = The standardized unexpected revenue growth defined in equation (3).
$Controls_{i,q}$= A vector of controls described below.

[24] I obtain the daily portfolio returns from CRSP ERDPORT1 dataset.

The coefficient of interest is β_7, which represents the incremental change in the revenue response coefficient for firms headquartered in the Ninth Circuit after the SGI decision relative to firms headquartered in other jurisdictions. Based on hypothesis 2, I expect it to be negative when estimated over high-risk firms.

Consistent with prior papers that examine the relation between unexpected earnings and short-window returns I control for a variety of firm characteristics that may alter the relation between revenues and returns independent of litigation risk (Blouin, Raedy, & Shackelford, 2003; Hayn, 1995). All of the following variables except Nonlinear are inserted in the specification individually and interacted with Surge resulting in a vector of 11 terms: Nonlinear, MTB, Persist, Size, Predict, Expense Surprise (ExpenseSurp), Loss and Beta. All variables are defined in Exhibit 1.

I restrict this test to firms that have the eight necessary lags of quarterly revenues to calculate the drift term.

4.3.1 The Likelihood of a Restatement

This paper examines whether litigation risk constrains managers from making opportunistic financial reporting choices. However, restatements can occur for a variety of seemingly innocuous reasons such as a change in GAAP. Hence, the ideal measure would capture only restatements caused by managerial decisions to intentionally bias reporting. Since that variable does not exist, I follow a method similar to Hennes et al. (2008). Specifically, I classify a restatement as intentional if any of the following occur: the restatement announcement explicitly mentions the term "fraud", the SEC publicly disclosed an investigation into the accounting issue, or there is a subsequent class-action lawsuit.[25] While this method is certainly not perfect, restatements captured will likely be those more damaging to the reputation of the firm and consumer confidence in financial reporting processes than other restatements. Hence, these restatements more closely reflect regulators intentions to prevent abuses of the financial reporting process.

[25] Given that class-action lawsuits declined after the SGI decision (Perino, 2003), the choice to include restatements with a corresponding lawsuit will bias the test against finding an increase in restatements after the decision.

4.3.2 Restatement specification

Restatements pose a unique challenge in a quarterly event study because firms often restate the entire year. Thus, quarterly financials filed before the SGI decision could be restated for GAAP violations that occur after the SGI decision. Therefore, I exclude fiscal years that overlap the SGI decision and compare the two years prior to the excluded year with the two years subsequent to the excluded year.[26] I examine the following cross-sectional, logistic model estimated quarterly over this period:

$$Restate_{i,q} = \alpha_0 + \beta_1 Circuit9_i + \beta_2 Post_q + \beta_3 Circuit9_i * Post_q + \beta_i Controls_{i,q} + \varepsilon \quad (8)$$

Where:
$Restate_{i,q}$ = (1) if the quarterly observation was subsequently restated because of an intentional misapplication of GAAP and (0) otherwise.
$Circuit9_i$ = (1) if firm i was headquartered within the Ninth Circuit and (0) otherwise.
$Post_q$ = (1) for report dates (RDQ) after the Silicon Graphics decision on July 2, 1999 and (0) otherwise.
$Controls_{i,q}$ = A vector of controls described below.

The coefficient of interest is β_3, which measures the change in the likelihood of a restatement for firms headquartered in the Ninth Circuit after the SGI decision, relative to firms headquartered outside the Ninth Circuit.[27] Hypothesis 3 suggests that it is positive indicating that restatements increased for firms headquartered within the Ninth Circuit subsequent to the SGI decisions.

$Controls_{i,q}$ are a vector of variables to control for changes in the firm over the event window and include: MTB, ROA, Leverage, BigSix, SaleGrowth and Size following prior literature (Agrawal & Chadha, 2005). All variables are defined in Exhibit 1.

4.4 Identification of high-risk firms

Prior research suggests that the likelihood of shareholder litigation varies across firms based on characteristics such as size and industry (Rogers & Van Buskirk, 2009; Kim & Skinner, 2010; Cao &

[26] I also run this model over a four-year period centered on the event date, consistent with the prior models. Conclusions are not sensitive to this change.
[27] Ai and Norton (2003) demonstrate that the coefficient, β_3, estimated in a nonlinear model, such as equation (8), does not reflect the full change in the relation between the likelihood of a restatement and one of the interaction terms brought about by a change in the other interaction term. This is because β_3 represents the change in the *probability function* and *not the change in the expectation* of a restatement. They propose a technique to properly determine the full interaction effect that has been adopted by previous papers (Bushman, Dai, & Wang, 2010). I follow this research and compute the marginal effect of the interaction term using the delta method.

Narayanamoorthy, 2009; Francis, Philbrick, & Schipper, 1994).[28] In the context of the Silicon Graphics decision, these characteristics are especially relevant identifiers of cross-sectional differences in firm responses to changes in litigation risk.

Size is an important identifier for the following three reasons. First, it is well recognized that attorneys have little incentive to bring costly litigation against smaller firms that have fewer resources to pay settlements (Cox, Thomas, & Kiku, 2006; Perino, 2003). Second, PSLRA requires that lawsuits proceed past the defendant's initial dismissal motions in order to reach the discovery phase. Hence, the plaintiff's complaint must be based on either public information or testimony obtained from a whistleblower. Larger firms will have more public information available upon which a case can be built and more employees which can potentially serve as whistleblowers. So, ex ante, it will be easier to build a case which withstands dismissal motions for larger than smaller firms. Third, size also captures how well the firm is informed about the actual litigation risk it faces. Larger firms are more likely to be staffed with in-house counsel and others informed about relevant case law. These firms may also have more extensive processes that require review or approval of accounting choices by individuals familiar with litigation risk. Thus, not only does size affect the actual risk of litigation, but size also affects the link between actual litigation risk and accounting choices. Accordingly, in this paper, I set a size threshold as assets that exceed $100 million.[29]

Similarly, industry is an important measure of litigation risk for the following reasons. First, it is well recognized that certain industries were most frequently subjected to class-action lawsuits, especially in the geographic area comprising the Ninth Circuit during the period of the SGI decision (Grundfest & Perino, 1997; Jones & Weingram, 1996; Johnson, Nelson, & Prichard, 1999; Johnson, Kasznik, & Nelson, 2001; Francis, Philbrick, & Schipper, 1994). Second, firms in these industries were instrumental

[28] The difference-in-difference specifications in tables 3 and 4 utilize the high-risk indicator for testing discretionary revenues and the market reaction to unexpected revenues. However, the restatement tests in Table 6 and the short-window tests in Table 8 demonstrate a shift in financial reporting choices for the *average* firm headquartered in the Ninth Circuit. Hence, the general conclusions drawn in this paper are not sensitive to the use of this variable.

[29] This threshold is consistent with Beasley et al. (2010) who examine fraud in overlapping time periods and report that the median public company that engaged in fraud had a size of $100 million. In robustness tests I examine the sensitivity of my results to this threshold.

in lobbying for PSLRA and subsequent legislation that constrained litigation (Eaton, 1998). Finally, popular press accounts of the Silicon Graphics decision emphasized the importance of the decision to the specific industries.[30] Following Francis et al. (1994) I identify high-risk industries as biotechnology, software, hardware, electronics and retailing industries. See Exhibit 1 for definitions of these industries.

4.5 Sample

The sample window for the main tests runs from July 1997 through July 2001. I use Compustat quarterly for the accounting data, and CRSP for the returns data. I eliminate observations with a change in fiscal year end, financial institutions, utilities and foreign firms as they face a different regulatory structure and litigation environment.

