The Changing Landscape of Auditors' Liability

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Abstract

We provide a comprehensive overview of shareholder litigation against auditors since the passage of the Private Securities Litigation Reform Act. The number of lawsuits per year has declined, dismissals have increased, and settlements in recent years have declined. Our study asks why. Tests indicate that the decline cannot be attributed solely to increases in audit quality, leading us to consider whether 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.

1. Introduction

Auditors' 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), they fear that large litigation costs threaten their very survival (Levitt and Nicolaisen 2008). For example, Laventhol & Horwath, the seventh-largest audit firm at the time, went bankrupt in 1990 because of 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 percent of their annual revenue (Center for Audit Quality 2008). Indeed, concern about high litigation costs was a factor that led the US Treasury secretary to institute the Advi-

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sory Committee on the Auditing Profession in 2008. The committee was asked to opine, among other things, on the sustainability of the public company auditing profession in the presence of significant litigation risk and 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,[1] 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 20-year period, while others are most noticeable in the latter half of our sample. For example, dismissals of Rule 10b-5 claims[2] increased monotonically over each 3-year period from 1996 to 2016, whereas settlements peaked at the turn of the century but declined thereafter.

Our study asks why. One explanation is that litiation against auditors has declined because audit quality has improved. Thus, 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 percent or more of net income. We use restatements because prior literature has found that they are the most consistently significant determinant of auditors' liability (Donelson and Prentice 2012). Our analysis shows that the likelihood that shareholders sue an auditor following a severe restatement 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 limited the reach of Rule 10b-5 against private actors. Such an interpretation would be consistent with our descriptive data, which show a declining role of Rule 10b-5 claims relative to other claims. For this analysis, we examine the Supreme Court's rulings in *Tellabs, Inc. v. Makor Issues & Rights, Ltd.* (551 U.S. 308 [2007]) and *Janus Capital Group, Inc. v. First Derivative Traders* (564 U.S. 135 [2011]). Both cases had potentially far-reaching effects for auditors' 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 auditors likely to be sued in the Second and Third Circuit courts but to have disadvantaged auditors most likely to be sued in the Ninth and Eleventh Circuits. In *Janus*, the Supreme Court attempted to resolve intracountry differences in liability for those actors, such as auditors, who have traditionally been considered to aid the issuer's mis-

[1] 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 (that is, 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 percent.) Hence, the key to settlement is for the plaintiff to survive the defendant's motion to dismiss.

[2] 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.

conduct rather than to perpetuate misconduct themselves. The Court's ruling in *Janus* most benefited 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's decisions (the treatment groups) relative to outcomes in the circuits that were not affected (the control groups). By examining changes in auditors' 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 a 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* (587 U.S. __ [2019]), and in prior legal literature. Such literature expresses concern over narrowing liability standards and questions whether the law provides auditors with efficient incentives or whether liability standards should be tightened to induce proper incentives (see, for example, Coffee 2006; Partnoy 2001; Kraakman 1986). In response, empirical studies have shown that auditors are still frequent targets of shareholder litigation (see, for example, Park 2017; Donelson 2013; Donelson and Prentice 2012; Talley 2006).[3]

However, those empirical studies use sample periods that only extend through 2007 (at the latest). As such, they do not capture the potential impact of *Janus* (decided in 2011). Further, the only paper to empirically examine whether auditors' liability standards matter for litigation outcomes finds no relationship between narrower primary liability standards and settlement values (Park 2017). As such, our paper is the first to capture the full extent of changes in auditors' 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 (see, for example, 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 auditors' liability in general has significantly declined—or that the Supreme Court's narrowing

[3] Changes in auditors' liability have significant implications for audit quality, as prior literature shows that litigation risk influences auditors' behavior and affects financial reporting outcomes (see, for example, Simunic 1980; Lys and Watts 1994; Lennox and Li 2012).

of Rule 10b-5 is the sole cause of the decline.[4] After all, auditors face risk from sources such as public regulators and state law that we do not cover here (see Talley [2006] for a summary of other sources of auditors' 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.[5]

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 US federal court system and explain why the cases could have a differential impact in different parts of the country.

2.1. Federal Courts

Federal courts in the United States are divided into 12 regional circuits.[6] 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 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.

Because of this structure, it is not unusual for circuits to apply the law differently—this occurrence is known as a circuit split. Many circuit splits are ultimately resolved by the Supreme Court. The Supreme Court takes only a fraction

[4] For example, following a series of high-profile accounting scandals, Congress passed the Sarbanes-Oxley Act of 2002 (Pub. L. No. 107-204, 116 Stat. 745), which required managers and auditors to enhance internal controls and reporting. The act 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 indicate that they think the Sarbanes-Oxley Act has improved audit quality (Center for Audit Quality 2008), and academic work finds 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 audit quality. Through its restrictions on the type of consulting work that auditors could perform, the act may have reduced the likelihood that a plaintiff can establish scienter. Compare *In re Enron Corp. Sec. Litig.* (235 F. Supp. 2d 549, 679 [S.D. Tex. 2002]), in which fees were found to provide the auditor with incentive to ignore red flags, and *Lewis v. Straka* (No. 05-1008, 2007 WL 2332421 [E.D. Wis. 2007]), in which fees were rejected as evidence of scienter. See also Hoffman and Baltay (2008).

[5] For example, in Center for Audit Quality (2008), the Advisory Committee on the Auditing Profession notes that some members support narrowing the liability standard for Rule 10b-5 but has no similar discussions for other federal or state law claims.

[6] There are 11 numbered circuits and the District of Columbia Circuit. As relevant to our study, the states covered by the Second and Third Circuits are New York, Connecticut, Vermont, Pennsylvania, New Jersey, and Deleware. The states covered by the Ninth and Eleventh Circuits are Alaska, Alabama, Arizona, California, Florida, Georgia, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington. The states covered by the Fourth Circuit are Maryland, North Carolina, South Carolina, Virginia, and West Virginia.

of the cases it is asked to review, and it frequently selects cases that will allow it to resolve circuit splits.[7]

2.2. *First Case:* Tellabs v. Makor

The first of the cases, *Tellabs v. Makor,* addressed a circuit split created by the heightened pleading standards of the Private Securities Litigation Reform Act of 1995 (PSLRA; Pub. L. 104-67, 109 Stat. 737). 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" (15 U.S.C. 78u-4[b][2]). As we describe below, courts differ on what is needed to show a strong inference—which thus leads to inconsistent pleading requirements across the 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 requires 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 elements.[8] In response to the plaintiff's complaint, the defendant usually files 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.[9] Many securities lawsuits are dismissed at this initial stage, which thus avoids significant costs of litigation such as discovery.

2.2.2. Pleading Scienter

The 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

[7] 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 percent 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 Supreme Court precedent, the importance of the legal issue, the attorneys, the number of amicus briefs, and the authors of any amicus briefs.

[8] Private plaintiffs must prove six elements to prevail under Rule 10b-5: a defendant's material misrepresentation or omission, scienter, a connection with the purchase or sale of securities, the plaintiff's reliance on the misrepresentation or omission, economic loss, and causation of the loss.

[9] As a practical matter, courts will often dismiss without prejudice, which 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.

"mental state embracing intent to deceive, manipulate, or defraud" (*Ernst & Ernst v. Hochfelder,* 425 U.S. 185, 193–94, n.12 [1976]). 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?

2.2.3. The Strong-Inference Standard

Different courts answered this question differently, causing PSLRA's pleading standards to be applied inconsistently across the United States. Because legal scholars have different interpretations of the circuit split prior to *Tellabs* (see, for example, Choi and Pritchard 2012; Cox, Thomas, and Bai 2009),[10] 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. (*Makor Issues & Rights, Ltd. v. Tellabs, Inc.,* 437 F.3d 588 [7th Cir. 2006])[11]

We describe Wood's classifications in our own words below. Her approach is largely consistent with much prior literature,[12] and Appendix Section A1 provides court cases in support of this categorization.

[10] As described below, there are also differing interpretations of the question addressed by the Supreme Court in *Tellabs*.

[11] *Makor Issues & Rights, Ltd. v. Tellabs, Inc.,* is 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.

[12] For example, in discussing the strong-inference standard, *Law360* uses the same classifications as Wood, although it notes that the Seventh Circuit took a lenient interpretation of the competing-inferences requirement (Raylesberg 2007). Cox, Thomas, and Bai (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 take the intermediate approach.

Lenient Approach. The Second and Third Circuits applied the most lenient pleading standards. The 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.

Intermediate Approach. 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 the 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.

