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DO THE MERITS MATTER? EMPIRICAL EVIDENCE ON SHAREHOLDER SUITS FROM OPTIONS BACKDATING LITIGATION

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This Article examines a basic question in corporate law: Do the legal merits matter in stockholder litigation? A connection between engaging in wrongful behavior and liability in a shareholder lawsuit is essential if lawsuits are to play a role in

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detering wrongful behavior. Yet skeptics of shareholder litigation have raised doubts about the degree to which such suits track actual malfeasance. The challenge is that managerial wrongdoing is almost never observable. While researchers can identify claims and—to some degree—evaluate their merits, such studies are limited to examining instances of wrongdoing that are actually litigated. We develop a novel approach to overcome this limitation in the context of one of the most notable corporate scandals of the twenty-first century: stock options backdating. Options backdating involves falsifying incentive option grant dates in order to increase the value of the options to executives. The manipulation of grant dates leaves a measurable statistical fingerprint, which we used to estimate the likelihood of backdating among not only companies sued for the practice, but across a sample of thousands of firms that used option compensation. We compare the likelihood that firms backdated with the incidence and disposition of shareholder derivative and securities class action lawsuits. We find that many firms that likely engaged in backdating were never sued and that even firms publicly named as backdaters in the press were not universally sued. Instead, plaintiffs' attorneys were selective in targeting firms with more egregious patterns of backdating. We also examine the motion to dismiss, settlements, and the use of special litigation committees, and we find that the probability of backdating is important for the latter two. These results are an important contribution to the shareholder litigation literature and are particularly timely and important for the unfolding debate over fee-shifting bylaws.

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INTRODUCTION

Corporate managers are deterred from wrongdoing by both public and private enforcement. While some types of corporate malfeasance may result in criminal or civil sanctions at the hands of the government, the staff and budget of regulators are limited. For this reason, corporate law relies heavily on private enforcement through state law derivative suits and federal securities class actions.¹ The efficiency and effectiveness of private enforcement are therefore of central concern for corporate law.

A threshold question is whether the merits of legal claims matter in stockholder litigation. Private enforcement relies heavily on the plaintiffs' bar to identify and prosecute promising cases. Since suits are initiated by plaintiffs' attorneys and settled by corporate managers using firm or insurance company dollars, the risk of strike suits and collusive settlements is high.² The problem confronting efforts to answer this question is that the merits of claims of corporate malfeasance are generally unobservable. To get around this problem, prior research on stockholder litigation has relied on variables that can be observed and are assumed to correlate with legal merit: the presence of an accounting restatement, for example, or a parallel SEC investigation. Such measures are noisy proxies for the merits of cases. Moreover, such a strategy restricts the researcher to legal claims actually litigated and omits cases of malfeasance that never resulted in a claim being filed. This is a significant omission, as the deterrence function of litigation depends critically on the probability that bad acts reliably lead to litigation.

This Article takes a novel approach to studying stockholder litigation by identifying a context in which it is possible to quantify breaches of duty across a large universe of firms, both sued and unsued. Specifically, we study cases arising out of the stock options backdating scandal. Backdating involved the falsification of the grant dates for stock options used to compensate key employees in order to covertly increase the employees' compensation.³

¹ See, e.g., WILLIAM T. ALLEN, REINER H. KRAAKMAN, & GUHAN SUBRAMANIAN, COMMENTARIES AND CASES ON THE LAW OF BUSINESS ORGANIZATION 363-64 (3d ed. 2009) [hereinafter AKS] (noting that derivative suits and class actions allow plaintiffs to "bring claims of fiduciary breach on behalf of disaggregated shareholders").

² *Id.* at 371-73 (discussing how factors such as plaintiffs' lawyers seeking settlements in nonmeritorious claims, corporations or their insurers bearing the cost of settling, and the structure of attorneys' fees can create greater incentives for strike suits and settlements).

