

**The Supreme Court's Impact on Securities Class Actions:
An Empirical Assessment of *Tellabs***

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Abstract

Using a sample of securities fraud class actions filed between 2003 and 2007, we study the impact of a widely-followed Supreme Court decision from that period, *Tellabs, Inc. v. Makor Issues & Rights, Ltd.* This decision clarified the law with respect to one of the most contested issues in securities litigation: pleading scienter. The *Tellabs* decision reversed a lenient Seventh Circuit decision for pleading scienter, but replaced it with a standard that is nonetheless relatively generous to plaintiffs. Looking at opinions resolving motions to dismiss decided before and after that decision, we find that *Tellabs* correlates with a significantly lower dismissal rate in circuits previously applying a higher preponderance standard in determining scienter, including the Ninth Circuit. We also find that the number of dismissal decisions before defendants obtain a final motion to dismiss increased after *Tellabs* in the Ninth Circuit. Perhaps because of the greater difficulty and time involved in obtaining dismissal, *Tellabs* correlates with an increase in nuisance settlements in the Ninth Circuit. In contrast, *Tellabs* also correlates with a decrease in nuisance settlements in circuits that previously applied the more lenient Seventh Circuit standard. Overall, we conclude that *Tellabs* led to increased uniformity in pleading standards, but that increase in uniformity is driven primarily by a weakening of the standard in the Ninth Circuit.

Key words:

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1. Introduction

The Supreme Court is not all that interested in securities law; on average, it hears one securities case per year (Pritchard 2003). The Court's inattention means that many areas of securities regulation are left to be developed by the lower courts and the SEC. In the field of securities class actions, that means mainly development by the district and appellate courts, with occasional *amicus* participation from the SEC. In recent years, however, the Supreme Court has taken a more active role in the area, loading up its still small securities docket with securities class actions. The impetus for this attention no doubt arises from the enactment of the Private Securities Litigation Reform Act of 1995 (PSLRA), a wholesale revision of securities class action practice, which gave rise to a host of interpretive questions.

In this paper, we assess the impact of the Supreme Court's recent decision in *Tellabs, Inc. v. Makor Issues & Rights, Ltd.*,¹ on lower court decisions. *Tellabs* is one of the Supreme Court's first efforts to grapple with the PSLRA.² The decision interprets the PSLRA's "strong inference" standard for pleading scienter—the defendants' state of mind—in Rule 10b-5 cases.³ The Supreme Court reversed a lenient Seventh Circuit decision for drawing inferences with respect to scienter, but replaced it with a standard that is nonetheless relatively generous to plaintiffs.

Tellabs addressed a question central to motion to dismiss practice in the lower courts.

¹ 551 U.S. 308 (2007).

² An earlier case, *Dura Pharmaceuticals, Inc. v. Broudo*, 544 U.S. 336 (2005), addresses the question of the plaintiffs' burden – for both pleading and proof – with respect to loss causation in Rule 10b-5 cases, that is, the required connection between the defendant's misrepresentation and the plaintiffs' losses. We touch upon *Dura* briefly below.

The Supreme Court interpreted the PSLRA again recently in *Stoneridge Investment Partners LLC v. Scientific-Atlanta, Inc.*, 128 S.Ct. 761 (2008). This decision is likely to have significant implications for secondary defendants, but it was handed down after our sample period, so we leave it for future work.

³ Exchange Act § 21D(b)(2).

Supreme Court and Securities Class Actions

The PSLRA makes the motion to dismiss the main event in securities fraud class actions, charging district courts with the task of gatekeeping: screening out meritless class actions at an early stage, while allowing meritorious actions to proceed. The evidence on how effective district courts are at doing this task is mixed, (Choi 2007; Johnson et al. 2007; Choi et al. 2009) but there can be little doubt that *Tellabs* will influence lower court judges as they undertake this sorting process. The strong inference scienter provision interpreted in *Tellabs* is central to Congress's efforts to screen out meritless class actions in enacting the PSLRA, and appellate courts have split in determining the height of the barrier it has created for plaintiffs pleading fraud (Grundfest & Pritchard 2002). Thus, *Tellabs* has the potential to affect significantly motion to dismiss outcomes.

To assess this possibility, we collect a sample of securities class action complaints filed from 2003 until the date of the *Tellabs* decision on June 21, 2007, along with the decisions resolving motions to dismiss in those cases, and settlements. We limit our sample to suits filed just prior to the *Tellabs* decision to avoid possible selection effects induced by *Tellabs* on suits filed after the decision. This sample allows us to observe directly the impact of *Tellabs* on case outcomes.

We find that the impact of *Tellabs* depends on the standard the specific circuit courts applied prior to the decision. We find that *Tellabs* correlates with a significantly lower dismissal rate in the Ninth Circuit, one of several circuits applying the more defendant-friendly "Preponderance" standard in determining scienter prior to *Tellabs*. *Tellabs* also correlates with an increase in the number of dismissal decisions before defendants are able to obtain a final dismissal in the Ninth Circuit, indicating greater defendant costs. We find that a higher

Supreme Court and Securities Class Actions

incidence of nuisance settlements among suits in the Ninth Circuit (and other Preponderance circuits) settled after *Tellabs*. In the circuits applying the more plaintiff-friendly “Reasonableness” standard prior to *Tellabs*, including the Third and Seventh Circuits, the incidence of nuisance suits decreased after the *Tellabs* decision. Because the Ninth Circuit handles the largest number of class actions, we conclude that *Tellabs*, although often characterized as a pro-defendant decision, may have in fact favored plaintiffs.

We proceed as follows. Part 2 describes the *Tellabs* decision and develops hypotheses relating to the effect of that decision in the different circuits. Part 3 describes the sample and provides descriptive statistics. Part 4 presents the results of our empirical tests of our hypotheses. Part 5 concludes.

2. Background and Hypotheses

2.1. *Tellabs*

Tellabs addressed the key provision in the PSLRA for weeding out frivolous “stock price drop” lawsuits: the strong inference standard for pleading scienter. That provision requires plaintiffs to “state with particularity facts giving rise to a strong inference that the defendant acted with the required state of mind.”⁴ Congress intended for the strong inference standard to give defendants the ability to eliminate frivolous securities fraud actions quickly at the motion to dismiss stage of litigation, instead of having to wait for summary judgment or trial. Because of the high costs – both direct (including attorney fees and discovery) and indirect (including distraction of management and negative reputational harm to the corporation) — of

⁴ Exchange Act § 21D(b)(2), 15 U.S.C. 78u-4(b)(2).

Supreme Court and Securities Class Actions

defending against a lawsuit, corporations face strong pressure to settle even weak cases to avoid drawn-out litigation. The PSLRA's discovery stay limits those costs by barring discovery prior to the resolution of the motion to dismiss. Providing defendants a quick and low cost way to eliminate weak cases bolsters defendants willingness to fight such lawsuits, rather than settle. At least until the motion to dismiss is resolved, most defendants will be unwilling to pay.

After the enactment of the PSLRA, the different circuits took divergent approaches in applying the strong inference standard. The Second Circuit relied on the legislative history and held that the PSLRA codified its pre-PSLRA pleading approach based on motive and opportunity and on recklessness.⁵ The Ninth Circuit also relied on the PSLRA's legislative history, but concluded that the statute raised the standard above that of the Second Circuit.⁶ Under the

⁵ *Novak v. Kasaks*, 216 F.3d 300, 311 (2000). The PSLRA's strong inference scienter provision was modeled after the standard applied in the Second Circuit prior to the PSLRA, which was generally regarded as the most stringent at the time. See S. Rep. No. 104-98, at 15 (1993), reprinted in 1995-96 U.S.C.C.A.N. 679, 694. Prior to the PSLRA, the Second Circuit had held that plaintiffs could meet the scienter standard in one of two ways. First, plaintiffs could plead that the defendants had the motive to commit fraud and the opportunity to do so. *Goldman v. Belden*, 754 F.2d 1059 (2d Cir. 1985). Although simplistic allegations of motive that could apply generally, such as keeping one's job, see *In re Crystal Brands Sec. Litig.*, 862 F. Supp. 745, 749 (D. Conn. 1994), were insufficient to meet the standard, other allegations of specific financial gain from a transaction were sufficient to state a claim—such as evidence of abnormal levels of insider trading. See *Goldman v. Belden*, 754 F.2d 1059, 1070 (2d Cir. 1985) (holding that allegations that defendants bullish statements to market were connected to significant stock sales met motive and opportunity test). Second, plaintiffs could meet the standard with circumstantial evidence of either recklessness or conscious behavior. See *San Leandro Emergency Med. Group Profit Sharing Plan v. Philip Morris Co.*, 75 F.3d 801 (2d Cir. 1996) (requiring plaintiffs seeking to meet recklessness standard to provide higher level of detail than that required under motive and opportunity test). Generally, this standard required plaintiffs to plead contemporaneous facts, conditions, or statements to show that the defendants knew or should have known that the alleged misstatement was misleading when made. See *Shields v. Citytrust Bancorp*, 25 F.3d 1124, 1129 (2d Cir. 1994) (rejecting allegations of fraud where plaintiffs failed to contrast public disclosure with contemporaneous internal document or data).

The Second Circuit has refined its explication of its scienter standard post-PSLRA. Now, rather than a two-prong test, the Second Circuit has set forth a list of the general types of allegations that will meet the heightened pleading standard for scienter. Synthesizing its own case law on the pleading standard, the Second Circuit held that plaintiffs can plead a strong inference of fraudulent intent by including sufficient allegations that the defendants: received concrete, personal benefits from the alleged fraud; participated in deliberately illegal behavior; knew or had access to facts "suggesting" that the public statements were inaccurate; or "failed to check information they had a duty to monitor." See *id.* at 311. This refined standard, of course, still leaves room for pleading based on motive and opportunity.

⁶ See *In re Silicon Graphics Inc. Sec. Litig.*, 183 F.3d 970, 974 (9th Cir. 1999).