Audit Analytics provides a dataset of financial restatements that is well suited for this paper. This dataset identifies restatements by searching for terms such as "restate", "error", and "prior period adjustments". They also collect all 8-Ks that contain "Item 4.02 Non Reliance" language. They then read all applicable 10-Ks and 10-Qs to ensure that the restatement is not caused by adoption of new accounting principles or revisions attributable to mergers and acquisitions.[31]

One concern regarding the restatement data is that the Audit Analytics dataset begins capturing restatements publicly disclosed after January of 2000 while the event window runs from July 1997 through July 2001. However, the construct of interest is not the disclosure of the restatement, itself, but rather the period over which financial statements violated GAAP. As demonstrated below, the restatement window (the period over which the financial statements violated GAAP) and the disclosure lag (the

[30] For example, the San Jose Mercury News documented the Silicon Graphics decision the day after by writing "a federal appeals court has given *the high-technology industry* a thickened coat of armor to defend itself against an avalanche of securities fraud cases" (Mintz 1999) [emphasis added]. See also the San Francisco Chronicle's report of the decision: "their [high tech firm's] lawyers convinced a federal appeals court to interpret the Reform Act so strictly that future lawsuits against *high tech firms* in Silicon Valley appear to have little chance of success [emphasis added] (Holding & Carlsen, 1999)."

[31] This is based on private correspondence with an Audit Analytics representative.

distance between the end of the restatement window and the public disclosure) are sufficiently large that the average restatement falling within the event window will be captured in the dataset.[32]

5.0 Results

5.1 Descriptive Statistics

Table 1 describes the geographic composition of the sample. Approximately 25% of the total observations and 34% of the high-risk observations in the sample are headquartered in the Ninth Federal Circuit. Panel B demonstrates that 77% of the observations in the Ninth Federal Circuit are headquartered within the state of California. Panel C shows that around 6% of the observations in the sample are in the high-risk group headquartered in the Ninth Circuit (2% prior to the SGI decision and 4% after) while twice as many high-risk firms were headquartered outside the Ninth Circuit (12%).

Table 2 presents the descriptive statistics for the samples used in the paper. Overall, the firms are large, profitable, use a big six auditor and have low abnormal returns around earnings announcements. Around 18% of the observations in the sample are high risk, average assets are around $1 billion, revenues around $283 million for the average firm, and 84% use a Big Six auditor.

Panel B shows the correlations. The measure of discretionary revenues is positively correlated with Surge, MTB, ROA and SaleGrowth and negatively correlated with Leverage, Sales and BigSix. Overall, this suggests that levered firms subject to a more stringent auditor have lower discretionary revenues than faster growing firms.

5.2 Testing Discretionary Revenues

Hypothesis 1 suggests that managers of high-risk firms headquartered in the Ninth Circuit recorded revenue more aggressively after the Silicon Graphics decision. Table 3 Panel A tabulates the results of equation (2), which tests this hypothesis. The first model examines only high-risk firms. The coefficient on the interaction between Post and Circuit9 is positive and statistically significant. This indicates that post SGI, high-risk firms headquartered in the Ninth Circuit increased discretionary

[32] See Figure 1 for a representation of the restatement timeline.

revenues over the pre SGI period relative to high-risk firms headquartered in other jurisdictions, confirming hypothesis 1.

Model 2 analyzes the non high-risk firms. The interaction term is not significant indicating that non high-risk firms headquartered in the Ninth Circuit did not alter revenue recognition policy relative to non high-risk firms headquartered in other jurisdictions.

Panel B tabulates tests of differences in the levels of discretionary revenues among groups and periods separately. The first test (column 1) examines the change in the levels of discretionary revenues before and after SGI within the same group. Results in this column indicate that the statistically significant interaction coefficient in Panel A is driven by an increase in discretionary revenues for high-risk firms headquartered in the Ninth Circuit. Discretionary revenues actually declined over the event period for all other groups although the decline is not statistically significant. The increase in the level of discretionary revenues for the high-risk firms headquartered in the Ninth Circuit is dramatic. In terms of magnitude, the increase for the mean (median) firm is equivalent to an increase in revenue of $13.5 ($2.6) million which is 3.7% (3.9%) of total revenues reported for the quarter. Further, column 2 (3) tests differences in the levels of discretionary revenues between high-risk firms headquartered in the Ninth Circuit and all other firms before (after) the SGI decision. Results in column 2 indicate that the level of discretionary revenues for high-risk firms headquartered in the Ninth Circuit was significantly lower than all other groups prior to the SGI decision. However, column 3 indicates that the level of discretionary revenues for high-risk firms headquartered in the Ninth Circuit was no different from the other groups after the SGI decision.

These results suggest that managers increased discretionary revenues in the period subsequent to the SGI ruling by recognizing revenue more slowly in the period prior to the SGI decision. Since cash flows equal accruals in the long term, discretionary actions to increase revenues must have either temporal consequences (in terms of reducing past or future revenues) or current financial consequences (in terms of a balance sheet effect in the current year). The results appear to be driven by the fact that discretionary revenues were abnormally low for high-risk firms headquartered in the Ninth Circuit in the

two-year period prior to the SGI decision. Hence, managers "funded" an increase in discretionary revenues in the period subsequent to the SGI decision by reporting abnormally low discretionary revenues in the period preceding the SGI decision. This is consistent with the well-recognized phenomenon that the Ninth Circuit provided one of the most favorable circuits to litigate securities class-action lawsuits prior to the SGI decision (Grundfest & Pritchard, 2002; Sale, 1998; Gibney, 2001; Perino, 2003). Overall, this panel indicates that the heightened risk of litigation prior to the SGI decision constrained managers from aggressively recognizing revenues. After the SGI decision reduced litigation risk, discretionary revenues increased to a level consistent with peer firms headquartered in other areas of the country.

5.3 Testing Market Reaction to Unexpected Revenues

Documenting a shift in discretionary revenues after the SGI decision, while interesting, is insufficient to determine whether class actions constrain managers from adopting aggressive revenue recognition practices. Managers could have recognized revenue more aggressively to signal private information or to opportunistically bias reporting. The prior motivation would presumably improve financial information while the latter would not. Equation 7 tests whether investors subsequently discounted unexpected revenues prior to the SGI decision. A decline in the investor response would indicate that the more aggressive revenue recognition policy after the SGI decision was likely opportunistic. An increase in the investor response would suggest that litigation risk actually inhibits managers from incorporating value-relevant information into the firm's revenue. Hypothesis 2 suggests that the market's reaction to unexpected revenues is attenuated for high-risk firms headquartered in the Ninth Circuit declined after the SGI decision.

Table 4 tabulates the results of these tests. Column 1 is a baseline quarterly regression of abnormal returns on unexpected revenues. The Surge variable is positive and statistically significant indicating that an increase in unexpected revenues is associated with greater abnormal returns in the three-day window around the quarterly announcement. Economically, moving from the median observation to the 75th percentile of unexpected revenues leads to an increased 3 day abnormal return of

1.5% for the baseline regression in column 1. This magnitude is consistent with prior literature (Kama, 2009). Column 2 is the difference-in-differences specification across high-risk firms. The three-way interaction among Surge, Post and Circuit9 is negative and significant. This indicates that the market response to unexpected revenues declined for high-risk firms headquartered in the Ninth Circuit subsequent to the SGI decision relative to other firms.[33] Column 3 is the same analysis over non high-risk firms. Consistent with the prior panel, which demonstrated no change in the level of discretionary revenues for the non high-risk firms, this model shows that the market reaction to unexpected revenues did not change for this population. Overall, results from this panel are consistent with the prior: a shift in the financial reporting process for high-risk firms headquartered in the Ninth Circuit. This panel complements the prior by demonstrating that the increase in discretionary reduced the information content of revenues.

Panel B tabulates tests of differences in the revenue response coefficient among groups and periods separately. Column 1 examines differences in revenue response coefficients within the same group comparing the pre and post period. The only statistically significant change in the market response to unexpected revenues over the event period occurred in the Ninth Circuit, high-risk group where the market response to revenue declined by nearly 30%. The revenue response coefficient actually increased for all other groups, although the increase is not statistically significant. The difference between the pre and post value for the Ninth Circuit, high-risk group is very significant, economically. The mean (median) high-risk firm headquartered in the Ninth Circuit that reported a positive value of unexpected revenues after the SGI decision would have seen a .61% (.50%) increase in the three-day raw return had the market response to unexpected revenues not changed subsequent to the SGI decision.