³ See, e.g., David I. Walker, *Unpacking Backdating: Economic Analysis and Observations on the Stock Option Scandal*, 87 B.U. L. REV. 561, 567-75 (2007) (detailing the background and context contributing to the development of the backdating phenomenon).

Executive stock options typically set an exercise price⁴ equal to the stock price on the day the option was issued, and as a result, options issued on days when the stock price happened to be low were more valuable to executives.⁵ By falsifying grant dates, backdaters were able to create an appearance that grants were issued on dates in the past when the stock price happened to be low, while accounting for them as though they had been issued on the falsified date. Backdating involved the manipulation of stock option grants with statistically measurable consequences: grants were more likely to be issued on favorable dates. Because of this practice, and because option grants are publicly reported, we are able to calculate the likelihood that individual firms engaged in manipulative practices over a very large sample. This methodology provides a measure of the merits⁶ of potential backdating claims that is both more precise and available for a larger universe of firms than in other types of litigation.

The data for this study includes hand-collected data on private shareholder litigation—both derivative suits under state law and class actions under the federal securities laws—alleging options backdating. For derivative suits, we have collected extensive information on each case, including the full set of claims pre-consolidation, the decision on the motion to dismiss, the use and recommendations of special litigation committees, and information about attorneys' fees and settlement. We supplement this data with information about the presence of securities class actions from public reports, public lists of SEC investigations, and the disclosure of backdating activities in media and analyst reports.

We combine this legal data with data on option grants and statistical simulation to estimate both the probability that a firm engaged in backdating and the extent to which the executive recipients of option grants benefited from that backdating. These measurements provide a more precise picture of the merits than in other shareholder litigation contexts. It is possible, therefore, to produce a firm-level, *ex ante* estimation of the merits of backdating claims for a large sample of firms. Armed with these estimates of merit, we investigate whether shareholder litigation, in the aggregate, targets

4 The exercise price is the amount that a holder of the option would be required to pay in order to purchase a share of stock at some point in the future—that is, to exercise the option.

5 Walker, *supra* note 3, at 570.

6 Our methodology captures the merits of claims insofar as we are able to statistically identify backdating. We acknowledge, of course, that there are other components of a successful backdating claim, some of which may be procedural in nature, that are not directly related to the alleged wrongful activity and not captured by this measure. Whether the firm, in fact, engaged in backdating is nevertheless the core merits question.

the “right” firms, how the merits affect the progress and disposition of the litigation, and whether the recoveries correlate to the merits of the claim.

We find that a majority of firms that likely engaged in backdating were never publicly linked to the practice. Among those firms publicly alleged to have engaged in backdating—in analyst reports or news coverage—a majority, but not all, were named in a derivative suit. Even fewer firms were targets of securities class actions. The sued firms were more likely to have backdated and have higher total reversal around likely-backdated option grants than the publicly implicated but unsued firms. Similarly, firms targeted in class actions, which were a subset of the firms sued derivatively, show more egregious patterns of backdating than firms subject only to derivative claims and also larger stock price drops when backdating activity was revealed. These results suggest that the incidence of lawsuits—even controlling for public revelations of backdating and SEC investigations—was linked to merits-related measures of backdating activity.

We also find that sued firms differ from unsued firms along other dimensions. Derivatively sued firms were larger than implicated but unsued firms. Additionally, firms that were targets of SEC investigations were more likely to face both class action and derivative suits. We observe a race-to-the-courthouse effect in derivative litigation, with multiple lawsuits targeting a single firm and making similar allegations. This effect was strongest among large firms and firms investigated by the SEC, though the number of complaints was not otherwise related to our measures of merit.

