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The Changing Landscape of Auditor Liability

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Comments welcome

Abstract:

We provide a comprehensive overview of shareholder litigation against auditors since the passage of the PSLRA. The number of lawsuits per year has declined, dismissals have increased, and settlements in recent years have declined. Our study asks why. Because we find that the likelihood an auditor is sued following a severe restatement has significantly declined in recent years, it does not appear that the decline can be attributed solely to increases in audit quality. Instead, we consider whether the Supreme Court cases limiting the scope of Rule 10b-5 against private actors may have led to the decline. To study this possibility, we focus on the Supreme Court's 2007 and 2011 rulings in *Tellabs v. Makor* and *Janus v. First Derivative*, respectively. Our analysis provides strong evidence that the higher liability standards imposed by *Janus* significantly reduced auditors' liability exposure, but we find only limited evidence that the pleading standards imposed by *Tellabs* had a significant effect.

JEL classification: K22, K41, M42

Key words: auditor liability, *Tellabs*, Rule 10b-5, Section 11, audit quality, *Janus*, PSLRA

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1. Introduction

Auditor liability is a double-edged sword: although litigation risk is a powerful incentive for audit firms to provide high quality audits (DeFond and Zhang, 2014), audit firms fear that large litigation costs threaten their very survival (Levitt and Nicolaisen, 2008). For example, Laventhol and Horwath, the seventh largest audit firm at the time, went bankrupt in 1990 due to costly lawsuits. Litigation costs are still thought to remain high today, as evidenced by the Center for Audit Quality's estimate that lawsuits cost audit firms roughly 15% of their annual revenue (CAQ, 2008). Indeed, concern about high litigation costs was a factor that led the U.S. Treasury Secretary to institute the Advisory Committee on the Auditing Profession in 2008. The Committee was asked to opine, among other things, on (i) the sustainability of the public company auditing profession in the presence of significant litigation risk, and (ii) whether to limit liability of audit firms (Levitt and Nicolaisen, 2008).

However, as we show using data from 1996 through 2016, there is evidence that shareholder litigation against auditors has declined in recent years. The number of lawsuits has decreased, dismissals have increased,² and auditors' settlement payouts have fallen (both in terms of dollar value and as a percentage of the total settlement value paid by all defendants). Some of these trends are consistent over the entire twenty-year period, while others are most noticeable in the latter half of our sample. For example, dismissals of Rule

² We refer to cases dismissed as those dismissed by the courts on motions under Rule 12(b)(6), not on motions for summary judgment. Motions for dismissal under Rule 12(b)(6) occur much earlier in the disposition of the case (i.e., before discovery), and nearly all cases that survive a motion to dismiss are settled (Hadfield, 2004) (in our data, this percentage is close to 100%). Hence, the key to settlement is for the plaintiff to survive the defendant's motion to dismiss.

10b-5 claims³ have increased monotonically over each three-year period from 1996 to 2016, whereas settlements peaked at the turn of the century but have declined thereafter.

Our study asks why. We begin our multivariate analysis by considering the possibility that an auditor will be subject to a federal class action following a severe restatement, where a severe restatement is defined as a negative restatement of 10% or more of net income. We use restatements because prior literature has found they are the most consistently significant determinant of auditor liability (Donelson and Prentice, 2012). The analysis shows that the likelihood that shareholders sue an auditor following a severe restatement has declined, on average, over our sample period, but particularly in the years following 2011.

Because the decline in shareholder litigation against auditors seems to be present even after controlling for audit quality, we consider whether the decline could be driven by recent Supreme Court cases that have limited the reach of Rule 10b-5 against private actors. Such an interpretation would be consistent with our descriptive data, which shows a declining role of Rule 10b-5 claims relative to other claims. For this analysis, we study the Supreme Court's rulings in *Tellabs v. Makor* and *Janus v. First Derivative*. Both cases had potentially far-reaching effects for auditor liability under Rule 10b-5. In *Tellabs*, the Supreme Court attempted to resolve differences in pleading standards across the country. The court's ruling is considered to have benefited those auditors likely to be sued in the Second and Third Circuits courts, but to have disadvantaged those most likely to be sued in the Ninth and Eleventh Circuits. In *Janus*, the Supreme Court attempted to resolve intra-country differences in liability for those actors, such as auditors, who have traditionally been

³ For ease of exposition, we refer to cases alleging violations of Rule 10b-5 promulgated under Section 10(b) of the Exchange Act as Rule 10b-5 cases.

considered to aid the issuer’s misconduct rather than to perpetuate misconduct themselves. The court’s ruling in *Janus* most benefitted those auditors likely to be sued in the Fourth and Ninth Circuits.

Our analysis uses the differential legal effects of *Tellabs* and *Janus* to compare litigation outcomes in the circuit courts most likely to be affected by the court decisions (the “treatment” groups) relative to outcomes in the circuits that were not affected (the “control” groups). By examining changes in auditor settlements and court rulings on motions to dismiss, we find strong evidence that the narrower liability standards imposed by *Janus* reduced auditors’ liability exposure. By contrast, the evidence for *Tellabs* is mixed, suggesting that pleading standards may have limited effect on case outcomes.

Our contribution is to show empirically that Rule 10b-5 has lost its bite for use against auditors in recent times—and to provide evidence that this decline is driven, at least in part, by the Supreme Court’s narrowing of liability standards in *Janus*. The question of liability standards under Rule 10b-5 has been of great import in Supreme Court decisions, most recently in *Lorenzo v. SEC*⁴, and in prior legal literature. Such literature has expressed concern over narrowing liability standards and questioned whether the law provides auditors with efficient incentives or whether liability standards should be tightened to induce proper incentives (e.g., Coffee, 2006; Partnoy, 2001; Kraakman, 1986). In response, empirical studies have showed that auditors are still frequent targets of shareholder litigation (e.g., Park, 2017; Donelson, 2013; Donelson and Prentice, 2012; Talley, 2006).⁵

⁴ 872 F.3d 578 (D.C. Cir. 2017), cert. granted, 2018 WL 646998 (U.S. Jun. 18, 2018) (No. 17-1077).

⁵ Changes in auditor liability have significant implications for audit quality, as prior literature shows that litigation risk influences auditor behavior and affects financial reporting outcomes (see, e.g., Simunic, 1980, Lys and Watts 1994, Lennox and Li 2012).

However, these studies use sample periods that only extend through 2007 (at the latest). As such, these empirical studies do not capture the potential impact of *Janus* (decided in 2011). Further, the only paper to empirically examine whether auditor liability standards matter for litigation outcomes found no relationship between narrower primary liability standards and settlement values (Park, 2017). As such, our paper is the first to capture any changes in auditor liability under federal securities laws over the past decade, and to provide empirical evidence that narrower liability standards have reduced auditors' litigation payouts.

Our paper also contributes to prior work on the effect of changes in pleading standards. Our results for *Tellabs* provide limited evidence that changes in pleading standards impact litigation outcomes—a result largely consistent with prior evidence finding that the pleading standards imposed by *Twombly* and *Iqbal* had minimal effect on average (e.g., Hubbard, 2017). There are several explanations for why changes in pleading standards have only limited effect on litigation outcomes, but one such explanation is that judges may not fully adhere to the new standard—a possibility that is consistent with many of the post-*Tellabs* cases.

As a caveat to our paper, we stress that we do not claim that auditor liability in general has significantly declined—or that the Supreme Court's narrowing of Rule 10b-5 is the sole cause of the decline.⁶ After all, auditors face risk from sources such as public regulators and

⁶ For example, following a series of high-profile accounting scandals, Congress passed the Sarbanes-Oxley Act of 2002. This Act required managers and auditors to enhance internal controls and reporting. It also increased penalties for white-collar crime, placed restrictions on the consulting work that auditors can perform, and established the Public Company Accounting Oversight Board (PCAOB) to regulate accounting firms. Consistent with its intent, audit committee members have indicated that they think the Sarbanes Oxley Act has improved audit quality (CAQ, 2008), and academic work has found that it led to more conservative financial reporting (Iliev, 2010). There is also a suggestion that it reduced litigation against auditors beyond any improvement in auditor quality. Through its restrictions on the type of consulting work that auditors could

state law that we do not cover here (see Talley, 2006 for a summary of other sources of auditor liability). Instead, we focus on liability under federal securities laws because Rule 10b-5 is the primary avenue for shareholders to sue auditors and other gatekeepers.⁷

2. Institutional background and Hypotheses

As noted previously, our analysis relies on the differential impact of two Supreme Court cases. Hence, we begin by describing the U.S. federal court system and explain why these cases could have a differential impact in different parts of the country.

2.1 Federal courts

Federal courts in the U.S. are divided into twelve regional circuits.⁸ Within the federal court system, the District Courts are the lower courts, the Courts of Appeal are the intermediate courts, and the Supreme Court is the highest court. Each circuit has multiple District Courts but only one Court of Appeals, and, of course, there is only one Supreme Court in the entire federal system. Each court is required to follow the decisions and interpretations of the courts directly above it. A District Court in the First Circuit, for example, is required to follow the First Circuit Court of Appeals, but is not required to follow the Second Circuit Court of Appeals.

perform, the Act may have reduced the likelihood that the plaintiff could establish scienter. Compare *In re Enron Corp. Sec. Litig.*, 235 F. Supp. 2d 549, 679 (S.D. Tex. 2002) (finding that fees provided the auditor with incentive to ignore red flags) with *Lewis v. Straka*, No. 05-1008, 2007 WL 2332421 (E.D. Wis. Aug. 13, 2007) (rejecting that fees are evidence of scienter). See also Hoffman and Baltay (2008).

⁷ For example, in its Final Report, the Advisory Committee on the Auditing Profession noted that some members supported narrowing the liability standard for Rule 10b-5, but had no similar discussions for other federal or state law claims.

⁸ There are eleven numbered circuits and the District of Columbia Circuit. As relevant to our study, the states covered by the Second and Third Circuits are NY, CT, VT, PA, NJ, and DE. The states covered by the Ninth and Eleventh Circuits are AK, AL, AZ, CA, FL, GA, HI, ID, MT, NV, OR and WA. The states covered by the Fourth Circuit are MD, NC, SC, VA, and WV.

Because of this structure, it is not unusual for different circuits to apply the law differently—this occurrence is known as a “circuit split.” Many of these circuit splits are ultimately resolved by the Supreme Court. The Supreme Court takes only a fraction of the cases it is asked to review, and it frequently selects cases that will allow it to resolve circuit splits.⁹

2.2 *Tellabs v. Makor*

The first of our two cases, *Tellabs v. Makor*,¹⁰ addressed a circuit split created by the heightened pleading standards of the Private Securities Litigation Reform Act (PSLRA) of 1995. Among other changes, PLSRA’s heightened pleading standards require that a plaintiff alleging a violation of Rule 10b-5 “state with particularity facts giving rise to a *strong inference* that the defendant acted with the requisite state of mind” (emphasis added). As we describe below, courts differed on what was needed to show a *strong inference*—thus leading to inconsistent pleading requirements across the different circuits.

2.2.1 *Pleading procedures*

In a typical federal securities lawsuit, the plaintiff initiates the lawsuit by filing a complaint, in which she pleads her case by listing the claim(s) that the defendant has allegedly violated. Each claim will require that the plaintiff show a number of elements. To succeed on a claim under Rule 10b-5, for example, the plaintiff must successfully show six

⁹ For example, only 76 of the 7,376 petitions filed in the Court’s 2013 term were granted plenary review (Feldman and Kappner, 2016). The number of securities law cases heard by the Supreme Court is especially low—such cases are roughly 1% of the docket (or 1.5 cases per year) (Pritchard, 2011). Some factors thought to influence the Court’s decision to accept a case include whether there is a circuit split, whether the lower court’s decision contradicts prior Supreme Court precedent, the importance of the legal issue, the attorneys, the number of amicus briefs, and the authors of any amicus briefs.

¹⁰ *Tellabs, Inc. v. Makor Issues & Rights, Ltd* 549 U.S. 1105 (2007).

elements.¹¹ In response to the plaintiff's complaint, the defendant will usually file a motion to dismiss under Rule 12(b)(6) arguing that the plaintiff has not properly pled one or more elements of each claim. In ruling on the motion to dismiss, the court will allow the plaintiff's claim(s) to proceed if it deems that she has properly pled each element and will dismiss the claim(s) if she has not.¹² Many securities lawsuits are dismissed at this initial stage, thus avoiding significant costs of litigation such as discovery.

2.2.2 *Pleading scienter*

PSLRA's heightened pleading standards made it easier for defendants to win dismissal at this initial stage, particularly when accused of Rule 10b-5 violations. One of the most hotly contested—and difficult to prove—elements of a claim under Rule 10b-5 is “scienter,” which has been defined by the courts as a “mental state embracing intent to deceive, manipulate, or defraud.” For a plaintiff to successfully plead that the defendant had the proper scienter for a violation of Rule 10b-5, she must essentially plead that the defendant knew, or should have known, that his actions were wrong.

The question remains, however, how much support the plaintiff must provide to convince the court that the defendant had the proper scienter. Although PLSRA attempted to address this question by requiring that a plaintiff alleging a violation of Rule 10b-5 provide “facts giving rise to a *strong inference*” of scienter, this requirement led to some confusion because PSLRA does not define “strong inference.” This left courts to answer the following: what *exactly* is required for a plaintiff to allege a “strong inference” of scienter?

¹¹ Private plaintiffs must prove six elements to prevail under Rule 10b-5: (1) a defendant's material misrepresentation or omission; (2) scienter; (3) in connection with the purchase or sale of securities; (4) plaintiff reliance on the misrepresentation or omission; (5) economic loss; and (6) loss causation.

¹² As a practical matter, courts will often dismiss “without prejudice.” This means that the plaintiff has an opportunity to remedy the complaint and try again. By contrast, a case that is dismissed “with prejudice” is dismissed forever. The court can also dismiss for other reasons, such as expiration of the statute of limitations.

2.2.3 Strong inference standard

Different courts answered this question differently, causing PSLRA's pleading standards to be applied inconsistently across the U.S. Because legal scholars have different interpretations of the circuit split prior to *Tellabs*,¹³ our analysis follows the classification of "strong inference" used by the court. In her opinion setting the law on this point in the Seventh Circuit, Judge Diane Wood of the Seventh Circuit Court of Appeals classified the different circuits as follows in 2006:

Currently three different approaches toward the way to demonstrate the required "strong inference" exist among the courts of appeals. The Second and Third Circuits take the position that the statute adopted the Second Circuit's pre-PSLRA pleading standard for scienter, "and thus plaintiffs may continue to state a claim by pleading either motive and opportunity or strong circumstantial evidence of recklessness or conscious misbehavior." ... The Ninth and Eleventh Circuits disagree believing that Congress considered, but ultimately rejected the Second Circuit's approach, opting instead for a more onerous burden. ... The remaining six circuits that have considered this issue take a middle ground, reasoning that "Congress chose neither to adopt nor reject particular methods of pleading scienter—such as alleging facts showing motive and opportunity—but instead only required plaintiffs to plead facts that together establish a strong inference of scienter." ... We find this position persuasive.¹⁴

We describe Judge Wood's classifications in our own words below. Her approach is largely consistent with much prior literature,¹⁵ and Appendix II provides court cases in support of this categorization.