[33] An alternative explanation for this result is that the reduction in market reactions is driven by an increase in voluntary earnings forecasts for the high-risk firms subsequent to the SGI decision. To test this, I included the number of voluntary forecasts issued in the quarter as a control variable, and also interacted it with the Surge variable. Untabulated results indicate that the coefficient of interest, the 3-way interaction among Surge, Circuit9 and HighRisk increased slightly in magnitude and significance indicating that these results are not driven by a shift in the propensity of firms to issue a voluntary disclosure. I also examined a 60-day returns window to capture the incorporation of voluntary disclosure information other than management earnings forecasts. Results are very similar to those presented here.

The next columns test the nature of the shift in the market response to unexpected revenues documented in column 1. The market response to unexpected revenues could have been greater for high-risk firms headquartered in the Ninth Circuit prior to the SGI decision, and converged after the decision relative to other firms. Alternatively, the market response to unexpected revenues for high-risk firms headquartered in the Ninth Circuit could have been no different prior to the SGI decision, but declined after the SGI decision, relative to other firms. If the market rewards revenue surprises more when litigation risk is high, the former explanation would prevail. However, if the market response to litigation risk is more acute after a high-profile event, such as the SGI decision, then the latter explanation should dominate. Although the revenue response coefficient for the Ninth Circuit, high-risk group is higher than all other groups prior to the SGI decision, the difference is not statistically significant (column 2). Instead, the last column indicates that the revenue response coefficient for the Ninth Circuit, high-risk firms after the SGI decision is significantly lower than each of the other 3 groups. These results suggest that the punitive litigation environment in the Ninth Circuit prior to SGI did not affect market reactions to unexpected revenues during that period. However, after the SGI decision, investors became suspicious of unexpected revenues reported by firms most susceptible to litigation.

Overall, this table is generally consistent with the results in the prior panel. The market response to unexpected revenues declined only for high-risk firms headquartered in the Ninth Circuit. This suggests that the discretion was opportunistic in nature and did not enhance the information available to the market.

5.4 Testing the Likelihood of a Restatement

The final hypothesis suggests that the likelihood of a restatement increased for Ninth Circuit firms subsequent to the SGI decision. Table 3 demonstrates that after the SGI decision, high-risk firms headquartered in the Ninth Circuit recognized revenue more quickly than before, relative to other firms. Table 4 suggests that this increase inhibited the information in revenues for market participants. While interesting, it could be that these high-risk firms complied with GAAP both before and after the shift.

Alternatively, restatements capture only shifts from reporting choices consistent with GAAP to those that violate GAAP. Accordingly, it captures more egregious violations of GAAP which are clearly indications that managers adopted aggressive reporting practices.

Table 5 examines the restatement data used in this analysis. Panel A tabulates descriptive statistics of the restatement data and demonstrates that the average restatement that occurred during the SGI event window will be captured in the data. As discussed above, the SGI window runs from July 1997 through July 2001. However, Audit Analytics did not begin collecting restatement data until January of 2000. Per Panel A, the average restatement window for the entire dataset is 612 days. And, the average disclosure lag is 263 days meaning that the average delay between the beginning of the restatement window and disclosure is 875 days. Thus, the Audit Analytics sample will capture the average restatement beginning from mid 1997 through the end of the SGI event window. See Figure 2 for a timeline of restatement events.[34]

Panel B examines the change in restatements by the location of the firm's headquarters and whether it occurred before or after SGI. As described above, the dataset will contain more restatements in the post SGI period because of the data collection process. Overall, the number of restatements nearly triples for firms headquartered within the Ninth Circuit while they just more than doubled outside the Ninth Circuit. The right side of the table scales these measures by the number of observations in each group. The proportion of restatements in and out of the Ninth Circuit roughly doubled after the SGI decision.

Table 6 examines whether the probability of a restatement increased subsequent to the SGI decision in a multivariate setting. Column 1 tests whether the likelihood of a restatement increased for

[34] Although a restatement in the pre period is captured in the data for the average firm there could be systematic differences in the disclosure timeline that would affect test results. For example, firms headquartered in the Ninth Circuit could announce restatements more timely relative to firms headquartered outside the Ninth Circuit in order to avoid litigation or reduce the class. In this case, the coefficient of interest would be biased in the predicted direction since the Ninth Circuit firms would demonstrate a larger increase in the post period because the data would pick up fewer restatements for the Ninth Circuit firms in the pre period (since the restatement disclosure would be delayed less and therefore occur before the data collection begins) relative to the other firms. Ultimately, it is an empirical issue whether firms headquartered in the Ninth Circuit announce the restatement more timely relative to other firms. A t-test suggests that there is no difference in the means of either the disclosure lag or the period between the beginning of the restatement period through the disclosure date between the groups.

the average firm headquartered in the Ninth Circuit. The marginal effect of the interaction between post and Circuit9 is positive and significant at a p<.01 level. This indicates that the probability of a restatement increased for the average firm headquartered in the Ninth Circuit relative to the average firm headquartered in other judicial circuits after the SGI decision. The next columns split the sample according to the high-risk dimension. Results indicate that the increase in the likelihood of a restatement noted in column 1 is driven by the high-risk firms. Economically, the likelihood of a restatement after the SGI decision for high-risk firms headquartered in the Ninth Circuit firms rose nearly 3% relative to before the SGI decision and relative to the change in restatements over the same period for firms headquartered outside the Ninth Circuit. This result supports hypothesis 3.

5.5 Robustness

This section conducts a series of tests to examine whether prior results are robust to a variety of alternative design choices. Table 7 tabulates the interaction coefficients in regressions centered on a pseudo-event date which is the actual event date shifted quarter-by-quarter forward and backward using the same four-year event window.[35] For example, the coefficient reported in period Q+1 in the first column is the interaction in equation (2) between Post and Circuit9 using discretionary revenues as the dependent variable centered 1 quarter after the SGI decision. The column 2 tabulates tests that replicate Table 4 by reporting the three-way interaction among Post, Circuit9 and Surge. All specifications include the same controls as described above and standard errors clustered at the firm level. Results indicate that the increase in discretionary revenues and the decline in the investor reaction to unexpected revenues are concentrated around the actual event date and fade as the pseudo-event date moves away from the actual event date.

The next tests examine the sensitivity of prior conclusions to alternative windows. All prior tables used a four-year window (two years prior and two years subsequent to the decision). Table 8 tabulates the results of these tests using windows of two years, one year and two quarters. Reported values are the

[35] Restatements cannot be examined in this test because of data constraints.

variables of interest, which are the interactions between Circuit9 and the Post indicator for the discretionary revenues and restatement tests and the interaction among Circuit9, Post and Surge for the market reaction tests.

Results of these robustness tests demonstrate two important effects. First, the change in the levels of discretionary revenues and the likelihood of a restatement is robust to alternative window lengths. However, results for the market reactions do not, in general, hold over shorter windows.[36] This could be attributable to a poorly specified expectations or abnormal returns model. Also, it could be that managers of some firms altered financial reporting policy in order to convey private information to market participants. Thus, litigation risk prior to the SGI decision may have been so high that it prevented managers from selecting the most informative accounting policies. In this case, the information content of revenues would increase subsequent to the SGI decision for these firms, which would counteract the decline in the market response for the opportunistic firms. The other important result to note from this table is that the coefficients of interest are generally significant for the average firm, but this result is driven by the high-risk firms.