Strict Approach. 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.[13] First, *Tellabs* requires the courts to consider all allegations in a securities fraud complaint collectively instead of focusing on the presence or absence of any particular allegation. Second, *Tellabs* requires the courts to consider whether the inference of guilt is "at least as strong as any opposing inference" (551 U.S. 326). For claims under Rule 10b-5, this condition requires courts to consider whether the inference of guilt 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 Antonin 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. (551 U.S. 329)

However, in the context of auditors, the litigation against Doral Financial Corp. and its auditor PwC shows that the *Tellabs* standard can be difficult to meet. After Doral announced it would restate earnings—Doral had overstated its pretax in-

[13] 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 that *Tellabs* addressed only 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*'s discussion of competing inferences as part of its attempt to address the strong-inference standard directly rather than a separate question (for example, Cox, Thomas, and Bai 2009; Rieder and Blase 2008; Rhinehart 2008; Stigi and White 2008).

come by approximately $920 million and understated its debt by approximately $3.3 billion—the 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 inference of guilt 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" (In re *Doral Financial Corp. Securities Litigation,* 563 F. Supp. 2d 461, 466 [2008]).[14]

Despite some ambiguity, most commentators consider the *Tellabs* standard to be slightly stricter than the intermediate approach described above. Compared to the Supreme 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 means that, in theory, *Tellabs* provided the greatest benefit to auditors most likely to be sued in the Second and Third Circuits and the greatest disadvantage to 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 examines 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 50 years. Despite the fact 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 they had a real effect on litigation outcomes (Hubbard 2017).[15] 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 to account for the changed legal rules. If this second explanation is correct, judges may be especially disobedient when ap-

[14] 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 the new standard. The court agreed and dismissed the claim against PwC roughly 6 weeks later (PwC had filed its original motion nearly 2 years before). See Mem. Order, 05 MD 1706 (July 8, 2008) (http://www.ecases.us/case/nysd/c1590164/in-re-doral-financial-corp-securities-litigation).

[15] The lack of significant findings has been analyzed in depth, with commentators noting that empirical analysis of the effect of these cases poses a litany of issues (see, for example, Engstrom 2013; Hubbard 2013; Gelbach 2012). As one 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 on 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 the defendants' decision about whether to file a motion to dismiss (Engstrom 2013).

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

2.3. Second Case: Janus Capital Group, Inc. v. First Derivative Traders

Our second case, *Janus v. First Derivative* (564 U.S. 135),[16] 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 that commits the fraud or misrepresentation, and a secondary actor is defined broadly as a party that was so involved in the primary's actions that it is also liable. Traditionally, auditors are 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 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 a secondary actor's liability under Rule 10b-5. With the recent exception of *Lorenzo,* these cases have consistently restricted the scope of a secondary actor's liability, meaning that auditors must be held liable as primary violators (if liable at all). First, in its highly significant decision in *Central Bank v. First Interstate (*511 U.S. 164 [1994]), the Supreme Court greatly limited the scope of Rule 10b-5 when it ruled that private plaintiffs cannot sue under aiding-and-abetting liability (that is, a secondary actor cannot be held liable for aiding and abetting the primary actor). Further, the Supreme Court's ruling in *Stoneridge v. Scientific Atlanta* (552 U.S. 148 [2008]) almost entirely eliminated the risk of scheme liability under Rule 10b-5. (In general terms, 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 sue only parties directly involved in a fraud, not third parties that 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 make a false or misleading statement. Typically, the only statements in securities filings that are made by the auditor are those in the audit re-

[16] 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, for example, *McIntire v. China MediaExpress Holdings,* No. 11-CV-0804 (February 28, 2013), dismissing Deloitte & Touche LLP.

port. 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 on the basis of this statement alone.[17] This led to difficulties establishing the elements of Rule 10b-5, particularly scienter. To see why, consider the litigation against ZST Digital Networks, Inc. (*Scott v. ZST Digital Networks, Inc*., No. CV 11-03531 GAF JCX, 2012 WL 538279). The company was required to file financial statements with both 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 the two 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.[18]

Faced with these challenges, enterprising plaintiffs attempted to push the limits of the bright-line test through two novel arguments: first, the auditor was so involved in the issuer's misstatements that the auditor should be primarily liable for the issuer's misconduct, and, second, the auditor could be liable for errors in unaudited financials by virtue of its statement in the audited annual report (see, for example, *Lattanzio v. Deloitte Touche*, 476 F.3d 147 [2d Cir. 2007]). However, barring a limited number of notable exceptions,[19] courts in the bright-line circuits typically declined to allow plaintiffs to use these arguments to make a claim under Rule 10b-5.

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 audi-

[17] 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]).

[18] 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). Falsity was the second most frequently cited element not met (five dismissals) followed by loss causation (four dismissals).

[19] The classic case exemplifying this approach is *In re Global Crossing, Ltd. Securities Litigation* (322 F. Supp. 2d 319 [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" (322 F. Supp. 2d 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" (322 F. Supp. 2d 334). The court seemed to place great weight on the fact that Arthur Andersen, the auditor, had suggested accounting treatments.

tor'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 (*Howard v. Everex Systems, Inc.,* 228 F.3d 1057, 1061 n.5 [9th Cir. 2000]).[20] This meant that plaintiffs could argue that the auditor was liable on the basis of 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 Securities and Exchange Commission (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 (for example, a plaintiff could argue that the auditor was reckless for its statements in the audit report and for its 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), who states 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 Circuit" and later endorsed by the Fourth Circuit in *Janus*.[21] Section A2 in the Appendix notes the cases supporting this classification.[22]

2.3.2. The 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 to make the statement for purposes of Rule 10b-5 liability (564 U.S. 142). 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

[20] 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, for example, *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."

[21] 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 (for example, Simpson Thacher 2011)—we omit the Third Circuit from our analyses.

[22] Although our paper focuses on *Tellabs* and *Janus,* there have been a number of important Supreme Court rulings with implications for auditors' liability under Rule 10b-5 over the past decade. For examples, see *Dura Pharmaceuticals, Inc. v. Broudo* (544 U.S. 336 [2005]) and *Omnicare, Inc. v. Laborers District Council Construction Industry Pension Fund* (2015 WL 1291916). We provide limited detail for several of these cases in Section A3.

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 5 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.

3. Research Design and Data

We begin with descriptive statistics and then proceed 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*.[23] All variables are defined in Table A2.

3.1. Sample Selection

Because we seek to understand the impact of Supreme Court cases addressing federal securities laws, our sample is limited to class action lawsuits brought by shareholders in federal court that contain at least one federal securities law claim.[24] To identify our sample of class action lawsuits, we started with the data set compiled by the Institutional Shareholder Services (ISS) for the period from January 1996 to June 2016. We then 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 complete defendant list from Bloomberg Law for every class action noted in the ISS data set during our sample

[23] 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 that there are safeguards designed to redirect federal litigation to the defendant's home circuit and to disincentivize forum shopping. First, if the plaintiff has picked an inconvenient location and the defendant requests to move the case to its home circuit to expedite the process (for example, to be closer to witnesses), the courts generally grant the request. Second, if cases are filed in multiple districts, the Judicial Panel on Multidistrict Litigation (MDL) is tasked with consolidating the cases, and it 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 percent of cases are filed in the defendant's home circuit (Cox, Thomas, and Bai 2009), a percentage that does not account for cases later reassigned to the defendant's home circuit.

[24] 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, but this is rare. Rozen, Rudolph, and Harris (2016, p. 2) finds 48 opt-out cases out of 1,458 cases from 1996 to 2014 (roughly 3.3 percent) and states that "[w]e found no discernable increase in the preponderance of opt-outs over time." Anecdotally, we are aware of only three such cases against auditors: Tyco, Ltd. (naming PwC), AOL Time Warner, Inc. (naming Ernst & Young), and Qwest (naming Arthur Andersen).

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 omitted an auditor defendant and included them in our sample as well.

Second, to confirm the validity of our sample, we reviewed all auditor litigation noted in the Audit Analytics database for 2005 (chosen randomly) and compared the cases to our cases from the ISS database for 2005. No class actions brought under federal securities laws were 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 data set 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.

3.2. Descriptive Statistics

3.2.1. Frequency of Lawsuits and Initial Claims

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 defendants[25] (this percentage is comparable the estimate in Talley [2006] that auditors are named in 8.41 percent 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 percent of cases.

Table 1 also provides detail on the frequency of claims under Rule 10b-5 and Section 11, the second most common claim.[26] We present comparative statistics for both auditors and other defendants. A few trends in these data are clear. Of

[25] Most lawsuits name only one auditor defendant, but some lawsuits name multiple auditors. If the lawsuit names two affiliated auditors, such as PwC and PwC Canada, we consider that one auditor defendant. However, if the lawsuit names two unrelated auditors, such as PwC and Ernst & Young, we 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.

[26] 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: one if the plaintiff alleged one or more violations and zero otherwise. Similarly, a court can dismiss one claim under a section but allow another under the same section to proceed. We count a claim as dismissed only if the court dismissed all claims brought under the section in question. To illustrate, if the court dismisses one claim under Rule 10b-5 but allows another to proceed, we consider the court to have allowed a Rule 10b-5 claim to proceed and would code the claim as allowed (that is, not dismissed).