Supreme Court and Securities Class Actions

higher Ninth Circuit pleading standard, plaintiffs had to plead, “at a minimum, particular facts giving rise to a strong inference of deliberate or conscious recklessness.”⁷ Most circuits, however, took a middle course in interpreting the strong inference standard, concluding that motive and opportunity allegations might suffice to support a strong inference of scienter, but courts would need to evaluate such allegations on a “case-by-case” basis.⁸

When the Supreme Court finally entered the fray over the interpretation of the strong inference standard in *Tellabs*, it did not resolve this longstanding split among the circuits over the stringency of the standard. Instead, it addressed a collateral, but related, issue on which the circuits had split: In considering whether the facts alleged by the plaintiff meet the strong inference standard, how should courts assess the allegations in the complaint and the different possible inferences with respect to scienter? In particular, should a court consider competing inferences arising from those facts?

Prior to the Supreme Court’s *Tellabs* opinion, the circuit courts split into three groups in assessing competing inferences when applying the strong inference standard. The First, Fourth, Sixth, and Ninth Circuits adopted a “preponderance” standard, requiring the inference that the defendants had the requisite scienter be the most plausible when compared with competing

⁷ *Id.*

⁸ *Greebel v. FTP Software, Inc.*, 194 F.3d 185 (1st Cir. 1999); *Ottman v. Hanger Orthopedic Group, Inc.* 353 F.3d 338 (4th Cir. 2003); *Nathenson v. Zonagen, Inc.*, 267 F.3d 400 (5th Cir. 2001); *In re Comshare, Inc. Sec. Litig.*, 183 F.3d 542 (6th Cir. 1999); *Makor Issues & Rights, Ltd. v. Tellabs, Inc.*, 437 F.3d 588 (7th Cir. 2006); *Fla. State Bd. of Admin v. GreenTree Fin. Corp.*, 270 F.3d 645 (8th Cir. 2001); *In re Silicon Graphics*, 183 F.3d 970 (9th Cir. 1999); *City of Philadelphia v. Fleming Cos.*, 264 F.3d 1245 (10th Cir. 2001); *Bryant v. Avado Brands, Inc.*, 187 F.3d 1271 (11th Cir. 1999).

The choice of scienter standard has important consequences: the Ninth Circuit, in adopting the most stringent standard post-PSLRA, also substantially increased its dismissal rate. In an earlier study, Pritchard and Sale (2005) found that Ninth Circuit courts dismissed cases at a 63% rate, while Second Circuit courts dismissed only 36%.

Supreme Court and Securities Class Actions

inferences that the defendants did not have scienter (Preponderance).⁹ Combined with the Ninth Circuit's higher deliberate or conscious recklessness scienter standard, this standard made it easier for defendants to obtain dismissal in the Ninth Circuit. The Second, Eighth, Tenth, and Eleventh Circuits required that the inference that the defendants acted with the requisite scienter must be at least equally plausible with competing inferences (Equal Inference).¹⁰ Finally, the Third and Seventh Circuits followed the most plaintiff-friendly approach, adopting the "reasonableness" standard that did not require any assessment of competing inferences, looking only at the plausibility of the plaintiff's allegations (Reasonableness).¹¹ Under the Seventh Circuit's reasonableness standard as set forth in *Makor Issues & Rights, Ltd. v. Tellabs, Inc.* (the lower court opinion before the Supreme Court in *Tellabs*), a complaint should survive "if it alleges facts from which, if true, a reasonable person could infer that the defendant acted with the required intent."¹²

The Seventh Circuit standard faced an uphill fight in the Supreme Court. The government's *Tellabs* brief argues that the Seventh Circuit's reasonableness standard would have made Congress's effort in enacting the scienter standard toothless, as it would mean reverting to pre-PSLRA standards under Rule 9(b) of the Federal Rules of Civil Procedure.¹³

Justice Ginsberg, writing for the *Tellabs* majority, rejected that reasonableness standard,

⁹ In re Credit Suisse First Boston Corp., 431 F.3d 36 (1st Cir. 2005); Ottman v. Hanger Orthopedic Group, Inc., 353 F.3d 338 (4th Cir. 2003); Helwig v. Vencor, Inc., 251 F.3d 540 (6th Cir. 2001); Gompper v. VISX, Inc., 298 F.3d 893 (9th Cir. 2002).

¹⁰ Acito v. IMCERA Group, Inc., 47 F.3d 47 (2d Cir. 1995); Rosenzweig v. Azurix Corp., 332 F.3d 854 (5th Cir. 2003); Fla. State Bd. Of Admin v. Gree Tree Fin. Corp., 270 F.3d 645 (8th Cir. 2001); Pirraglia v. Novell, Inc., 339 F.3d 1182 (10th Cir. 2003); Garfield v. NDC Health Corp., 466 F.3d 1255 (11th Cir. 2006).

¹¹ In re Suprema Specialties, Inc. Sec. Litig., 438 F.3d 256 (3rd Cir. 2006).

¹² 437 F.3d 588, (7th Cir. 2006).

¹³ Id. at *23 (arguing that "the court of appeals' standard appears to be equivalent to the standard that it (and some other courts of appeals) had applied *before* the enactment of the Reform Act, under which a complaint was sufficient if the plaintiff pleaded facts that supported at least a *reasonable* inference of state of mind.").

Supreme Court and Securities Class Actions

instead requiring a comparative inquiry: “A complaint will survive, we hold, only if a reasonable person would deem the inference of scienter cogent and at least as compelling as any opposing inference one could draw from the facts alleged.”¹⁴ Ties go to the plaintiff, but the plaintiff, as the master of the complaint, must show that the inference of fraudulent intent is at least as likely as an innocent one. Thus, the Supreme Court in *Tellabs* chose the intermediate Equal Inference standard, rejecting both the Reasonableness and Preponderance standards.¹⁵

2.2 Hypotheses

2.2.1. Likelihood of dismissal

Tellabs lowered the standard for complaints in the Ninth Circuit and other Preponderance circuits, but raised it in Reasonableness circuits. We accordingly posit the following hypothesis on the effect of *Tellabs*.

Hypothesis 1: Ninth Circuit and other courts previously applying the Preponderance standard will be less likely to dismiss complaints based on scienter grounds post-*Tellabs*. Courts previously applying the Reasonableness standard should be more likely to dismiss complaints based on scienter grounds post-*Tellabs*.

One can wonder whether much difference exists between the Equal Inference standard and the Preponderance standard. In theory, the two differ only when there is a tie between competing inferences. The Equal Inference standard awards ties to the plaintiffs, leading to a rejection of the defendants’ motion to dismiss on scienter grounds; the Preponderance

¹⁴ *Tellabs*, 127 S.Ct. at 2510.

¹⁵ Brief for the United States as Amicus Curiae Supporting Petitioners, *Tellabs, Inc. v. Makor Issues & Rights, Ltd.*, No. 06-484, 2007 WL 460606, at *26 (arguing that “if the alleged facts give rise to two seemingly equally strong competing inferences, a court must conclude that the inference of scienter is not itself strong.”) (citations and quotation marks omitted).

Supreme Court and Securities Class Actions

standard awards ties to the defendants, leading to a dismissal. As Justice Scalia noted in his *Tellabs* concurrence, the difference between the equal inference and preponderance standards is likely to be determinative in only a small fraction of cases: “How often is it that inferences are precisely in equipoise?”¹⁶ Given the limited change to the law effected by *Tellabs* in most circuits, would it make any difference to outcomes?

Contrary to Justice Scalia, we think that it might. We conjecture that the difference between the Preponderance and Equal Inference standard is significant. When courts are able to assess the probabilities of competing inferences with mathematical precision (for example 50.1% versus 49.9%), ties will be rare, as Justice Scalia suggests. Determining the probability for a particular inference is more ambiguous in practice, however, as judges must wrestle with uncertainty. Faced with two inferences of uncertain magnitude, we posit that judges will often not be sure which inference is more likely than the other, leading to a relatively large number of perceived ties. In those cases, the difference between the Equal Inference and Preponderance standards may be outcome determinative.

Tellabs' influence may be broader than that. The decision may have sent a cautionary message to judges making motion to dismiss decisions in Preponderance standard circuit courts, particularly in the Ninth Circuit. The Ninth Circuit's higher deliberate or conscious recklessness standard of scienter was theoretically untouched by the *Tellabs* holding. Nonetheless, the *Tellabs* decision may have resulted in a spillover effect leading judges to effectively reduce the scienter standard itself.

¹⁶ *Tellabs*, 127 S. Ct. at 2514.

Supreme Court and Securities Class Actions

2.2.2. Number of dismissal decisions

We are also interested in the effect of *Tellabs* on judges' willingness to allow plaintiffs the opportunity to replead. Judges usually do not make a final decision on the first motion to dismiss. Instead, judges that dismiss a complaint will give the plaintiffs leave to amend. Plaintiffs are given a chance to remedy the defect in the complaint and thus survive the motion to dismiss. We hypothesize the following:

Hypothesis 2: Ninth Circuit and other courts previously applying the Preponderance standard will take longer to dismiss complaints with prejudice post-*Tellabs*. Courts previously applying the Reasonableness standard should dismiss complaints with prejudice sooner post-*Tellabs*.

To the extent *Tellabs* sent a message to judges in the Ninth Circuit and other Preponderance circuits to be more lenient in their treatment of plaintiffs in dismissal motions, we conjecture that this message will spill over to how many chances judges give to plaintiffs. We therefore predict that judges in Preponderance circuits will, in addition to lowering their standard for when a competing inference is deemed to meet the scienter standard, also be more willing to give plaintiffs a second chance to revise their complaints. Thus, there will be a greater number of motion to dismiss decisions for any given case. Consequently, dismissed cases will take a longer time to resolve. Conversely, *Tellabs* sends the opposite message to judges in the previously more lenient Reasonableness circuits, telling those judges to toughen not only their standards in judging competing inferences, but also to be less willing to give plaintiffs a second chance to amend the complaint to correct deficiencies. That should lead to quicker final dismissal decisions in those circuits.

Supreme Court and Securities Class Actions

2.2.3. Nuisance settlements

We now turn to the effect of *Tellabs* on settlements. The next proposition follows directly from the last two: if defendants find it more difficult to obtain a dismissal with prejudice, or if it takes longer to obtain that dismissal, they will be more willing to settle even weak cases in order to avoid the costs of litigation.