Overall, Tables 7 and 8 suggest that the results in prior panels were not driven by general trends which occurred in the Ninth Circuit relative to firms headquartered in other legal jurisdictions. Instead, the change in discretionary revenues and market reactions is concentrated around the event date, itself. Further, results generally hold over very short windows making it less likely that a confounding event is driving the results as this event would have had to occur during the same quarter as the SGI decision.

I also perform a series of untabulated tests to examine whether research design choices affect the results. I used raw values of discretionary revenues and abnormal returns, values winsorized at 5%, lowered the total assets requirement to $10 million, raised it to $200 million, and used a probit model to test restatements. I extended the returns window from three days centered on the event date to 60 days prior to the earnings announcement through the day after (+1). I also explored other expectations models

[36] This coefficient is negative and significant in a window of four quarters prior and one quarter subsequent to the decision providing some evidence that the market response to unexpected revenues for firms headquartered in the Ninth Circuit did decline in the quarter immediately following the decision.

such as a seasonal random walk, and models scaled by lagged total assets instead of standardized. Inferences from all analyses remain unchanged.

Next, I examined whether discretionary accruals changed over the event period. Although the link between litigation and accounting outcomes is strongest in the revenue account, it may affect total accruals. I measured the level of discretionary accruals using the cross-sectional, modified-Jones approach advocated by Teoh et al. (1998). I find that the levels of discretionary accruals are significantly larger for both high-risk and non high-risk groups headquartered in the Ninth Circuit relative to firms headquartered in other jurisdictions using the difference-in-differences model illustrated in Table 3.

6.0 Conclusion

Class-action lawsuits under securities laws impose tremendous costs on the U.S. economy and are growing in popularity throughout the world. Despite their perceived importance in regulating securities markets, little empirical evidence exists regarding whether they constrain managers from reporting opportunistically. Accordingly, this paper examines the alleged benefits of class actions by testing whether an unexpected decline in litigation risk affects the levels of discretionary revenues, the market reaction to unexpected revenues and the likelihood of a financial restatement.

Empirically, I first identify a court decision that reduced the risk of shareholder litigation only for firms headquartered within the U.S. Court of Appeals for the Ninth Circuit. This decision is a strong setting to examine as it affected legal outcomes (Pritchard & Sale, 2005; Perino, 2003), was unexpected, widely publicized in popular media, unlikely to be driven by environmental factors and only affected a subset of firms based upon the geographic location of the headquarters.

Then, I examine the changes in the levels of discretionary revenues, the market reactions to unexpected revenues, and the likelihood of a restatement for firms headquartered in the Ninth Circuit relative to firms headquartered in other federal circuits. These outcomes each capture a unique aspect of the financial reporting process and provide insight into the nature of the reporting change (informative versus opportunistic) as well as whether the change was subtle or more egregious.

Results indicate that the likelihood of a restatement and the levels of discretionary revenues increased while the investor reaction to revenue surprises declined after the decision for firms affected by the decision relative to firms not affected. Further, these reporting changes were driven by firms that faced the highest risk of litigation. Overall, the risk of class-action lawsuits filed under securities laws constrains managers from adopting aggressive reporting practices.

REFERENCES

Agrawal, A., & Chadha, S. (2005). Corporate Governance and Accounting Scandals. *Journal of Law and Economics* , 371-406.

Ai, C., & Norton, E. (2003). Interaction erms in logit and probit models. *Economics Letters* , 123-129.

Alexander, J. (1991). Do the Merits Matter? A Study of Settlements in Securities Class Actions. *Stanford Law Review* , 497-598.

Baginski, S. P., Hassell, J. M., & Kimbrough, M. D. (2002). The effect of legal environment on voluntary disclosure: Evidence from management earnings forecasts issued in U.S. and Canadian markets. *The Accounting Review* .

Beasley, M., Carcello, J., Hermanson, D., & Neal, T. (2010). *Fraudulent Financial Reporting 1998:2007 - An Analysis of U.S. Public Companies.* Committee of Sponsoring Organizations of the Treadway Commission.

Behrens, M., Fowler, G., & Kim, S. (2009). Global litigation trends. *Michigan State Journal of International Law* , 165-194.

Berle, A., & Means, A. (1932). *The Modern Corporation and Private Property,1987.* New York: Harcourt Brace.

Bloomberg, M., & Schumer, C. (2007). *Sustaining New York's and the US' Global Financial Services Leadership.* City of New York and the US Senate.

Blouin, J., Raedy, J. S., & Shackelford, D. (2003). Capital Gains Taxes and Equity Trading: Empirical Evidence. *Journal of Accounting Research* , 611-651.

Bushman, R., Dai, Z., & Wang, X. (2010). Risk and CEO turnover. *Journal of Financial Economics* , 381-398.

Cao, Z., & Narayanamoorthy, G. (2009). The Effect of Litigation Risk on Management Earnings Forecasts. *Working Paper* .

Choi, S., & Pritchard, A. (2010). The Supreme Court's Impact on SEcurities Class Actions: An Empirical Assessment of Tellabs. *Working Paper* .

Christie, A. (1990). Aggregation of test statistics: An evaluation of the evidence on contracting and size hypotheses. *Journal of Accounting and Economics* , 539-566.

Coffee, J. (2007). Law and the Market: The Impact of Enforcement. *University of Pennsylvania Law Review* , 229-311.

Coffee, J. (2006). Reforming the Securities Class Action: An Essay on Deterrence and its Implementation. *Columbia Law Review* , 1551-1553.

Coffee, J. (1986). Understanding the Plaintiff's Attorney: The Implications of Economic Theory for Private Enforcement of Law Through Class and Derivative Actions. *Columbia Law Review* , 669-727.

Cornerstone Research. (2009). *Accounting Class Action Filings and Settlements.*

Cornerstone Research. (2005). *Securities Class Action Case Filings 2005: A Year in Review.* Cornerstone Research.

Cox, J., & Thomas, R. (2009). Mapping the American Shareholder Litigation Experience: A Survey of Empirical Studeis of the Enforcement of the U.S. Securities Laws. *Vanderbilt and Duke University Law School Research Paper* .

Cox, J., Thomas, R., & Bai, L. (2009). Do differences in pleading standards cause forum shopping in securities class actions?: doctrinal and empirical analyses. *Wisconsin Law Review* .

Cox, J., Thomas, R., & Kiku, D. (2006). Does the plaintiff matter? An empirical analysis of lead plaintiffs in securities class actions. *Columbia Law Review* .

Dechow, P., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of their proxies, their determinants and their consequences. *Journal of Accounting and Economics* .

Dechow, P., Hutton, A., Kim, J., & Sloan, R. (2011). Detecting Earnings Management: A New Approach. *Working Paper April 2011* .

Dunbar, F., Foster, T., Juneja, V., & Martin, D. (1995). *Recent Trends III: What Explains Settlements in Securities Class Actions?* NERA.

Eaton, L. (1998, June 11). The Silicon Valley Gang. *New York Times* .

Fich, E., & Shivdasani, A. (2007). Financial fraud, director reputation and shareholder wealth. *Journal of Financial Economics* .

Field, L., Lowry, M., & Shu, S. (2005). Does disclosure deter or trigger litigation? *Journal of Accounting and Economics* .

Forum, F. S. (2007). *Global Capital Markets Survey.* Washington DC: Financial Services Forum.

Foster, G. (1977). Quarterly Accounting Data: Time-Series Properties and Predictive-Ability Results. *George* , 1-21.

Francis, J., LaFond, R., Olsson, P., & Schipper, K. (2005). The Market Pricing of Accruals Quality. *Journal of Accounting and Economics* , 295-327.

Francis, J., Philbrick, D., & Schipper, K. (1994). Shareholder litigation and corporate disclosures. *Journal of Accounting Research* .

GAO. (2002). *Report 03-138: Financial statement restatements: Trends, market impacts, regulatory responses, and remaining challenges.* Washington, DC: GAO.