¹³ For example, compare Choi and Pritchard (2012) and Cox, Thomas, and Bai (2009). As described below, there are also differing interpretations of the question addressed by the Supreme Court in *Tellabs* itself.

¹⁴ *Makor Issues & Rights, Ltd. v. Tellabs, Inc* 437 F.3d 588 (7th Cir. 2006) (the lower court opinion before the Supreme Court opinion in *Tellabs*). We use the Seventh Circuit's classification because the Supreme Court did not provide such a classification.

¹⁵ For example, in discussing the "strong inference" standard, Securities Law360 uses the same classifications as Judge Wood, although it notes that the Seventh Circuit had taken a lenient interpretation of the "competing inferences" requirement. See *Tellabs Decision Should Reduce Frivolous Fraud Suits* (July 05, 2007). And Cox, et al. (2009) use the same classifications for all circuits except the Eighth and Eleventh—they consider the former to be similar to the Second and Third Circuits, and the latter to be part of the intermediate approach.

- The Second and Third Circuits applied the most lenient pleading standards. These courts allowed allegations of motive and opportunity to deceive, manipulate, or defraud alone to satisfy the pleading requirement. This test was the least favorable to auditors because it was relatively easy for plaintiffs to pass the pleading stage.
- The First, Fourth, Fifth, Sixth, Seventh, Eighth, and Tenth Circuits were generally considered to follow the “intermediate approach,” which is essentially a balancing test that allows allegations of motive and opportunity to help show scienter, but does not consider them sufficient in every case. Each of these circuits used different formulations, but all required the plaintiff to provide facts that supported a reasonable inference that the defendant had the required state of mind.
- The Ninth and Eleventh Circuits had the strictest interpretation of the PSLRA pleading standard. Plaintiffs were required to show deliberate recklessness or conscious misconduct. This test was most beneficial to auditors because it was relatively more difficult for plaintiffs to pass the pleading stage.

The Supreme Court’s *Tellabs* opinion in 2007 addressed this circuit split by setting a new legal standard to guide all circuit courts.¹⁶ First, *Tellabs* requires the courts to consider all allegations in a securities fraud complaint collectively, rather than focusing on the presence or absence of any particular allegation. Second, *Tellabs* requires the courts to consider whether the guilty inference is “at least as strong as any opposing inference.” For

¹⁶ Choi and Pritchard (2012) state that *Tellabs* did not attempt to fully resolve the circuit-level differences in the strong inference standard—instead, they say *Tellabs* only addressed the related issue of competing inferences. This distinction leads them to classify some circuits differently than we do here. Although we note this consideration, our empirical analysis follows the line of literature that views *Tellabs*’ discussion of competing inferences as part of its attempt to address the strong inference standard directly rather than a separate question (e.g., Cox, et al., 2009; Rieder and Blase, 2008; Rhinehart, 2008; Stigi and White, 2008).

claims under Rule 10b-5, this condition requires courts to consider whether the guilty inference is as strong as the inference that, for example, the client merely tricked the auditor.

Some have criticized the *Tellabs* standard as too weak. For example, in his concurrence, Justice Scalia argued that *Tellabs*'s "opposing inference" standard was too lenient given the text of the PSLRA.

I fail to see how an inference that is merely "at least as compelling as any opposing inference," ... can conceivably be called what the statute here at issue requires: a "strong inference," 15 U. S. C. §78u-4(b)(2). If a jade falcon were stolen from a room to which only A and B had access, could it possibly be said there was a "strong inference" that B was the thief? I think not, and I therefore think that the Court's test must fail. In my view, the test should be whether the inference of scienter (if any) is more plausible than the inference of innocence.

However, in the context of auditors, the litigation against Doral Financial Corp. and its auditor PwC shows that this standard can be difficult to meet. After Doral announced it would restate earnings—Doral had overstated its pre-tax income by approximately \$920 million and understated its debt by approximately \$3.3 billion—plaintiffs filed suit alleging that both Doral and PwC violated Rule 10b-5. In dismissing the case against PwC, the court noted that the plaintiff's allegations did not provide the requisite strong inference of scienter under *Tellabs*—that the guilty inference is at least as strong as any opposing inference—because the inference that PwC had the necessary scienter "is not as compelling as the inference that PwC was, like the public, duped by Doral."¹⁷

Despite some ambiguity, most commentators consider the *Tellabs* standard to be slightly stricter than the "intermediate approach" described above. Compared to the Supreme

¹⁷ PwC had filed a motion to dismiss prior to the Supreme Court's ruling in *Tellabs*, but the court had yet to rule on the dismissal. After *Tellabs*, PwC's attorneys filed an update to their motion to dismiss informing the court of the new *Tellabs* standard and arguing that their motion should be granted under this new standard. The court agreed and dismissed the claim against PwC roughly six weeks later (PwC had filed its original motion nearly two years before). Memorandum Order, 05 MD 1706, (Signed by Judge Jed S. Rakoff on 7/7/08) (Entered: 07/08/2008).

Court standard, the lenient pre-*Tellabs* standard applied by the Second and Third Circuits was too permissive, and the strict pre-*Tellabs* standard applied by the Ninth and Eleventh Circuits was too harsh. This meant that, in theory, *Tellabs* provided the greatest benefit to those auditors most likely to be sued in the Second and Third Circuits, and the greatest disadvantage to those auditors most likely to be sued in the Ninth and Eleventh Circuits.

However, there are reasons to question whether *Tellabs* produced this theoretical effect. Significant prior literature studies the effects of *Twombly* and *Iqbal*, a sequence of Supreme Court cases in 2007 and 2009, respectively, which provided the most significant changes to pleading standards in fifty years. Despite that these cases sent shockwaves through the legal community and, from a purely legal basis, significantly increased pleading requirements, there is only limited evidence that these cases had a real effect on litigation outcomes (Hubbard, 2017).¹⁸ There are two primary explanations for this result. First, it is not clear that prior changes in pleading standards did more than validate what plaintiffs were already doing. For example, as discussed in Hubbard (2013), there is evidence that plaintiffs already conformed to the higher pleading standards required by *Twombly* before the Court's decision. Second, it is possible that judges continue to apply the same pleading standards without updating for the changed legal rules. If this second explanation is correct, judges may be especially disobedient when applying securities law cases such as *Tellabs*. The

¹⁸ The lack of significant findings has been analyzed in depth, with commentators noting that empirical analysis on the effect of these cases poses a litany of issues (see, e.g., Engstrom, 2013; Hubbard, 2013; Gelbach, 2012). For example, there is evidence that plaintiffs dynamically respond to the new pleading standards by changing their complaints. Boyd et al. (2013) provide evidence that the number of causes of action pled per case declined after *Twombly*, and Hazelton (2014) provides evidence that plaintiffs changed their language in complaints. Thus, without sufficiently accounting for selection effects through a strategy such as the “straddle” approach proposed by Hubbard (2013), which limits the sample to cases filed before the decision, empirical work studying these cases may incorrectly find null results. However, despite its benefits, the “straddle” approach is also imperfect—for example, it washes out the plaintiffs’ decision to sue, but not defendants’ decision on whether to file a motion to dismiss (Engstrom, 2013).

Supreme Court rarely takes securities laws cases (Pritchard, 2011), so courts that neglect to follow *Tellabs* may not fear reversal.

2.3 *Janus Capital Group, Inc. v. First Derivative Traders*

Our second case, *Janus Capital v. First Derivative*,¹⁹ addressed a circuit split regarding liability standards under Rule 10b-5. In the context of Rule 10b-5, a primary violator is defined broadly as the party who commits the fraud or misrepresentation, and a secondary actor is defined broadly as a party who was so involved in the primary's actions that she is also liable. Traditionally, auditors were far more likely to be held liable as secondary actors than primary violators. Although auditors rarely prepare the underlying misstated financials (the client creates the financials), they arguably assist the client in the perpetuating the misstatements.

2.3.1 *Liability for secondary actors under Rule 10b-5*

In recent years, the Supreme Court has repeatedly addressed the question of secondary actor liability under Rule 10b-5. With the recent exception of *Lorenzo*, these cases have consistently restricted the scope of secondary actor liability, causing auditors to be held liable as primary violators (if liable at all). First, in its highly significant 1994 decision in *Central Bank v. First Interstate*,²⁰ the Supreme Court greatly limited the scope of Rule 10b-5 when it ruled that private plaintiffs cannot sue under "aiding and abetting" liability (i.e., a secondary actor cannot be held liable for aiding and abetting the primary actor). Then, in 2008, the Supreme Court's ruling in *Stoneridge v. Scientific Atlanta*²¹ almost entirely

¹⁹ *Janus Capital Group, Inc. v. First Derivative Traders* 131 S. Ct. 2296. Although *Janus* specifically applied to misstatements in a limited number of documents such as quarterly filings, courts do not always recognize this distinction and have applied *Janus* to misstatements in other documents such as annual reports. See, e.g., Docket Num. 11-CV-0804; Decision and Order filed on 2/28/2013 (dismissing Deloitte & Touche LLP).

²⁰ *Central Bank of Denver, N.A. v. First Interstate Bank of Denver N.A.*, 511 U.S. 164 (1994).

²¹ *Stoneridge Investment Partners, LLC v. Scientific Atlanta, Inc.* 128 S. Ct. 761.

eliminated the risk of “scheme liability” under Rule 10b-5 (stated generally, scheme liability allows plaintiffs to hold secondary actors, such as auditors, liable for an issuer’s fraud if the secondary actor advanced the fraud by using deceptive tactics). In effect, these two cases held that shareholders can only sue parties directly involved in a fraud, not third parties who indirectly aid or abet the fraud—unless those third parties were so involved that they can be considered primary participants in the fraud.

This led to the question underlying *Janus*: what conduct will cause traditionally secondary actors, such as auditors, to be liable as primary actors? Under Rule 10b-5, the defendant must *make* a false or misleading statement to be liable as a primary actor. However, what does it mean to *make* a statement?

Prior to *Janus*, the circuit courts split on this question. One set of circuits followed what is known informally as the “bright-line test,” which required that the secondary actor actually make a false or misleading statement. Typically, the only statements in securities filings that are “made” by the auditor are those in the audit report. The audit report is a key part of a company’s annual report, and typically uses relatively boilerplate language to express that the auditor has audited the firm’s financials in accordance with accepted auditing standards, and that, in the auditor’s opinion, the firm’s financials present fairly, in all material respects, the firm’s financial position in accordance with generally accepted accounting principles.

In the circuits that applied the bright-line test, the plaintiff typically pled the elements of Rule 10b-5 based on this statement alone.²² This led to difficulties establishing the

²² Under the most common articulation of the “bright line” test, a secondary actor like an auditor “must actually make a false or misleading statement in order to be held liable under Section 10(b),” as “[a]nything short of such conduct is merely aiding and abetting, no matter how substantial that aid may be.” *Wright v. Ernst & Young LLP*, 152 F.3d 169, 175 (2d Cir. 1998).

elements of Rule 10b-5, particularly scienter. To see why, consider the litigation against ZST Digital Networks, Inc.²³ The company was required to file financial statements with both the US and Chinese securities regulators. The filings were vastly different; ZST showed a profit in the US filings and a loss in the Chinese filings. The differences extended beyond different accounting rules in place in the different countries to reflect differences in the business fundamentals. Despite the plaintiff's arguments that the auditor was reckless in providing a clean audit opinion in the US filings, the court declined to find that the plaintiff had properly pled scienter.²⁴

Faced with these challenges, enterprising plaintiffs attempted to push the limits of the bright-line test through two primary arguments: (1) by arguing the auditor was so involved in the issuer's misstatements that the auditor should be primarily liable for the issuer's misconduct, and (2) that the auditor could be liable for errors in unaudited financials by virtue of its statement in the audited annual report.²⁵ However, barring a limited number of notable exceptions,²⁶ courts in the bright-line circuits typically declined to allow plaintiffs to use these other arguments to make a claim under Rule 10b-5.

²³ *Scott v. ZST Digital Networks, Inc.*, No. CV 11-03531 GAF JCX, 2012 WL 538279.

²⁴ In our review of all cases filed in the Fourth and Ninth Circuits from 2005 to 2015, scienter was the most frequently cited element not met (13 of the 15 dismissals cited lack of scienter). Falsity was the second most frequently cited element not met (five dismissals cited falsity) followed by loss causation (four dismissals cited loss causation).

²⁵ See, e.g., *Lattanzio v. Deloitte Touche*, 476 F.3d 147 (2d Cir. 2007).

²⁶ The classic case exemplifying this approach is *In re Global Crossing, Ltd. Securities Litigation* 322 F. Supp. 2d 319, 336 (S.D.N.Y. 2004). The court held that a "plaintiff may state a claim for primary liability under section 10(b) for a false statement (or omission), even where the statement is not publicly attributed to the defendant, [but] where the defendant's participation is substantial enough that s/he may be deemed to have made the statement, and where investors are sufficiently aware of defendant's participation that they may be found to have relied on it as if the statement had been attributed to the defendant." *Id.* at 333. Here, plaintiffs sufficiently alleged that the auditor served as the primary accomplice in perpetuating the fraud that ultimately caused the downfall of the company; the auditor "materially assisted in the preparation of all public financial disclosures, including public filings, statements to the press and investing public, earnings releases, and press releases relating to financial issues of GC." *Id.* at 334. The court seemed to place great weight on the fact that Arthur Andersen, the auditor, had suggested accounting treatments.

By contrast, another set of circuits allowed the first argument: that the auditor could be liable as a primary violator if it substantially assisted in the issuer's misconduct. In the circuits that followed the "substantial participation test," the auditor's "substantial participation or intricate involvement" in the false or misleading statement was sufficient to state a claim for primary liability under Rule 10b-5.²⁷ This meant that plaintiffs could argue that the auditor was liable based on the audit report—or that the auditor was liable for its substantial participation in the issuer's fraud. Cases applying the substantial participation test have found that the auditor assisted the issuer by suggesting accounting treatments, preparing and/or creating documents such as earnings releases, press releases, and/or SEC letters, and/or identifying and correcting financial misstatements. By broadening the relevant scope of conduct, plaintiffs had more options to argue that the auditor met the elements of Rule 10b-5 (e.g., a plaintiff could argue that the auditor was reckless for his statements in the audit report, and for his supposed assistance to the issuer).

To classify whether a circuit follows the bright-line or substantial participation test for purposes of our empirical analysis, we follow prior legal literature as best as possible. In particular, we follow Jeffries (2013), which stated that "[t]wo of the most prominent of the standards of liability were the 'bright line standard' adopted by the Second, Fifth, Eighth, Tenth, and Eleventh Circuits, and the 'substantial participation test' adopted by the Ninth

²⁷ The substantial participation test allows liability to attach if the auditor "substantially participated" in the "preparation" of a false statement knowing that it would be publicly disseminated. See, e.g., *Howard v. Everex Sys., Inc.*, 228 F.3d 1057 (9th Cir. 2000); *In re Software Toolworks Inc.*, 50 F.3d 615 (9th Cir. 1994). For a typical example of the "substantial participation" test, see *In re ZZZZ Best Securities Litigation*: 864 F. Supp. 960 (C.D. Cal. 1994). The court held that the auditor could be held liable as a primary violator even though it did not directly make a statement because it was "intricately involved" in the creation of false and misleading documents and the "resulting deception."