Table 1
Securities Law Class Actions: Summary Statistics

	All Cases in Institutional Shareholder Services Data			Subset of Cases Naming Auditor Defendants			
	All	Rule 10b-5	Section 11	Number of Defendants	Defendants with a Complaint	Rule 10b-5	Section 11
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
Total	4,682	3,761	1,122	540	504	406	161
Average	223	179	53.5	26	24	19	7.7

Note. Averages are approximate because of rounding.

the lawsuits in ISS, an annual average of 179 lawsuits allege violations of Rule 10b-5 (roughly 80 percent) and an annual average of 53.5 allege violations of Section 11 (roughly 24 percent) (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 or 8 claims per year, on average, for violations of Section 11. However, the relative proportion of Section 11 claims has increased in recent years.[27]

To better identify time trends, Table 2 summarizes the data in Table 1 over 3-year periods. Table 2 shows that, at a summary level, the percentage of auditors sued under Rule 10b-5 decreased from 92 percent in 1996–98 to 69 percent between 2014 and June 2016. By contrast, the percentage of auditor defendants sued under Section 11 increased from 28 percent to 54 percent over the same

[27] 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.

Table 2
Securities Claims against Auditor Defendants

Year Filed	Defendants with a Complaint	Rule 10b-5 Claims		Section 11 Claims		Non–Rule 10b-5 Claims	
		N	(%)	*N*	(%)	*N*	(%)
1996–98	47	43	92	13	28	20	43
1999–2001	91	83	91	20	22	31	34
2002–4	134	122	91	40	30	58	43
2005–7	67	54	81	21	31	27	40
2008–10	85	50	59	30	35	54	64
2011–13	67	45	67	30	45	39	58
2014–June 2016	13	9	69	7	54	9	69
Total	504	406		161		238	

Note. Non–Rule 10b-5 claims reflect defendants sued for a violation of any claim other than or in addition to Rule 10b-5.

period.[28] 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.[29]

In Table 3, we show the breakdown of cases against Big *N* auditors and auditors of foreign companies.[30] Top audit firms represented the vast majority of defendants in the beginning of our sample—Big *N* firms represented more than 80 percent of auditor defendants from 1996 to 2004—but this percentage declined in the final years of our sample. Only 35 percent of defendants were from

[28] 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. Claims brought under Section 11 of the Securities Act must be brought within 1 year of the discovery of the violation or within 3 years of the security being 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 2 years of the discovery of the violation or 5 years after the violation.

[29] 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. Section 12 imposes liability on any person who sells securities in accordance with a material falsity in the registration statement; Sections 11 and 12 have overlap, but Section 11 is applicable to manufacturers of securities (for example, issuers, auditors, and so on), whereas Section 12 is applicable to retailers (securities dealers who sell to the general public). Section 15 imposes secondary liability on controlling persons for primary liabilities of control persons under Sections 11 and 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.

[30] The largest accounting firms are referred to as the Big *N*. During our sample period, there were five such firms until the collapse of Arthur Andersen in 2002. After that, there were four such firms.

Table 3
Litigation by Type of Auditor Defendant

Year Filed	All Defendants	Big *N* Firms		Auditors of Foreign Firms	
		N	%	*N*	%
1996–98	73	60	82	3	4
1999–2001	97	84	87	6	6
2002–4	137	114	83	15	11
2005–7	67	45	67	8	12
2008–10	86	60	70	11	13
2011–13	67	23	35	41	60
2014–June 2016	13	7	54	5	38
Total	540	393	73	89	16

Big *N* firms in 2011–13, and 54 percent of defendants were from such firms between 2014 and June 2016. Further, the percentage of auditor defendants that audit firms in foreign countries has increased. Although only 4 percent of auditors sued in 1996–98 were sued for their work on firms headquartered outside the United States, this number increased to 60 percent in 2011–13 and 38 percent between 2014 and June 2016. Anecdotally, we noticed that much of this increase was driven by auditors of Chinese companies listed in the United States.

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, where the 3-year ranges indicate when the case was filed. The numerator is the number of cases for which the court dismissed all Rule 10b-5 claims, where the Court either dismissed all claims with prejudice, or where the Court dismissed without prejudice but the plaintiff declined to file an amended complaint. The denominator is the number of lawsuits alleging that the auditor violated Rule 10b-5. Only resolved cases are included. Figure 1 shows that the percentage of claims dismissed increased monotonically over each 3-year period. 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. Table 4 shows the sample selection for the settlements we were able to identify. The missing complaints are almost exclusively from the years prior to 2004—the year that the rollout of the federal case management system Public Access to Court Electronic Records was completed. For some cases, 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

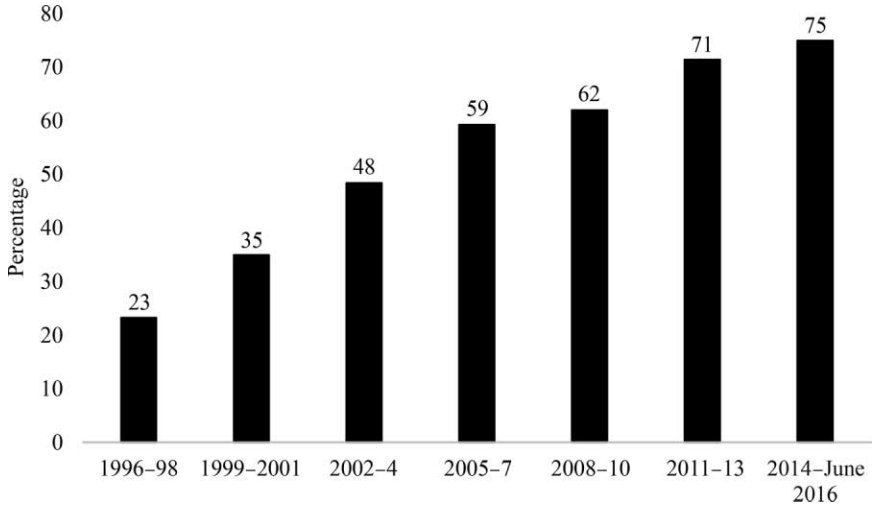

Figure 1. Dismissal rates for Rule 10b-5 claims

the settlement documents reported the aggregate settlement value paid by all defendants and not the individual settlement paid by each defendant.

Table 5 provides detail on the number of cases auditors paid to settle per year. As highlighted in Figure 2, the percentage of cases auditors paid to settle declined from January 1996 to June 2016. 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. Table 5 provides some evidence that the frequency with which the parties settled the case before the court ruled on the defendant's motion to dismiss declined over the sample period.

Table 6 provides descriptive data on settlement values for cases filed from January 1996 to June 2016.[31] 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 were highest in the late 1990s and early 2000s and declined in recent years. Table 7, which presents the top ten shareholder settlements paid by auditors, shows a similar trend. Nine of the 10 cases were filed from 1998 to 2003. The

[31] Although we collected data from January 1996 to June 2016, 11 cases in our sample are still pending resolution. As shown in Section A4, cases with longer duration are more likely to have negative outcomes for auditors. Therefore, the total settlement values reported in the final years of our sample may increase. Table A3 reports the number of cases filed in each year and the percentage of those cases that are still pending. All cases still pending were filed in 2012 or later. Table A4 shows durations for resolved cases by litigation outcome. As shown, when a Rule 10b-5 claim is dismissed, the case is shorter than when the court denies the motion to dismiss. Similarly, cases in which the auditor pays to settle are longer than those in which the auditor pays nothing.

Table 4
Auditor Settlements: Summary Statistics

		Defendants with a Complaint		Settlements with Unknown Value	
Year Filed	Defendants	*N*	%	*N*	%
1996–98	73	47	64	10	21
1999–2001	97	91	94	22	24
2002–4	137	134	98	20	15
2005–7	67	67	100	10	15
2008–10	86	85	99	7	8
2011–13	67	67	100	8	10
2014–16	13	13	100	0	0
Total	540	504	93	77	15

Table 5
Resolved Auditor Cases: Trends in Settlement Values

		Nonzero Settlements		Settled before Dismissal Ruling	
Year Filed	Complaints	*N*	%	*N*	%
1996–98	47	36	77	15	32
1999–2001	91	64	70	23	25
2002–4	134	80	60	25	19
2005–7	67	36	54	12	18
2008–10	85	30	35	8	9
2011–13	63	24	38	12	19
2014–16	6	2	33	1	17
Total	493	272	55	96	19

remaining case was filed in 2008 against Ernst & Young for its work on Lehman Brothers.

Table 8 summarizes auditor settlements relative to settlements by other defendants over each 3-year period. So that the comparison of settlement values will be consistent, only cases with known auditor settlements are included (that is, both populations include the same cases). Of course, as noted previously, many of these cases are still pending. As a caveat, we note that the dollar values underestimate the amount paid by auditors because, as shown in Table 4, there are 77 cases for which the settlement value is unclear, which means that we are unable to include the settlements from these cases in our calculations. If we are unable to determine the auditor's settlement, we omit the lawsuit from Table 8 so that the comparison of the auditor's settlement to the total settlement will be consistent.