Gibney, B. C. (2001). The end of the unbearable lightness of pleading: Scienter after Silicon Graphics. *UCLA Law Review* , 973-1015.

Grundfest, J. (1995). Why Disimply? *Harvard Law Review* , 727-747.

Grundfest, J., & Perino, M. (1997). *Securities Litigation Reform: The First Year's Experience.* Stanford Law School Working Paper no. 140.

Grundfest, J., & Pritchard, A. (2002). Statutes with Multiple Personality Disorders: The Value of Ambiguity in Statutory Design and Interpretation. *Stanford Law Review* , 627-736.

Gulati, M. (1999). When corporate managers fear a good thing is coming to an end: The Case of Interim Nondisclosure . *UCLA Law Review* .

Helland, E. (2006). Reputation penalties and the merits of class-action securities litigation. *Journal of Law and Economics* .

Hennes, K., Leone, A., & Miller, B. (2008). The importance of distinguishing errors from irregularities in restatement research: The case of restatements and CEO/CFO turnover. *The Accounting Review* , 1487-1519.

Holding, R. (1999, December 10). SEC warns tech firms to quit "Cooking the books". *San Francisco Chronicle* , p. A2.

Holding, R., & Carlsen, W. (1999, November 19). Beyond the Law: As the SEC attempts to crack down on imporper accounting, a recent federal court ruling threatens future investor lawsuits. *San Francisco Chronicle* , p. A1.

Jackson, H., & Roe, M. (2009, MARCH 16). *Private and Public Enforcement of Securities Laws: Resource based evidence.* Retrieved from ssrn: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1000086

Jegadeesh, N., & Livnat, J. (2006). Revenue Surprises and Stock Returns. *Journal of Accounting and Economics* , 147-171.

Jennings, J., Kedia, S., & Rajgopal, S. (2011). The Deterrence Effects of SEC Enforcement and Class Action Litigation. *Working Paper* .

Johnson, M., Kasznik, R., & Nelson, K. (2001). The Impact of Securities Litigation Reform on the Disclosure of Forward-Looking Information By High Technology Firms. *Journal of Accounting Research* , 297-327.

Johnson, M., Nelson, K., & Prichard, A. (1999). In Re Silicon Graphics Inc.: Shareholder Wealth Effects Resulting from the Interpretation of the Private Securities Litigation Reform Act's Pleading Standard. *California Law Review* , 773-810.

Johnson, M., Nelson, K., & Pritchard, A. (2007). Do the merits Matter More? The Impact of the Private Securities Litigation Reform Act. *Journal of Law Economics and Organization* .

Jones, C., & Weingram, S. (1996). *The Determinants of 10b-5 Litigation Risk.* Working Paper, Stanford University.

Jones, J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research* , 193-228.

Kama, I. (2009). On the Market Reaction to Revenue and Earnings Surprises. *Journal of Business Finance and Accounting* , 31-50.

Kasznik, R., & Lev, B. (1995). To Warn or Not to Warn: Management Disclosures in the Face of an Earnings Surprise. *The Accounting Review* .

Kim, I., & Skinner, D. (2010). Measuring Securities Litigation Risk. *Working Paper* .

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2006). What Works in Securities Law? *Journal of Finance* , 1-32.

Lin, Y.-H. (2008). Modeling Securities Class Actions outside the United States: The Role of Nonprofits in the Case of Taiwan. *NYU Journal of Law and Business* , 143-198.

Milev, J., Patton, R., & Starykh, S. (2011). *Recent trends in securities class action litigation: 2011 mid-year review.* Washington DC: Nera Economic Consulting.

Morgenson, G. (2005, July 1). Ebbers Set to Shed Assets. *NY Times* , p. C1.

Nixon, D. (2004). *Political Ideology Measurement Project*. Retrieved October 18, 2011, from David Nixon: http://www2.hawaii.edu/~dnixon/PIMP/

O'Brien, V. (1993, June 17). Private litigation under the federal securities laws. *U.S. Senate Committee on Banking, Housing, and Urban Affairs, Subcommittee on Securities* . Washington, DC.

Palmrose, Z.-V., & Scholz, S. (2004). The circumstances and legal consequences of non-GAAP reporting: Evidence from restatements. *Contemporary Accounting Research* , 139-180.

Perino, M. (2003). Did the Private Securities Litigation Reform Act Work? *University of Illinois Law Review* , 914-978.

Plumlee, M., & Yohn, T. (2010). An Analysis of the Underlying Causes Attributed to Restatements. *Accounting Horizons* , 41-64.

Pritchard, A. (2009). Testimony before the Committee on the Judiciary, Subcommittee on Crime and Drugs United States Senate. *Evaluating S. 1551: The Liability for Aiding and Abetting Securities Violations Act of 2009.*

Pritchard, A., & Sale, H. (2005). What Counts as Fraud? An Empirical Study of Motions to Dismiss under the Private Securities Litigation Reform Act. *Journal of Empirical Legal Studies* .

Qiang, X. (2007). The Effects of Contracting, Litigation, Regulation, and Tax costs on Conditional and Unconditional Conservatism: Cross-sectional Evidence at the Firm Level. *The Accounting Review* .

Research, C. (2009). *Accounting Class Action Filings and Settlements.*

Rogers, J., & Stocken, P. (2005). Credibility of management forecasts. *The Accounting Review* .

Rogers, J., & Van Buskirk, A. (2009). Shareholder litigation and changes in disclosure behavior. *Journal of Accounting and Economics* .

Romano, R. (1991). The Shareholder Suit: Litigation without Foundation. *Journal of Law Economics and Organization* .

Sale, H. (1998). Heightened Pleading and Discovery Stays: An Analysis of the Effect of the PSLRA's Internal-Information Standard on '33 and '34 Act Claims. *Washington University Law Quarterly* , 537-595.

Skinner, D. (1997). Earnings disclosure and stockholder lawsuits. *Journal of Accounting and Economics* , 249-282.

Skinner, D. (1994). Why firms voluntarily disclose bad news. *Journal of Accounting Research* .

Srinivasan, S. (2005). Consequences of financial reporting failure of outside directors: evidence from accounting restatements and audit committee members. *Journal of Accounting Research* .

Stubben, S. (2010). Discretionary Revenues as a Measure of Earnings Management. *The Accounting Review* , 695-717.

Teoh, S. H., Wong, T., & Rao, G. (1998). Are Acruals during Inital Public Offerings Opportunistic? *Review of Accounting Studies* , 175-208.

FIGURES

Figure 1: Structure of the U.S. Federal Court System

Figure 2: Timeline of Restatements

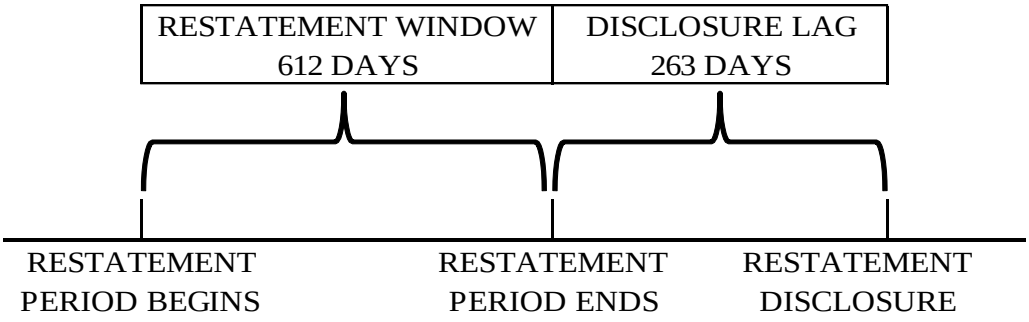

EXHIBIT 1
Variable Definitions

Dependent Variables

CAR	=	the three-day, cumulative abnormal return centered on the earnings announcement date adjusted by the market return for the same size decile;
DiscRev	=	the level of discretionary revenues for firm i in quarter q as defined by Stubben (2010) and estimated as the residual in equation (1);
Restate	=	indicator variable that takes a value of (1) if the observation was subsequently restated as a result of an intentional violation of GAAP. Similar to Hennes, Leone and Miller (2008) I identify restatements where either 1) fraud is explicitly mentioned in the restatement announcement 2) there is a corresponding SEC investigation or 3) there is a subsequent class action lawsuit and (0) otherwise;