Circuit” and later endorsed by the Fourth Circuit in *Janus*.²⁸ Appendix III notes the cases supporting this classification.²⁹

2.3.2 *Ultimate authority standard*

The Supreme Court resolved this circuit split over liability standards in *Janus* in June 2011. In response to shareholders’ attempt to hold an investment adviser liable for misleading statements in the prospectuses of its affiliated mutual funds, the Supreme Court ruled that a person or entity must have “ultimate authority” over a statement in order to *make* the statement for purposes of Rule 10b-5 liability. In so ruling, the Supreme Court endorsed a test that is, if anything, stronger than the bright line test.

Although courts themselves have provided limited guidance fleshing out the *Janus* standard with regard to auditors, it appears that *Janus* requires plaintiffs to make a case for liability based *only* on statements directly attributed to the auditor. Indeed, more than half of the cases in the Fourth and Ninth Circuits in the five years prior to *Janus* alleged that the auditor substantially participated in the firm’s misconduct. By contrast, none of the cases after *Janus* made these allegations—all use only the auditor’s statement as a basis for liability. By this formulation, *Janus* refutes even the limited number of cases that occurred in a bright-line circuit but appear to apply a looser standard. Therefore, we expect *Janus* to reduce auditors’ litigation risk nationwide, but especially in the circuits that previously followed the substantial participation test—the Fourth and Ninth circuits.

²⁸ Jeffries (2013) includes a third classification, the Creator Standard, which she says applies in the Third Circuit and is distinct from either the Substantial Participation or Bright Line tests. Because this third classification is controversial—many lawyers consider the Third Circuit to follow the Bright Line test (e.g., Simpson Thacher June 2011 Securities Law Alert), we omit the Third Circuit from our analyses.

²⁹ Although our paper focuses on *Tellabs* and *Janus*, there have been a number of important Supreme Court rulings with implications for auditor liability under Rule 10b-5 over the past decade. We do not discuss all such cases here. For examples of other important cases, consider *Dura Pharmaceuticals, Inc. v. Michael Broudo* 544 U.S. 336 and *Omnicare, Inc. v. Laborers District Council Construction Industry Pension Fund*, 2015 WL 1291916 (U.S. 2015). We provide limited detail for several of these cases in Appendix IV.

3. Research Design and Data

3.1 Design

Our paper begins with descriptive statistics and then proceeds to multivariate analysis. Our first set of multivariate tests examines how the likelihood of litigation has changed over time, and our next set of tests compares trends in auditor litigation outcomes before and after *Tellabs* and *Janus*.³⁰

3.2 Sample selection

Because we seek to understand the role of Supreme Court cases addressing federal securities laws, our sample is limited to (1) class action lawsuits (2) brought by shareholders (3) in federal court that (4) contain at least one federal securities law claim.³¹ To identify our sample of class action lawsuits, we started with the dataset compiled by the Institutional Shareholder Services (ISS) for the period from Jan. 1996 to June 2016. From this starting point, we took three actions. First, we identified the cases naming auditor defendants. In addition to the 362 cases for which ISS identifies an auditor defendant, we collected the

³⁰ Although it is possible that our results might be affected by forum shopping—the practice by some litigants of selecting the court that will treat their claims most favorably—we note there are safeguards designed to redirect federal litigation to the defendant’s home circuit and to dis-incentivize forum shopping. First, if the plaintiff has picked an inconvenient location and the defendant requests to move the case to its home circuit in order to expedite the process (e.g., to be closer to witnesses), the courts generally grant the request. Second, if cases are filed in multiple districts, the Multi-District Litigation (MDL) panel is tasked with consolidating the cases, and the MDL panel will likely assign the cases to the defendant’s home circuit. Indeed, forum shopping in federal courts seems limited, as prior literature shows that roughly 85% of cases are filed in the defendant’s home circuit (Cox, et al., 2009)—a percentage that doesn’t account for cases later reassigned to the defendant’s home circuit.

³¹ Limiting our sample in this manner necessarily requires that we omit some types of lawsuits. For example, we omit cases brought by parties other than shareholders and claims against auditors in state court. Some of these can be very significant (Donelson, 2013). However, although liability under state law poses significant risk to auditors, shareholders sue almost exclusively under federal law because state law typically does not grant them standing to sue. Our sample also omits plaintiffs who opt-out of federal class actions and bring separate actions in state courts. However, it is rare for plaintiffs to opt out of federal class actions and bring a separate action in state courts. The Cornerstone/Latham & Watkins 2012-2014 Update finds 48 opt-out cases out of 1,458 cases from 1996 to 2014 (roughly 3.3%) and states that “[w]e found no discernable increase in the preponderance of opt-outs over time.” Anecdotally, we are only aware of three such cases against auditors: Tyco, Ltd. (naming PwC); AOL Time Warner, Inc. (naming E&Y); and Qwest (naming Arthur Anderson).

complete defendant list from Bloomberg Law for every class action noted in the ISS dataset during our sample period. This step was necessary because ISS does not always note the full list of defendants, especially when a defendant has been dismissed by the courts on a Rule 12(b)(6) motion. We identified 142 additional cases for which ISS had omitted an auditor defendant and included these cases in our sample as well.

Second, to confirm the validity of our sample, we reviewed all auditor litigation noted in Audit Analytics for one year, 2005 (chosen randomly), and compared these cases to our cases in the ISS database for 2005. We did not identify a single class action brought under federal securities laws missing from our sample (there are additional cases against auditors, but these are, for example, lawsuits by clients over marketing practices, labor disputes, or faulty tax shelters—not class action lawsuits by shareholders). Because we did not identify any missing cases that met our sample specifications, we have greater confidence that our sample based on the ISS dataset is comprehensive.

Third, for every lawsuit naming an auditor defendant, we reviewed the court filings from Bloomberg Law to identify the plaintiffs' claims, the court's rulings on motions to dismiss (if any), and the settlement value paid by the auditor (if any). Although we had an initial set of 504 lawsuits naming 540 auditor defendants (some lawsuits name multiple auditor defendants), we were unable to find the complete set of documents for all lawsuits. In particular, we could only locate complaints—and therefore identify the claims alleged against the auditor—for 504 of the auditor defendants.

3.3 Descriptive statistics

3.3.1 Frequency of lawsuits & initial claims

Panel A of Table 1 shows litigation data for each year of our sample. Over the sample period, there are an average of 223 lawsuits per year naming an average of 26 auditor

defendants³² (this percentage is comparable to Talley, 2006's estimate that auditors are named in 8.41% of securities cases). However, the percentage of cases naming auditors is relatively low in the final years of our sample. In each year from 2012 through June 2016, auditors were included as defendants in only 3-6% of cases.

Panel A also provides detail on the frequency of claims under Rule 10b-5 and Section 11, the second most common claim.³³ We present comparative statistics for both auditors and other defendants. A few trends from these data are clear. Of the total lawsuits in ISS, an annual average of 179 lawsuits allege violations of Rule 10b-5 (roughly 80%) and an annual average of 53.5 allege violations of Section 11 (roughly 24%) (note that some cases allege both violations). Of the claims brought against auditor defendants, the lion's share—19 claims per year, on average—allege violations of Rule 10b-5. By contrast, there are only 7-8 claims per year, on average, for violations of Section 11. However, the relative proportion of Section 11 claims has increased in recent years.³⁴

To better identify time-trends, panel B summarizes the data in panel A over each three-year period. Panel B shows that, at a summary level, the percentage of auditors sued under Rule 10b-5 has decreased from 91% in 1996-1998 to 69% in 2014 - June 2016. By

³² Most lawsuits only name one auditor defendant, but some lawsuits name multiple auditors. If the lawsuit names two affiliated auditors, such as PwC and PwC Canada, we would consider that one auditor defendant. However, if the lawsuit names two unrelated auditors, such as PwC and E&Y, we would consider that two auditor defendants. When there are multiple auditor defendants, it is usually because the company switched auditors midway through the period of alleged misrepresentation.

³³ Plaintiffs may allege multiple violations of the same section. For example, a plaintiff might allege two violations of Rule 10b-5 in the same complaint. We do not count such allegations individually, but instead treat each variable as binary: 1 if the plaintiff alleged one or more violations and 0 otherwise. Similarly, a court can dismiss one claim under a section but allow another under the same section to proceed (e.g., the court can dismiss one claim under Rule 10b-5 but allow another to proceed). We only count a claim as dismissed if the court dismissed all claims brought under the section in question. If the court dismisses one claim under Rule 10b-5 but allows another to proceed, we would consider the court to have allowed a Rule 10b-5 claim to proceed and would mark the claim as allowed (i.e., not dismissed).

³⁴ The detail on claims against auditor defendants should be interpreted carefully. Because some lawsuits name multiple auditor defendants and many lawsuits bring multiple claims, the number of claims is greater than the number of auditor defendants, and the number of auditor defendants is greater than the number of lawsuits.

contrast, the percentage of auditor defendants sued under Section 11 has increased from 28% in 1996-1998 to 54% in 2014 - June 2016.³⁵ The percentage of auditors sued under any section of the Securities or Exchange Acts other than, or in addition to, Rule 10b-5 also appears to increase over time, likely driven by plaintiffs' attorneys who have become more hesitant to sue under only Rule 10b-5.³⁶

Finally, in panel C, we show the breakdown of cases against Big4/Big5 auditors and auditors of foreign companies. Top audit firms represented the vast majority of defendants in the beginning of our sample—Big4/Big5 firms represented more than 80% of auditor defendants from 1996 to 2004—but this percentage declined in the final years of our sample. Only 35% of defendants were from Big4/Big5 firms in 2011-2013, and 54% of defendants were from Big4 firms in 2014-June 2016. Further, the percentage of auditor defendants who audit firms in foreign countries has increased. Although only 4% of auditors sued in 1996-1998 relate to audited firms headquartered outside the U.S., this number increased to 60%

³⁵ The increasing role of Section 11 presents an interesting dynamic. Section 11 allows shareholders to bring claims against auditors and other parties for falsities in registration statements (and documents incorporated by reference into registration statements). As a significant plus for plaintiffs, Section 11 is easier to litigate than Rule 10b-5; it provides virtually absolute liability regardless of the defendant's conduct, and therefore does not require the plaintiff to plead scienter or other elements that can be difficult to show under Rule 10b-5. However, as a significant negative for plaintiffs, Section 11 is not available in many instances. Not only is it limited to registration statements (and documents incorporated by reference), but the statute of limitations is shorter under Section 11 than under Rule 10b-5, meaning that plaintiffs have a shorter period of time during which to bring a claim. Claims brought under Section 11 of the Securities Act must be brought within one year of the discovery of the violation or within the three years after the security involved was first offered to the public. By contrast, following the Sarbanes-Oxley Act, claims brought under Rule 10b-5 of the Exchange Act must be brought within two years after the discovery of the violation or five years after the violation.

³⁶ We also have claims under Section 12 (14 claims) and Section 15 (16 claims) of the Securities Act, and Section 20a (37 claims) and Section 18 (8 claims) of the Exchange Act. In brief, Section 12 imposes liability on any person who has sold securities in accordance with a material falsity in the registration statement (Section 11 and Section 12 have overlap, but Section 11 is applicable to "manufacturers" of securities (e.g., issuers, auditors, etc.) whereas Section 12 is applicable to "retailers" (i.e., securities dealers who sell to the general public); Section 15 imposes secondary liability on controlling persons for primary liabilities of control persons under Section 11 and Section 12 of the Securities Act; Section 20a imposes secondary liability on controlling persons for primary liabilities of controlled persons under any provision of the Exchange Act; and Section 18 provides a private right of action for any person who buys or sells securities in reliance on a false or misleading statement in a document that is required by the Exchange Act.

in 2011-2013 and 38% in 2014-June 2016. Anecdotally, we noticed that much of this increase was driven by auditors of Chinese listings in the U.S.

3.3.2 Litigation outcomes

3.3.2.1 Dismissal rates

The first trend in litigation outcomes that we examine is the dismissal rate for Rule 10b-5 and Section 11 claims (the two most common claims). Although we find no discernible trend in dismissal rates of Section 11 claims, we find a consistent increase in the dismissal rate for Rule 10b-5 claims over the sample period. This trend is summarized in Figure 1. The numerator is the number of cases for which the court dismissed all Rule 10b-5 claims, either (1) with prejudice, or (2) without prejudice, but the plaintiff declined to file an amended complaint. The denominator for this rate is the number of lawsuits alleging that the auditor violated Rule 10b-5. Figure 1 shows that the percentage of claims dismissed increased monotonically over each three-year period from 1996 to 2016: 23% (1996-1998), 35% (1999-2001), 48% (2002-2004), 59% (2005-2007), 62% (2008-2010), 74% (2011-2013), and 75% (2014 – June 2016). Note that 11 cases filed in 2012 or later are still pending, so the dismissal rates for the final two periods will change slightly when these cases are resolved.

3.3.2.2 Auditor settlements

Next, we examine auditor settlements. Panel A of Table 2 shows the sample selection for the settlements we were able to identify. The first column shows the total number of auditor defendants per year, and the second column shows the number of auditor defendants for which we were able to locate the initial complaint. The missing complaints are almost exclusively from the years prior to 2004—the year that the rollout of the federal case management system, PACER, was completed. Finally, the fourth column shows the number

of cases where we could obtain the complaint but not the exact dollar amount paid by the auditor to settle the case. In rare instances, this was because we were unable to obtain settlement documents; the more common explanation, however, was that the settlement documents reported the aggregate settlement value paid by all defendants and not the individual settlement paid by each defendant.

Panel B provides detail on the number of non-zero settlements paid by auditors per year. As highlighted in Figure 2, the percentage of non-zero settlements declined from Jan. 1996 to June 2016—70% (1996-1998), 65% (1999-2001), 57% (2002-2004), 52% (2005-2007), 34% (2008-2010), 35% (2011-2013), and 33% (2014-June 2016). These numbers reflect the number of non-zero settlements relative to the number of auditor defendants for which we could identify complaints. In the final two columns of panel B, we note the number and percentage of instances in which the parties settled the case before the court ruled on the defendant's motion to dismiss. It appears this frequency has declined over the sample period.

Panel C provides descriptive data on settlement values for cases filed from Jan. 1996-June 2016.³⁷ The total dollar amount paid out by auditors peaked for cases filed in 2002 at \$673 million, and the mean dollar amount per case paid out by auditors peaked for cases filed in 1998 at just over \$28 million. In general, payouts are highest in the late 1990s and early 2000s, with payouts declining in recent years. Panel D, which presents the top ten shareholder settlements paid by auditors, shows a similar trend. Nine of the ten cases were

³⁷ Although we collected data from Jan. 1996-June 2016, eleven cases in our sample are still pending resolution. As shown in Appendix V, cases with longer duration are more likely to have negative outcomes for auditors. Therefore, we caveat that the total settlement values reported in the final years of our sample may increase. Panel A reports the number of cases filed in each year along with the percentage of those cases that are still pending. All cases still pending were filed in 2012 or later. Panel B shows the mean (median) duration for the resolved cases by litigation outcome (duration is defined as the number of days from when the case was filed until it was either settled or dismissed). As shown, when a Rule 10b-5 claim is dismissed, the case duration is shorter than when the court denies the motion to dismiss. Similarly, cases where the auditor pays to settle have longer duration than those in which the auditor pays nothing.

filed from 1998 to 2003. The remaining case, number ten on our list, was filed in 2008 against Ernst & Young for its work on Lehman Brothers.