We find no strong predictors of the disposition of the motion to dismiss in either derivative or class action suits. None of the covariates is significant in our regressions for either derivative or class action claims, and even a sensitive non-parametric test does not distinguish the merits of dismissed claims from non-dismissed claims. This may reflect that the motion to dismiss often turns on legal rules that are not directly related to the alleged wrongful activity, such as demand on the board in the derivative context.⁷

We find some evidence that the size of settlements is related to the merits of cases. For shareholder derivative suits, we use the size of attorneys’ fees as a proxy for the settlement amount, and we find that fees are related to the level of backdating activity. For class action suits, we find no relationship between settlement amounts and either the backdating probability or the total value

⁷ Plaintiffs in derivative suits must establish that it would be futile to demand the corporation’s board to cause the corporation to sue in its own right. See *AKS, supra* note 1, at 383-85 (discussing *Rales v. Blasband*, 634 A.2d 927 (Del. 1993), and “the right of a stockholder to prosecute a derivative suit [to be] limited to situations where the stockholder has demanded that the directors pursue the corporate claim and they have wrongfully refused to do so”).

extracted through backdating. However, we do find that when the SEC conducted an investigation, cases had larger settlements.

We also examine the use of special litigation committees (SLCs) as a tool to regain corporate control over derivative litigation. We find that the use of SLCs was both strongly related to the number of complaints filed and an indicator variable reflecting a very high probability of actual backdating activity. Interestingly, only a minority of SLCs recommended that the company seek dismissal of the claims, contrary to the common claim that SLCs recommend dismissal as a matter of course.

The welfare implications of stockholder litigation in general and the derivative suit in particular are hotly disputed in corporate law scholarship. Some scholars have concluded that the derivative suit is in need of radical reform,⁸ if not complete abolition.⁹ In important ways, state corporate law has responded to these critiques by forcing derivative plaintiffs to run a demanding gauntlet of procedural requirements.¹⁰ Others have a more positive view of derivative litigation, seeing it as an important bulwark against managerial opportunism.¹¹ The debate over derivative litigation has gained particular importance in the aftermath of the recent *ATP Tour, Inc. v. Deutscher Tennis Bund* case. In *ATP Tour*, the Delaware Supreme Court held that corporate bylaws that shift the cost of derivative litigation to

⁸ See STEPHEN M. BAINBRIDGE, CORPORATION LAW AND ECONOMICS 404 (2002) (suggesting that states “allow firms to opt out of the derivative suit process by charter amendment”); see also Jonathan R. Macey & Geoffrey P. Miller, *The Plaintiffs’ Attorney’s Role in Class Action and Derivative Litigation: Economic Analysis and Recommendations for Reform*, 58 U. CHI. L. REV. 1, 105-16 (1991) (proposing that courts auction off derivative and class action claims).

⁹ See BAINBRIDGE, *supra* note 8, at 404 (making a case for “eliminating derivative litigation”); see also TOM BAKER & SEAN J. GRIFFITH, ENSURING CORPORATE MISCONDUCT: HOW LIABILITY INSURANCE UNDERMINES SHAREHOLDER LITIGATION 20 (2010) (“[I]f shareholder litigation does not deter, then it loses its core justification and ought, therefore, to be abolished.”).

¹⁰ See *Marx v. Akers*, 666 N.E.2d 1034, 1037 (N.Y. 1996) (holding courts should be “reluctant to permit shareholder derivative suits”); see also BAKER & GRIFFITH, *supra* note 9, at 29 (“[T]he procedural obstacles associated with demand have substantially limited [the derivative suit’s] usefulness State law has decided . . . that the derivative suit remedy to corporate mismanagement was often worse than the disease . . .”).

¹¹ Robert B. Thompson & Randall S. Thomas, *The Public and Private Faces of Derivative Lawsuits*, 57 VAND. L. REV. 1747, 1750 (2004) (“Overall, the claim that derivative suits are typically strike suits is much weaker than in earlier periods.”). In an earlier era, the Supreme Court noted that the derivative suit, “born of stockholder helplessness, was long the chief regulator of corporate management and has afforded no small incentive to avoid at least grosser forms of betrayal of stockholders’ interests.” *Cohen v. Beneficial Indus. Loan Corp.*, 337 U.S. 541, 548 (1949). Without the ability to bring a derivative claim, “there would be little practical check on such abuses.” *Id.*; see also Eugene V. Rostow, *To Whom and For What Ends Is Corporate Management Responsible?* (describing the derivative suit as “the most important procedure the law has yet developed to police the internal affairs of corporations”), in *THE CORPORATION IN MODERN SOCIETY* 46, 48 (Edward S. Mason ed., 1959).