Variables of Interest

Circuit9	=	indicator variable that takes a (1) value if the firm is headquartered within the jurisdiction of the 9th Circuit U.S. Court of Appeals and (0) otherwise;
HighRisk	=	indicator variable that takes a value of (1) if the firm has the following SIC noted in Francis, Philbrick and Schipper (1994) (2833-2836, 8731-8734, 3570-3577, 7370-7374, 3600-3674, 5200-5961) and assets exceed $100 million and (0) otherwise;
Post	=	indicator variable that takes a (1) value if the observation occurs after the 9th Circuit U.S. Court of Appeals published the decision in re. Silicon Graphics Securities Litig. (183 F.3d 970) on July 2, 1999 and (0) otherwise;
Surge	=	revenue surprise where revenue (REVTQ) expectation is modeled as a seasonal random walk with a drift term following (Jegadeesh and Livnat 2006) and described in equation (3) above;

Control Variables

Assets	=	total assets (ATQ);
Beta	=	the Beta coefficient obtained using the market model estimated over the period from 100 days to 2 days before the earnings announcement date;
BigSix	=	indicator variable that takes a value of (1) if the current auditor was a member of the Big Six;
ExpenseSurp	=	expense surprise where expense expectation is modeled as a seasonal random walk with a drift term following the same methodology used to measure Surge (Jegadeesh and Livnat 2006) and described in equation (3) above. Expenses are measured as all accounts that roll into after tax income (IBQ) not modeled in the Surge variable (TXTQ, MIIQ, XINTQ, SPIQ, NOPIQ, DPQ, XOPRQ). Missing values of the expense variables are set to (0);
Income	=	income before extraordinary items (IBQ);
Leverage	=	total long term debt (DLTTQ) divided by total assets (ATQ);
Loss	=	indicator variable that takes a value of (1) if the observation has negative net income (IBQ) and (0) otherwise;
MTB	=	market to book ratio defined as market value (closing price in last fiscal year (PRCC_F)*number of shares outstanding (CSHO)) divided by total book value (TBV);
Nonlinear	=	unexpected revenues * absolute value of unexpected revenues;
Persist	=	the autoregressive coefficient from the Foster (1977) model;

(Continued on next page)

EXHIBIT 1 (Continued)
Variable Definitions

Control Variables		
Predict	=	firm constant measure of the predictability of unexpected revenues measured as the mean absolute value of unexpected revenues measured over the entire sample period;
Return	=	daily return compounded for the quarter ending on the quarterly balance sheet date;
ROA	=	return on assets defined as income before extraordinary items (IBQ) divided by assets as the beginning of the quarter (ATQ_{q-1});
Sales	=	quarterly revenues reported (SALEQ);
SaleGrowth	=	the seasonally adjusted difference in the most recent quarters of total sales ($SALEQ_q$ - $SALEQ_{q-4}$) scaled by total assets as of the beginning of the seasonally adjusted period (ATQ_{q-4});
Size	=	log of market value of equity;

TABLE 1

Composition of the Sample

Panel A: Sample makeup by jurisdiction over the SGI event period

circuit	# of Obs.	% of Obs.	# of HighRisk Obs.	% of HighRisk Obs.
1	3,126	7%	676	9%
2	4,149	10%	617	8%
3	3,828	9%	628	8%
4	2,488	6%	441	6%
5	4,327	10%	497	6%
6	2,906	7%	535	7%
7	2,441	6%	369	5%
8	2,774	7%	432	6%
9	10,442	25%	2,670	34%
10	2,379	6%	285	4%
11	3,339	8%	585	8%
DC	43	0%	7	0%
	42,242	100	7,742	100%

Panel B: Ninth U.S. Circuit by the State of the Firm's Headquarters

STATE	Freq.	Percent
AK	7	0%
AZ	663	6%
CA	7,997	77%
HI	61	1%
ID	104	1%
MT	45	0%
NV	259	2%
OR	550	5%
WA	756	7%
	10,442	100

(Continued on next page)

TABLE 1 (continued)

Panel C: Identification of Observations by Group

# of Observations per Group			
Circuit9	HighRisk	Pre	Post
Y	Y	1,031	1,639
Y	N	3,804	3,968
N	Y	2,256	2,816
N	N	13,036	13,692
		20,127	22,115

% of Observations per Group			
Circuit9	HighRisk	Pre	Post
Y	Y	2%	4%
Y	N	9%	9%
N	Y	5%	7%
N	N	31%	32%
		48%	52%

This table demonstrates the geographical and temporal makeup of the sample. Panel A tabulates observations according to the location of the headquarters over the SGI event period (4 year window centered on July 2, 1999). HighRisk firms are those with assets in excess of $100 million and in an industry identified by Francis et al. (1994). Panel B tabulates observations within the Ninth Circuit by the state where the firm is headquartered. Panel C tabulates the observations according to whether they fall inside the Ninth Circuit and HighRisk group and whether they occur before (Pre) or after (Post) the Silicon Graphics decision.

TABLE 2

Descriptive statistics and correlations.

Panel A. Descriptive Statistics

Variable	Mean	Std Dev	25th Pctl	50th Pctl	75th Pctl
Assets	1,067.88	8,455.40	27.26	101.96	408.70
BigSix	0.84	0.37	1.00	1.00	1.00
CAR	0.00	0.10	-0.05	0.00	0.05
Circuit9	0.24	0.43	0.00	0.00	0.00
Discrev	0.00	0.05	-0.02	0.00	0.02
HighRisk	0.18	0.38	0.00	0.00	0.00
Income	10.77	236.74	-1.07	0.39	4.38
Leverage	0.17	0.22	0.00	0.10	0.28
MTB	2.86	7.10	0.84	1.69	3.42
ROA	-0.03	0.14	-0.03	0.01	0.02
Sales	283.71	1,367.53	5.69	27.75	119.96
SaleGrowth	0.05	0.16	-0.01	0.02	0.08
Size	4.68	2.06	3.31	4.62	6.01
SURGE	0.08	1.56	-0.83	0.18	0.95