Panel E summarizes auditor settlements relative to settlements by other defendants over each three-year period. Total auditor payouts peaked at \$1.37 billion for cases filed in 2002-2004, and have been far lower in the years following. Total auditor payouts were \$260 million for cases filed in 2005-2007, \$275 million for cases filed in 2008-2010, a mere \$21 million for cases filed in 2011-2013, and just over \$1 million for 2014-June 2016 (of course, as noted previously, many of these cases are still pending). As a caveat, we note that the dollar values noted underestimate the amount paid by auditors because, as noted in panel A, there are 76 cases for which the settlement value was unclear, meaning that we were unable to include the settlements from these cases in our calculations. If we are unable to determine the auditor's settlement, we omit the entire settlement from panel E so that the comparison of the auditor's settlement to the total settlement will be consistent.

Over the entire sample period, we can identify \$3.568 billion paid out by auditors. For comparison, Donelson (2013)—to our knowledge, the most comprehensive prior study examining auditor litigation trends—reports that auditors paid \$1.733 billion in securities class actions from 1996-2007. The amount paid by auditors is roughly 7% of the \$49.596 billion that we can identify as paid out in total by all defendants. As a benchmark, over the period 2002-2015 for which we have data on audit fees from the Audit Analytics database, auditors earned roughly \$179.4 billion in audit fees (or roughly \$163.3 billion for the merged Audit Analytics-Compustat sample). During this same period, auditors paid roughly \$1.932 billion to settle the federal class action lawsuits in our sample (of course, this figure does not reflect total litigation costs, as it excludes major categories such as legal fees).

One interesting pattern, explored in Table 3, is the relative importance of different claims. Panel A only includes cases that the auditor paid to settle (i.e., the auditor's payout was non-zero). Although 91% of auditor settlements from 1996-1998 resolved a Rule 10b-5 claim, this percentage decreased to 55% in 2011-2013. By contrast, the percentage of auditor settlements that resolved a Section 11 claim (at least one claim other than Rule 10b-5) increased from 33% (42%) in 1996-1998 to 55% (73%) in 2011-2013.³⁸ Panel B presents this same analysis for only Big4/Big5 auditor defendants and shows a similar trend.

Panels C through F show average settlement values based on the claims the defendant is alleged to have violated. Panel C shows the full sample, panel D shows only non-zero settlements, panel E includes only Big4/Big5 auditor defendants, and panel F includes only auditors of foreign company defendants. Although our mean settlement value of \$8.47M in panel C is a little lower than the magnitude documented in the prior literature—Carleton et al. (1996) and Talley (2006) find mean damages of \$11M and \$13M, respectively—the decrease is intuitive given that these studies do not include data from recent years. Overall, settlement values tend to be highest when the auditor is alleged to have violated Rule 10b-5, particularly when such violations are alleged in conjunction with other claims.

In sum, the settlement and dismissal data suggest that there has been a decline in federal securities liability for auditors since the passage of the PSLRA. One explanation for this trend is that auditors have performed higher-quality audits over this period, and shareholders have less cause to sue them. Although we examine this question more formally in Table 5, we begin with descriptive statistics in Table 4. Table 4 shows the following: (1) the number of SEC Accounting and Auditing Enforcement Releases (AAERs) issued in each

³⁸ Although Table 3 includes the final period from 2014 – June 2016 for completeness, the information may not be representative as seven cases are still pending.

year to exchange-traded companies beginning in 2000 (the first year for which complete data are available online); (2) the number of severe restatements in each year beginning in 2002 (the first year for which reliable data are available from Audit Analytics and defined as restatements for which the value of the restatement is negative and reflects 10% or more of net income); (3) the number of settled PCAOB Disciplinary Orders in each year beginning in 2005 (the first year available); and (4) the percentage of “not sufficient” audits (calculated as “not sufficient” audits relative to audits inspected), as determined by the PCAOB, in each year beginning in 2005 (the first year available).

There is no consistent trend in the four variables reported in Table 4. There were fewer SEC AAERs and severe restatements in the second half of the sample period, but there was an increase in PCAOB settled disciplinary orders over the same period. Meanwhile, the number of “not sufficient” audits shows no discernable trend.³⁹ This inconsistency may reflect that regulators are budget-constrained and differ in their enforcement priorities rather than any change (or lack of change) in audit quality.⁴⁰

4. Multivariate Analyses

4.1 Changes in the frequency of litigation

³⁹ The PCAOB deems an audit “not sufficient” when the inspection staff find that the auditor failed to gather sufficient audit evidence to support an audit opinion; it does not mean the audit report was wrong, but instead that the auditor did not conduct the proper testing to have a basis for the report. Arguably, there is a slight increase in “not sufficient” audits (an average of 22% in the first six years for an average of 28.5% in the latter six years). However, due to the small sample size and the non-random selection of audits for inspection, we hesitate to draw conclusions.

⁴⁰ For example, when the SEC was resource constrained following the financial crises, it brought fewer enforcement actions related to accounting fraud. As stated by Andrew Ceresney (Co-Director of the Division of Enforcement), “In the wake of the financial crisis, the SEC was very focused on financial crisis cases – cases involving CDOs, RMBS, Ponzi schemes, and other transactions that resulted in massive losses to investors. Consequently, we devoted fewer resources to accounting fraud. During this period, we have had fewer accounting fraud investigations.” Financial Reporting and Accounting Fraud (Sept. 2013). See also Harison & Pashkoff (2012) (discussing that the SEC and PCAOB are, to some extent, substitute regulators). However, regardless of the cause of these trends, they could affect case outcomes: because the plaintiff must plead his case prior to discovery, a regulatory enforcement action—and the additional detail that comes with it—can be critical to surviving a motion to dismiss.

Table 5 tests, more formally, whether the decline in litigation persists after controlling for any increases in accounting quality. Because Donelson and Prentice (2012) found that restatements are the most consistently significant determinant of auditor liability, Table 5 tests whether the likelihood that a firm will be subject to a class action lawsuit following a severe restatement has changed over time. (As before, a restatement is defined as severe if it is negative and the amount restated is 10% of more of net income.) The analysis includes only the sample of firms that experienced a severe restatement from Jan. 2002 through June 2016 and uses the equation below. The first three columns reflect whether the auditor was subject to litigation, and the final three reflect whether the firm managers were subject to litigation.

$$\text{Lawsuit Following Restatement} = \alpha + \beta_1 \text{Time_Trend Variable} + \text{Controls} \quad (1)$$

We consider three time-trend variables: (1) Post *Janus* (set to 1 in 2012-2016), (2) Post *Tellabs* (set to 1 in 2008-2016), and (3) Year, which ranges from 2002 to 2016. The dependent variable is the presence of a lawsuit within one year of the date the restatement is announced. Following Kedia and Rajgopal (2011), controls are included for each firm's prior year market value, leverage, book-to-market ratio, age, whether the firm is included in the S&P1500, and whether the firm is "small," defined as having market equity less than \$200M (market value enters the regressions in log form). Further, following Kim and Skinner (2012), we include controls for firm returns, the standard deviation of returns, and sales growth. Descriptive statistics are provided in panel A of Table 5. Roughly one hundred severe restatements are dropped because they cannot be matched to either CRSP or Compustat.

The regression results for the full sample are provided in panel B. Standard errors are clustered by industry, and all models include industry fixed effects (industry fixed effects

are measured using two-digit SIC codes). All models here and throughout the paper use Ordinary Least Squares (OLS) even with a binary dependent variable to ease interpretation of the coefficients. However, all inferences remain consistent with logit regressions. Finally, all multivariate regressions here and throughout the paper include only U.S.-based firms and litigation against auditors of U.S.-based firms due to complications associated with international litigation.⁴¹

Columns (1) through (3) of Panel B show that, from 2002 through 2016, auditors were less likely to be sued following a severe restatement. In column (1), the estimate on the *Post Tellabs* variable is too imprecise to reach any conclusions (coefficient of -0.014, SE of 0.015, 95% CI of -0.043 to 0.015), but the *Post Janus* variable in column (2) reflecting the years from 2012 to 2016 is significant at 5 percent. This coefficient suggests that the likelihood the auditor will be sued is roughly two percentage points lower following *Janus*. In column (3), the coefficient on *Year* is negative (statistically significant at 10%), indicating that the likelihood an auditor will be sued following a severe restatement has decreased over the sample period. By contrast, none of the results in columns (4) through (6) show a statistically significant decline in the likelihood that managers will be sued following a severe restatement.

Panel C presents the same analysis using a matched sample of firms, where firms are matched based on their likelihood of litigation. We predict the likelihood of litigation using firm returns, the standard deviation of returns, and sales growth, and we match each firm with the most similarly situated firm from the same two-digit SIC code. Because firms are

⁴¹ For example, consider the litigation against Ernst & Young for its role as the auditor of Sino-Forest Corporation. Although the US litigation was dismissed, it was only dismissed because the parties reached a multi-million dollar settlement in Canada. It seems incorrect to view this as dismissed because E&Y paid a substantial sum. Docket No. 12-cv-01726 (S.D.N.Y.).

matched within SIC code, the regressions omit industry fixed effects. The sample size for this panel is limited, but the results remain generally consistent with those in Panel B. The coefficients on *Post Janus* and *Year* are negative and statistically significant at 5%. The coefficient on *Post Tellabs* is negative and only slightly smaller in magnitude, but remains too imprecise to make any conclusions (coefficient of -0.237, SE of 0.228, 95% CI of -0.794 to 0.320). Interestingly, column (6), which was significant only at 15% in Panel B, becomes statistically significant at 5% in Panel C and indicates that managers have become less likely to be targets of federal class actions following severe restatements.⁴²

4.2 Changes in litigation outcomes following *Tellabs* and *Janus*

4.2.1 Regression specification

The prior analysis provides evidence that auditors have become less likely to be sued after a severe restatement in the latter years of our sample period. This suggests the general descriptive trend showing a decline in litigation persists even after controlling for underlying improvements in accounting quality. To study whether there is evidence that the decline can be attributed to changing legal rules, Tables 6 through 8 exploit the institutional feature that firms were differentially affected by the Supreme Court rulings. In particular, we compare litigation outcomes in the circuits most affected by *Tellabs* and *Janus* (the “treatment” groups) relative to trends in other circuits (the “control” groups), before and after the event date. This design resembles a difference-in-differences test. In this regard, our paper is similar to Choi and Pritchard (2012) and Bliss, Partnoy, and Furchtgott (2016).

⁴² In unreported analyses, we attempt to test the likelihood that a lawsuit against an auditor will be dismissed after a severe restatement. Unfortunately, after limiting the sample to observations in which shareholders have sued the auditor after a severe restatement, we have only 18 observations. Nonetheless, using only these 18 observations and the controls reported in Table 5, we find the likelihood of dismissal has increased after *Janus*. The coefficient on *Year* is also positive, but is not statistically significant at standard levels. We do not report these results due to the low number of observations.

The timeline for Tables 7 and 8 is presented in Figure 3. We follow the approach of Hubbard (2013), who recommends limiting empirical studies examining changes in litigation outcomes following court decisions to only cases filed prior to the decision. He makes this recommendation due to concerns that plaintiffs change the type of cases filed (or their complaints) after a significant court case, and that the resulting selection effects caused by the change in filings may affect empirical outcomes such as dismissal rates. In all tests, the date of the court decision (June 21, 2007 and June 13, 2011 for *Tellabs* and *Janus*, respectively) is the event date, and the *Post* variable is defined to be consistent with each dependent variable. When testing dismissal rates, *Post* reflects whether the case was dismissed after the event date. When testing settlement values, *Post* reflects whether the parties settled after the event date.

Using the equations below, we estimate changes in litigation outcomes in the affected circuits following each decision.

$$\text{Dependent Variable} = \alpha + \beta_1 \text{Post Tellabs} + \beta_2 \text{Two.Three} + \beta_3 \text{Nine.Eleven} + \beta_4 \text{Post} * \text{Two.Three} + \beta_5 \text{Post} * \text{Nine.Eleven} + \text{Controls} \quad (2)$$

$$\text{Dependent Variable} = \alpha + \beta_1 \text{Post Janus} + \beta_2 \text{Four.Nine} + \beta_3 \text{Post} * \text{Four.Nine} + \text{Controls} \quad (3)$$

As noted above, we include only cases filed before the opinion was issued to address selection effects. The cases in the post period are those for which the court ruled on a motion to dismiss (or approved a settlement) after the opinion was issued.

To examine changes in litigation outcomes, we consider four dependent variables. The first two dependent variables reflect claims dismissed. Because *Tellabs* and *Janus* specifically relate to Rule 10b-5—and did not, for example, have a direct effect on Section 11 liability—these dependent variables examine Rule 10b-5 claims: (i) *Dismiss10b*: an indicator set to 1 if the court dismissed the Rule 10b-5 claim; and (ii) *Allow10b*: an indicator

set to 1 if the court denied a motion to dismiss and allowed a Rule 10b-5 claim to proceed. In interpreting the data, we analyzed claims allowed and claims dismissed separately because many claims are settled before the court rules on a motion to dismiss (i.e., claims allowed and claims dismissed are not perfectly negatively correlated). The final two dependent variables examine changes in auditor settlements: (i) *Ratio*: the ratio of the value paid by the auditor to settle a case relative to that paid by all non-auditor defendants; and (ii) $\text{Ln}(\text{Settlement} + 1)$: the natural log of the value paid by the auditor to settle the case. If the case is dismissed, the auditor's settlement value is set to 0. Descriptive statistics for the dependent and control variables are provided in Table 6, and the regression results are reported in Tables 7 and 8.

As noted in equations (2) and (3), all models control for lawsuit and firm characteristics. We mention these variables here briefly, define them in detail in the Appendix, and present their descriptive statistics in Table 6. Following prior research (Rogers and Stocken, 2005; Kim and Skinner, 2012; Brochet and Srinivasan, 2013), we introduce controls for categories of cases that are more likely to attract litigation, including: (i) instances where the SEC filed an enforcement action (*SEC Action*); (ii) transactions often associated with lawsuits such as IPOs or equity issuances (*IPO*); and (iii) specific industries that are litigation prone (*High Litigation*). Firm litigation risk measures are included as control variables; these include the firm's return on assets (*ROA*), size (*LnAssets*), and growth prospects (*Growth*), as well as controls relating to the class period, including the length of the class period (*LnClassPeriodLength*), the drop the firm's stock price during the class period (*Price Drop*), and average share turnover during the class period (*Share*

Turnover).⁴³ All continuous, non-logged variables are winsorized at the 1st and 99th percentiles. Standard errors are clustered by circuit court, and all models include industry fixed effects (due to the low number of observations, we use one-digit SIC codes).