Over the full 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 to 2007. The amount paid by auditors is roughly 7 percent of the $49.60 billion that we can identify as paid out

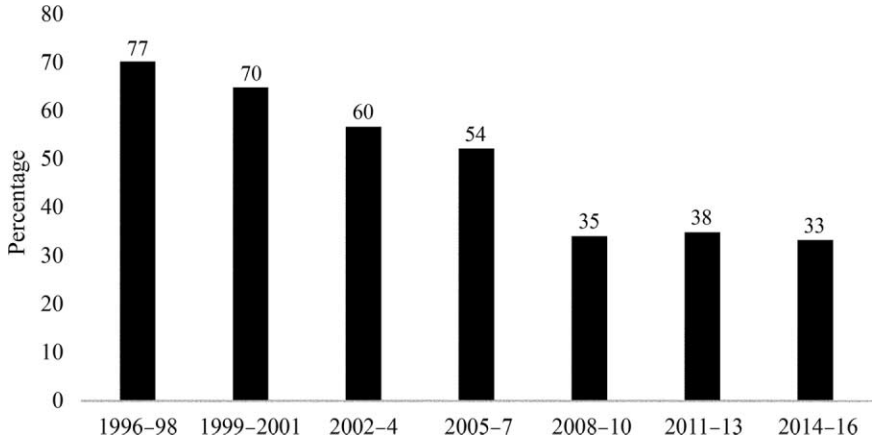

Figure 2. Cases with nonzero settlements

Table 6
Settlements Paid by Auditors to Shareholders: Descriptive Statistics

	N	Total	Mean	Median	Min	Max	SD
1996	4	3,500,000	875,000	0	0	3,500,000	1,750,000
1997	12	168,454,250	14,037,854	1,150,000	0	75,000,000	23,860,071
1998	21	588,105,000	28,005,000	1,750,000	0	335,000,000	76,694,500
1999	20	290,460,000	14,523,000	787,500	0	126,000,000	32,263,280
2000	26	382,650,000	14,717,308	1,850,000	0	115,000,000	28,619,940
2001	23	203,000,000	8,826,087	925,000	0	112,500,000	23,451,350
2002	46	672,588,135	14,621,481	1,825,000	0	225,000,000	36,783,072
2003	35	435,885,000	12,453,857	185,000	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	199,250	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	6,491,452	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	250,000	0	850,000	415,080
2015	1	0	0	0	0	0	0
June 2016	1	0	0	0	0	0	0

Note. Values are in US dollars.

by all defendants. As a benchmark, over the period 2002–15 our data on audit fees from Audit Analytics reveal that auditors earned roughly $179.4 billion in audit fees (or roughly $163.3 billion for the merged Audit Analytics–Compustat sample). During the same period, auditors paid roughly $1.932 billion to settle

Table 7
Largest Shareholder Settlements Paid by Auditors, 1996 to June 2016

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

Table 8
Resolved Auditor Cases: Auditor and Nonauditor Settlements

	Settlements Paid by Auditor Defendant		Settlements Paid by All Defendants		Auditor Settlements
Year Filed	$	*N*	$	*N*	(%)
1996–98	760,059,250	37	4,578,600,000	37	17
1999–2001	876,110,000	69	11,868,035,000	69	7
2002–4	1,374,743,135	114	23,391,325,000	114	6
2005–7	259,938,499	57	3,980,475,000	57	7
2008–10	274,570,000	76	5,310,100,000	76	5
2011–13	21,400,433	64	447,034,933	64	5
2014–16	1,350,000	6	20,900,000	6	6
Total	3,568,171,317	423	49,596,469,933	423	7

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 Tables 9 and 10, is the relative importance of different claims. Table 9 shows the claims resolved with nonzero settlements, and Table 10 shows settlement values by claim. In Table 9, although 91 percent of settlements with auditor defendants in 1996–98 resolved a Rule 10b-5 claim, this percentage decreased to 55 percent in 2011–13 and 50 percent in 2014–16. 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 percent (42 percent) in 1996–98 to 55 percent (73 percent) in 2011–13 and 50 percent (50 percent) in 2014–16.[32] The analysis for Big *N* auditor defendants shows a similar trend.

Table 10 shows average settlement values based on the claims the defendant is alleged to have violated. Although our mean settlement value of $8.44 million for the full sample is a little lower than the magnitude documented in the prior literature—Carleton et al. (1996) and Talley (2006) find mean damages of $11 million and $13 million, respectively—the decrease is intuitive given that those 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 performed higher-quality audits over this period, and shareholders have less cause to sue them. Although we examine this question more formally in Tables 12 and 13, we begin with descriptive statistics on audit quality in Table 11. Table 11 presents the number of SEC Accounting and Auditing Enforcement releases (AAERs) issued to exchange-traded companies beginning in 2000 (the first year for which complete data are available online), the number of severe restatements beginning in 2002 (the first year

[32] Although Table 9 includes the final period (2014 to June 2016) for completeness, the information may not be representative, as seven cases are still pending.

Table 9

Claims in Cases with Nonzero Settlements

		Rule 10b-5 Claims		Section 11 Claims		Non–Rule 10b-5 Claims	
	Defendants	*N*	%	*N*	%	*N*	%
All auditor defendants:							
1996–98	33	30	91	11	33	14	42
1999–2001	59	54	92	13	22	23	39
2002–4	76	69	91	31	41	40	53
2005–7	35	26	74	16	4	19	54
2008–10	29	20	69	9	31	14	48
2011–13	22	12	55	11	50	16	73
2014–16	2	1	50	1	50	1	50
Total	256	212		92		127	
Big *N:*							
1996–98	29	27	93	9	31	11	38
1999–2001	54	49	91	13	24	23	43
2002–4	62	56	90	29	47	37	60
2005–7	25	18	72	13	52	16	64
2008–10	22	15	68	9	41	12	55
2011–13	4	3	75	1	25	2	50
2014–16	0	0		0		0	
Total	196	168		74		101	

Table 10

Settlement Value ($) by Claim Type

	All Cases	Includes Rule 10b-5	Includes Section 11	Only Rule 10b-5	Only Section 11
Full sample:					
Mean	8,435,393	10,018,965	12,797,435	5,950,845	2,074,711
Median	0	0	54,250	0	0
25th Percentile	0	0	0	0	0
75th Percentile	2,800,000	3,650,000	8,250,000	2,050,000	531,600
N	423	341	135	228	47
Nonzero settlements:					
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
25th Percentile	750,000	1,000,000	531,600	775,000	487,500
75th Percentile	15,000,000	22,500,000	25,000,000	9,075,000	7,000,000
N	199	167	74	103	20
Big *N:*					
Mean	11,309,873	13,204,686	16,527,444	8,049,274	3,163,333
Median	29,999	400,000	500,000	0	0
25th Percentile	0	0	0	0	0
75th Percentile	6,840,000	7,625,000	13,500,000	3,500,000	1,750,000
N	307	252	102	163	30
Auditor of foreign firm:					
Mean	5,515,666	6,585,583	2,558,382	8,119,571	161,104
Median	0	0	0	0	0
25th Percentile	0	0	0	0	0
75th Percentile	1,337,500	1,750,000	400,000	1,750,000	400,000
N	72	60	26	35	9

Table 11
Measures of Audit Quality over Time

	Auditor Defendants	AAERs Issued	Severe Restatement	PCAOB Disciplinary Orders	Not-Sufficient Audits (%)
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
June 2016	3	50	26	17	23
Total	437	2,333	877	147	
Average	25.7	137.2	58.5	12.25	25

Note. AAERs = Accounting and Auditing Enforcement releases; PCAOB = Public Company Accounting Oversight Board.

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 percent or more of net income), the number of settled Public Company Accounting Oversight Board (PCAOB) disciplinary orders beginning in 2005 (the first year available), and the percentage of "not sufficient" audits (calculated as not-sufficient audits relative to audits inspected), as determined by the PCAOB, beginning in 2005 (the first year available).

There is no consistent trend in the variables reported in Table 11. 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.[33] This inconsistency may reflect that regulators are budget constrained

[33] The PCAOB deems an audit not sufficient when the inspection staff find that the auditor failed to gather sufficient 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 percent in the first 6 years and an average of 28.5 percent in the latter 6 years). However, because of the small sample and the nonrandom selection of audits for inspection, we hesitate to draw conclusions.

and differ in their enforcement priorities rather than any change (or lack of change) in audit quality.[34]

4. Multivariate Analyses

4.1. Changes in the Frequency of Litigation

Tables 12 and 13 test, more formally, whether the decline in litigation persists after controlling for any increases in accounting quality. Because Donelson and Prentice (2012) find that restatements are the most consistently significant determinant of auditors' liability, we test 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 percent of more of net income.) The analysis includes only the sample of firms that experienced a severe restatement from January 2002 through June 2016 and uses equation (1). Table 12 presents descriptive statistics on the variables used in the regressions, and Table 13 presents regression results. Consider the probability that public company i with auditor j announces a restatement at time t. To estimate litigation against the auditor, we use the following linear probability model:

$$\text{Lawsuit}_{ijt+1} = \beta_0 + \beta_1 \text{Time\_Trend\_Variable}_t + \beta \boldsymbol{X}_{it} + \mu_{it} + \varepsilon_{ijt+1}. \quad (1)$$

The dependent variable reflects whether litigation occurred within 1 year of the day the restatement is announced. All specifications include controls for the public company characteristics described below ($\boldsymbol{X}_{it}$), and some include fixed effects for the public company's industry (μ_{it}). Standard errors are clustered by industry. Table 13 presents results when the auditor was subject to litigation and when the firm's managers were subject to litigation.