Hypothesis 3: Defendants in Ninth Circuit and other courts previously applying the Preponderance standard will be more likely to pay nuisance settlement amounts post-*Tellabs*. Defendants in courts previously applying the Reasonableness standard should be less likely to pay nuisance settlement amounts post-*Tellabs*.

The strongest pro-plaintiff impact of *Tellabs*, we conjecture, should be for the Ninth and other circuits applying the Preponderance standard. After *Tellabs*, motions to dismiss in the Preponderance circuits will be both more difficult to obtain for defendants and take longer to resolve. If these conjectures are correct, defendants should be more willing to settle even weak cases to avoid the cost of litigating such claims. Second and third chances lead to greater delay and corresponding litigation costs. In contrast, defendants should benefit from *Tellabs* in for the Reasonableness standard circuits. Defendants in those circuits will find it easier and faster to obtain dismissal after *Tellabs*; they should be less willing to settle weak claims.

3. Sample and Descriptive Statistics

3.1 Sample

To test our hypotheses, we construct our sample based on securities class actions filed from 2003 to mid-2007 (right before the *Tellabs* decision on June 21, 2007) from the Stanford

Supreme Court and Securities Class Actions

Securities Clearinghouse.¹⁷ Thus, all of the cases in our sample were filed pre-*Tellabs*, but many of the decisions resolving motions to dismiss those cases were handed down both before and after *Tellabs*. The strength of our data set is that this time period minimizes any selection effects that follow from the *Tellabs* decision. We are able to observe directly the impact of *Tellabs* on the motion to dismiss decision without having to take into account any shift in the mix of cases appearing before the court. It precludes us, however, from testing in this study how plaintiffs' attorneys responded to *Tellabs* in their decision to file suit.

Our sample is almost the entire population of securities class actions during the sample period. We limit our sample, however, to cases in which an allegation of fraud was made under Rule 10b-5 of the Securities Exchange Act of 1934, which is necessary to trigger the strong inference provision. We include public offering cases (§ 11 of the Securities Act) and proxy cases (§ 14 of the Exchange Act) if a Rule 10b-5 claim is made as well. We exclude cases in which financial firms (SIC 6000 to 6999) are the primary defendant because of the different regulatory regime that applies to them.

[Insert Table 1 About Here].

Table 1 shows that the lawsuit filings were distributed relatively equally across our sample period; there is some tapering off in 2006 and 2007. Looking at the frequency of lawsuit by circuit, we find that the Ninth Circuit, the circuit with the most stringent standard for pleading scienter, stands head-and-shoulders above its peers with 26.5% of the lawsuits.

Looking at suit outcomes, we see that half of the cases are settled (50.1% of the cases), but dismissal with prejudice is not far behind (37.5%). If dismissal with prejudice is combined

¹⁷ The sample is based on the dataset in Choi (2009).

Supreme Court and Securities Class Actions

with voluntary dismissal, close to half of the cases end up being dismissed in some manner. Thus, plaintiffs' lawyers are taking on substantial risk in these cases – a one in two chance of recovery – although that risk may not be evenly distributed across all cases. Notably, only a trivial percentage of cases are resolved through summary judgment or trial. These findings confirm that the motion to dismiss is the main event for most defendants; if they fail to prevail at this point, settlement is likely. Comparing the Ninth Circuit with the other circuits, we see that settlement is slightly less likely in the Ninth Circuit.

3.2 Control Variables

Descriptive statistics regarding the cases are presented in Table 2. We use the following set of variables in each of our multivariate models as controls (collectively referred as “Case Controls”). From the complaints, we collect information about the causes of action alleged and use indicator variables for the cause of action.¹⁸ All of our cases were selected to include a Rule 10b-5 cause of action (the base category). Eleven percent of the cases also allege a § 11 claim under the Securities Act of 1933 (Section 11). Section 11 is available only for material misstatements and certain omissions in the registration statement used in a public offering, but it allows for a substantially greater chance of surviving the motion to dismiss because § 11 does not require plaintiffs to plead fraudulent intent. Moreover, loss causation and due diligence are affirmative defenses. Claims under § 14 of the Exchange Act relating to misstatements in a proxy statement also carry an easier standard for state of mind and loss causation (Section 14),

¹⁸ For each class action, we collected data from the last filed consolidated class complaint. When a consolidated complaint was not available, we collected data from the last filed complaint on file with the Stanford Securities Class Clearinghouse.

Supreme Court and Securities Class Actions

but these are found in a much smaller percentage of the sample. Most suits allege solely Rule 10b-5 violations.

[Insert Table 2 About Here].

We collect information on key aspects of the litigation from the last amended complaint available for each class action.¹⁹ The presence of the information in the complaint indicates that the plaintiffs found the information useful in meeting the pleading standards. We include in our Case Controls indicator variables for SEC and other government investigations (Govt. Investigation) and accounting restatements (Restatement) as described in the complaints. These are both high profile adverse events and the most common events triggering these suits. The presence of a government investigation or a restatement indicates a higher likelihood of wrongdoing and thus a stronger case for the plaintiffs. The overall strength of the case will also be bolstered if the firm has terminated a top officer including the Chief Executive Officer, Chief Operating Officer, and Chief Financial Officer (Officer Term.) or its auditor (Auditor Term.) due to events relating to the fraud in question as described in the complaints.

We also include variables in our Case Controls relating to the firm-specific characteristics of the defendant issuer. We include a measure of firm size, measured as market value of equity measured at the end of the fiscal year preceding the beginning of the class period (Market Capitalization). Larger firms may have greater resources to defend against a class action. On the other hand, larger firms may also be better able to pay a settlement, leading to more vigorous prosecution of the case by plaintiffs' attorneys. We also include two industry controls that may relate to case strength and loss causation. Firms in the high technology sector (High

¹⁹ As described in Choi (2009), the complaints and other securities docket related documents were collected from the PACER online website.

Supreme Court and Securities Class Actions

Tech) may have stock prices that are particularly vulnerable to declines in sales or earnings. Firms in pharmaceuticals and medical devices may experience steep stock price declines if the Food and Drug Administration denies approval of their new products. To capture this effect, we include an indicator variable (FDA) equal to 1 if the last amended complaint for the class action contains allegations based on U.S. Food and Drug Administration-related disclosures and 0 otherwise.

We also collect data for our Case Controls relating to the use of confidential witnesses in the complaints in our sample (Confidential). This data is collected from the first complaint after the selection of the lead plaintiff. Since the cases were all selected prior to the *Tellabs* decision, we are unable to test the impact of *Tellabs* on confidential witness use. Nonetheless, this data may offer insights on the quality of the complaints filed in the different circuits. We find that complaints filed in the Ninth Circuit are somewhat less likely to rely on confidential witnesses, but the difference is not significant at conventional levels (p -value=0.134).

For our tests focusing on dismissals based on a lack of scienter, we include a set of variables relating to the allegation of defendant motive in the complaint (referred to as the “Motive Variables”). We collect allegations from the last amended complaint in the litigation relating to motive for the fraud and the triggering event for its revelation. Motive allegations are typically intended to help satisfy the scienter requirement. Insider trading is by far the most common motivation alleged (Insider Trading). Other motive allegations that may lead an issuer to hype its shares are executive bonus compensation (Bonus) and the intention of the issuer to offer securities (Offering), to use their stock as consideration for acquisitions (Acquisition), or to merge with another company in a stock merger (Merger).

Supreme Court and Securities Class Actions

Table 3 presents descriptive statistics relating to the rationale for dismissing the complaint. Scierer, the issue addressed by *Tellabs*, is far and away the most commonly invoked argument for dismissing complaints, with 43.6% of dismissal motions resulting in a dismissal based at least partly on a lack of scierer finding. The same argument is rejected in nearly a quarter of dismissal decisions.

[Insert Table 3 About Here].

4. Empirical Tests

4.1 Scierer as Grounds for Dismissal and *Tellabs*

We start with a test of whether *Tellabs* affected dismissal decisions based on scierer (Hypothesis 1). Judges often will allow plaintiffs to amend their complaints after a dismissal. We limit our sample here to dismissal decisions based on scierer in the final motion to dismiss listed in the securities docket for each of our class actions. We define an indicator variable Scierer equal to 1 if the final motion to dismiss decision ordered dismissal (at least partially) based on a failure to plead scierer with particularity and equal to 0 if the decision denied dismissal based on scierer either completely or partially (indicating that the lawsuit is allowed to continue at least to some defendants).²⁰ To divide our set of final dismissal decisions based on the timing of the *Tellabs* decision, we define an indicator variable Post-*Tellabs* Dismissal equal to 1 if the final dismissal decision occurred after the *Tellabs* decision and 0 otherwise.

²⁰ Having at least part of the class action suit continue is important in that it provides plaintiffs' attorney a credible threat to continue with the litigation, thereby putting pressure on defendants who desire to avoid the direct and indirect costs of defending against litigation to settle.

Supreme Court and Securities Class Actions

Panel A of Table 4 reports a comparison of final dismissals based on scienter before and after the *Tellabs* decision. Consistent with Hypothesis 1, the fraction of scienter dismissals increased in Reasonableness circuits from 0.500 to 0.692 after *Tellabs* (although the difference is not significant). Also consistent with Hypothesis 1, the fraction of scienter dismissals decreased from 0.698 to 0.452 in Preponderance circuits (difference significant at the 1% level). Moreover, in the Ninth Circuit (the Preponderance circuit with the most stringent scienter standard), the fraction of scienter dismissals went from 0.793 down to 0.429 (difference significant at the 1% level).

To control for other factors that may affect the likelihood of a dismissal, we estimate a logit model, with the dependent variable *Scienter*. We construct variables capturing the standard for drawing inferences used in the circuits prior to *Tellabs*. Our base category for drawing inferences is the Equal Inference standard ultimately adopted by the Supreme Court, so we include indicator variables for the Reasonableness standard adopted by the Seventh Circuit in *Tellabs* (also used in the Third Circuit), and the Preponderance standard advocated by Justices Scalia and Alito (adopted in the First, Fourth, Sixth, and Ninth Circuits). We use these variables, along with the *Post-Tellabs* Dismissal variable and interaction variables for each. We also include the Case Control variables, and Motive Variables for the scienter alleged in the complaint (Insider Trading, Bonus, Offering, Acquisition, and Merger).