unsuccessful plaintiffs are lawful.¹² Such bylaws would increase the expected costs of pursuing a stockholder claim and thus may reduce—perhaps dramatically—the volume of stockholder litigation. This, of course, is the ambition of those who promote such bylaws, but there is a concomitant risk that such a wholesale approach would eliminate meritorious suits as surely as it would eliminate nuisance suits. If derivative litigation is unrelated to the underlying merit of claims, then there would be little worth preserving. The fee shifting debate in Delaware was at least temporarily resolved when, over the objection of the U.S. Chamber of Commerce, Delaware passed an amendment to the Delaware General Corporation Law (DGCL) in 2015 that effectively prohibited corporations from adopting bylaws that would shift the cost of litigation to losing plaintiffs.¹³

The data we present here suggests that derivative litigation—at least in the backdating context—is more responsive to the underlying merits than many observers suspect. Sued companies have higher measures of both the magnitude and probability of backdating than unsued firms, and we find a significant relationship between attorneys' fees and merit. The relationship between measures of legal merit and litigation outcomes suggests that efforts to reform the pathologies of stockholder litigation should be approached with caution.

At the same time, one of the unique features of our data here—the availability of measures of legal merit and potential damages—counsels against generalizing our findings. The measures of merit and damages we compute are based on publicly available information, so plaintiffs' attorneys could have relied on them just as we have here. Accordingly, the responsiveness of derivative litigation in this context may not necessarily mean that derivative litigation works well in contexts where the merits are obscured from the view of researchers and plaintiffs' attorneys. Nevertheless, in light of the fact that the continued existence of shareholder derivative liability is a matter of open debate, identifying a context in which derivative suits are merits-related is important.

The information we present about backdating litigation is also important in its own right. While existing studies have analyzed the prevalence of backdating, the price impact of being implicated in the backdating scandal, and SEC investigations of backdating, ours is the first

¹² *ATP Tour, Inc. v. Deutscher Tennis Bund*, 91 A.3d 554 (Del. 2014). Technically, the decision concerned only a nonstock company, but there was no indication that the court intended the holding to be so limited.

¹³ See, e.g., Tom Hals, *Delaware Bans 'Loser-Pays' Rules in Corporate Class Actions*, REUTERS (June 25, 2015), <http://www.reuters.com/article/2015/06/25/delaware-corporatelaw-idUSLiNoZB1JN20150625> [<http://perma.cc/3NLM-GQ86>] (discussing the reasoning behind the adoption of the law, including the concern that fee-shifting would wipe out shareholder litigation and the ability to police corporate boards).

study to offer a comprehensive picture of private shareholder litigation involving backdating allegations.

I. DERIVATIVE LITIGATION AND OPTIONS BACKDATING

Do the merits of corporate legal claims affect the incidence and outcomes of stockholder suits? The question cuts to the heart of corporate law's design, which relies on private enforcement to animate substantive rights. This Part outlines the importance of the do-the-merits-matter question and the elusive quest to answer it. It also introduces the stock option backdating scandal of 2006 and 2007 and explains why that episode offers a unique opportunity to investigate this basic corporate law question.