We consider three time-trend variables: Post-*Janus* (which equals one in 2012–16), Post-*Tellabs* (which equals one in 2008–16), and Year, which ranges from 2002 to 2016. 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&P 1500, and whether the firm is small, defined as having market equity less than $200 million (market value enters the regressions in log form). Further, following Kim and Skinner (2012), we include controls for firms' returns, the standard deviation of returns, and sales growth. Roughly 100

[34] 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 (codirector of the Division of Enforcement), "In the wake of the financial crisis, the SEC was very focused on financial crisis cases—cases involving CDOs [collateralized debt obligations], RMBS [residential mortgage-backed securities], 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" (Ceresney 2013). See also Harison and Pashkoff (2012), who discuss 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 its 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 12
Likelihood of Litigation after Severe Restatement: Descriptive Statistics

	N	Mean	SD	Min	25th Percentile	Median	75th Percentile	Max
Manager Defendant	793	.10	.30	.00	.00	.00	.00	1.00
Auditor Defendant	793	.02	.15	.00	.00	.00	.00	1.00
Ln(Market Value)	650	5.46	1.83	.57	4.14	5.42	6.84	10.27
Leverage	717	.25	.28	.00	.02	.16	.38	2.90
Book-to-Market Ratio	650	.53	1.55	−13.35	.24	.51	.87	5.90
S&P 1500	793	.27	.45	.00	.00	.00	1.00	1.00
Small	793	.39	.49	.00	.00	.00	1.00	1.00
Age	751	15.59	12.57	−5.00	7.00	12.00	21.00	54.00
Growth	793	.20	1.00	−1.00	−.07	.00	.15	6.69
FY Returns	693	.17	1.29	−.97	−.34	−.07	.30	9.40
SD Returns	688	2.41	2.80	.01	.72	1.48	2.85	18.19

Note. Continuous variables are winsorized at the 1st and 99th percentiles.

severe restatements are excluded because they cannot be matched to Center for Research in Security Prices (CRSP) and/or Compustat data.

The regression results for the full sample are provided in Table 13. All models using the full sample include industry fixed effects (measured using two-digit standard industrial classification [SIC] codes), and all models throughout use ordinary least squares (OLS) regression even with a binary dependent variable to ease interpretation of the coefficients. However, all inferences remain consistent with logit regressions. Finally, all multivariate regressions include only US-based firms and litigation against auditors of US-based firms because of complications associated with international litigation.[35]

The results for auditor defendants in Table 13 show that, from 2002 through 2016, auditors were less likely to be sued following a severe restatement. The estimate on Post-*Tellabs* is too imprecise to reach any conclusions (95 percent confidence interval [CI] = [−.043, .015]), but Post-*Janus,* which reflects the years 2012–16, is significant at 5 percent. This coefficient suggests that the likelihood the auditor will be sued is roughly 2 percentage points lower following *Janus*. Further, the coefficient on Year is negative (statistically significant at 10 percent), which indicates that the likelihood an auditor will be sued following a severe restatement decreased over the sample period. By contrast, none of the results for the firms' managers show a statistically significant decline in the likelihood that managers will be sued following a severe restatement.

Table 13 presents the same analysis using a sample of firms in which firms are matched by their likelihood of litigation. We predict the likelihood of litigation using firms' returns, the standard deviation of returns, and sales growth, and we

[35] 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 dismissed only because the parties reached a multimillion dollar settlement in Canada. It seems incorrect to view this as dismissed because Ernst & Young paid a substantial sum (Joint Stipulation to Dismiss Ernst & Young with Prejudice, *Leapard v Chan,* No. 1:12-cv-01726 (S.D.N.Y. 2013).

Table 13

Time Trends in the Frequency of Litigation after a Severe Restatement

	Auditor Defendant			Manager Defendant		
	(1)	(2)	(3)	(4)	(5)	(6)
Full sample:						
Post-*Janus*	−.021*			−.033		
	(.010)			(.041)		
Post-*Tellabs*		−.014			−.022	
		(.015)			(.038)	
Year			−.003+			−.008
			(.002)			(.005)
Ln(Market Value)	.001	.000	.001	.013	.012	.014
	(.010)	(.010)	(.010)	(.014)	(.014)	(.015)
Leverage	.019	.018	.017	−.019	−.020	−.023
	(.021)	(.021)	(.021)	(.043)	(.044)	(.045)
Book-to-Market Ratio	−.000	−.000	−.001	.000	.000	.000
	(.002)	(.002)	(.002)	(.006)	(.006)	(.006)
Fortune Dummy	.029+	.030+	.027	.022	.023	.013
	(.017)	(.017)	(.018)	(.035)	(.036)	(.036)
Small	−.020	−.020	−.020	−.054	−.054	−.056
	(.030)	(.030)	(.030)	(.048)	(.047)	(.047)
Age	−.002*	−.002*	−.002*	−.000	−.001	−.000
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)
Growth	−.007	−.007	−.008	−.007	−.006	−.008
	(.005)	(.005)	(.005)	(.012)	(.012)	(.012)
SD Returns	.003	.003	.003	.007	.007	.007
	(.004)	(.004)	(.004)	(.008)	(.007)	(.008)
FY Returns	.008	.009	.009	.008	.008	.009
	(.010)	(.010)	(.010)	(.011)	(.011)	(.011)
Constant	.046	.051	5.638*	.061	.070	15.797
	(.056)	(.060)	(3.141)	(.092)	(.092)	(10.031)
R^2	.089	.088	.091	.147	.146	.153
Matched sample:						
Post-*Janus*	−.396*			−.178		
	(.109)			(.127)		
Post-*Tellabs*		−.237			−.142	
		(.228)			(.111)	
Year			−.040*			−.028*
			(.015)			(.013)
Ln(Market Value)	−.049	−.052	−.057	.026	.019	.027
	(.066)	(.076)	(.071)	(.052)	(.047)	(.049)
Leverage	.149	.304	.188	−.176	−.194	−.198
	(.217)	(.211)	(.224)	(.139)	(.137)	(.143)
Book-to-Market Ratio	−.242*	−.157	−.224	−.048	−.051	−.052
	(.097)	(.123)	(.116)	(.058)	(.063)	(.064)
Fortune Dummy	.568*	.654*	.633**	.034	.036	.019
	(.178)	(.181)	(.164)	(.108)	(.110)	(.107)
Small	−.297	−.146	−.174	−.069	−.076	−.074
	(.309)	(.308)	(.275)	(.164)	(.160)	(.160)

Table 13 (*Continued*)

	Auditor Defendant			Manager Defendant		
	(1)	(2)	(3)	(4)	(5)	(6)
Age	−.023*	−.026**	−.024**	.002	.002	.003
	(.006)	(.005)	(.006)	(.003)	(.004)	(.003)
Growth	−.139	−.046	.028	.074**	.093**	.093**
	(.411)	(.301)	(.373)	(.025)	(.022)	(.028)
SD Returns	.018	.017	.018	.011	.013	.010
	(.022)	(.028)	(.022)	(.015)	(.014)	(.014)
FY Returns	−.012	−.006	−.010	.004	.006	.006
	(.039)	(.036)	(.033)	(.031)	(.031)	(.027)
Constant	1.040*	.968+	80.489*	.391	.456	57.350*
	(.385)	(.477)	(29.862)	(.334)	(.311)	(26.068)
N	32	32	32	136	136	136
R^2	.511	.469	.507	.097	.095	.126

Note. The dependent variable is a dummy variable set to one if a lawsuit is brought within 1 year of the restatement. Standard errors, in parentheses, are clustered by industry, and continuous, nonlogged variables are winsorized at the 1st and 99th percentiles. For the full sample ($N = 646$), regressions include industry fixed effects.

+ Significant at the 10% level.

* Significant at the 5% level.

** Significant at the 1% level.

match each firm with the most similarly situated firm with the same two-digit SIC code. Because firms are matched within SIC codes, the regressions omit industry fixed effects. The sample size for the matched firms is limited, but the results remain generally consistent with those for the full sample. The coefficients on Post-*Janus* and Year are negative and statistically significant at 5 percent. The coefficient on Post-*Tellabs* is negative and only slightly smaller in magnitude but remains too imprecise to make any conclusions (95 percent CI = [−.794, .32]). Interestingly, coefficient on Year for manager defendants, which was significant only at 15 percent for the full sample, becomes statistically significant at 5 percent in the matched sample and indicates that managers are less likely to be targets of federal class actions following severe restatements.[36]

4.2. Changes in Litigation Outcomes following Tellabs *and* Janus

4.2.1. Regression Specification

The prior analysis provides evidence that auditors are less likely to be sued after a severe restatement in the latter years of our sample period. This suggests

[36] 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 sued the auditor after a severe restatement, we have only 18 observations. Nonetheless, using only those 18 observations and the controls reported in Table 5, we find that the likelihood of dismissal increased after *Janus*. The coefficient on Year is also positive but is not statistically significant at standard levels. We do not report these results because of the low number of observations.

the general descriptive trend showing that 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 14–16 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 (2018). Table 14 presents descriptive statistics, and Tables 15 and 16 present regression results.