The sample for these tests is restricted by the total number of usable observations. Although 449 observations have at least some information in CRSP and Compustat, only 331 observations have the full information that we need from these databases. From there, we restrict the sample to include only cases filed prior to each Supreme Court opinion, as required by the straddle method proposed by Hubbard (2013). Table 6 shows the number of observations for each analysis (there is some variation because of missing data—e.g., as noted before, we were unable to find auditor settlement amounts in some cases). When coding the Two-Three, Nine-Eleven, and Four-Nine circuit dummies, we do not include circuits until the courts have ruled on the point of law. For example, because the Seventh Circuit did not rule on the *Tellabs* point of law until 2006, we omit Seventh Circuit observations from before that 2006 ruling in all *Tellabs* analyses.

4.2.2 Results. *Tellabs* - Pleading Standards

Table 7 shows the changes in auditor litigation patterns following *Tellabs*. The variables of interest are the interactions between Post *Tellabs* and Two-Three, where Two-Three is a dummy variable set to one if the litigation occurred in either the Second or Third Circuit, and Post *Tellabs* and Nine-Eleven, where Nine-Eleven is a dummy variable set to one if the litigation occurred in either the Ninth or Eleventh Circuits. These interaction terms represent whether there was a differential change in litigation outcomes in the Second and Third Circuits (Ninth and Eleventh Circuits), relative to other circuits, after *Tellabs*.

⁴³ We do not include our control for severe restatements because none of the lawsuits in Tables 6 through 8 were filed within one year of the company experiencing a severe restatement.

Columns (1) and (2) use *Dismiss10b* and *Allow10b* as the dependent variables, respectively. Column (3) measures the ratio of the auditor's settlement relative to the total settlement paid by all defendants, and column (4) uses the natural log of the dollar value of the auditor's settlement amount.

The results provide only limited evidence that *Tellabs* affected litigation outcomes. Columns (1) and (2) provide no evidence that there was a statistically significant change in dismissals in any of the treatment circuits following *Tellabs*. And columns (3) and (4) show that auditor settlements in the Second and Third Circuits declined after *Tellabs*, but provide no evidence of changes in settlement values in the Fourth and Ninth Circuits.⁴⁴

There are several possible explanations for the lack of consistent empirical findings in Table 7. From an empirical perspective, the lack of a significant finding does not indicate that there was no effect—only that the tests do not provide evidence of an effect.⁴⁵ However, consistent with the prior studies on *Twombly* and *Iqbal*, there are theoretical explanations for the largely null result. One possibility is that *Tellabs* did not result in a uniform standard among courts. This seems like a reasonable explanation. Even now, it is not clear the lower courts have fully adopted *Tellabs*, as the Second Circuit still uses the motive and opportunity

⁴⁴ In unreported tests examining the robustness of this result, we check whether the result remains consistent if we include circuit fixed effects and/or omit any of the treatment circuits. (Because each of our treatment variables includes two circuits—and the balance of these circuits differs in the pre period versus the post period—one concern is that the change in relative weights affects our empirical outcomes.) We find all results remain consistent with the inclusion of fixed effects, but that the decline in settlements in the Second and Third Circuits loses significance if we drop the Second Circuit (the coefficient remains negative) Because we have far more observations in the Second Circuit than the Third Circuit, this may be due to a lack of power.

⁴⁵ It could be that the design of our empirical tests prevents us from capturing any effect. For example, the *Stoneridge* case noted earlier was decided only a year after *Tellabs* and had an opposite effect in the Ninth Circuit, so this case may negate the empirical effect of *Tellabs* in this particular circuit. Although we would ideally test *Stoneridge* directly, we are unable to do so due to sample size concerns. *Stoneridge* resolved a circuit split between the Eighth and Fifth Circuits and the Ninth Circuits, and the law was unclear in the other circuits. As such, there is only a limited sample, especially because the results in the Ninth Circuit could potentially be confounded by *Tellabs*.

test and the Ninth Circuit still uses the recklessness standard (albeit applied with legal nods to *Tellabs*).⁴⁶

4.2.3 Results. *Janus*—Liability Standards

Table 8 shows the change in auditor litigation patterns in the Fourth and Ninth Circuits following *Janus*, and, unlike the prior table, provides consistent evidence of a change in litigation outcomes.⁴⁷ Columns (1) and (2) show that Rule 10b-5 claims are more likely to be dismissed or, conversely, less likely to be allowed in the Fourth and Ninth Circuits post *Janus*.⁴⁸ Columns (3) and (4) indicate that auditor settlements—measured both as the ratio of auditor settlements to total settlements and as the log value of total auditor settlements—declined in the Fourth and Ninth Circuits post *Janus*.⁴⁹

The decline in settlement value is likely driven by two factors. First, because more cases are dismissed (and thus “settled” for \$0), settlement values mechanically decline.

⁴⁶ See, e.g., *Zucco Partners, LLC v. Digmarc Corporations*, Case No. 06-35758 (9th Cir. Jan. 12, 2009); *Rubke, Trustee v. Capital Bancorp LTD*, Case No. 07-15083 (9th Cir. Jan. 13, 2009); *ECA & Local 134 IBEW Joint Pension Trust of Chi. v. JP Morgan Chase Co.*, 553 F.3d 187, 201 (2d Cir. 2009).

⁴⁷ Although we attempted to dig into this result by identifying specific instances of “bad” auditor conduct that were excluded by *Janus*, we were unable to do so. Our best information on the auditor’s conduct comes from the plaintiffs’ complaints, and we found that the amended complaints filed after *Janus* no longer included these examples of “bad” auditor conduct. Prior to *Janus*, the initial complaints are typically vague, but the amended complaints include far more detail. Indeed, as noted previously, more than half of the cases filed in the Fourth and Ninth circuits in our sample in the five years prior to *Janus* included allegations of “bad” conduct but none of the cases filed in the five years after *Janus* made these same allegations (this is based on the final complaint filed in each case). Therefore, it is reasonable to assume that the disappearance of “bad” auditor conduct from the complaints is related to plaintiffs’ lack of incentives to investigate for this type of information post *Janus*. As such, given the substantial drop in the frequency of these allegations in the complaints, we are comfortable assuming that a substantial portion of the cases were affected, but we cannot identify those specific cases because the complaints (and amended complaints) no longer include these examples.

⁴⁸ Of the 50 cases included in the regression, 19 were dismissed. Of these 19 cases, ten cited scienter, two cited loss causation, two cited other 10b-5 elements, and nine lacked sufficient detail to determine the reason for dismissal (e.g., minute orders). Of the two cases that cited loss causation, both also cited scienter. Nonetheless, because *Janus* did not affect loss causation, we run Table 8 excluding these two cases. The results are untabulated but remain consistent with those reported in the paper.

⁴⁹ As a practical matter, this result is driven entirely by the Ninth Circuit; only one of the 24 cases from the Fourth Circuit in our sample was filed in 2007 or later, and this one case lacks corresponding data from CRSP and Compustat. Of the 19 dismissals included in the regression, nine occurred prior to the court decision, and ten occurred after the court decision. Of the 13 non-zero settlements included in the regression, seven occurred prior to the court decision, and six occurred after the court decision.

Second, the reduced settlements likely reflect the change in bargaining power. Following auditor-friendly changes in law, plaintiffs know they must convince the court that their case meets the applicable new requirements before the case can be adjudicated or, in most securities cases, before discovery can even proceed. When plaintiffs are uncertain whether the case can proceed under the new requirements, it makes sense for them to be more likely to settle—and to settle for a lower percentage of potential damages—than to risk that the court will dismiss their claim.

In sum, we find evidence that narrower Rule 10b-5 primary liability standards reduce auditors' liability exposure, but we find inconsistent evidence on whether changes in pleading standards have an effect.⁵⁰ Our evidence is largely consistent with prior work on pleading standards, but conflicts with prior work on liability rules, as Park (2017) did not find a relationship between narrower primary liability standards and settlement values. The difference likely results from the use of different (i) research designs, as Park (2017) uses a linear regression with dummies for the Second and Ninth Circuits rather than our difference-in-differences approach; (ii) time periods, as Park (2017) includes data from 1996 through 2007; and/or (iii) sample selection, as Park (2017) includes only cases involving a restatement, leading to a smaller sample that includes many severe cases.

5. Discussions and Conclusions

Our paper highlights the changing nature of litigation against auditors since the passage of the PSLRA. We provide descriptive data on the frequency of lawsuits brought against auditors under federal securities laws, the claims underlying those lawsuits,

⁵⁰ One concern is that the firms across circuits are not comparable due to, for example, industry concentration in certain circuits, and that the difference-in-differences tests may violate the parallel trends assumption. Unfortunately, we are unable to meaningfully test for parallel trends due to the small sample size in general, but especially if we partition the sample by year and circuit.

outcomes of motions to dismiss, and settlement values paid by auditors—all of which suggest that auditors' litigation exposure under Rule 10b-5 has significantly declined in recent years. To consider the possibility that litigation has declined because audit quality has improved, we look at the likelihood that an auditor will be sued following a severe restatement. We show that this likelihood has decreased—indicating the decrease persists after controlling for any increase in audit quality—and that the decline is pronounced in the years following the Supreme Court's decision in *Janus v. First Derivative*. Further tests provide additional evidence that *Janus*, which changed liability standards, reduced auditors' litigation exposure. By contrast, we also study the Supreme Court's opinions in *Tellabs v. Makor*, but find inconclusive evidence that *Tellabs*, which changed pleading standards, led to changes in litigation outcomes.

Appendix I – Variable Definitions

Variable	Definition
Allow 10b	Dummy variable. Equal to 1 if the plaintiff brought a Section 10b claim against the auditor and the court denied the auditor's motion to dismiss, thus allowing the claim to proceed; 0 otherwise. Hand-collected from court filings available on Bloomberg Law.
Book to Market	The ratio of a firm's book value to its market value. A firm's book value is calculated as the sum of stockholders' equity and investment tax credit (if available), minus the book value of preferred stock. If these variables are not available, we calculate book value as book value of common equity plus the par value of preferred stock. Finally, if these variables are not available, we calculate book value as assets minus liabilities. Market value is the value of the firm's equity at the close of the prior fiscal quarter.
Case Duration	Total number of days from when lawsuit was filed until lawsuit was either dismissed or settled. Calculated based on the FederalFilingDate and FinalSettlementDate columns in the ISS data and additional hand-collected information from Bloomberg Law.
Dismiss 10b	Dummy variable. Equal to 1 if the plaintiff brought a 10b claim against the auditor and the court dismissed the claim on a ruling on a motion to dismiss; 0 otherwise. Hand-collected from court filings available on Bloomberg Law.
Equity Issuance	Dummy variable. Equal to 1 if the lawsuit pertains to a public offer of securities; 0 otherwise. Obtained from ISS database.
Growth	The percentage growth in revenue over the fiscal year during which the lawsuit is filed, calculated using Compustat data.
High Litigation	Dummy variable. Equal to 1 if the firm is in the following SIC groups (as per Francis, Philbrick and Schipper, 1994): 2833–2836, 3570–3577, 3600–3674, 5200–5961, 7370–7374, 8731–8734.
Initial 10b	Dummy variable. Equal to 1 if the plaintiff brought a 10b claim against the auditor; 0 otherwise. Hand-collected from court filings available on Bloomberg Law.
IPO	Dummy variable. Equal to 1 if the lawsuit relates to an IPO; 0 otherwise. Obtained from ISS database.
Leverage	Total debt divided by total assets, calculated using Compustat data for the most recently completed fiscal quarter.
Ln(Assets)	Log of total assets, calculated using Compustat data for the most recently completed fiscal year (Tables 5-7) or fiscal quarter (Table 9).
Ln(Auditor Settlement)	Log of total settlement paid by auditor plus 1. Cases dismissed are recorded as \$0 settlements. Hand-collected from court filings available on Bloomberg Law.

Ln(Class Period Length)	Log of the number of business days in the class period plus 1. Hand-collected from court filings available on Bloomberg Law.
Ln(Market Value)	Log market value (in millions of dollars), calculated using Compustat data for the most recently completed fiscal quarter.
Nine-Eleven	Dummy variable. For Tables 8-9, Nine-Eleven is equal to 1 if the firm's primary address in Compustat is listed as a state in the Ninth or Eleventh Circuits—AK, AL, AZ, CA, FL, GA, HI, ID, MT, NV, OR and WA; 0 otherwise.
Post <i>Tellabs</i>	Dummy variable. Equal to 1 if the lawsuit was filed after June 21, 2007 (the date of the Supreme Court's decision in <i>Tellabs, Inc. v Makor Issues & Rights, Ltd.</i> , et al.); 0 otherwise.
Price Drop	The difference between the highest stock price during the class period and the price as of the final date of the class period, scaled by the highest price.
Ratio	The ratio of the amount an auditor paid to settle a lawsuit relative to the amount paid by all non-auditor defendants. If the claims were dismissed against all defendants (i.e., a zero payout for all defendants), the ratio is recorded as 0. If the claims were dismissed against the non-auditor defendants but the auditor paid a settlement, the ratio is recorded as 1.
ROA	Net income before taxes and extraordinary items divided by total assets, calculated using Compustat data for the most recently completed fiscal year.
Severe Restatement	Dummy variable. Equal to one if the restated earnings and the cumulative effect of the restatement was 10% or more of net income (this variable is calculated by Audit Analytics and defined as “The aggregate impact of the restatement. The field is calculated as sum of changes in net income for all the periods affected by the restatement”).
SEC Enforcement	Dummy variable. Equal to 1 if the lawsuit relates to an SEC Enforcement Action; 0 otherwise. Obtained from ISS database.
Share Turnover	The average daily share turnover during the class period measured by trading volume as a percentage of the number of shares outstanding (trading volume for NASDAQ stocks is adjusted using the methodology in Gao and Ritter, 2010).
S&P1500	Dummy variable. S&P1500 is set to 1 if Compustat indicates that the firm was included in the S&P1500.
Std.Dev. Returns	The standard deviation of daily stock returns over the 90-day window ending on the day prior to the first quarter included in the regression.
Two-Three	Dummy variable. For Tables 2-7, Two-Three is equal to 1 if the case was litigated in the Second or Third Circuit courts. For Tables 8-9, Two-Three is equal to 1 if the firm's primary address in Compustat is listed as a state in the Second or Third Circuits—NY, VT, CT, DE, NJ, or PA.; 0 otherwise.

Appendix II – Discussion of *Tellabs* & Classification of Circuit Courts pre-*Tellabs*

In *Tellabs*, the plaintiffs sued management over a series of supposedly false statements made from December 2000 to June 2001. The plaintiffs in this case were *Tellabs*' shareholders, and the defendants were *Tellabs*' CEO and other executives. The plaintiffs specifically alleged that the defendants had falsely claimed that the company had strong demand for its products and was earning record revenues. In reality, the plaintiffs, stated, the opposite was true—and *Tellabs*' executives knew the opposite was true. As such, the plaintiffs argued, the defendants had purposely misled them about the true value of the stock price, and had caused the stock price to decline from a high of roughly \$67 to a low of roughly \$16 during the seven-month period in question. Below we provide more detail on the cases that are commonly thought to have set the strong inference standard for each circuit in the post-PSLRA, pre-*Tellabs* period.

First Circuit.

Classification: Intermediate

Relevant Case(s): *Greebel v. FTP Software, Inc.*, 194 F.3d 185 (1st Cir. 1999).

See also *In re Credit Suisse First Boston Corp.*, 431 F.3d 36 (1st Cir. 2005).

Second Circuit.