A. *Do the Merits Matter in Stockholder Litigation?*

The utility of shareholder suits has been the subject of longstanding and contentious debate.¹⁴ Shareholder litigation could be a tool that harnesses the self-interest of plaintiffs' attorneys to deter misconduct at public companies. Alternatively, it could be a mechanism that operates chiefly to benefit plaintiffs' attorneys and defendants at the expense of shareholders.¹⁵ The answer carries important policy implications: if stockholder litigation fails to focus on actual wrongdoing, there can be little hope that it in fact deters wrongdoing or that it delivers compensation to those who suffer from it. If there is no connection between the merits and the operation of litigation, stockholder litigation—an expensive system of private enforcement—would be in need of deep reform if not outright abolition.¹⁶

The principal procedural hurdles in stockholder litigation, for both derivative and securities suits, have been shaped by the desire to inhibit meritless lawsuits. The requirement that a stockholder first make a demand on the board of directors in derivative suits, for example, has traditionally

¹⁴ See, e.g., Joseph A. Grundfest, *Why Disimply?*, 108 HARV. L. REV. 727, 739 (1995) (“The suggestion that securities class actions settle for amounts unrelated to the merits of the underlying litigation ranks among the most contentious and analytically difficult hypotheses in the entire securities litigation debate.”)

¹⁵ Under directors' and officers' liability insurance, managers have a strong incentive to settle claims. For comprehensive treatment of this issue, see BAKER & GRIFFITH, *supra* note 9, at 152-76.

¹⁶ See BAINBRIDGE, *supra* note 8, at 179 (suggesting that abolition of long standing practices might be one way to create reform); see also Daniel R. Fischel & Michael Bradley, *The Role of Liability Rules and the Derivative Suit in Corporate Law: A Theoretical and Empirical Analysis*, 71 CORNELL L. REV. 261, 286-87 (1986) (noting that the best and perhaps only justification for the derivative suit is “detering large one-shot frauds” and stating that this “limited, albeit important, justification[] for the derivative suit in no way suggest[s] that such suits should be brought more frequently or that legal rules that discourage their incidence are detrimental to investors”).

been justified as a bulwark against nuisance suits.¹⁷ Similarly, courts and commentators have defended the SLC, which allows a board committee to wrest control of the derivative claims from the complaining stockholder, as a mechanism for weeding out meritless claims.¹⁸ In the securities context, the demanding pleading requirements and specialized mechanism for selecting a lead plaintiff introduced by the Private Securities Law Reform Act of 1995 were directly aimed at reducing the volume of suits.¹⁹

A prominent and persistent focus of reformers' attention has been attorneys' fees. Under the prevailing rule in the United States (the so-called American Rule), each party to litigation pays its own attorneys regardless of the outcome. The alternative rule—known as the English Rule—forces the losing party to pay the winner's legal fees and expenses.²⁰ A longstanding suspicion is that the American Rule induces meritless strike suits because plaintiffs (and their attorneys) can sue and offer to settle for less than the cost of defending the suit. Assuming that stockholders would be less likely to bring derivative suits if forced to bear the corporation's cost of defense, many states in the middle of the twentieth century adopted security-for-expenses statutes.²¹ These statutes entitle the corporation to demand that any small stockholder bringing a suit post security for the corporation's legal expenses, from which the corporation could recover at the termination of the suit. The target was explicitly stockholder suits with no merit. The Governor of New Jersey, upon signing that state's statute, noted that the legislation was intended to “deter the filing of irresponsible suits by persons who either have no legitimate cause of action or who institute such action more for the

¹⁷ See, e.g., *Aronson v. Lewis*, 473 A.2d 805, 812 (Del. 1984) (holding that a purpose of the demand requirement is to “provide a safeguard against strike suits”); *Barr v. Wackman*, 329 N.E.2d 180, 186 (N.Y. 1975) (explaining that the demand requirement is “designed to discourage ‘strike suits’ by shareholders making reckless charges for personal gain rather than corporate benefit”).

¹⁸ See *Black v. NuAIRE, Inc.*, 426 N.W.2d 203, 208 (Minn. Ct. App. 1988) (“The purpose of [the SLC statute] is to grant corporations the ability to respond effectively to the potential abuses of strike suits, in which a single dissenting shareholder, owning only one share of stock, may file a derivative suit for its nuisance value alone.”); see also Elliott J. Weiss & Lawrence J. White, *File Early, Then Free Ride: How Delaware Law (Mis)Shapes Shareholder Class Actions*, 57 VAND. L. REV. 1797, 1799-1800 (2004) (suggesting that an explicit purpose of the SLC “is to weed out opportunistic claims”).