The timeline for the regressions 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 cases filed prior to the decision. He makes this recommendation because of 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's decision (June 21, 2007, for *Tellabs* and June 13, 2011, for *Janus*) is the event date, and the Post variable reflects whether the outcome in question—either settlement or dismissal—occurred after the court's decision.

Consider the probability that auditor j of public company i is sued in circuit c at time t. To estimate changes in litigation outcomes in the affected circuits following each decision, we use the following linear probability models:

$$\begin{aligned}\text{Litigation Outcome}_{ijc(t+n)} = {} & \beta_0 + \beta_1 \text{Post-}\textit{Tellabs}_t \\ & + \beta_2 \text{Two-Three}_c + \beta_3 \text{Nine-Eleven}_c \\ & + \beta_4 \text{Two-Three} \times \text{Post-}\textit{Tellabs}_{tc} \\ & + \beta_5 \text{Nine-Eleven} \times \text{Post-}\textit{Tellabs}_{tc} \\ & + \beta \boldsymbol{X}_{it} + \mu_{it} + \varepsilon_{ijc(t+n)}\end{aligned} \tag{2}$$

and

$$\begin{aligned}\text{Litigation Outcome}_{ijc(t+n)} = {} & \beta_0 + \beta_1 \text{Post-}\textit{Janus}_t + \beta_2 \text{Four-Nine}_c \\ & + \beta_3 \text{Post} \times \text{Four-Nine}_{tc} \\ & + \beta \boldsymbol{X}_{it} + \mu_{it} + \varepsilon_{ijc(t+n)}.\end{aligned} \tag{3}$$

The dependent variable reflects the case outcome at the time it is resolved ($t + n$). All specifications include controls for the public company characteristics described below ($\boldsymbol{X}_{it}$) and fixed effects for the public company's industry (μ_{it}) (because of the low number of observations, we use one-digit SIC codes). Standard errors are clustered by circuit court. 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 Supreme Court's opinion was issued.

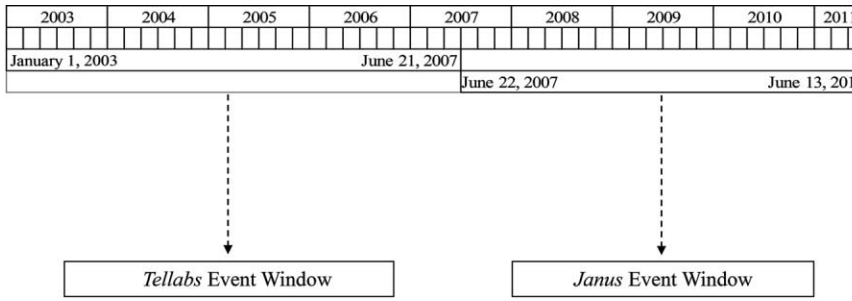

Figure 3. Timeline of event windows for *Tellabs* and *Janus* straddle tests (regressions include only lawsuits filed during these windows).

To examine changes in litigation outcomes, we consider four dependent variables. The first two 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: Dismiss 10b, an indicator set to one if the court dismissed the Rule 10b-5 claim, and Allow 10b, an indicator set to one if the court denied a motion to dismiss and allowed a Rule 10b-5 claim to proceed. In interpreting the data, we analyze claims allowed and claims dismissed separately because many claims are settled before the court rules on a motion to dismiss (that is, claims allowed and claims dismissed are not perfectly negatively correlated). The final two dependent variables examine changes in auditor settlements: Ratio, the ratio of the value paid by the auditor to settle a case relative to that paid by all nonauditor defendants, and Ln(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 equals 0.

As noted in equations (2) and (3), all models control for case and firm characteristics. We mention these variables here briefly, define them in detail in Table A2, and present their descriptive statistics in Table 14. 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 instances in which the SEC filed an enforcement action (SEC Action) transactions often associated with lawsuits such as initial public offerings or equity issuances (IPO), and industries that are litigation prone (High Litigation). Firms' litigation risk measures are included as control variables; these include the firm's return on assets (ROA), size (Ln(Assets)), and growth prospects (Growth) and controls relating to the class period, including its length (Ln(Class Period Length)), the drop the firm's stock price during the class period (Price Drop), and average share turnover during the class period (Share Turnover).[37] All continuous, nonlogged variables are winsorized at the 1st and 99th percentiles.

The sample for these tests is restricted by the total number of usable observations. Although 449 observations have at least some information in the CRSP

[37] We do not include our control for severe restatements because none of the lawsuits in Tables 14–16 were filed within 1 year of the company experiencing a severe restatement.

Table 14
Variables in Regressions on Litigation Outcomes after *Tellabs* and *Janus:* Descriptive Statistics

					Percentile			
	N	Mean	SD	Min	25th	50th	75th	Max
Tellabs:								
Dismiss 10b	81	.49	.5	0	0	0	1	1
Allow 10b	81	.16	.37	0	0	0	0	1
Auditor Settlement ($)	67	10,169,530	32,174,787				2,000,000	210,000,000
Ratio	67	.108	.21	0	0	0	.17	1
Two-Three	81	.25	.43	0	0	0	0	1
Nine-Eleven	81	.38	.49	0	0	0	1	1
SEC Action	81	.01	.11	0	0	0	0	1
IPO	81	.05	.22	0	0	0	0	1
Equity Issuance	81	.09	.28	0	0	0	0	1
High Litigation	81	.42	.5	0	0	0	1	1
ROA	76	−.09	.52	−4.29	−.05	.01	.05	.24
Ln(Assets)	76	6.91	2.53	1.67	5.12	6.67	8.42	13.83
Growth	76	.31	1.15	−.45	−.01	.14	.36	9.80
Price Drop	81	10.67	24.25	.04	1.10	2.45	8.01	.51
Share Turnover	81	.05	.09	0	.00	.01	.04	15.36
Ln(Class Period Length)	75	6.78	.68	5.09	6.19	6.88	7.43	7.76
Big Five	81	.83	.38	0	1	1	1	1

Janus:								
Dismiss 10b	59	.37	.49	0	0	0	1	1
Allow 10b	59	.15	.36	0	0	0	0	1
Auditor Settlement ($)	53	1,927,642	5,075,414				875,000	24,000,000
Ratio	53	.05	.16	.00	.00	.00	.04	1.00
Four-Nine	57	.25	.43	0	0	0	0	1
SEC Action	59	0	0	0	0	0	0	0
IPO	59	.07	.25	0	0	0	0	1
Equity Issuance	59	.27	.45	0	0	0	1	1
High Litigation	59	.12	.33	0	0	0	0	1
ROA	57	−.03	.14	−.78	−.02	.00	.01	.22
Ln(Assets)	57	9.36	3.25	1.67	6.64	9.35	12.1	14.6
Growth	57	.26	.86	−.98	−.11	.06	.31	5.05
Price Drop	59	13.04	29.62	.04	1.13	3.81	7.49	121.5
Share Turnover	59	.06	.13	.00	.01	.02	.05	.56
Ln(Class Period Length)	54	6.57	.65	4.42	6.08	6.68	7.1	7.7
Big Five	59	.85	.36	0	1	1	1	1

Note. Data include auditor defendants of US-based firms. Continuous variables are winsorized at the 1st and 99th percentiles.

and Compustat databases, only 331 observations have the full information that we need. From there, we restrict the sample to cases filed prior to each Supreme Court opinion, as required by the straddle method proposed by Hubbard (2013). Table 14 shows the number of observations for each analysis (there is some variation because of missing data—for example, as noted above, 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 for *Tellabs:* Pleading Standards

Table 15 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. The 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*.

The results provide only limited evidence that *Tellabs* affected litigation outcomes. There is no evidence of a statistically significant change in dismissals of Rule 10b-5 claims in any of the treatment circuits following *Tellabs*. Further, although Table 15 shows that auditor settlements in the Second and Third Circuits declined after *Tellabs,*[38] the analysis provides no consistent evidence of changes in settlement values in the Fourth and Ninth Circuits.

There are several possible explanations for the lack of consistent empirical findings in Table 15. 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.[39] However, consistent with studies of *Twombly* and *Iqbal*, there are theoretical explanations for the largely null result. One possibility is that

[38] 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 the circuits differs in the pre- and postperiods—one concern is that the change in relative weights affects our empirical outcomes.) We find that the 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.

[39] It could be that the design of our empirical tests prevents us from capturing an effect. For example, *Stoneridge* (552 U.S. 148 [2008]) was decided only a year after *Tellabs* and had an opposite effect in the Ninth Circuit, so it may negate the empirical effect of *Tellabs* in that particular circuit. Although we would ideally test *Stoneridge* directly, we are unable to do so because of sample size concerns. *Stoneridge* resolved a circuit split between the Eighth and Fifth Circuits and the Ninth Circuit, 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 be confounded by *Tellabs*.