Classification: Lenient

Relevant Case(s): *Press v. Chem. Inv. Servs.*, 166 F.3d 529, 537-38 (2^d Cir. 1999).

See also *Novak v. Kasaks*, 216 F.3d 300, 314 n. 1 (2^d Cir. 2000).

Third Circuit.

Classification: Lenient

Relevant Case(s): *In re: Advanta Corp. Sec. Litig.*, 180 F.3d 525, 530-35 (3^d Cir. 1999).

Fourth Circuit.

Classification: Intermediate

Relevant Case(s): *Ottman v. Hanger Orthopedic Group, Inc.*, 353 F.3d 338, 344-45 (4th Cir. 2003).

Fifth Circuit.

Classification: Intermediate

Relevant Case(s): *Nathenson v. Zonagen Inc.*, 267 F.3d 400, 406-12 (5th Cir. 2001).

Sixth Circuit.

Classification: Intermediate

Relevant Case(s): *In re Comshare, Inc. Sec. Litig.*, 183 F.3d 542, 549 (6th Cir. 1999).

See also *Helwig v. Vencor, Inc.*, 251 F.3d 540, 550-52 (6th Cir. 2001) (en banc).

Seventh Circuit.

Classification: Intermediate

Relevant Case(s): *Makor Issues & Rights, Ltd. v. Tellabs Inc.*, 437 F.3d 588, 601 (7th Cir. 2006).

Eighth Circuit.

Classification: Intermediate

Relevant Case(s): *Fla. State Bd. of Admin. v. Green Tree Fin. Corp.*, 270 F.3d 645, 659-61 (8th Cir. 2001).

Ninth Circuit.

Classification: Strict

Relevant Case(s): *In re Silicon Graphics Inc. Securities Litigation*, 183 F.3d 970 (9th Cir. 1999).

Tenth Circuit.

Classification: Intermediate

Relevant Case(s): *City of Philadelphia v. Fleming Cos., Inc.*, 264 F.3d 1245, 1261-63 (10th Cir. 2001).

Eleventh Circuit.

Classification: Strict

Relevant Case(s): *Bryant v. Avado Brands, Inc.*, 187 F.3d 1286-87 (11th Cir. 1999).

Supreme Court Opinion.

8-1 decision for *Tellabs*.

Majority opinion by Justice Ginsburg.

Appendix III – Discussion of *Janus* & Classification of Circuit Courts pre-*Janus*

Janus involved a number of related entities: (1) Janus Capital Group, Inc. (“JCG”), a publicly traded company that created the Janus family of mutual funds; (2) Janus Capital Management LLC (“JCM”), the investment adviser and administrator of the funds (a wholly subsidiary of JCG); and (3) Janus Investment Fund (“JIF”), a trust that held the funds' assets and is wholly owned by investors in the Janus funds. The case concerned statements in prospectuses issued by JIF (the statements were written by JCM’s in-house counsel) stating that the JCM would implement policies to prevent “market timing” (an investment strategy that is thought to be detrimental to long-term investors).

In fact, however, regulators alleged that JCG and JCM had permitted market trading in the JIF funds. In response to the regulatory action, investors withdrew an estimated \$14B from JIF funds, and the stock price fell 12.7% in one day. JCG and JCM eventually settled with regulators for \$225M, after which shareholders sued JCG and JCM. They alleged JCG and JCM had caused JIF to issue prospectuses containing the false statements on market timing. The question for the Supreme Court was whether JCM could be held liable under Rule 10b-5 for the false statements in JIF’s prospectuses. Below we provide the cases that are commonly thought to have set the strong inference standard for each circuit in the pre-*Janus* period.

Second Circuit.

Classification: Bright Line.

Relevant Case(s): *Shapiro v. Cantor*, 123 F. 3d 717 (2nd Cir. 1997).

See also *Wright v. Ernst & Young LLP*, 152 F.3d 169, 175 (2d Cir. 1998); *Pac. Inv. Mgmt. Co. v. Mayer Brown LLP*, 603 F.3d 144 (2d Cir. 2010).

Fourth Circuit.

Classification: Substantial Participation.

Relevant Case(s): *In re Mutual Funds Inv. Litigation*, 566 F. 3d 111 (2009).

Fifth Circuit.

Classification: Bright Line.

Relevant Case(s): *AFFCO Inv. 2001 LLC v. Proskauer Rose LLP*, 625 F.3d 185 (5th Cir. 2010).

Eighth Circuit.

Classification: Bright Line.

Relevant Case(s): *In re Charter Commc’ns, Inc. Sec. Litig.*, 443 F.3d 987, 992 (8th Cir. 2006).

Ninth Circuit.

Classification: Substantial Participation.

Relevant Case(s): *Howard v. Everex Systems, Inc.*, 228 F.3d 1057, 1061 n.5 (9th Cir. 2000).

Tenth Circuit.

Classification: Bright Line.

Relevant Case(s): *Anixter v. Home-State Production Co.*, 77 F. 3d 1215 (10th Cir. 1996).

Eleventh Circuit.

Classification: Bright Line.

Relevant Case(s): *Ziemba v. Cascade Intern., Inc.*, 256 F.3d 1194, 1205 (11th Cir. 2001).

Supreme Court Opinion.

5-4 decision for *Janus*.

Majority opinion by Justice Thomas.

Appendix IV – Case Detail on *Tellabs* and *Janus*

This table displays descriptive detail, such as cite count and key dates, for the four court Supreme Court opinions since the passage of the PSLRA that are commonly considered to have most reduced auditor liability under federal securities laws.

Case Detail		
Case	<i>Dura v. Broudo</i>	<i>Tellabs, Inc. v. Makor</i>
Citation	544 US 336 (2005)	551 US 308 (2007)
Granted	6/28/2004	1/5/2007
Argued	1/12/2005	3/28/2007
Decided	4/19/2005	6/21/2007
<u><i>Full Cite Count</i></u>		
Cites - Federal Court Decisions	3063	5458
Cites - Court Docs	3922	4409
Cites - Law Reviews	571	505
Cites – Treatises	31	78
<u><i>Citations inc. the word "Auditor"</i></u>		
Cites - Federal Court Decisions	455	577
Cites - Court Docs	925	1051
Cites - Law Reviews	192	167
Cites – Treatises	16	17
Case	<i>Stoneridge v. Scientific-Atlanta</i>	<i>Janus v. First Derivative</i>
Citation	552 US 148 (2008)	564 US 135 (2011)
Granted	3/26/2007	6/28/2010
Argued	10/9/2007	12/7/2010
Decided	1/15/2008	6/13/2011
<u><i>Full Cite Count</i></u>		
Cites - Federal Court Decisions	801	356
Cites - Court Docs	1051	696
Cites - Law Reviews	495	152
Cites – Treatises	68	52
<u><i>Citations inc. the word "Auditor"</i></u>		
Cites - Federal Court Decisions	207	91
Cites - Court Docs	302	174
Cites - Law Reviews	209	66
Cites – Treatises	22	16

Appendix V – Case Duration and Resolution

Panel A shows the resolution of cases against auditors in our sample by year. A case is considered resolved if it has been settled, dismissed with prejudice, or dismissed without prejudice but the plaintiff declined to amend the complaint (i.e., refile to bring claims against the auditor). Panel B shows the mean and median case duration associated with a number of litigation outcomes.

Panel A. Cases filed and resolved by year

Year	Num. Defendants	Num. Resolved	Percent Resolved
1996-2010	460	460	100%
2011	42	42	100%
2012	13	11	85%
2013	12	10	83%
2014	4	4	100%
2015	6	1	17%
June 2016	3	1	33%

Panel B. Case duration

	Mean	Median	Obs.
...if Motion to Dismiss 10(b) Claim is Granted	1329	1217	101
...if Motion to Dismiss 10(b) Claim is Denied	1651	1506	104
...if Motion to Dismiss 11 Claim is Granted	1345	1119	38
...if Motion to Dismiss 11 Claim is Denied	1504	1329	56
...if Auditor Pays No Settlement	1199	1021	92
...if Case is Settled for a Non-Zero Amount	1427	1253	238

t-test: 10(b) Dismissal Granted v. Denied

t = 3.3007

t-test: 11 Dismissal Granted v. Denied

t = 1.0239

t-test: Settlement v. No Settlement

t = - 2.6704

Figure 1: Dismissal Rates for Rule 10b-5 Claims Brought Against Auditors

This figure shows the dismissal rates for Rule 10b-5 claims brought against auditors. The numerator for this rate is the number of cases for which the court dismissed all Rule 10b-5 claims, either (1) with prejudice, or (2) without prejudice, but the plaintiff declined to file an amended complaint. The denominator for this rate is the number of lawsuits alleging that the auditor violated Rule 10b-5. The year represents the year the case was filed.

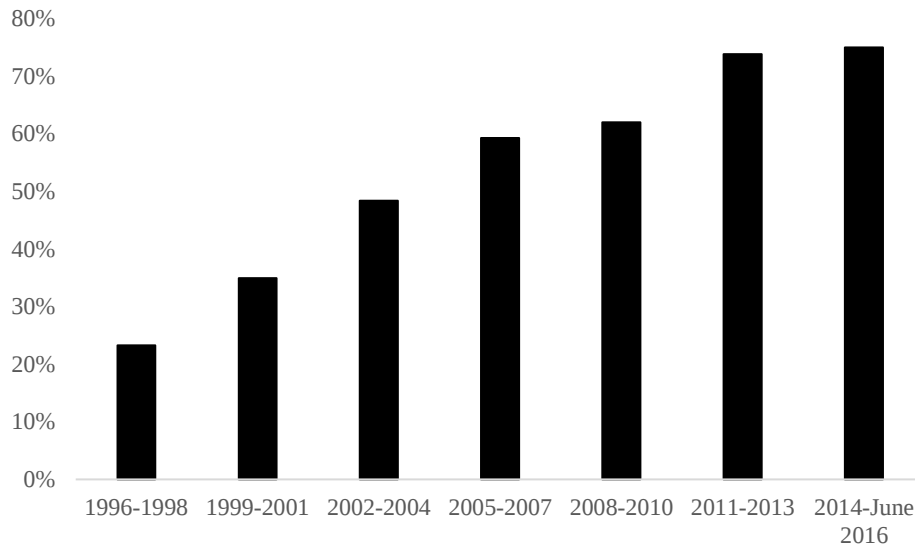


Figure 2: Percentage of Cases with Non-Zero Settlements

This figure shows the percentage of cases auditors paid to settle. The year represents the year the case was filed, and the rate is calculated as the number of cases the auditor paid \$1 or more to settle relative to the total number of cases brought by plaintiffs against auditor defendants for which we could locate the initial complaint. Only resolved cases are included.

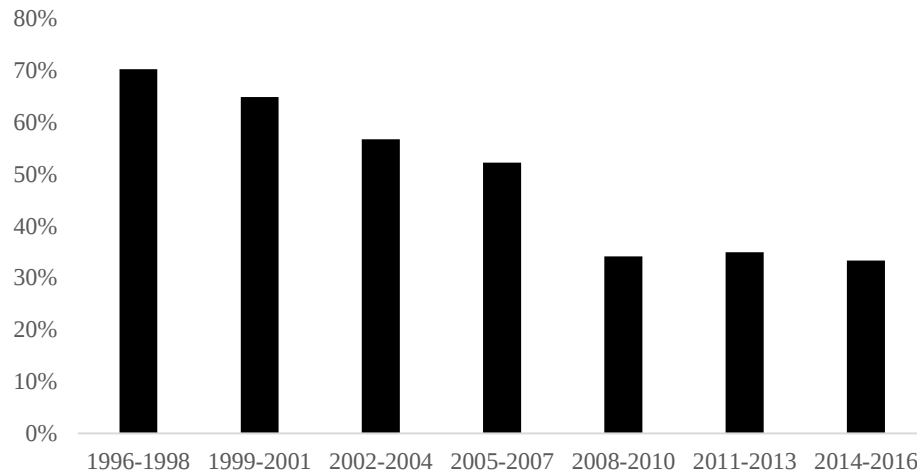
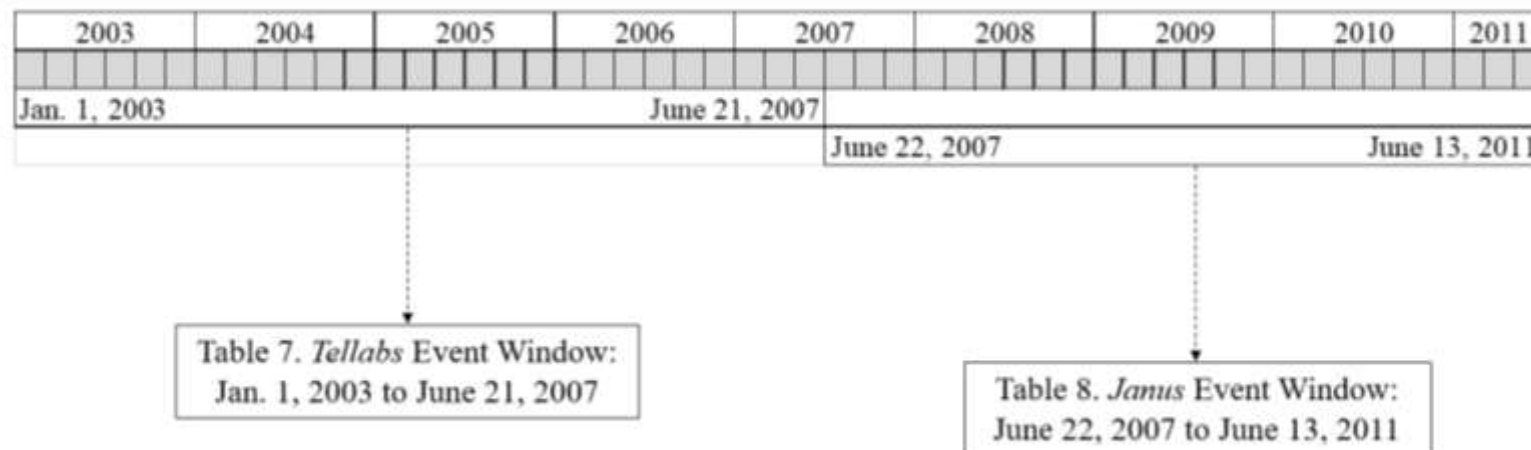


Figure 3: Timeline of Event Windows for *Tellabs* and *Janus* “Straddle” Tests

This figure shows event windows for the regressions studying changes in litigation outcomes following *Tellabs* and *Janus* (Tables 7 and 8, respectively). Only cases filed prior to the court decision are included, and the Post variable reflects whether the outcome in question—either settlement or dismissal—occurred before or after the court decision.



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Table 1: Securities Law Class Actions by Year

This table provides summary statistics on securities law class actions in each year from 1996 to 2016. In panel A, the first three columns include all lawsuits in the ISS database and the final four columns include only the lawsuits that name an auditor defendant. Num. Lawsuits reflects the total number of lawsuits filed. Num. 10(b) Lawsuits reflects the number of lawsuits alleging at least one violation of Rule 10b-5. Num. 11 Lawsuits reflects the number of lawsuits alleging at least one violation of Section 11. Num. Defendants refers to the number of auditor defendants. Num. Identified Complaints refers to the number of defendants for which we could locate the complaint. Num. 10b Claims refers to the number of Rule 10b-5 claims brought against auditors. Num. 11 Claims refers to the number of Section 11 claims brought against auditors. Panel B summarizes the data on claims brought against auditors by aggregating the data in panel A over three-year periods. Num. Identified Complaints, Num. 10(b) Claims, and Num. 11 Claims are the same as in panel A, and Num. Alleging non-10(b) reflects the number of defendants sued for a violation of any claim other than, or in addition to, Rule 10b-5. Panel C shows the number of defendants from Big4/Big5 accounting firms as well as the number of auditor defendants that audit non-US firms over each three-year period.