Our sample is potentially biased because we look at only cases filed prior to *Tellabs*, but examine dismissal decisions and outcomes that occur both prior and after *Tellabs*. The time available for a case to resolve prior to *Tellabs* is truncated at the date of the *Tellabs* decision (June 21, 2007). The time available for a case to resolve after *Tellabs*, in contrast, is not

Supreme Court and Securities Class Actions

truncated. As a result, the cases that are finally dismissed after *Tellabs* may take systematically longer to resolve than those resolved prior to *Tellabs*. To the extent dismissal time correlates with case strength or complexity, our models will have an omitted variable bias if our control variables do not otherwise capture case strength or complexity. Accordingly, we include the number of days between the final motion to dismiss order date and the date the first suit related to the litigation was filed (Dismissal Time) to control for differences in time to dismissal between our Pre-*Tellabs* Dismissal and Post-*Tellabs* Dismissal samples.²¹

$$\begin{aligned} \text{Scienter}_i &= \alpha + \beta_{1i} \text{Post-} \textit{Tellabs} \text{ Dismissal}_i + \beta_{2i} \text{Reasonableness}_i \\ &+ \beta_{3i} \text{Reasonableness} \times \text{Post-} \textit{Tellabs} \text{ Dismissal}_i \\ &+ \beta_{4i} \text{Preponderance}_i + \beta_{5i} \text{Preponderance} \times \text{Post-} \textit{Tellabs} \text{ Dismissal}_i \\ &+ \sum \beta_{ki} \text{Case Controls}_{ki} + \sum \beta_{ji} \text{Motive Variables}_{ji} + \text{Dismissal Time}_i + \varepsilon_i \end{aligned}$$

We present the results in Panel B of Table 4 as Model 1. These results show the impact of *Tellabs* is primarily in the circuits that had previously applied the Preponderance standard. Those circuits were significantly more likely to dismiss prior to *Tellabs*, with a positive coefficient on the Preponderance variable that is significant at the 5% level. Measured at the mean of the independent variables, a class action in a Preponderance circuit increases the probability of a dismissal with prejudice by 21.6% relative to the base category of Equal Inference circuits. The interaction variable is negative and significant at the 1% level, indicating that after *Tellabs*, the chance of dismissal in Preponderance circuits relative to Equal Inference

²¹ There are also possible selection effects. We only observe cases that are filed. If the decision to file a suit is correlated with the relationship between lead plaintiff composition and selection and attorney agency costs, then our results may be biased. Nonetheless, in an analysis of case outcomes (high value settlement versus nuisance-level settlements or dismissal), Choi (2007) reports no qualitative change in his results when controlling for the decision to file selection effect. Plaintiffs' attorneys also have a choice of forum. Cox, Thomas, and Bai (2008), however, report that most forum selection decisions are largely driven by geographical convenience and are thus unlikely to be correlated with the variables of interest in this paper.

Supreme Court and Securities Class Actions

circuits diminished. *Tellabs* has achieved substantially greater uniformity in the application of the pleading standard. The sum of Preponderance and Preponderance x Post-*Tellabs* Dismissal is negative and significant at the 10% level, indicating that after *Tellabs*, if anything, a class action in a Preponderance circuit has a decreased probability of dismissal relative to Equal Inference circuits.

[Table 4 About Here]

Even among the Preponderance circuits, the Ninth Circuit is an outlier in two ways. The Ninth Circuit deals with over a quarter of all class action in our sample, making it by far the highest volume circuit. The Ninth Circuit also applied the deliberate and conscious recklessness standard, the most stringent scienter standard. Any spillover effect from *Tellabs* on courts' application of their scienter standard will therefore benefit plaintiffs the most in Ninth Circuit cases. In order to assess the impact of *Tellabs* on the Ninth Circuit, we run one model with just cases from that circuit, eliminating the Reasonableness and Preponderance circuit related variables (Model 2). *Tellabs* seems to have diminished the Ninth Circuit's propensity to dismiss. Post-*Tellabs* Dismissal is negative and significant at the 1% level in the regression for the Ninth Circuit sub-sample (Model 2). Measured at the mean of the independent variables, a class action in the Ninth Circuit after the *Tellabs* decision has a 68.6% decreased probability of a dismissal with prejudice relative to a class action in the Ninth Circuit prior to the *Tellabs* decision.

In our last model, we estimate the model for the entire sample replacing the Reasonableness and Preponderance circuit related variables with an indicator variable for the Ninth Circuit and an interaction term for Ninth Circuit x Post-*Tellabs* Dismissal (Model 3). In the

Supreme Court and Securities Class Actions

overall sample, the variable for Ninth Circuit is positive and significant at the 1% level, indicating that prior to *Tellabs*, class actions were more likely to be dismissed in the Ninth Circuit relative to all other circuits (Model 3). Measured at the mean of the independent variables, a class action in the Ninth Circuit prior to the *Tellabs* decision has a 32.2% increased probability of a dismissal with prejudice relative to a class action in the other circuits. In contrast, the interaction variable in Model 3 for the Ninth Circuit and Post-*Tellabs* Dismissal is negative and significant at the 1% level and the sum of Ninth Circuit + Ninth Circuit x Post-*Tellabs* Dismissal is not significantly different from zero, indicating that class actions after the *Tellabs* decision in the Ninth Circuit do not have a significantly different probability of dismissal relative to actions in other circuits.²² Thus, *Tellabs* appears to have had its most substantial effect reducing the propensity of circuits to dismiss on scienter grounds in circuits previously applying the Preponderance standard, and in particular, the Ninth Circuit.

We ran a number of robustness tests controlling further for possible differences in dismissal time between our Pre and Post-*Tellabs* Dismissal samples,²³ possible changes in the

²² Most of the Case Controls in Table 4 are not significantly different from zero. The coefficient on Government Investigation is negative and significant in Models 1 and 3, indicating that the presence of a Government Investigation makes it less likely that a case will get dismissed on scienter grounds. The coefficient on Restatement is negative and significant in Model 2, indicating that a restatement correlates with decreased probability of dismissal on scienter grounds in the Ninth Circuit. The coefficient on High Tech is positive and significant at the 10% level in Model 2, indicating that Ninth Circuit courts are more likely to dismiss cases involving high technology companies. The correlation between the probability of dismissal and market capitalization is mixed. The coefficient on the log of market capitalization is positive and significant at the 10% level in Model 1 but is negative and significant at the 10% level in Model 2. Except for the Merger motive variable (which is positive and significant at the 5% level in Model 2), none of the motive variables are significantly different from zero.

²³ We include Dismissal Time in the regression models in Table 4 to control for differences in dismissal time between cases in our Pre-*Tellabs* Dismissal and pPst-*Tellabs* Dismissal samples. As a robustness test, we control for the possibility that Post-*Tellabs* Dismissal cases may systematically contain longer to resolve cases compared with the Pre-*Tellabs* Dismissal cases by re-estimating the models of Table 4 using Post-*Tellabs* First Dismissal instead of Post-*Tellabs* Dismissal. Including only cases that had their first dismissal decision after *Tellabs* in the Post-*Tellabs* sample (Post-*Tellabs* First Dismissal) reduces the possibility that our construction of the Post and Pre-*Tellabs* samples leads to systematically longer length cases in the Post-*Tellabs* period. We exclude cases where the

Supreme Court and Securities Class Actions

mix of cases plaintiffs' attorneys filed in anticipation of the *Tellabs* decision,²⁴ and the impact of the lead counsel and lead plaintiffs on litigation results.²⁵ We also estimate models using

first dismissal occurred prior to the *Tellabs* decision and the final dismissal motion occurred after *Tellabs*. Unreported, we obtain the same qualitative results as the models in Table 4.

As an additional robustness test, we match each Post-*Tellabs* Dismissal case with a Pre-*Tellabs* Dismissal case with a resolution time within 30 days within the resolution time of the Post-*Tellabs* Dismissal case. We exclude any Post-*Tellabs* Dismissal case without a match, leaving 210 Pre and Post-*Tellabs* Outcome cases. We then re-estimated the models in Table 4 solely for the matched Pre and Post-*Tellabs* Dismissal cases. We obtain qualitatively the same results as in Model 1 of Table 4 except that the coefficient on Preponderance in Model 1, although still positive is now significant only at the 18.0% level; the coefficient on Preponderance x *Tellabs* Dismissal is negative and significant at the 5% level. In Model 2, the coefficient on *Tellabs* Dismissal in Model 2 while negative is now significant at only the 14.8% level. In Model 3, the coefficient on Ninth Circuit in Model 3 is still positive but now significant at only the 17.7% level; the coefficient on Ninth Circuit x *Tellabs* Dismissal is negative and significant at the 5% level, indicating a reduction in the probability of dismissal based on scierter in the Ninth Circuit relative to other circuits after *Tellabs*.

²⁴ As a robustness test to control further for possible selection effects due to the prospect of the *Tellabs* decision affecting filing decisions even before the *Tellabs* ruling on June 21, 2007, we exclude cases that were filed after the Supreme Court granted *certiorari* on January 5, 2007 and re-estimated the models in Table 4. Unreported, we obtained qualitatively the same results as in Table 4.

²⁵ We track variables relating to the lead plaintiffs and their attorneys. These data are obtained from Choi (2009). This data only tracks lead plaintiffs and their selected lead counsel. As a result, the data exists only for securities class actions where the litigation reached the lead plaintiff and lead counsel stage. Because we lack data on the lead plaintiff and selected lead counsel for cases that are dismissed or settled prior to the selection of the lead plaintiff, we use these variables only for robustness tests. We construct an indicator variable for the presence of only institutions as lead plaintiff (All Institutional Lead Plaintiff). Institutional lead plaintiffs may have greater ability in monitoring plaintiffs' attorneys and bring only stronger cases. We also construct an indicator variable for the most experienced securities class action firms that act as lead counsel (Top Attorney). Attorneys more experienced in class actions may have different selection criteria for the cases that they bring or may have greater resources to bring to bear in investigating fraud and drafting complaints. These differences may affect probability of dismissal.