Table 15
Changes in Auditors' Litigation Outcomes after *Tellabs*

	Dismiss 10b	Allow 10b	Ratio	Ln(Settlement + 1)
Post-*Tellabs*	−.080	−.172	.136	7.002**
	(.330)	(.121)	(.086)	(1.975)
Two-Three	−.052	.230	.433**	6.750*
	(.288)	(.226)	(.043)	(2.305)
Nine-Eleven	.034	−.161	.036	−.078
	(.222)	(.104)	(.070)	(2.233)
Post-*Tellabs* × Two-Three	−.643	.257	−.365*	−5.762+
	(.402)	(.189)	(.137)	(2.835)
Post-*Tellabs* × Nine-Eleven	.094	.149	−.212+	−3.996
	(.455)	(.137)	(.113)	(3.558)
IPO	−.142	.120	−.012	.252
	(.290)	(.163)	(.105)	(3.263)
Equity Issuance	−.626**	−.056	.182	7.977
	(.139)	(.070)	(.165)	(6.092)
High Litigation	−.016	.066	.181	4.021
	(.173)	(.099)	(.103)	(3.656)
SEC Action	−.350	.290	.192	2.535
	(.404)	(.336)	(.153)	(3.727)
Price Drop	.002	.002	.001	.036
	(.002)	(.002)	(.001)	(.063)
Share Turnover	.329	−.136	−.155	−10.350
	(.448)	(.129)	(.241)	(8.958)
Ln(Class Period Length)	.049	.031	−.131	−1.534
	(.157)	(.091)	(.095)	(2.779)
ROA	.019	.046	.096*	1.639
	(.087)	(.063)	(.037)	(1.386)
Ln(Assets)	−.019	.064+	.013	.633
	(.039)	(.032)	(.015)	(.642)
Growth	−.115**	.117**	.011	.401
	(.025)	(.018)	(.013)	(.510)
Big *N*	−.239	−.103	−.065	−1.962
	(.141)	(.118)	(.075)	(3.629)
Constant	.650	−.468	.782	8.099
	(.942)	(.646)	(.631)	(18.504)
N	69	69	59	59
R^2	.359	.504	.544	.403

Note. Standard errors, in parentheses, are clustered by circuit court; continuous, nonlogged variables are winsorized at the 1st and 99th percentiles. All regressions include industry fixed effects.
+ Significant at the 10% level.
* Significant at the 5% level.
** Significant at the 1% level.

Tellabs did not result in a uniform standard among courts. This seems like a reasonable explanation. Even now, it is not clear that the lower courts have fully adopted *Tellabs*, as the Second Circuit still uses the motive and opportunity test and the Ninth Circuit still uses the recklessness standard (albeit applied with legal nods to *Tellabs*) (see, for example, *Zucco Partners, LLC v. Digmarc Corp.,* No.

06-35758 [9th Cir. 2009]; *Rubke v. Capital Bancorp Ltd.,* No. 07-15083 [9th Cir. 2009]; *ECA & Local 134 IBEW Joint Pension Trust of Chi. v. JP Morgan Chase Co*., 553 F.3d 187 [2d Cir. 2009]).

4.2.3. Results for *Janus:* Liability Standards

Table 16 shows the change in auditors' litigation patterns in the Fourth and Ninth Circuits following *Janus,* and, unlike Table 15, provides consistent evidence of a change in litigation outcomes.[40] Rule 10b-5 claims are more likely to be dismissed or, conversely, less likely to be allowed in the Fourth and Ninth Circuits after *Janus*.[41] 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 after *Janus*.[42]

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. 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 it 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

[40] Although we attempted to examine this result by identifying specific instances of auditors' conduct that were excluded by *Janus*, we were unable to do so. Our best information about the auditors' conduct comes from the plaintiffs' complaints, and we found that the amended complaints filed after *Janus* no longer include these examples of bad conduct. Prior to *Janus,* the initial complaints are typically vague, but the amended complaints include far more detail. Indeed, as noted above, more than half of the cases filed in the Fourth and Ninth Circuits in our sample in the 5 years prior to *Janus* included allegations of supposed bad conduct, but none of the cases filed in the 5 years after *Janus* made the same allegations (this is based on the final complaint filed in each case). Therefore, it is reasonable to assume that the disappearance of bad conduct from the complaints is related to plaintiffs' lack of incentives to investigate for this type of information after *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 specific cases because the complaints (and amended complaints) no longer include the examples.

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

[42] 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 that case lacks corresponding data from Center for Research in Security Prices and Compustat. Of the 19 dismissals included in the regression, nine occurred prior to the decision, and 10 occurred after the decision. Of the 13 nonzero settlements included in the regression, seven occurred prior to the court's decision, and six occurred after the decision.

Table 16
Changes in Auditors' Litigation Outcomes after *Janus*

Janus	Dismiss 10b	Allow 10b	Ratio	Ln(Settlement + 1)
Post-*Janus*	.250^{+}	.162**	−.093^{+}	−.662
	(.109)	(.038)	(.045)	(1.624)
Four-Nine	−.385*	.336**	.292**	10.040**
	(.148)	(.027)	(.074)	(1.245)
Post-*Janus* × Four-Nine	.890**	−.452**	−.252**	−7.962**
	(.115)	(.038)	(.069)	(1.113)
IPO	.035	−.166	−.110	−3.207
	(.502)	(.135)	(.082)	(2.417)
Equity Issuance	−.037	−.138^{+}	−.051	−1.519
	(.232)	(.069)	(.057)	(1.610)
High Litigation	−.100	.232	.180	3.222^{+}
	(.312)	(.169)	(.136)	(1.469)
Price Drop	−.001	−.002	−.000	.050*
	(.003)	(.001)	(.001)	(.015)
Share Turnover	−.538	1.322**	.168	13.931**
	(.550)	(.256)	(.179)	(2.092)
Ln(Class Period Length)	.139	.044	.011	.445
	(.137)	(.083)	(.036)	(1.286)
ROA	−.089	.014	.363	19.174
	(.342)	(.042)	(.387)	(11.556)
Ln(Assets)	−.002	.023	.015	.312
	(.032)	(.028)	(.017)	(.235)
Growth	.165	−.056	−.077**	−1.086^{+}
	(.098)	(.039)	(.022)	(.464)
Big *N*	−.249	.222*	.036	1.234
	(.325)	(.090)	(.085)	(3.032)
Constant	−.298	−.743	−.180	−4.743
	(.782)	(.773)	(.351)	(6.930)
N	50	50	45	45
R^2	.386	.774	.680	.639

Note. Standard errors, in parentheses, are clustered by circuit court; continuous, nonlogged variables are winsorized at the 1st and 99th percentiles. All regressions include industry fixed effects.

$^{+}$ Significant at the 10% level.

* Significant at the 5% level.

** Significant at the 1% level.

changes in pleading standards have an effect.[43] Our evidence is largely consistent with prior work on pleading standards but conflicts with prior work on liability rules, as Park (2017) does not find a relationship between narrower primary liability standards and settlement values. The difference likely results from the use of different research designs, as Park (2017) uses a linear regression with dummies for the Second and Ninth Circuits rather than our difference-in-differences approach; different time periods, as Park (2017) includes data for 1996–2007;

[43] One concern is that the firms across circuits are not comparable because of, 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 because of the small sample size in general, but especially if we partition the sample by year and circuit.

and/or different sample selection, as Park (2017) includes only cases involving a restatement, which leads 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, 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—which indicates that the decrease in litigation risk 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

Supplemental Information on Court Cases and Litigation Outcomes

A1. Discussion of Tellabs *and Classification of Circuit Courts before* 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's shareholders, and the defendants were Tellabs's chief executive officer and other executives. The plaintiffs 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's 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 it to decline from a high of roughly $67 to a low of roughly $16 during the 7-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. The First Circuit follows the intermediate approach. The relevant case is *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. The Second Circuit follows the lenient approach. The relevant case is *Press v. Chem. Inv. Servs.,* 166 F.3d 529, 537–38 (2d Cir. 1999); see also *Novak v. Kasaks,* 216 F.3d 300, 314 n.1 (2d Cir. 2000).

Third Circuit. The Third Circuit follows the lenient approach. The relevant case is *In re: Advanta Corp. Sec. Litig.,* 180 F.3d 525, 530–35 (3d Cir. 1999).

Fourth Circuit. The Fourth Circuit follows the intermediate approach. The relevant case is *Ottman v. Hanger Orthopedic Group, Inc.,* 353 F.3d 338, 344–45 (4th Cir. 2003).

Fifth Circuit. The Fifth Circuit follows the intermediate approach. The relevant case is *Nathenson v. Zonagen Inc.,* 267 F.3d 400, 406–12 (5th Cir. 2001).