Panel A. Summary statistics on claims

Year	Total Lawsuits in ISS			Lawsuits Naming Auditor Defendants			
	Num. Lawsuits	Num.10b Lawsuits	Num.11 Lawsuits	Num. Defendants	Num. Identified Complaints	Num.10b Claims	Num.11 Claims
1996	111	92	28	12	5	5	0
1997	186	161	38	22	16	14	6
1998	261	224	52	39	26	24	7
1999	233	213	35	30	27	23	9
2000	239	217	49	37	36	32	8
2001	518	487	342	30	28	28	3
2002	275	255	71	54	54	50	23
2003	259	242	49	47	44	40	11
2004	278	249	54	36	36	32	6
2005	194	185	36	23	23	21	7
2006	146	122	28	21	21	18	5
2007	208	175	49	23	23	15	9
2008	271	201	79	32	31	23	12
2009	239	139	49	32	32	12	10
2010	244	125	31	22	22	15	8
2011	249	156	39	42	42	26	22
2012	214	135	28	13	13	7	7
2013	233	159	25	12	12	12	1
2014	117	80	13	4	4	2	2
2015	129	89	19	6	6	4	4
June 2016	78	55	8	3	3	3	1
Avg.	~223	~179	~53.5	~26	~24	~19	~7.7
Total	4,682	3,761	1,122	540	504	406	161

Panel B. Breakdown of claims against auditor defendants

	Num. Identified Complaints	Num. 10(b) Claims		Num. 11 Claims		Num. Alleging non-10(b)	
1996-1998	47	43	91%	13	28%	20	43%
1999-2001	91	83	91%	20	22%	31	34%
2002-2004	134	122	91%	40	30%	58	43%
2005-2007	67	54	81%	21	31%	27	40%
2008-2010	85	50	59%	30	35%	54	64%
2011-2013	67	45	67%	30	45%	39	58%
2014-June 2016	13	9	69%	7	54%	9	69%
Total	504	406		161		238	

Panel C. Breakdown of litigation against various auditor defendants

	Num. Defendants		Num. Big 4/5 Defendants		Num. Foreign Company Defendants	
1996-1998	73	59	81%	3	4%	73
1999-2001	97	85	88%	6	6%	97
2002-2004	137	114	83%	15	11%	137
2005-2007	67	45	67%	8	12%	67
2008-2010	86	60	70%	11	13%	86
2011-2013	67	23	35%	41	60%	67
2014-June 2016	13	7	54%	5	38%	13
Total	540	393	73%	89	16%	540

Table 2: Settlement Values for Auditor and Non-Auditor Defendants (\$ millions)

This table shows trends in settlement values over time. The year variable reflects the year when the case was filed, and cases dismissed are recorded as settlements of \$0. Panel A shows the sample process to identify settlements. Num. Defendants and Num. Identified Complaints are defined as in Table 1. Complaint with Settlement Not Stated refers to the number of instances where we could locate the case but could not identify how much the auditor paid to settle. In panel B, Non-Zero Auditor Settlements shows the number of settlements the auditor paid \$1 or more to settle, Settlement before Dismissal Ruling shows the number of cases settled prior to the court's final ruling on a motion to dismiss, and Settlements with Unknown Value shows the number of settlements where we were able to determine that the auditor paid to settle the claim, but where we were unable to determine the value paid. Panel C presents descriptive statistics on settlements paid by auditors to shareholders in each year from 1996 through June 2016. Panel D presents the ten largest monetary settlements paid by auditors to shareholders over the sample period from 1996 through June 2016. Panel E presents total settlements paid by auditors and total settlements paid by non-auditor defendants over each three year period.

Panel A. Settlement data over the sample period

Year Filed	Num. Defendants	Num. Identified Complaints	% Cases with Complaint	Complaints with Settlement Not Stated ("Unknown")	% Settlements with Unknown Value
1996-1998	73	47	64%	10	21%
1999-2001	97	91	94%	22	24%
2002-2004	137	134	98%	20	15%
2005-2007	67	67	100%	10	15%
2008-2010	86	85	99%	7	8%
2011-2013	67	67	100%	7	10%
2014-2016	13	13	100%	0	0%
Total	540	504	93%	76	15%

Panel B. Non-zero settlements over the sample period

Year Filed	Total Complaints (Resolved Cases)	Non-Zero Auditor Settlements	% Non-Zero Settlements	Settlements before Dismissal Ruling	% Settlements Before Dismissal Ruling
1996-1998	47	33	70%	15	32%
1999-2001	91	59	65%	23	25%
2002-2004	134	76	57%	25	19%
2005-2007	67	35	52%	12	18%
2008-2010	85	29	34%	8	9%
2011-2013	63	22	35%	12	19%
2014-2016	6	2	33%	1	17%
Total	493	256	52%	96	19%

Panel C. Settlement values by year

Year	#Obs.	Total Value	Mean	Median	Min	Max	Std. Dev.
1996	4	3,500,000	875,000	0	0	3,500,000	1,750,000
1997	12	168,454,250	14,037,854	1150000	0	75,000,000	23,860,071
1998	21	588,105,000	28,005,000	1750000	0	335,000,000	76,694,500
1999	20	290,460,000	14,523,000	787500	0	126,000,000	32,263,280
2000	26	382,650,000	14,717,308	1850000	0	115,000,000	28,619,940
2001	23	203,000,000	8,826,087	925000	0	112,500,000	23,451,350
2002	46	672,588,135	14,621,481	1825000	0	225,000,000	36,783,072
2003	35	435,885,000	12,453,857	185000	0	210,000,000	39,683,207
2004	33	266,270,000	8,068,788	0	0	97,500,000	21,270,153
2005	20	114,597,500	5,729,875	199250	0	38,250,000	11,037,839
2006	19	49,104,999	2,584,474	0	0	29,750,000	6,980,313
2007	18	96,236,000	5,346,444	0	0	44,750,000	11,971,619
2008	31	201,235,000	649,1452	0	0	99,000,000	20,081,731
2009	26	64,500,000	2,480,769	0	0	37,000,000	8,633,054
2010	19	8,835,000	465,000	0	0	1,750,000	739,046
2011	42	18,117,933	431,379	0	0	12,000,000	1,871,677
2012	11	1,762,500	160,227	0	0	1,750,000	527,281
2013	11	1,520,000	138,182	0	0	1,425,000	427,740
2014	4	1,350,000	337,500	250000	0	850,000	415,080
2015	1	0	0	0	0	0	0
Jun. 2016	1	0	0	0	0	0	0

Panel D. Top ten shareholder settlements paid by auditors

	Company	Auditor	Year	Shareholder Settlement	Court
(1)	Cendant Corp.	Ernst & Young LLP	1998	\$ 335,000,000	USDC - New Jersey
(2)	Tyco International, Ltd.	PricewaterhouseCoopers LLP	2002	\$ 225,000,000	USDC - New Hampshire
(3)	Adelphia Communications Corp.	Deloitte & Touche LLP	2003	\$ 210,000,000	USDC - New York (Southern)
(4)	Rite Aid Corp.	KPMG LLP	1999	\$ 126,000,000	USDC - Pennsylvania (Eastern)
(5)	Lernout & Hauspie Speech Products N.V.	KPMG LLP	2000	\$ 115,000,000	USDC - Massachusetts
(6)	Enron Corp.	Arthur Andersen LLP & Andersen Worldwide	2001	\$ 112,500,000	USDC - Texas (Southern)
(7)	Sunbeam Corp.	Arthur Andersen LLP	1998	\$ 110,000,000	USDC - Florida (Southern)
(8)	HealthSouth Corp.	Ernst & Young LLP	2003	\$ 109,000,000	USDC - Alabama (Northern)
(9)	AOL Time Warner, Inc.	Ernst & Young LLP	2002	\$ 100,000,000	USDC - New York (Southern)
(10)	Lehman Brothers Holdings, Inc.	Ernst & Young LLP	2008	\$ 99,000,000	USDC - New York (Southern)

Panel E. Auditor and non-auditor settlements over the sample period

Year Filed	Total Settlement Paid by Auditor Defendant	Num. Settlements: Auditor Defendant	Total Settlement Paid by All Defendants	Num. Settlements: Any Defendant	Auditor Settlement Relative to Total
1996-1998	760,059,250	37	4,578,600,000	37	17%
1999-2001	876,110,000	69	11,868,035,000	69	7%
2002-2004	1,374,743,135	114	23,391,325,000	114	6%
2005-2007	259,938,499	57	3,980,475,000	57	7%
2008-2010	274,570,000	76	5,310,100,000	76	5%
2011-2013	21,400,433	64	447,034,933	64	5%
2014-2016	1,350,000	6	20,900,000	6	6%
Total	3,568,171,317	423	49,596,469,933	423	7%

Table 3: Settlement Values by Claim

This table shows settlement values associated with different claims. Panels A and B shows the breakdown of claims in cases with non-zero settlements (i.e., claims that were pending when the auditor settled). Panel A shows the results for the full sample, and panel B includes only Big4/Big5 auditor defendants. Panels C through F show auditor settlement values based on the initial claims the defendant is alleged to have violated. The first column reflects settlement values for the entire sample of litigation. The second (third) column reflects settlement values for cases in which the defendant is alleged to have violated Rule 10b-5 (Section 11). Finally, the fourth (fifth) column reflects settlement values for cases in which the defendant is alleged to have violated *only* Rule 10b-5 (Section 11)—that is, the plaintiffs brought no other claims against the defendant. Panel C shows the results for the full sample, panel D shows the results for only non-zero settlements, panel E includes only Big4/Big5 auditor defendants, and panel F includes only auditors of non-US companies.

Panel A. Claims against auditor defendants in cases with non-zero settlements

	Num. Defendants	Num. 10(b) Claims		Num. 11 Claims		Num. Alleging non-10(b)	
1996-1998	33	30	91%	11	33%	14	42%
1999-2001	59	54	92%	13	22%	23	39%
2002-2004	76	69	91%	31	41%	40	53%
2005-2007	35	26	74%	16	46%	19	54%
2008-2010	29	20	69%	9	31%	14	48%
2011-2013	22	12	55%	11	50%	16	73%
2014-2016	2	1	50%	1	50%	1	50%
Total	256	212		92		127	

Panel B. Claims against Big5 auditor defendants in cases with non-zero settlements

	Num. Defendants	Num. 10(b) Claims		Num. 11 Claims		Num. Alleging non-10(b)	
1996-1998	29	27	93%	9	31%	11	38%
1999-2001	54	49	91%	13	24%	23	43%
2002-2004	62	56	90%	29	47%	37	60%
2005-2007	25	18	72%	13	52%	16	64%
2008-2010	22	15	68%	9	41%	12	55%
2011-2013	4	3	75%	1	25%	2	50%
2014-2016	0	0	-	0	-	0	-
Total	196	170		75		102	

Panel C. Settlement value by claim – All claims

	All Cases	Auditor Settlement			
		Incl. 10b	Incl. 11	Only 10b	Only 11
Mean	\$8,466,488	\$10,066,923	\$12,797,435	\$5,986,782	\$2,074,711
Median	\$0	\$0	\$54,250	\$0	\$0
25 th	\$0	\$0	\$0	\$0	\$0
75 th	\$2,600,000	\$3,650,000	\$8,250,000	\$2,000,000	\$531,600
Obs.	421	339	135	226	47

Panel D. Settlement value by claim – Non-zero settlements

	All Cases	Auditor Settlement			
		Incl. 10b	Incl. 11	Only 10b	Only 11
Mean	\$17,911,514	\$20,435,251	\$23,346,671	\$13,136,045	\$4,875,572
Median	\$3,500,000	4,000,000	\$5,875,000	\$2,600,000	\$724,500
25 th	\$750,000	\$1,000,000	\$531,600	\$775,000	\$487,500
75 th	\$14,625,000	\$21,750,000	\$25,000,000	\$9,075,000	\$7,000,000
Obs.	199	167	74	103	20

Panel E. Settlement value by claim for Big5 auditors

	All Cases	Auditor Settlement			
		Incl. 10b	Incl. 11	Only 10b	Only 11
Mean	\$11,346,833	\$13,257,294	\$16,527,444	\$8,098,961	\$3,163,333
Median	\$40,000	\$500,000	\$500,000	\$0	\$0
25 th	\$0	\$0	\$0	\$0	\$0
75 th	\$6,840,000	\$7,750,000	\$13,125,000	\$3,500,000	\$1,750,000
Obs.	306	251	102	162	30

Panel F. Settlement value by claim when defendant company is foreign

	All Cases	Auditor Settlement			
		Incl. 10b	Incl. 11	Only 10b	Only 11
Mean	\$5,515,666	\$6,585,583	\$2,558,382	\$8,119,571	\$161,104
Median	\$0	\$0	\$0	\$0	\$0
25 th	\$0	\$0	\$0	\$0	\$0
75 th	\$1,337,500	\$1,750,000	\$400,000	\$1,750,000	\$400,000
Obs.	72	60	26	35	9

Table 4: Measures of Audit Quality Over Time

This table shows accounting quality measures in the years available from 2000 through June 2016. It presents the number of auditor defendants in each year alongside the number of SEC Accounting and Auditing Enforcement Releases (AAERs), severe restatements, and settled PCAOB disciplinary actions. Severe restatements are defined as (negative) restatements equal to 10 percent or more of net income. The final column presents the percentage of audits deemed “not sufficient” by the Public Company Accounting Oversight Board.

Year	Num. Auditor Defendants	Num. AAERs Released – Exchange Traded Firms	Num. Severe Restatements	Num. Settled PCAOB Disciplinary Orders	PCAOB Not Sufficient Audits (% of audits inspected)
2000	37	131			
2001	30	124			
2002	54	198	55		
2003	47	205	55		
2004	36	174	65		
2005	23	177	112	4	31%
2006	21	166	124	3	20%
2007	23	216	66	9	14%
2008	32	148	64	4	16%
2009	32	175	46	6	19%
2010	22	121	54	7	31%
2011	42	120	41	8	30%
2012	13	77	41	8	30%
2013	12	79	43	13	33%
2014	4	80	37	24	25%
2015	6	92	48	44	29%
Jun 2016	3	50	26	17	23%
Avg.	25.7	137.2	58.5	12.25	25%
Total	437	2,333	877	147	

Table 5: Time-Trends in the Frequency of Litigation

This table shows the frequency of litigation following a severe restatement. Panel A presents descriptive statistics. Panel B uses the full sample to present regression results estimating the frequency with which severe restatements are followed by litigation against company management and auditors. Panel C presents the same analysis using a matched sample. Severe restatements are defined as (negative) restatements equal to 10 percent or more of net income, and the sample ranges from 2002 to June 2016. In panels B and C, the first three columns examine litigation against auditors, and the final three columns examine litigation against company managers. The dependent variable is a dummy variable set to 1 if a lawsuit was brought within one year of the restatement. All continuous, non-logged variables are winsorized at the 1st and 99th percentiles. Statistical significance of 10%, 5%, and 1% is represented by *, **, and ***, respectively.