We added the Top Attorney and All Institutional Lead Plaintiff variables to assess the importance of attorney and lead plaintiff expertise (and selection) to the three models in Table 4. Unreported, neither variable is significant in the models. The results of the robustness models differ somewhat from those in Table 4. While the coefficient on Preponderance is still positive and significant at the 5% level, the coefficient on Post-*Tellabs* x Preponderance is no longer significant in Model 1. The coefficient on Post-*Tellabs* for the Ninth Circuit-only subset (Model 2) is not significantly different from zero. Model 3's results are similar as those in Table 4. While the coefficient on Ninth Circuit is still positive and significant at the 1% level, the coefficient on Post-*Tellabs* x Ninth Circuit is negative and significant at only the 10% level Model 3. The models with Top Attorney and All Institutional Lead Plaintiff suffer from a possible selection issue—data on the lead plaintiff and lead counsel exist only for cases that survive to the lead plaintiff selection stage of litigation. We also add Top Attorney and an indicator variable for whether any of the lead plaintiffs was an institutional lead plaintiff (Any Institutional Lead Plaintiff) to the models in Table 4. Unreported, the models resulted in the same qualitative results as the robustness models with the Top Attorney and All Institutional Lead Plaintiff variables.

Supreme Court and Securities Class Actions

variations of our definition of a scienter dismissal.²⁶ Although we find some differences with these robustness tests, the results were largely consistent with the results in Table 4.

4.2 Litigation Duration and *Tellabs*

We now turn to the cost of *Tellabs* for defendants seeking dismissal. One important question for litigants is how many “bites at the apple” will be afforded to the plaintiffs. Defendants are anxious to obtain an early dismissal with prejudice to minimize the expense and distraction of the lawsuit. Plaintiffs, however, want to avail themselves of the opportunity to craft a complaint that will pass muster with the district court. Earlier opinions dismissing a complaint without prejudice may provide guidance to the plaintiffs on what they need to do to craft an adequate complaint. Judges may vary in their willingness to afford plaintiffs an opportunity to amend, and they have fairly substantial discretion in dismissing with or without prejudice. The first dismissal, however, will typically be without prejudice.

²⁶ Our definition of the Scienter dependent variable focuses only on whether the judge in the final motion to dismiss makes a decision to dismiss or not to dismiss the complaint on scienter-based grounds. This approach does not include final motion to dismiss decisions that do not mention scienter. Such final motion to dismiss decisions, nonetheless, represent the last in a line of motion to dismiss decisions. It is likely that the judge in an earlier motion to dismiss decision in the same litigation ruled on scienter at least partially in the plaintiffs’ favor (otherwise the litigation would have ended earlier through dismissal if the defendant had won on scienter grounds). Thus, as a robustness test, we redefine the Scienter variable to treat final motions to dismiss that do not mention scienter as equal to 0 (indicating that the court ruled in the plaintiffs favor on scienter grounds in a prior motion to dismiss). Using this redefined definition of the Scienter variable, we obtain the same qualitative results as in Table 4.

Our definition of the Scienter dependent variable treats motion to dismiss rulings that rule completely in the plaintiffs’ favor and only partially in the plaintiffs’ favor on scienter grounds as the same (both are equal to 0). In either case, the plaintiffs still are able to move the litigation forward and potentially obtain a settlement. As a robustness test, we define the Scienter variable to equal 1 if the final motion to dismiss decision ordered dismissal (at least partially) based on a failure to plead scienter with particularity, 0 if the decision both denied and granted dismissal based on scienter, and -1 if the decision denied dismissal based on scienter. Using this redefined definition of scienter, we obtain the same qualitative results as in models of Table 4 except that the coefficient on Ninth Circuit x *Tellabs* Dismissal in Model 3 while still negative is now insignificant.

Supreme Court and Securities Class Actions

The *Tellabs* decision did not address whether judges must give plaintiffs the opportunity to amend their complaints. We conjecture, however, that *Tellabs* may have sent an important signal to judges with respect to how generous they should be in affording plaintiffs an opportunity to plead (as set for in Hypothesis 2). For courts that previously adhered to the Preponderance standard, *Tellabs* announced a more lenient standard that might lead judges to also be more lenient in giving second chances to plaintiffs. For courts adhering to the Reasonableness standard, *Tellabs* invites a new inquiry applying its more exacting standard, sending the opposite signal to judges to reduce their willingness to give second chance to plaintiffs to craft an adequate complaint.²⁷

To test Hypothesis 2, we limit our sample to those cases that ended up with a dismissal with prejudice. We use the number of dismissals before a court reaches the final dismissal with prejudice as a proxy for the time to final resolution. For those cases that resulted in a dismissal with prejudice, the number of dismissals ranged from 1 to 4 in our data set. To control for differences in dismissal times pre and post-*Tellabs*, we divide the sample based on whether the first dismissal decision is after the *Tellabs* decision (defined as Post-*Tellabs* First Dismissal equals 1 and 0 otherwise). We exclude cases that had a first dismissal decision prior to *Tellabs* but the final dismissal decision after *Tellabs*. Because all cases in the Post-*Tellabs* First Dismissal = 1 sub-sample must have had their first dismissal decision after *Tellabs*, the possibility that resolution time to the final motion to dismiss for such cases will be longer than for Post-*Tellabs* First Dismissal = 0 sub-sample is reduced.

²⁷ The opposite hypothesis is also possible. *Tellabs* may have lead to a more lenient standard in the Preponderance circuits, causing judges to compensate by giving fewer second chances in such circuits, and the opposite result in Reasonableness circuits. As discussed in the text, our results reject this opposite hypothesis at least for the Ninth Circuit.

Supreme Court and Securities Class Actions

Panel B of Table 5 reports a comparison of the mean number of dismissals for the sample divided by whether the first dismissal decision occurred before or after the *Tellabs* decision. Inconsistent with Hypothesis 2, the number of dismissals needed before a final dismissal decreased in Reasonableness circuits from 1.333 to 1.000 after *Tellabs* (although the difference is not significant). Consistent with Hypothesis 2, the number of dismissals needed before a final dismissal decreased from 1.259 to 1.143 in Preponderance circuits (difference however not significant). Moreover, in the Ninth Circuit the number of dismissals needed before a final dismissal went from 1.359 to 1.400, although the difference is not significant).

[Insert Table 5 about here]

To control for other factors that may affect the number of dismissals, we use an ordinary least squares model, with the number of dismissals before a final dismissal with prejudice as our dependent variable. We estimate three models with the same independent variables (including Case Controls and Motive Variables) as in the Scierter models in Table 4. Because of collinearity between Dismissal Time and the number of dismissals, we do not include Dismissal Time in the model. Instead, our division of cases based on the date of the first dismissal decision (*Post-Tellabs* First Dismissal) lessens the possibility that the cases in the *post-Tellabs* period will systematically be those that take longer to resolve compared with the *pre-Tellabs* period.

$$\begin{aligned} \text{Number of Dismissals} = & \alpha + \beta_{1i}\text{Post-}T\text{ellabs First Dismissal}_i \\ & + \beta_{2i}\text{Reasonableness}_i + \beta_{3i}\text{Reasonableness} \times \text{Post-}T\text{ellabs First Dismissal}_i \\ & + \beta_{4i}\text{Preponderance}_i + \beta_{5i} \text{Preponderance} \times \text{Post-}T\text{ellabs First Dismissal}_i \\ & + \sum \beta_{ki}\text{Case Controls}_{ki} + \sum \beta_{ji}\text{Motive Variables}_{ji} + \epsilon_i \end{aligned}$$

Supreme Court and Securities Class Actions

We present our results in Panel C of Table 5. In Model 1, most of the independent variables of interest are not significantly different from zero, indicating that generally *Tellabs* did not affect the willingness of judges to give plaintiffs extra chances to file an amended complaint after a dismissal. The most interesting results are from the regressions examining the Ninth Circuit. In Model 2 (Ninth Circuit only), the coefficient on Ninth Circuit is positive, indicating that Ninth Circuit judges after *Tellabs* gave a greater number of second chances in the form of leave to amend the complaint after a dismissal relative to the Ninth Circuit prior to *Tellabs*. The coefficient on Post-*Tellabs* in Model 2 however is significant at only the 11.4% level, beyond conventional levels of significance. In Model 3 (with all the circuits), the coefficient on Ninth Circuit is positive and significant at the 1% level, indicating that prior to *Tellabs*, it took 0.311 more dismissals to reach a final dismissal with prejudice in the Ninth Circuits compared with all other circuits. The coefficient on Ninth Circuit x Post-*Tellabs* Dismissal is positive and significant at the 10% level; after the *Tellabs* decision, class actions took 0.830 more dismissals before the final dismissal with prejudice relative to other circuits. The Ninth Circuit – which appears to be the most willing to grant dismissal prior to *Tellabs* – takes considerably longer to do it after the *Tellabs* decision relative to other circuits.²⁸

²⁸ It is possible that the amount of time and effort involved in a dismissal motion may vary based on how many prior motions have already occurred. It may take more time and effort for the first dismissal motion, for example, compared with the third motion. To control for this possibility, we re-estimate Models 1 and 3 in Table 5 using an ordered logit model for the specification (the ordered logit form of Model 2 did not converge). Unreported, we obtain similar qualitative results as in Table 5 except in Model 3, while the coefficient on Ninth Circuit is positive and significant at the 1% level, the coefficient on Ninth Circuit x Post-*Tellabs* First Dismissal is positive but now significant at only the 12.4% level.

As a robustness test to control further for possible selection effects due to the prospect of the *Tellabs* decision affecting filing decisions even before the *Tellabs* ruling on June 21, 2007, we exclude cases that were filed after the Supreme Court granted *certiorari* on January 5, 2007 and re-estimated the models in Table 5. Unreported, we obtained qualitatively the same results as in Table 5.

We added the Top Attorney and All Institutional Lead Plaintiff variables to assess the importance of attorney and lead plaintiff expertise (and selection) to Model 1 of Table 5. Unreported, we obtain the same

Supreme Court and Securities Class Actions

The results from Table 5 indicate that the Ninth Circuit's greater willingness to dismiss was apparently tempered, to some extent, by providing plaintiffs with every opportunity to meet the pleading standard (compared with practices in other circuits). Whether this tendency will persist after the Ninth Circuit has adjusted to the new standard remains to be seen.