¹⁹ See James D. Cox & Randall S. Thomas, *SEC Enforcement Heuristics: An Empirical Inquiry*, 53 DUKE L.J. 737, 760 (2003) (“Concerns that too many suits were ‘strike suits’ led to the enactment of the PSLRA.”).

²⁰ For an overview of the differences between the two systems, see generally Theodore Eisenberg & Geoffrey P. Miller, *The English Versus the American Rule on Attorney Fees: An Empirical Study of Public Company Contracts*, 98 CORNELL L. REV. 327 (2013).

²¹ See Henry W. Ballantine, *Abuses of Shareholders Derivative Suits: How Far Is California's New “Security For Expenses Act” Sound Regulation?*, 37 CALIF. L. REV. 399, 399 (1949) (noting how California's 1949 act follows the “questionable example” of security-for-expenses statutes in New York, New Jersey, Pennsylvania and Wisconsin).

personal gain of a settlement out of court than in the interest of the corporation or its stockholders.”²² At the time, many academic observers feared these statutes would upset a careful equilibrium in corporate law and fundamentally damage private enforcement of fiduciary duties.²³ Through a combination of creative pleading by plaintiffs, forgiving amendments by legislatures, and lenient interpretations by courts,²⁴ such dire predictions did not come to pass,²⁵ and indeed it was not long before commentators proclaimed the revival of the derivative suit.²⁶

The American Rule remains a target of reform, especially in the wake of the Delaware Supreme Court’s May 2014 decision in *ATP Tour, Inc. v. Deutscher Tennis Bund* and the subsequent legislative response. ATP Tour, Inc., the governing body of men’s professional tennis and a Delaware nonstock company, had adopted a bylaw that purported to require any league owner who initiated litigation against the Tour to reimburse the Tour’s legal fees if the plaintiff did not “obtain a judgment on the merits that substantially achieves, in substance and amount, the full remedy sought.”²⁷ Answering certified questions from a federal court about the validity and enforceability of the bylaw, the Delaware Supreme Court held that such a bylaw is valid in a nonstock corporation and also noted that it would be enforceable if adopted for a proper purpose.²⁸ In analyzing the proper purpose inquiry, the court observed that “[t]he intent to deter litigation . . . is not invariably an improper purpose.”²⁹

The decision commanded immediate and widespread attention for its implication that a public company might use a bylaw to shift from the

²² *Id.* at 402 (quoting New Jersey Governor Walter Edge).

²³ *See, e.g.*, George D. Hornstein, *The Death Knell of Stockholders’ Derivative Suits in New York*, 32 CALIF. L. REV. 123, 124-25 (1944) (explaining that the option for calculating the bond amount based on reasonable expenses required by New York was “bound to be so high (a hundred thousand dollars would be moderate in any sizable case) that very few individuals could possibly raise the bond” and that, even if the plaintiff could raise the bond, “they would rarely be willing to risk it, for experience has demonstrated that many unquestionably meritorious suits have been lost on numerous technical grounds”).

²⁴ *See, e.g.*, *McClure v. Borne Chem. Co.*, 292 F.2d 824, 833 (3d Cir. 1961) (holding that state security-for-expenses statutes do not apply to federal claims).

²⁵ *See* RALPH C. FERRARA ET AL., *SHAREHOLDER DERIVATIVE LITIGATION: BESIEGING THE BOARD* § 1.03 at 1-19 (1995) (“[C]lever [sic] plaintiffs found ways to plead around the security-for-expenses statutes and it is the statutes, rather than the derivative action, that appear to be on their last leg.” (footnote omitted)).

²⁶ *See, e.g.*, Daniel J. Dykstra, *The Revival of the Derivative Suit*, 116 U. PA. L. REV. 74, 74-75 (1967) (noting the sharp increase in derivative actions from 1955 to 1965 and that reported numbers most likely reflect a small percentage of actions taken).