Sixth Circuit. The Sixth Circuit follows the intermediate approach. The relevant case is *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. The Seventh Circuit follows the intermediate approach. The relevant case is *Makor Issues & Rights, Ltd. v. Tellabs Inc.,* 437 F.3d 588, 601 (7th Cir. 2006).

Eighth Circuit. The Eighth Circuit follows the intermediate approach. The relevant case is *Fla. State Bd. of Admin. v. Green Tree Fin. Corp.,* 270 F.3d 645, 659–61 (8th Cir. 2001).

Ninth Circuit. The Ninth Circuit follows the strict approach. The relevant case is *In re Silicon Graphics Inc. Securities Litigation,* 183 F.3d 970 (9th Cir. 1999).

Tenth Circuit. The Tenth Circuit follows the intermediate approach. The relevant case is *City of Philadelphia v. Fleming Cos., Inc.,* 264 F.3d 1245, 1261–63 (10th Cir. 2001).

Eleventh Circuit. The Eleventh Circuit follows the strict approach. The relevant case is *Bryant v. Avado Brands, Inc.,* 187 F.3d 1286–87 (11th Cir. 1999).

Supreme Court Opinion. The Supreme Court's decision in *Tellabs* was 8–1. The majority opinion was written by Justice Ruth Bader Ginsburg.

A2. Discussion of Janus *and Classification of Circuit Courts before* Janus

Janus involved a number of related entities: Janus Capital Group, Inc. (JCG), a publicly traded company that created the Janus family of mutual funds; Janus Capital Management LLC (JCM), the investment adviser and administrator of the funds (a wholly owned subsidiary of JCG); and 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 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 $14 billion from JIF funds, and the stock price fell 12.7 percent in 1 day. Eventually JCG and JCM settled with regulators for $225 million, after which shareholders sued JCG and JCM. They alleged that JCG and JCM had caused JIF to issue prospectuses containing the false statements about 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 relevant standard for each circuit in the pre-*Janus* period.

Second Circuit. The Second Circuit uses the bright-line test. The relevant case is *Shapiro v. Cantor,* 123 F. 3d 717 (2d 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. The Fourth Circuit uses the substantial-participation test. The relevant case is *In re Mutual Funds Inv. Litigation,* 566 F.3d 111 (2009).

Fifth Circuit. The Fifth Circuit uses the bright-line test. The relevant case is *AFFCO Inv. 2001 LLC v. Proskauer Rose LLP,* 625 F.3d 185 (5th Cir. 2010).

Eighth Circuit. The Eighth Circuit uses the bright–line test. The relevant case is *In re Charter Commc'ns, Inc. Sec. Litig.,* 443 F.3d 987, 992 (8th Cir. 2006).

Ninth Circuit. The Ninth Circuit uses the substantial-participation test. The relevant case is *Howard v. Everex Systems, Inc.,* 228 F.3d 1057, 1061 n.5 (9th Cir. 2000).

Tenth Circuit. The Tenth Circuit uses the bright–line test. The relevant case is *Anixter v. Home-State Production Co.,* 77 F. 3d 1215 (10th Cir. 1996).

Eleventh Circuit. The Eleventh Circuit uses the bright-line test. The relevant case is *Ziemba v. Cascade Intern., Inc.,* 256 F.3d 1194, 1205 (11th Cir. 2001).

Supreme Court Opinion. The Supreme Court's decision in *Janus* was 5–4. The majority opinion was written by Justice Clarence Thomas.

A3. Details on Additional Court Cases and Variables Included in the Analysis

Table A1 displays descriptive detail, such as citation counts 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. Table A2 provides definitions of the variables used in the multivariate regressions.

Table A1
Descriptive Details for Supreme Court Opinions

	Dura v. Broudo	*Tellabs, Inc. v. Makor*	*Stoneridge v. Scientific-Atlanta*	*Janus v. First Derivative*
Citation	544 U.S. 336 (2005)	551 U.S. 308 (2007)	552 U.S. 148 (2008)	564 U.S. 135 (2011)
Granted	June 28, 2004	January 5, 2007	March 26, 2007	June 28, 2010
Argued	January 12, 2005	March 28, 2007	October 9, 2007	December 7, 2010
Decided	April 19, 2005	June 21, 2007	January 15, 2008	June 13, 2011
Citations:				
Federal court decisions	3,063	5,458	801	356
Court documents	3,922	4,409	1,051	696
Law reviews	571	505	495	152
Treatises	31	78	68	52
Citations including "Auditor":				
Federal court decisions	455	577	207	91
Court documents	925	1,051	302	174
Law reviews	192	167	209	66
Treatises	16	17	22	16

Table A2

Definitions of the Variables Used in the Multivariate Regressions

Variable	Definition	Source
Allow 10b	A dummy variable equal to one if the plaintiff brought a Rule 10b-5 claim against the auditor and the court denied the auditor's motion to dismiss, thus allowing the claim to proceed, and zero otherwise	Bloomberg Law
Book-to-Market Ratio	Ratio of a firm's book value to its market value; book value is calculated as the sum of stockholders' equity and investment tax credit (if available) minus the book value of preferred stock; if those variables are not available, it is calculated as book value of common equity plus the par value of preferred stock; if those variables are not available, it is calculated as assets minus liabilities; market value is the value of the firm's equity at the close of the prior fiscal quarter	
Duration	Number of days from when lawsuit was filed until it was dismissed or settled	Institutional Shareholder Services (FederalFilingDate and FinalSettlementDate columns); Bloomberg Law
Dismiss 10b	A dummy variable equal to one if the plaintiff brought a Rule 10b-5 claim against the auditor and the court dismissed it on a ruling on a motion to dismiss and zero otherwise	Bloomberg Law
Equity Issuance	A dummy variable equal to one if the lawsuit pertains to a public offer of securities and zero otherwise	Institutional Shareholder Services
Growth	Percentage growth in revenue over the fiscal year during which the lawsuit was filed	Compustat
High Litigation	A dummy variable equal to one if the firm is in one of the following standard industrial classifications (as in Francis, Philbrick, and Schipper 1994): 2833–2836, 3570–3577, 3600–3674, 5200–5961, 7370–7374, or 8731–8734	
IPO	A dummy variable equal to one if the lawsuit relates to an initial public offering and zero otherwise	Institutional Shareholder Services
Leverage	Total debt divided by total assets for the most recently completed fiscal quarter	Compustat
Ln(Assets)	Log of total assets for the most recently completed fiscal year or fiscal quarter	Compustat
Ln(Auditor Settlement)	Log of total settlement paid by auditor plus 1; dismissed cases are recorded as $0 settlements; hand collected from court filings available on Bloomberg Law	Bloomberg Law
Ln(Class Period Length)	Log of the number of business days in the class period plus 1	Bloomberg Law
Ln(Market Value)	Log market value (in millions of dollars) for the most recently completed fiscal quarter	Compustat

Nine-Eleven	A dummy variable equal to one if the firm's primary address is in the Ninth or Eleventh Circuits (Arkansas, Alaska, Arizona, California, Florida, Georgia, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington) and zero otherwise	Compustat
Post-*Tellabs*	A dummy variable equal to one if the lawsuit was filed after June 21, 2007 (the date of the Supreme Court's decision in *Tellabs*), and zero otherwise	
Price Drop	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	Ratio of the amount an auditor paid to settle a lawsuit relative to the amount paid by all nonauditor defendants; if the claims were dismissed against all defendants (a payout of $0), it is recorded as zero; if the claims were dismissed against the nonauditor defendants but the auditor paid a settlement, it is recorded as one	
ROA	Net income before taxes and extraordinary items divided by total assets for the most recently completed fiscal year	Compustat
Severe Restatement	A dummy variable equal to one if the restated earnings and the cumulative effect of the restatement was 10 percent or more of net income (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 Action	A dummy variable equal to one if the lawsuit relates to a Securities and Exchange Commission enforcement action and zero otherwise	Institutional Shareholder Services
Share Turnover	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)	Audit Analytics (2012)
S&P 1500	A dummy variable equal to one if the firm was included in the S&P 1500	Compustat
SD Returns	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	A dummy variable equal to one if the case was litigated in the Second or Third Circuit courts (Tables 2–7) or if the firm's primary address in is in the Second or Third Circuits (New York, Vermont, Connecticut, Delaware, New Jersey, and Pennsylvania) and zero otherwise (Tables 8 and 9)	Compustat

A4. Duration and Resolution of the Cases

Table A3
Resolution of Cases Filed against Auditors

		Resolved	
	Defendants	*N*	%
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

Note. 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.

Table A4
Duration of Cases by Litigation Outcome

	Mean	Median	*N*	*t*-Statistic
Motion to dismiss Rule 10b-5 claim:				
Granted	1,329	1,217	101	
Denied	1,651	1,506	104	
Granted versus denied				3.3007
Motion to dismiss Section 11 claim:				
Granted	1,345	1,119	38	
Denied	1,504	1,329	56	
Granted versus denied				1.0239
Settled for a nonzero amount:				
Yes	1,428	1,258	251	
No	1,203	1,025	95	
Yes versus no				−2.7082

Note. Duration is defined as the number of days from filing to settlement or dismissal.

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