4.3. Settlements and *Tellabs*

We have found that defendants in the Ninth Circuit and other Preponderance circuits had a reduced likelihood of dismissal based on scienter grounds after *Tellabs*. Moreover, obtaining a final dismissal took more time in the Ninth Circuit relative to other circuits after *Tellabs*. Based on these findings, we hypothesize that we should see an increase in the proportion of nuisance settlements among settlements (Hypothesis 3). For circuits where *Tellabs* reduced the probability of dismissal and increased the amount of time to obtain final dismissal, defendants should be more willing to pay a low-value settlement in order to rid themselves of even a weak case. Thus, another measure of the overall effect of *Tellabs* on litigation outcomes is the incidence of nuisance settlement. We predict the opposite for Reasonableness jurisdictions.

We focus on the sub-sample of class actions that resulted in a settlement. We use as our dependent variable "Nuisance," which equals 1 if the settlement amount was for \$3 million or less and 0 if the settlement amount was for greater than \$3 million. To divide suit outcomes

qualitative results as in Model 1 of Table 5. We also add Top Attorney and an indicator variable for whether any of the lead plaintiffs was an institutional lead plaintiff (Any Institutional Lead Plaintiff) to Model 1 of Table 5. Unreported, we obtain the same qualitative results as in Model 1 of Table 5 except that Preponderance is significant at only the 14.8% level. Due to a lack of post-*Tellabs* First Dismissal observations for Ninth Circuit cases where we had data on the lead counsel and lead plaintiff we were unable to estimate robustness tests including Top Attorney, All Institutional Lead Plaintiff, and Any Institutional Lead Plaintiff variables for Models 2 and 3 of Table 5.

Supreme Court and Securities Class Actions

based on the timing of the *Tellabs* decision, we construct an indicator variable (Post-*Tellabs* Outcome) equal to 1 if the final outcome occurred after the *Tellabs* decision and 0 otherwise. Did *Tellabs* increase the incidence of nuisance settlement?

Panel A of Table 6 reports a comparison of the fraction of nuisance settlements before and after the *Tellabs* decision. Consistent with Hypothesis 3, the fraction of nuisance settlements in Reasonableness circuits decreased from 0.769 to 0.059 after *Tellabs* (difference significant at the 1% level). Inconsistent with Hypothesis 3, the fraction of nuisance settlements decreased from 0.250 to 0.224 in Preponderance circuits (although the difference is not significant). Consistent with Hypothesis 3, in the Ninth Circuit the fraction of nuisance settlements increased from 0.194 to 0.263 (although the difference is not significant).

To control for other factors that affect the incidence of nuisance outcomes, we estimate logit regressions with Nuisance as the dependent variable. We estimate three models with the same independent variables (including Case Controls) as in the Scierter Dismissal models in Table 4 (replacing post-*Tellabs* Dismissal with post-*Tellabs* Outcome).

$$\begin{aligned} \text{Nuisance} = & \alpha + \beta_{1i}\text{Post-}\textit{Tellabs}\ \text{Outcome}_i + \beta_{2i}\text{Reasonableness}_i \\ & + \beta_{3i}\text{Reasonableness} \times \text{Post-}\textit{Tellabs}\ \text{Outcome}_i \\ & + \beta_{4i}\text{Preponderance}_i + \beta_{5i}\ \text{Preponderance} \times \text{Post-}\textit{Tellabs}\ \text{Outcome}_i \\ & + \sum \beta_{ki}\text{Case Controls}_{ki} + \text{Resolution Time}_i + \varepsilon_i \end{aligned}$$

We report the results of these regressions in Panel B of Table 6. For the overall sample, we find that the Reasonableness standard correlated positively with nuisance settlements. In Model 1, the coefficient on Reasonableness is positive and significant at the 1% level. Measured at the mean of the independent variables and conditional on a settlement as the ultimate outcome of the lawsuit, a class action in Reasonableness circuits prior to the *Tellabs*

Supreme Court and Securities Class Actions

decision had a 58.7% increased probability of a nuisance value settlement relative to Equal Inference circuits. The coefficient on Reasonableness x Post-*Tellabs* Outcome is negative and significant at the 1% level. The sum of Reasonableness and Reasonableness x Post-*Tellabs* Outcome is not significantly different from zero, indicating that there was no significant difference in the incidence of nuisance settlements between Reasonableness and Equal Inference circuits after *Tellabs*, which is consistent with Hypothesis 3. Thus, *Tellabs* appears to have bolstered defendants in Reasonableness circuits in refusing to pay nuisance settlements. At the other end of the spectrum, the coefficient for the Preponderance standard is insignificant, as is the interaction variable with Post-*Tellabs* Outcome, suggesting that *Tellabs* had little effect on nuisance settlement in Preponderance circuits as a whole.

When we isolate the Ninth Circuit in Model 2, we see an increase in nuisance outcomes after *Tellabs* within the circuit standing alone. The coefficient on Post-*Tellabs* Outcome is positive and significant at the 10% level. Measured at the mean of the independent variables and conditional on a settlement as the ultimate outcome of the lawsuit, a class action in the Ninth Circuit after to the *Tellabs* decision had a 24.8% increased probability of a nuisance value settlement relative to the Ninth Circuit prior to *Tellabs*. In Model 3, we observe that the coefficient on Ninth Circuit is negative and significant at the 5% level. Measured at the mean of the independent variables and conditional on a settlement as the ultimate outcome of the lawsuit, a class action in the Ninth Circuit prior to the *Tellabs* decision had a 21.2% lower probability of a nuisance value settlement relative to all other circuits. In contrast, we find a positive coefficient (significant at the 5% level) on the interaction variable between the Ninth Circuit and Post-*Tellabs* Outcome. Moreover, the sum of Ninth Circuit and Ninth Circuit x Post-

Supreme Court and Securities Class Actions

Tellabs Outcome is not significantly different from zero.²⁹ This suggests that *Tellabs* increased the likelihood of nuisance settlement in the Ninth Circuit to the level of other circuits, again consistent with Hypothesis 3.³⁰ With dismissal less likely in the Ninth Circuit after *Tellabs*, defendants appear to have become more willing to settle weak cases for small amounts.³¹

²⁹ To control for possible bias due to difference in resolution times between the Pre and Post-*Tellabs* samples, as an additional robustness test, we match each Post-*Tellabs* Outcome case that settled with a Pre-*Tellabs* Outcome case that settled with a resolution time within 30 days within the resolution time of the Post-*Tellabs* Outcome case. We exclude any Post-*Tellabs* Outcome case without a match, leaving 162 Pre and Post-*Tellabs* Outcome cases. We then re-estimated the models in Table 6 solely for the matched Pre and Post-*Tellabs* Outcome cases (excluding the Resolution Time variable). We obtain similar results as in Table 6. In Model 1, the coefficient on Reasonable is positive and significant at the 5% level. The Reasonableness x Post-*Tellabs* Outcome variable was dropped due to collinearity—all settlements in a Reasonableness circuit in the post-*Tellabs* Outcome period were non-nuisance (indicating a dramatic drop in nuisance suits for Reasonable circuits). Unlike in Table 6, the coefficient on Post-*Tellabs* in Model 2 (Ninth Circuit only) is positive but not significantly different from zero. In Model 3, the coefficient on Ninth Circuit is negative and significant at the 10% level while the coefficient on Ninth Circuit x Post-*Tellabs* Outcome is positive and significant at the 5% level, indicating an increase in nuisance suits in the Ninth Circuit relative to other circuits after *Tellabs*.

As a robustness test to control further for possible selection effects due to the prospect of the *Tellabs* decision affecting filing decisions even before the *Tellabs* ruling on June 21, 2007, we exclude cases that were filed after the Supreme Court granted *certiorari* on January 5, 2007 and re-estimated the models in Table 6. Unreported, we obtained qualitatively the same results as in Table 6.

We also added the Top Attorney and All Institutional Lead Plaintiff variables to assess the importance of attorney and lead plaintiff expertise (and selection) to the three models in Table 6. Unreported, the robustness models generate the same qualitative results as in Table 6. We also added Top Attorney and an indicator variable for whether any of the lead plaintiffs was an institution (Any Institutional Lead Plaintiff to the three models in Table 6. Unreported, the models generated the same qualitative results as in Table 6.

³⁰ The decision to settle is not random. As a robustness test, I employ a Heckman correction using as an instrument in the first stage selection model (between settlement and non-settlement) the total number of securities class actions filed in the dataset time period for the district court in which the specific class action is filed (Heckman, 1979). I assume this variable is correlated with the decision to settle. A particular district court with large numbers of securities class action may face greater pressure to dismiss such actions to clear their docket, leading to fewer settlements. On the other hand, I assume this variable is not correlated directly with the probability of a nuisance suit outcome conditional on a settlement. For the second stage, I re-estimate the models of Table 6. I employ the HECKPROB procedure in Stata to estimate the Heckman models. Only Model 1 of Table 6 converged. The re-estimated Model 1 provided the same qualitative results as in Table 6. The coefficient on Reasonableness is positive and significant at the 1% level; the coefficient on Reasonableness x Post-*Tellabs* Outcome is negative and significant at the 1% level.

³¹ As an additional robustness test, we re-estimate the models in Table 6 with a different cutoff for nuisance suits--treating settlements for \$4 million or less as a nuisance settlement. Unreported, models generated similar results as in Table 6 except that the coefficient on Post-*Tellabs* Outcome in Model 2 remains positive but now significant at the 5% level. The coefficient on Ninth Circuit in Model 3 remains positive but now only significant at the 10% level.