Panel B: Pearson (Spearman) correlations for the sample above (below) diagonal

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Assets	**1.00**	**0.05**	0.00	**-0.02**	-0.01	**0.05**	**0.32**	**0.02**	**0.03**	**0.04**	**0.76**	-0.01	**0.27**	-0.01
(2) BigSix	**0.44**	**1.00**	0.00	**0.06**	**-0.02**	**0.17**	**0.02**	**0.03**	**0.07**	**0.16**	**0.09**	**0.03**	**0.45**	-0.01
(3) CAR	**0.04**	0.01	**1.00**	0.01	0.00	**0.02**	**0.01**	0.00	**0.02**	**0.11**	0.00	**0.08**	**0.01**	**0.10**
(4) Circuit9	**-0.06**	**0.06**	0.00	**1.00**	0.00	**0.10**	**-0.01**	**-0.14**	**0.06**	**-0.06**	**-0.04**	**0.05**	**-0.06**	-0.01
(5) Discrev	-0.01	**-0.03**	0.00	-0.01	**1.00**	**0.00**	0.00	**-0.04**	**0.04**	**0.05**	**-0.02**	**0.04**	-0.01	**0.02**
(6) HighRisk	**0.37**	**0.17**	**0.03**	**0.10**	-0.02	**1.00**	**0.02**	**-0.04**	**0.07**	**0.09**	**0.10**	**0.10**	**0.34**	-0.02
(7) Income	**0.49**	**0.15**	**0.12**	**-0.09**	0.05	**0.13**	**1.00**	0.00	**0.03**	**0.10**	**0.33**	0.00	**0.11**	0.00
(8) Leverage	**0.34**	**0.06**	0.01	**-0.18**	**-0.03**	**-0.04**	0.11	**1.00**	**-0.09**	-0.02	**0.03**	-0.03	**0.21**	**0.03**
(9) MTB	**0.12**	**0.15**	**0.04**	**0.11**	**0.06**	**0.15**	**0.19**	**-0.16**	**1.00**	**0.03**	**0.04**	**0.09**	**0.05**	**0.01**
(10) ROA	**0.32**	**0.11**	**0.15**	**-0.06**	**0.08**	**0.11**	**0.82**	0.00	**0.19**	**1.00**	**0.06**	**0.11**	**0.36**	**0.05**
(11) Sales	**0.92**	**0.39**	0.06	**-0.09**	**-0.01**	**0.33**	**0.58**	**0.34**	**0.08**	**0.43**	**1.00**	**0.02**	**0.41**	0.00
(12) SaleGrowth	**0.12**	**0.05**	**0.12**	**0.04**	**0.07**	**0.13**	0.27	0.00	**0.23**	**0.35**	**0.19**	**1.00**	**0.06**	**0.39**
(13) Size	**1.00**	**0.44**	**0.04**	**-0.06**	-0.01	**0.37**	**0.49**	**0.34**	**0.12**	**0.32**	**0.92**	**0.12**	**1.00**	-0.02
(14) SURGE	0.00	0.00	**0.11**	-0.01	**0.03**	-0.01	0.12	**0.02**	**0.05**	**0.14**	0.03	**0.51**	0.00	**1.00**

This table provides descriptive statistics (Panel A) and Pearson (Spearman) correlations above (below) diagonal of variables used in this paper. Bolded variables are significant at the P<.05 level. Variables are defined in Exhibit 1.

TABLE 3

Tests of Discretionary Revenues

Panel A: Difference in Differences Estimation of Equation (2)

	(1) HighRisk=1	(2) HighRisk=0
Constant	0.011*	0.006***
	(1.45)	(3.58)
Post	-0.002*	-0.001*
	(-1.35)	(-1.45)
Circuit9	-0.011***	0.001
	(-3.57)	(0.46)
Post*Circuit9	**0.011*** **	**0.000**
	(3.21)	**(0.14)**
Controls:		
Size	-0.002***	0.00
	(-2.71)	(0.19)
Leverage	-0.008**	-0.008***
	(-2.10)	(-3.38)
ROA	0.019**	0.020***
	(2.16)	(5.19)
BigSix	0.003	-0.005***
	(0.44)	(-3.40)
SaleGrowth	0.001	0.012***
	(0.09)	(2.33)
MTB	0.000***	0.000***
	(2.50)	(3.26)
N	7,644	34,938
R-Squared	0.012	0.008

(Continued on next page)

TABLE 3 (continued)

Panel B: Tests of Changes in Discretionary Revenues Across Groups

Circuit9	HighRisk	Pre	Post	(1) Diff between Pre and Post (P-Value)	(2) Diff between Circuit9, HighRisk and row value in Pre period (P-Value)	(3) Diff between Circuit9, HighRisk and row value in Post period (P-Value)
Y	Y	-0.003	0.005	<.01		
Y	N	0.007	0.006	0.66	<.01	0.69
N	Y	0.008	0.005	0.14	<.01	0.96
N	N	0.006	0.005	0.15	<.01	0.97

***,**,* represents significance at a p<0.01, p<0.05, p<0.1 level, respectively using one-sided tests and robust t-statistics clustered at the firm level. This table examines reported discretionary revenues around the Silicon Graphics decision for firms headquartered inside and outside the U.S. Court of Appeals for the Ninth Circuit. Panel A tabulates the results of equation (2) with DiscRev as the dependent variable. The event window is 4 years wide centered on the event date (July 2, 1999). Model 1 includes only HighRisk observations while model 2 includes all observations that are not HighRisk. The key variables of interest Circuit9 (Post) represent observations where the firm is headquartered in the U.S. Court of Appeals for the Ninth Circuit (occur after the Silicon Graphics decision on July 2, 1999). Variables are defined in Exhibit 1. Panel B tabulates the differences of the levels of discretionary revenues across periods for the same group and across groups for the same period. Column 1 compares the level of discretionary revenues before and after the Silicon Graphics decision within the same group. The test tabulated in column 2 (3) compares the levels of discretionary revenues for high-risk firms headquartered in the Ninth Circuit with other groups prior to (subsequent to) the Silicon Graphics decision.

TABLE 4

Tests of Market Returns to Unexpected Revenues

Panel A: Difference in Differences Estimation of Equation (7)

	(1) Full	(2) HighRisk=1	(3) HighRisk=0
Constant	0.013***	0.005	0.019***
	(2.92)	(0.33)	(3.74)
Surge	0.021***	0.009	0.021***
	(7.50)	(1.16)	(6.82)
Circuit9		0.007**	0.004**
		(1.91)	(2.06)
Post		0.001	-0.002*
		(0.26)	(-1.45)
Post*Circuit9		-0.001	-0.002
		(-0.21)	(-0.70)
Surge*Post		0.001	0.001
		(0.76)	(1.28)
Surge*Circuit9		0.002	0.001
		(1.05)	(0.78)
Surge*Post*Circuit9		**-0.007****	**0.001**
		(-2.21)	**(0.65)**
Controls:			
Surge*Loss	-0.005***	-0.003*	-0.005***
	(-5.92)	(-1.57)	(-5.79)
Surge*Size	-0.001***	-0.000	-0.001***
	(-8.22)	(-1.03)	(-7.50)
Surge*Beta	-0.000	-0.000	-0.000
	(-1.25)	(-0.38)	(-0.78)
Surge*Predict	-0.000	-0.000	-0.000
	(-0.12)	(-0.01)	(-0.06)
Surge*Persist	0.001	0.002	0.001
	(0.38)	(0.53)	(0.52)
Surge*ExpenseSurp	0.000*	0.000	0.000*
	(1.49)	(0.37)	(1.47)
Surge*MTB	-0.000	0.000**	-0.000
	(-0.41)	(1.78)	(-1.13)
Nonlinear	-0.001***	-0.001***	-0.001***
	(-5.52)	(-2.73)	(-4.91)
Predict	-0.002	0.001	-0.002
	(-0.72)	(0.07)	(-0.48)
Persist	0.007***	0.015**	0.005*
	(2.48)	(1.94)	(1.44)
ExpenseSurp	-0.004***	-0.003**	-0.005***
	(-8.27)	(-2.24)	(-8.24)
MTB	0.000***	0.001***	0.000**
	(3.47)	(2.94)	(2.08)
Beta	-0.000	0.001	-0.002**
	(-0.35)	(0.37)	(-2.01)
Size	-0.001***	-0.002***	-0.002***
	(-5.40)	(-2.81)	(-6.31)

(Continued on next page)

TABLE 4 (continued)

Tests of Market Returns to Unexpected Revenues

Panel A: Difference in Differences Estimation of Equation (7)

	(1) Full	(2) HighRisk=1	(3) HighRisk=0
Loss	-0.025***	-0.018***	-0.026***
	(-19.77)	(-6.16)	(-18.97)
N	40,923	8,361	32,562
R-Squared	0.030	0.017	0.037

Panel B: Tests of Changes in Discretionary Revenues Across Groups

Circuit9	HighRisk	Pre	Post	(1) Diff between Pre and Post (P-Value)	(2) Diff between Circuit9, HighRisk and row value in Pre period (P-Value)	(3) Diff between Circuit9, HighRisk and row value in Post period (P-Value)
Y	Y	0.021	0.015	0.04		
Y	N	0.020	0.023	0.19	0.79	<0.01
N	Y	0.019	0.020	0.58	0.34	0.05
N	N	0.019	0.020	0.19	0.43	0.02

***,**,* represents significance at a p<0.01, p<0.05, p<0.1 level, respectively using one-sided tests and robust t-statistics clustered at the firm level. This table examines the market reaction to unexpected revenues around the Silicon Graphics decision for firms headquartered inside and outside the U.S. Court of Appeals for the Ninth Circuit. Panel A tabulates the results of equation (7) which are quarterly regressions with 3 day abnormal returns centered on the earnings announcement date as a dependent variable and using a 4 year window centered on the event date (July 2,1999). The first model includes all observations while the second (third) are constrained to include only high-risk (non high-risk) observations. Panel B tests the differences in the levels of the market reaction to unexpected revenues across periods for the same group and across groups for the same period. Test 1 compares the market reaction to unexpected revenues before and after the Silicon Graphics decision within the same group. The test tabulated in column 2 (3) compares the market reaction to unexpected revenues for high-risk firms headquartered in the Ninth Circuit with other groups prior to (subsequent to) the Silicon Graphics decision.