Panel A: Descriptive data

	Obs	Mean	SD	Min.	25 th	Median	75 th	Max
Lawsuit - Company	793	0.10	0.30	0.00	0.00	0.00	0.00	1.00
Lawsuit – Auditor	793	0.02	0.15	0.00	0.00	0.00	0.00	1.00
Ln(Market Value)	650	5.46	1.83	0.57	4.14	5.42	6.84	10.27
Leverage	717	0.25	0.28	0.00	0.02	0.16	0.38	2.90
Book-to-Market	650	0.53	1.55	-13.35	0.24	0.51	0.87	5.90
S&P1500	793	0.27	0.45	0.00	0.00	0.00	1.00	1.00
Small	793	0.39	0.49	0.00	0.00	0.00	1.00	1.00
Age	751	15.59	12.57	-5.00	7.00	12.00	21.00	54.00
Growth	793	0.20	1.00	-1.00	-0.07	0.00	0.15	6.69
FY Returns	693	0.17	1.29	-0.97	-0.34	-0.07	0.30	9.40
Std.Dev.Returns	688	2.41	2.80	0.01	0.72	1.48	2.85	18.19

Panel B: Full Sample - Litigation against company managers and auditors

	(1)	(2)	(3)	(4)	(5)	(6)
	Auditor Defendants			Company Defendants		
Post-Janus (2012 - 2016)	-0.021** (0.010)			-0.033 (0.041)		
Post - Tellabs (2008 - 2016)		-0.014 (0.015)			-0.022 (0.038)	
Year			-0.003* (0.002)			-0.008+ (0.005)
Ln(Market Value)	0.001 (0.010)	0.000 (0.010)	0.001 (0.010)	0.013 (0.014)	0.012 (0.014)	0.014 (0.015)
Leverage	0.019 (0.021)	0.018 (0.021)	0.017 (0.021)	-0.019 (0.043)	-0.020 (0.044)	-0.023 (0.045)
Book-to-Market Ratio	-0.000 (0.002)	-0.000 (0.002)	-0.001 (0.002)	0.000 (0.006)	0.000 (0.006)	0.000 (0.006)
Fortune Dummy	0.029* (0.017)	0.030* (0.017)	0.027 (0.018)	0.022 (0.035)	0.023 (0.036)	0.013 (0.036)
Small	-0.020 (0.030)	-0.020 (0.030)	-0.020 (0.030)	-0.054 (0.048)	-0.054 (0.047)	-0.056 (0.047)
Age	-0.002** (0.001)	-0.002** (0.001)	-0.002** (0.001)	-0.000 (0.001)	-0.001 (0.001)	-0.000 (0.001)
Growth	-0.007 (0.005)	-0.007 (0.005)	-0.008 (0.005)	-0.007 (0.012)	-0.006 (0.012)	-0.008 (0.012)
Std.Dev>Returns	0.003 (0.004)	0.003 (0.004)	0.003 (0.004)	0.007 (0.008)	0.007 (0.007)	0.007 (0.008)
FY_Return	0.008 (0.010)	0.009 (0.010)	0.009 (0.010)	0.008 (0.011)	0.008 (0.011)	0.009 (0.011)
Constant	0.046 (0.056)	0.051 (0.060)	5.638* (3.141)	0.061 (0.092)	0.070 (0.092)	15.797 (10.031)
Clustering Variable	Industry	Industry	Industry	Industry	Industry	Industry
Fixed Effects	Industry	Industry	Industry	Industry	Industry	Industry
Observations	646	646	646	646	646	646
R-squared	0.089	0.088	0.091	0.147	0.146	0.153

Panel C: Matched Sample - Litigation against company managers and auditors

	(1)	(2)	(3)	(4)	(5)	(6)
	Auditor Defendants			Company Defendants		
Post-Janus (2012 - 2016)	-0.396** (0.109)			-0.178 (0.127)		
Post - Tellabs (2008 - 2016)		-0.237 (0.228)			-0.142 (0.111)	
Year			-0.040** (0.015)			-0.028** (0.013)
Ln(Market Value)	-0.049 (0.066)	-0.052 (0.076)	-0.057 (0.071)	0.026 (0.052)	0.019 (0.047)	0.027 (0.049)
Leverage	0.149 (0.217)	0.304 (0.211)	0.188 (0.224)	-0.176 (0.139)	-0.194 (0.137)	-0.198 (0.143)
Book-to-Market Ratio	-0.242** (0.097)	-0.157 (0.123)	-0.224 (0.116)	-0.048 (0.058)	-0.051 (0.063)	-0.052 (0.064)
Fortune Dummy	0.568** (0.178)	0.654** (0.181)	0.633*** (0.164)	0.034 (0.108)	0.036 (0.110)	0.019 (0.107)
Small	-0.297 (0.309)	-0.146 (0.308)	-0.174 (0.275)	-0.069 (0.164)	-0.076 (0.160)	-0.074 (0.160)
Age	-0.023** (0.006)	-0.026*** (0.005)	-0.024*** (0.006)	0.002 (0.003)	0.002 (0.004)	0.003 (0.003)
Growth	-0.139 (0.411)	-0.046 (0.301)	0.028 (0.373)	0.074*** (0.025)	0.093*** (0.022)	0.093*** (0.028)
Std.Dev>Returns	0.018 (0.022)	0.017 (0.028)	0.018 (0.022)	0.011 (0.015)	0.013 (0.014)	0.010 (0.014)
FY_Return	-0.012 (0.039)	-0.006 (0.036)	-0.010 (0.033)	0.004 (0.031)	0.006 (0.031)	0.006 (0.027)
Constant	1.040** (0.385)	0.968* (0.477)	80.489** (29.862)	0.391 (0.334)	0.456 (0.311)	57.350** (26.068)
Clustering Variable	Industry	Industry	Industry	Industry	Industry	Industry
Observations	32	32	32	136	136	136
R-squared	0.511	0.469	0.507	0.097	0.095	0.126

Table 6: Descriptive Statistics on Variables in the Lawsuit Trend Regressions

This table presents descriptive statistics on the firms used in the multivariate regressions analyzing trends in auditor litigation. All variables are defined in the Appendix. Panel A provides detail on the variables in Tables 7, and panel B provides detail on the variables in Tables 8. All continuous variables are winsorized at the 1st and 99th percentiles. The table includes only auditor defendants of U.S.-based firms.

Panel A. Tellabs variables

	Num. Obs	Mean	SD	Min.	25th	50th	75th	Max
Dismiss10b	81	0.49	0.5	0	0	1	1	1
Allow10b	81	0.16	0.37	0	0	0	0	1
Auditor Settlement Ratio	67	10,169,530	32,174,787	0	0	0	2,000,000	210,000,000
	67	0.11	0.21	0	0	0	0.17	1
Two-Three	81	0.25	0.43	0	0	0	0	1
Nine-Eleven	81	0.38	0.49	0	0	0	1	1
SEC Action	81	0.01	0.11	0	0	0	0	1
IPO	81	0.05	0.22	0	0	0	0	1
Equity Issuance	81	0.09	0.28	0	0	0	0	1
High Litigation	81	0.42	0.5	0	0	0	1	1
ROA	77	-0.07	0.53	-4.29	-0.04	0.01	0.06	1.02
Ln(Assets)	77	6.88	2.53	1.67	5.07	6.67	8.42	13.83
Growth	81	0.51	2.04	-0.58	0	0.1	0.31	12.8
Price Drop	81	10.69	24.25	0.04	1.1	2.44	8.01	121.5
Share Turnover	81	0.24	1.7	0	0	0.01	0.05	15.36
Ln(Class Period Length)	75	6.78	0.68	5.09	6.19	6.88	7.43	7.76
Big5	81	0.83	0.38	0	1	1	1	1

Panel B. Janus variables

	Num. Obs	Mean	SD	Min.	25th	50th	75th	Max
Dismiss10b	62	0.37	0.49	0	0	1	1	1
Allow10b	62	0.15	0.36	0	0	0	0	1
Auditor Settlement Ratio	55	1,874,818	4,943,369	0	0	0	912,500	24,000,000
	54	0.05	0.15	0	0	0	0.04	1
Four-Nine	60	0.25	0.44	0	0	0	0.5	1
SEC Action	62	0	0	0	0	0	0	0
IPO	62	0	0	0	0	0	0	1
Equity Issuance	62	0.27	0.45	0	0	0	1	1
High Litigation	62	0.13	0.34	0	0	0	0	1
ROA	60	-0.03	0.14	-0.78	-0.02	0	0.01	0.22
Ln(Assets)	60	9.22	3.25	1.67	6.52	9.08	11.98	14.63
Growth	62	0.23	0.91	-0.98	-0.06	0	0.32	5.61
Price Drop	62	12.74	28.97	0.04	1.18	3.76	7.49	121.5
Share Turnover	62	1.02	3.43	0	0.01	0.02	0.08	15.36
Ln(Class Period Length)	57	6.59	0.64	4.42	6.12	6.69	7.1	7.7
Big5	62	0.84	0.37	0	1	1	1	1

Table 7: Changes in Auditors' Liability Exposure after *Tellabs*

This table presents regression results estimating whether firms located in the Second and Third Circuits or in the Ninth and Eleventh Circuits had differential changes in litigation outcomes following *Tellabs*. The dependent variables are as follows: (1) Dismiss10b – set to 1 if the courts dismissed the Rule 10b-5 claim against the auditor; (2) Allow10b – set to 1 if the courts ruled on a motion to dismiss that the Rule 10b-5 claim should be allowed to proceed; (3) the ratio of the value paid by the auditor to settle the claim relative to the value paid by all non-auditor defendants; and (4) the log of the value the auditor paid to settle the claim plus one. Standard errors are clustered by circuit court, and all continuous, non-logged variables are winsorized at the 1st and 99th percentiles. Statistical significance of 10%, 5%, and 1% is represented by *, **, and ***, respectively.

	(1) Dismiss10b	(2) Allow10b	(3) Ratio	(4) Ln(Settle+1)
Post <i>Tellabs</i>	-0.061 (0.344)	-0.199* (0.106)	0.137 (0.086)	6.985** (2.550)
Two-Three	-0.116 (0.292)	0.286 (0.236)	0.440*** (0.040)	7.286* (3.683)
Nine-Eleven	0.089 (0.219)	-0.187 (0.105)	0.023 (0.046)	-0.355 (2.442)
Post*Two-Three	-0.577 (0.417)	-0.004 (0.153)	-0.374** (0.134)	-5.994* (2.784)
Post*Nine-Eleven	0.002 (0.450)	0.174 (0.129)	-0.175 (0.115)	-2.778 (2.610)
IPO	-0.117 (0.307)	0.087 (0.149)	0.006 (0.093)	1.205 (2.344)
Equity Issuance	-0.533*** (0.125)	-0.057 (0.073)	0.098 (0.108)	4.124 (6.871)
High Litigation	0.031 (0.139)	0.050 (0.090)	0.163 (0.114)	3.013 (2.539)
SEC Enforcement Action	-0.293 (0.392)	0.217 (0.322)	0.210 (0.167)	3.158** (1.063)
Price Drop	0.000 (0.003)	0.002 (0.002)	0.001 (0.001)	0.042 (0.042)
Share Turnover	0.032 (0.029)	-0.054*** (0.016)	-0.021* (0.011)	-0.046 (0.319)
Class Period Length	0.047 (0.170)	0.027 (0.093)	-0.115 (0.110)	-1.029 (1.992)
ROA	-0.079 (0.066)	0.138* (0.065)	0.115*** (0.023)	2.296* (1.105)
Ln(Assets)	-0.013 (0.041)	0.065** (0.028)	0.009 (0.018)	0.565 (0.888)
Growth	-0.078*** (0.023)	0.083*** (0.016)	0.004 (0.010)	0.201 (0.123)
Big 4/5 Accountant	-0.228 (0.132)	-0.157 (0.151)	-0.070 (0.059)	-2.017 (1.098)
Constant	0.592 (0.965)	-0.365 (0.650)	0.711 (0.686)	5.245 (8.733)
Fixed Effects	Industry	Industry	Industry	Industry
Observations	71	71	61	61
R-squared	0.338	0.546	0.512	0.381

Table 8: Changes in Auditors' Liability Exposure after *Janus*

This table presents regression results estimating whether firms located in the Fourth or Ninth Circuits (the circuits in which *Janus* was most likely to benefit auditors) had differential changes in litigation outcomes following *Janus*. The dependent variables are as follows: (1) Dismiss10b – set to 1 if the courts dismissed the Rule 10b-5 claim against the auditor; (2) Allow10b – set to 1 if the courts ruled on a motion to dismiss that the Rule 10b-5 claim should be allowed to proceed; (3) the ratio of the value paid by the auditor to settle the claim relative to the value paid by all non-auditor defendants; and (4) the log of the value the auditor paid to settle the claim plus one. Standard errors are clustered by circuit court, and all continuous, non-logged variables are winsorized at the 1st and 99th percentiles. Statistical significance of 10%, 5%, and 1% is represented by *, **, and ***, respectively.

	(1) Dismiss10b	(2) Allow10b	(3) Ratio	(4) Ln(Settle+1)
Post <i>Janus</i>	0.293** (0.103)	0.213** (0.082)	-0.121 (0.069)	-1.828 (1.527)
Four-Nine	-0.364*** (0.074)	0.254*** (0.045)	0.231** (0.083)	9.262*** (1.377)
Post <i>Janus</i> * Four-Nine	0.952*** (0.112)	-0.533*** (0.070)	-0.216** (0.073)	-7.935*** (1.711)
IPO	-0.039 (0.469)	-0.165 (0.129)	-0.129 (0.103)	-3.905 (4.403)
Equity Issuance	0.015 (0.194)	-0.226* (0.096)	-0.038 (0.070)	-1.182 (2.255)
High Litigation	-0.064 (0.251)	0.250 (0.187)	0.192 (0.159)	2.731 (2.197)
Price Drop	-0.001 (0.003)	-0.000 (0.001)	-0.000 (0.001)	0.058** (0.017)
Share Turnover	-0.031** (0.009)	-0.000 (0.006)	-0.007 (0.006)	-0.304 (0.223)
Class Period Length	0.091 (0.116)	0.066 (0.113)	0.012 (0.051)	-0.074 (1.965)
ROA	-0.327 (0.433)	0.122 (0.325)	0.447 (0.259)	26.328*** (3.520)
Ln(Assets)	0.015 (0.033)	0.020 (0.045)	0.017 (0.018)	0.392 (0.315)
Growth	0.149* (0.074)	-0.001 (0.059)	-0.062*** (0.012)	-1.965 (1.051)
Big 4/5 Accountant	-0.153 (0.390)	0.108 (0.105)	0.002 (0.085)	-1.125 (2.481)
Constant	-0.269 (0.657)	-0.670 (1.073)	-0.147 (0.454)	1.908 (13.308)
Fixed Effects	Industry	Industry	Industry	Industry
Observations	50	50	44	44
R-squared	0.435	0.542	0.659	0.634