Firms with a large market capitalization may be willing to settle frivolous suits for higher amounts to avoid the higher cost of distraction and reputational harm from such litigation. To take into account this possibility, we redefine Nuisance as settlements where the settlement amount over market capitalization ratio of the defendant corporation is below a fixed threshold. To obtain an exogenous threshold, we use the settlement amount /

Supreme Court and Securities Class Actions

5. Conclusion

This study examines the impact of the Supreme Court's first decision interpreting the "strong inference" pleading standard of the PSLRA. In *Tellabs*, the Supreme Court rejected the Seventh Circuit's Reasonableness standard for drawing inferences of fraudulent intent from a complaint. In doing so, the Supreme Court increased the standard for assessing scienter inferences in the Third and Seventh Circuits, making it more difficult for plaintiffs' to survive the dismissal motion. In the Preponderance circuits, including most notably the Ninth Circuit, *Tellabs* had the opposite impact, decreasing the standard for assessing scienter inferences. We find evidence that this move to a uniform standard had divergent effects on class action litigation depending on the pre-*Tellabs* starting point of each circuit.³²

market capitalization ratio at the 25th percentile for firms that settled that had a market capitalization of \$100 million or more (equal to 0.0045264). Using this definition of Nuisance, we re-estimate the models in Table 6. We find the same qualitative results as in Model 1 (a significant reduction in the probability of a nuisance suit in Reasonable circuits), but only insignificant results for the Ninth Circuit in Models 2 and 3.

³² One potentially confounding effect on our analysis of the impact of *Tellabs* on lower court decisionmaking is *Dura Pharmaceuticals, Inc. v. Broudo*, 544 U.S. 336 (2005), which the Supreme Court decided April 19, 2005 (a little more than two years prior to *Tellabs*). The Ninth Circuit in the lower court *Dura* opinion had established a relatively weak test for loss causation, requiring that plaintiffs only needed to please that their loss touch" the misstatement, and that this requirement could be satisfied by alleging that the price was inflated by the misrepresentation at the time of purchase without any showing of any subsequent price decline associated with the revelation of the misrepresentation. *Broudo v. Dura Pharmaceuticals, Inc.*, 339 F.3d 933 (9th Cir. 2003). The Supreme Court rejected the Ninth Circuit's touch causation standard as inconsistent with the PSLRA's requirement that the plaintiff show that the misstatement "caused" the loss. Exchange Act § 21D(b)(4); 15 U.S.C. 78u-4(b)(4) (plaintiff must show that "the [challenged] act or omission of the defendant *** caused the loss for which the plaintiff seeks to recover damages."). The Court went on to hold that plaintiffs must also plead some basis for loss causation in their complaint, without specifying exactly what that might entail. Thus, *Dura*, like *Tellabs*, has the potential to affect motions to dismiss.

Unfortunately, our sample is not designed to test the influence of *Dura* on dismissal decisions. We have relatively few loss causation decisions in the Ninth Circuit prior to the Supreme Court's *Dura* decision, perhaps because the "touch causation" standard made filing a motion to dismiss on such grounds futile. We leave the study of *Dura* for future work. We nonetheless note that *Dura* should have made dismissal more likely in the Ninth Circuit. If anything, the *Dura* decision biased against our finding that dismissal became less likely in the Ninth Circuit after the *Tellabs* decision.

Supreme Court and Securities Class Actions

The greatest impact of *Tellabs* was in the Ninth Circuit, the Preponderance circuit with the most stringent standard of scienter, based on deliberate or conscious recklessness. We report evidence that the probability of scienter-based dismissal decreased, while the number of dismissal decisions necessary to obtain final dismissal increased in the Ninth Circuit after the *Tellabs* decision relative to other circuits. We report that the decrease in dismissal probability and the increased time (and cost) to obtain dismissal in the Ninth Circuit post-*Tellabs* also correlated with a higher incidence of nuisance amount settlements. In contrast, we report that in the Reasonableness circuits, encompassing the Third and Seventh Circuits, the incidence of nuisance suits decreased relative to the base category Equal Inference circuits. Thus, we observe an overall shift to a more uniform standard for dismissal after *Tellabs*.

This overall trend toward uniformity may have had a differential impact on plaintiffs and defendants. The impact on Ninth Circuit cases is particularly important given the large number of class actions that are filed in that circuit. Weighted by the number of class actions in each circuit, our findings suggest that *Tellabs* may have, on balance, benefitted plaintiffs and the plaintiffs' bar.

Supreme Court and Securities Class Actions

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Supreme Court and Securities Class Actions

Table 1: Sample Description

Panel A

Year of Suit Filing	Freq.	Percent
2003	147	26.16
2004	174	30.96
2005	140	24.91
2006	87	15.48
2007	14	2.49
Total	562	100

Circuit Court	Freq.	Percent
1	37	6.58
2	102	18.15
3	48	8.54
4	21	3.74
5	50	8.9
6	25	4.45
7	26	4.63
8	26	4.63
9	149	26.51
10	23	4.09
11	52	9.25
12	3	0.53
Total	562	100

Panel B

Suit Outcome (If Known)	All		9th Cir.		Other	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Settlement	259	50.10	67	48.20	192	50.79
Trial Verdict or Judgment on Pleadings for Plaintiff	2	0.39	2	1.44	0	0.00
Summary Judgment for Defendant	6	1.16	1	0.72	5	1.32
Voluntary Dismissal	56	10.83	20	14.39	36	9.52
Dismissal with Prejudice	194	37.52	49	35.25	145	38.36
Total	517	100	139	100.00	378	100.00

Chi2 test of the difference between the 9th Cir and Other = 8.3759 (pr = 0.079)

Supreme Court and Securities Class Actions

Table 2: Summary Statistics for the Independent Variables

Variable	All		9 th Cir.		Other		Tests of Differences
	Mean	Stand. Dev.	Mean	Stand. Dev.	Mean	Stand. Dev.	p-value
Section 11	0.111	0.314	0.069	0.254	0.126	0.332	0.0577
Section 14	0.027	0.162	0.041	0.199	0.022	0.147	0.2191
Govt. Investigation	0.274	0.446	0.235	0.425	0.288	0.453	0.2124
Restatement	0.357	0.480	0.345	0.477	0.361	0.481	0.7247
Officer Term.	0.329	0.470	0.315	0.466	0.334	0.472	0.6777
Auditor Term.	0.072	0.258	0.096	0.296	0.063	0.243	0.1832
Market Capitalization	6205.6	21400.1	3918.1	10816.4	7051.0	24123.7	0.1308
High Tech	0.167	0.374	0.255	0.437	0.136	0.343	0.0008
FDA	0.040	0.196	0.027	0.164	0.044	0.206	0.3730
Confidential	0.532	0.500	0.493	0.502	0.545	0.499	0.2881
Insider Trading	0.583	0.494	0.616	0.488	0.571	0.496	0.3450
Bonus	0.287	0.453	0.221	0.416	0.310	0.463	0.0405
Offering	0.290	0.454	0.297	0.458	0.288	0.454	0.8491
Acquisition	0.145	0.353	0.131	0.339	0.150	0.358	0.5738
Merger	0.086	0.280	0.069	0.254	0.091	0.289	0.4088

p-value is from two-sided t-test of the difference in means. Variable definitions are in the appendix.

Supreme Court and Securities Class Actions

Table 3: Basis for Dismissal

Final Dismissal Decision Grounds	Dismissal denied based on the ground	Both denied and granted dismissal based on the ground	Dismissal granted (at least partially) based on the ground	Did not rule on the ground
Scienter	99 25.4%	35 9.00%	170 43.6%	86 22.1%
Loss Causation	64 16.4%	6 1.5%	45 11.5%	275 70.5%
Forward Looking Safe Harbor	37 9.5%	5 1.3%	52 13.3%	296 75.9%
Reliance	20 5.1%	0 0.0%	8 2.1%	362 92.8%
Materiality	42 10.8%	9 2.3%	41 10.5%	298 76.4%
Misstatement	72 18.5%	26 6.7%	104 26.7%	188 48.2%
Puffery	13 3.3%	2 0.5%	15 3.9%	360 92.3%
Attribution to Defendant	15 3.9%	10 2.6%	17 4.4%	348 89.2%
Group Pleading	10 2.6%	0 0.0%	24 6.2%	356 91.3%

Supreme Court and Securities Class Actions

Table 4: Final Dismissal Decisions Based on Scienter

Panel A: Summary Statistic Comparison

Circuit	Post-Tellabs Dismissal = 0	Post-Tellabs Dismissal = 1	p-value
Reasonableness	0.500	0.692	0.2448
Preponderance	0.698	0.452	0.0071
Ninth Circuit	0.793	0.429	0.0006

p-value is from a two-sided t-test of the difference in means

Panel B: Logistic Regressions

	Scienter		
	Model 1: All	Model 2: 9 th Cir.	Model 3: All
Post-Tellabs Dismissal	0.185 (0.42)	-3.552 ^{**} (-3.15)	0.0362 (0.11)
Reasonableness	-0.0297 (-0.07)		
Reasonableness x Post-Tellabs Dismissal	0.494 (0.56)		
Preponderance	0.901 [*] (2.46)		
Preponderance x Post-Tellabs Dismissal	-1.785 ^{**} (-2.85)		
Ninth Circuit			1.454 ^{**} (3.43)
Ninth Circuit x Post-Tellabs Dismissal			-2.298 ^{**} (-3.39)
Section 11	-0.812 ⁺ (-1.65)	-0.923 (-0.58)	-0.668 (-1.38)
Section 14	0.364 (0.45)	-3.165 (-0.72)	0.462 (0.57)
Govt. Investigation	-0.786 [*] (-2.39)	-1.051 (-1.10)	-0.689 [*] (-2.09)
Restatement	-0.00541 (-0.02)	-2.694 [*] (-2.53)	0.000713 (0.00)
Officer Term.	-0.215 (-0.73)	0.493 (0.52)	-0.244 (-0.83)
Auditor Term.	-0.348 (-0.62)	0.00416 (0.00)	-0.410 (-0.72)

Supreme Court and Securities Class Actions

In(Market Capitalization)	0.112 ⁺ (1.74)	-0.416 ⁺ (-1.80)	0.0950 (1.47)
High Tech	0.166 (0.45)	2.023 ⁺ (1.89)	0.100 (0.27)
FDA	-0.695 (-1.05)	-2.854 (-1.36)	-0.511 (-0.75)
Confidential	0.0917 (0.32)	-0.0640 (-0.08)	0.112 (0.39)
Insider Trading	-0.0128 (-0.05)	-0.234 (-0.28)	0.0309 (0.11)
Bonus	-0.106 (-0.34)	0.514 (0.52)	-0.0131 (-0.04)
Offering	-0.328 (-1.04)	-0.852 (-1.04)	-0.351 (-1.12)
Acquisition	0.0141 (0.04)	-1.252 (-1.09)	0.0604 (0.18)
Merger	-0.118 (-0.25)	3.425 [*] (1.99)	-0.145 (-0.32)
Resolution Time	0.000673 (1.27)	0.00368 ⁺ (1.84)	0.000886 ⁺ (1.66)
Constant	-0.601 (-1.03)	3.858 [*] (2.05)	-0.707 (-1.21)
N	272	76	272
pseudo R ²	0.098	0.464	0.109

t statistics in parentheses; ⁺ $p < 0.10$, ^{*} $p < 0.05$, ^{**} $p < 0.01$. Logit Model: Dependent variable “Scienter” is defined to equal 1 if the final motion to dismiss decision ordered dismissal (at least partially) based on a failure to plead scienter with particularity, 0 if the decision denied dismissal based on scienter either completely or partially (indicating that the lawsuit is allowed to continue at least to some defendants). Case Controls include Section 11, Section 14, Govt. Investigation, Restatement, Officer Term., Auditor Term., In(Market Capitalization), High Tech, FDA, Confidential, and Top Atty. Variable definitions are in the Appendix. In Model 2, the Section 14 indicator variable is perfectly correlated with a denial of dismissal on scienter grounds and dropped in the logit model.