TABLE 5

Descriptive Statistics of Restatements

Panel A: Timing of Restatements in Audit Analytics Database (in days)

	N	Mean	Median
Beginning of restatement period to disclosure	10,932	875	775
End of restatement period to disclosure	10,932	263	183
Duration of restatement period	10,932	612	365

Panel B: Frequency of Restatements on the Event Study Sample

	Number of Restatements		As a % of Total Obs.	
	Circuit9	Other	Circuit9	Other
Pre SGI	134	262	2.3%	1.3%
Post SGI	329	553	4.9%	2.6%

This table describes the timing and incidence of restatements. Panel A describes the timing of restatements in the Audit Analytic restatement database as of March 2011. Audit Analytics began collecting restatement data as of first quarter, 2000. Tabulated figures in columns 3 and 4 are the mean and median days from either the beginning (row 1) or end (row 2) of the disclosure window. Panel B presents the number of restatements according to whether it occurs before or after the SGI decision and which federal circuit the restating firm was headquartered. The right side of the panel scales the number of restatements by the number of observations within the category.

TABLE 6

Test of Restatements

	(1) Full	(2) HighRisk=1	(3) HighRisk=0
Circuit9	0.017**	0.039	0.008*
	(2.10)	(1.21)	(1.29)
Post	0.024***	0.052***	0.015***
	(4.98)	(2.86)	(3.82)
Post*Circuit9	**0.019****	**0.042****	**0.002**
	(2.32)	**(1.72)**	**(0.30)**
Controls:			
Size	0.007***	0.014***	0.003***
	(6.05)	(2.98)	(2.71)
Leverage	-0.013	0.005	-0.005
	(-1.25)	(0.14)	(-0.62)
ROA	0.015	0.031	0.015
	(0.96)	(0.47)	(1.20)
BigSix	0.010*	-0.000	0.006
	(1.30)	(-0.00)	(1.08)
SaleGrowth	0.031***	0.043**	0.020***
	(4.75)	(1.79)	(3.61)
MTB	0.000	0.001	-0.000
	(0.77)	(1.03)	(-0.44)
N	45,057	8,493	36,564
Pseudo R-Squared	0.08	0.05	0.04

***,**,* represents significance at a p<0.01, p<0.05, p<0.1 level, respectively using one-sided tests and robust t-statistics clustered at the firm level. This table tabulates the average marginal effects of a logistic regression where the dependent variable takes a value of one if the firm-quarter observation was subsequently restated for an egregious violation of GAAP. The marginal effect reported for the interaction term is calculated using the delta method, consistent with prior literature in accounting (Bushman, Dai and Wang, 2010). The sample period extends from two years prior to the event date (July 2, 1999) to two years after the event date excluding the fiscal year that straddles the SGI decision. This is done as firms that subsequently announce restatements for more egregious violations of GAAP likely restate the full year. Hence, quarters occurring prior to the decision could be restated for violations that occur subsequent to the SGI decision. Variables are defined in Exhibit 1.

TABLE 7

Tests of Rolling Regressions Using Pseudo-Event Dates

Period	(1) Discretionary Revenues	(2) Revenue Response Coefficient
Q-8	-0.003	-0.001
Q-7	-0.004	-0.002
Q-6	-0.003	-0.001
Q-5	-0.002	-0.003
Q-4	-0.001	-0.003
Q-3	0.001	-0.004
Q-2	0.003	-0.006 **
Q-1	0.007 **	-0.008 ***
Q	**0.011 *** **	**-0.007 ** **
Q+1	0.010 ***	-0.005 *
Q+2	0.009 ***	-0.006 **
Q+3	0.009 ***	-0.004 *
Q+4	0.008 ***	-0.004 *
Q+5	0.006 **	-0.003
Q+6	0.004 *	-0.001
Q+7	0.001	0.003
Q+8	-0.001	0.006 **

***,**,* represents significance at a p<0.01, p<0.05, p<0.1 level, respectively using one-sided tests and robust t-statistics clustered at the firm level. This table presents the coefficients of interest from 4 year window quarterly estimations centered on pseudo-event dates which represent the actual event window shifted forward and backward, quarter-by-quarter. Period Q replicates results presented in Tables 3 and 4 while Q+1 shifts the event date forward by one quarter and conducts the same multivariate estimation with all controls, standard errors clustered at the firm level and 4 year windows centered on the new event date. Column one replicates Table 3 using discretionary revenues as the dependent variable. Reported values are the coefficients on the interaction between Post and Circuit9 from equation (2). Column 2 replicates Table 4 with abnormal returns regressed on Surge. Reported coefficients are the coefficients on the three-way interaction among Post, Circuit9 and Surge from equation (7). Variables are defined in Exhibit 1.

TABLE 8

Short Window Tests

	Two Year Window			One Year Window			Two Quarter Window		
	All	HighRisk=1	HighRisk=0	All	HighRisk=1	HighRisk=0	All	HighRisk=1	HighRisk=0
Discretionary Revenues	0.004**	0.013***	0.002	0.006***	0.016***	0.003	0.008***	0.018***	0.005**
	(1.75)	(2.92)	(0.81)	(2.37)	(3.62)	(1.12)	(2.79)	(3.66)	(1.68)
Market Response to Unexpected Revenues	0.001	-0.004	0.003	0.003	-0.003	0.005*	0.003	-0.000	0.005
	(0.41)	(-0.85)	(1.03)	(0.93)	(-0.48)	(1.48)	(0.78)	(-0.02)	(1.06)
Restatements	0.019**	0.042**	0.006	0.024***	0.048**	0.010	0.024**	0.046**	0.011
	(2.17)	(1.76)	(0.68)	(2.40)	(1.83)	(0.97)	(2.31)	(1.70)	(1.04)

***,**,* represents significance at a p<0.01, p<0.05, p<0.1 level, respectively using one-sided tests and robust t-statistics clustered at the firm level. These models test the robustness of prior tests to alternate window lengths. Tabulated statistics are the coefficients of interest which represent the interaction between Circuit9 and Post for the discretionary revenues and restatement tests and the three-way interaction among Circuit9, Post and Surge for the market response to unexpected revenues tests. The definitions of the windows are as follows for the discretionary revenues and market response to unexpected revenues: a 2 year window is a sample of 1 year prior to the decision though 1 year after the SGI decision, a 1 year window is 2 quarters prior to the decision through 2 quarters after the decision, a 2 quarter window is 1 quarter prior through 1 quarter after the SGI decision. The windows for restatement tests are defined in the same manner except the fiscal year that straddles the SGI decision is excluded. This is done as firms that subsequently issue restatements for more egregious violations of GAAP likely restate the full year. Hence, quarters occurring prior to the decision could be restated for violations that occur subsequent to the SGI decision.