Supreme Court and Securities Class Actions

Table 5: Number of Dismissal Decisions Before Final Dismissal

Panel A: Breakdown of Dismissal Decision Timing

Circuit	# Dismissal Decisions	Percentage
Final Dismissal Decision Pre-Tellabs	295	72.48
Final Dismissal Decision Post-Tellabs	112	27.52
First Dismissal Decision Pre-Tellabs	22	5.41
First Dismissal Decision Post-Tellabs	90	22.11

Panel B: Summary Statistic Comparison

Circuit	Post-Tellabs First Dismissal = 0	Post-Tellabs First Dismissal = 1	p-value
Reasonableness	1.333	1.000	0.3299
Preponderance	1.259	1.143	0.4561
Ninth Circuit	1.359	1.400	0.8900

p-value is from a two-sided t-test of the difference in means. t-tests exclude cases where the first dismissal was prior to *Tellabs* but the final dismissal occurred after *Tellabs*.

Supreme Court and Securities Class Actions

Table 5 Continued

Panel C: Ordinary Least Squares Regressions

	Number of Dismissal Decisions		
	Model 1: All	Model 2: 9 th Cir.	Model 3: All
Post- <i>Tellabs</i> Dismissal	0.0618 (0.49)	0.808 (1.64)	-0.0303 (-0.32)
Reasonableness	0.187 (1.48)		
Reasonableness x Post- <i>Tellabs</i> Dismissal	-0.366 (-1.15)		
Preponderance	0.185 ⁺ (1.98)		
Preponderance x Post- <i>Tellabs</i> Dismissal	-0.0876 (-0.43)		
Ninth Circuit			0.311 ^{**} (3.36)
Ninth Circuit x Post- <i>Tellabs</i> Dismissal			0.520 ⁺ (1.76)
Constant	0.903 ^{**} (5.98)	1.055 [*] (2.13)	0.856 ^{**} (6.04)
Case Controls	Yes	Yes	Yes
Motive Variables	Yes	Yes	Yes
<i>N</i>	158	40	158
adj <i>R</i> ²	0.048	0.063	0.137

t statistics in parentheses; ⁺ $p < 0.10$, ^{*} $p < 0.05$, ^{**} $p < 0.01$. Ordinary Least Squares Model: Dependent variable “Number of Dismissal Decisions” equals the number of opinions on motions to dismiss for cases that ultimately end with a dismissal with prejudice. The models exclude cases where the first dismissal was prior to *Tellabs* but the final dismissal occurred after *Tellabs*. The OLS models are estimated solely for class actions that resulted in a dismissal with prejudice. Case Controls include Section 11, Section 14, FDA, Insider Trading, Govt. Investigation, Restatement, Officer Term., Auditor Term., High Tech, Bonus, Offering, Acquisition, Merger, and Confidential. Motive Variables include Insider Trading, Bonus, Offering, Acquisition, and Merger. Variable definitions are in the Appendix.

Supreme Court and Securities Class Actions

Table 6: Nuisance Suit Outcome

Panel A: Nuisance Suit Summary Statistic Comparison

Circuit	Pre-Tellabs	Post-Tellabs	p-value
Reasonableness	0.769	0.059	0.0000
Preponderance	0.250	0.224	0.7932
Ninth Circuit	0.194	0.263	0.5027

p-value is from a two-sided t-test of the difference in means

Panel B: Logistic Regressions

	Nuisance		
	Model 1 All	Model 2 9 th Cir.	Model 3 All
Post-Tellabs Outcome	0.225 (0.45)	2.094 ⁺ (1.83)	-0.603 (-1.47)
Reasonableness	2.713 ^{**} (3.00)		
Reasonableness x Post-Tellabs Outcome	-4.306 ^{**} (-2.93)		
Preponderance	-0.229 (-0.44)		
Preponderance x Post-Tellabs Outcome	0.176 (0.24)		
Ninth Circuit			-1.422 [*] (-2.40)
Ninth Circuit x Post-Tellabs Outcome			1.697 [*] (2.16)
Constant	2.030 ^{**} (2.63)	1.007 (0.49)	2.522 ^{**} (3.38)
Case Controls	Yes	Yes	Yes
N	232	62	232
pseudo R ²	0.190	0.353	0.154

t statistics in parentheses; ⁺ $p < 0.10$, ^{*} $p < 0.05$, ^{**} $p < 0.01$. Logit model: Dependent variable “Nuisance” is equal to 1 if the settlement amount was for \$3 million or less and 0 if the settlement amount was for greater than \$3 million. Models are estimated solely for class actions that resulted in settlement. Case Controls include Section 11, Section 14, FDA, Insider Trading, Govt. Investigation, Restatement, Officer Term., Auditor Term., High Tech, Bonus, Offering, Acquisition, Merger, and Confidential. Motive Variables include Insider Trading, Bonus, Offering, Acquisition, and Merger. Variable definitions are in the appendix.

Supreme Court and Securities Class Actions

Appendix: Variable Definitions

Dependent Variables

Variable	Description
Scienter	Variable for the final motion to dismiss decision based on scienter pleading grounds. Defined as equal to 1 if the final motion to dismiss decision ordered dismissal (at least partially) based on the ground in question, 0 if the decision either did not rule on dismissal based on the ground in question or both denied and granted dismissal based on the ground in question, and -1 if the decision denied dismissal based on the ground in question.
Number of Dismissals	The number of judge ordered dismissals for cases that ultimately end with a dismissal with prejudice. For example, if a judge orders a dismissal with leave to amend and then later orders a dismissal with prejudice, the number of dismissals will equal 2.
Nuisance	Indicator variable equal to 1 if the settlement amount was for \$3 million or less and 0 if the settlement amount was for greater than \$3 million.

Independent Variables

Legal Variables	Description
Post- <i>Tellabs</i> Dismissal	Indicator variable equal to 1 if the final dismissal decision was made after the Supreme Court's <i>Tellabs</i> decision and 0 otherwise.
Post- <i>Tellabs</i> First Dismissal	Indicator variable equal to 1 if the first dismissal decision was made after the Supreme Court's <i>Tellabs</i> decision and 0 otherwise.
Post- <i>Tellabs</i> Outcome	Indicator variable equal to 1 if the final case outcome occurred after the Supreme Court's <i>Tellabs</i> decision and 0 otherwise.
Reasonableness	Indicator variable equal to 1 if the circuit required a reasonable inference, and 0 otherwise.
Preponderance	Indicator variable equal to 1 if the circuit required a preponderant inference, and 0 otherwise.

Case Control Variables	Description
Section 11	Indicator variable equal to 1 if the complaint for a particular class action alleged a Section 11 of the Securities Act of 1933 violation and 0 otherwise.
Section 14	Indicator variable equal to 1 if the complaint for a particular class action alleged a Section 14 of the Securities Exchange Act of 1934 violation and 0 otherwise.
Govt. Investigation	Indicator variable equal to 1 if the complaint indicated the presence of a SEC or other governmental investigation or enforcement action relating to the fraud at issue and 0 otherwise.
Restatement	Indicator variable equal to 1 if the complaint indicated that the company

Supreme Court and Securities Class Actions

	announced a restatement covering at least part of the class period and 0 otherwise.
Officer Term.	Indicator variable equal to 1 if the complaint indicated that a top officer of the defendant company resigned or was terminated during the class period and 0 otherwise.
Auditor Term.	Indicator variable equal to 1 if the complaint indicated that the auditor resigned or was terminated during the class period and 0 otherwise.
High Tech	Indicator variable equal to 1 if the firm is in SIC codes 3570-3577 or 7370-7379 and 0 otherwise
FDA	Indicator variable equal to 1 if the last amended complaint for a particular class action is based on U.S. Food and Drug Administration-related disclosures and 0 otherwise.
Confidential	Indicator variable equal to 1 if the first complaint filed after the selection of the lead plaintiff refers to at least one confidential witness who was an employee of the issuer and 0 otherwise.
Market Capitalization	Market value of a company's common equity (in \$ millions) at the end of the fiscal year preceding the beginning of the class period

Motive Variables

Insider Trading	Indicator variable equal to 1 if the complaint alleged insider trading and 0 otherwise.
Bonus	Indicator variable equal to 1 if the complaint alleged bonus compensation as a part of the pleadings relating to scienter and 0 otherwise.
Offering	Indicator variable equal to 1 if the complaint alleged a securities offering as a part of the pleadings relating to scienter and 0 otherwise.
Acquisition	Indicator variable equal to 1 if the complaint alleged inflated stock price to further corporate acquisitions as a part of the pleadings relating to scienter and 0 otherwise.
Merger	Indicator variable equal to 1 if the complaint alleged a merger or reorganization as a part of the pleadings relating to scienter and 0 otherwise.