²⁷ *See* *ATP Tour, Inc. v. Deutscher Tennis Bund*, 91 A.3d 554, 556 (Del. 2014) (quoting 2006 addition of Article 23 to ATP’s bylaws).

²⁸ *Id.* at 558-60.

²⁹ *Id.* at 560.

American to the English Rule.³⁰ Critics of stockholder suits saw in the decision the promise of curtailing meritless litigation. Stephen Bainbridge, for example, noted that “we are faced with a world in which runaway frivolous litigation is having a major deleterious effect on U.S. capital markets,” and fee-shifting bylaws offer “an appropriate means of addressing the problem through private ordering.”³¹ On the other side, plaintiffs’ attorneys feared the worst, describing the decision as a “disaster” that “caused Delaware to secede from the union” by forsaking the American Rule.³² In the wake of the *ATP Tour* decision, the Delaware bar proposed a legislative amendment that would prohibit fee-shifting bylaws, but that proposal was initially derailed by lobbying effort by the Business Roundtable. While some intrepid public companies adopted fee-shifting bylaws after *ATP*,³³ Delaware ultimately amended the DGCL to make fee-shifting bylaws explicitly impermissible over resistance from some business groups.³⁴

Both the existing structure of class-based stockholder litigation and the debate over reforms sparked by *ATP* turns on whether stockholder suits bear some relationship to merit. That question has always been in the background of judicial opinions on stockholder suits,³⁵ and academics have worked to

³⁰ See, e.g., Lisa A. Rickard, *Delaware Flirts with Encouraging Shareholder Lawsuits*, WALL ST. J. (Nov. 14, 2014, 5:48 PM), <http://www.wsj.com/articles/lisa-rickard-delaware-flirts-with-encouraging-shareholder-lawsuits-1416005328> [<http://perma.cc/FAH9-YE58>] (describing the impact of the *ATP Tour* ruling).

³¹ Stephen Bainbridge, *The Case for Allowing Fee Shifting Bylaws as a Privately Ordered Solution to the Shareholder Litigation Epidemic*, PROFESSORBAINBRIDGE.COM (Nov. 17, 2014, 10:50am), <http://www.professorbainbridge.com/professorbainbridge.com/2014/11/the-case-for-allowing-fee-shifting-bylaws-as-a-privately-ordered-solution-to-the-shareholder-litigat.html> [<http://perma.cc/YK3J-6KN9>].

³² Tom Hals, *Delaware Upholds Fee-shifting Bylaw, Could Upend Class Actions*, REUTERS (May 9, 2014, 6:03 PM) <http://www.reuters.com/article/2014/05/09/delaware-courts-fees-idUSL2NoNV1PK20140509> [<http://perma.cc/4C33-VPPA>] (quoting a prominent Delaware shareholder attorney).

³³ See, e.g., Plasmatech Biopharmaceuticals, Amendment to Bylaws, Current Report (Form 8-K), Item 5.03, Exhibit 3.1 (Mar. 2, 2015) (disclosing adoption of a fee-shifting bylaw amending payment of litigation costs).

³⁴ See Hals, *supra* note 13 (reporting passage of the legislation barring fee-shifting but allowing forum requirements); see also Tom Hals, *Delaware Bans ‘Loser-Pays’ Fee-Shifting Bylaws in Corporate Class Actions*, INS. J. (June 26, 2015), <http://www.insurancejournal.com/news/east/2015/06/26/373071.htm> [<http://perma.cc/ZRR2-JH6J>].

³⁵ See *Joy v. North*, 692 F.2d 880, 887 (2d Cir. 1982) (“Derivative suits may be brought for their nuisance value, the threat of protracted discovery and litigation forcing settlement and payment of fees even where the underlying suit has modest merit. Such suits may be harmful to shareholders because the costs offset the recovery. Thus, a continuing debate surrounding derivative actions has been over restricting their use to situations where the corporation has a reasonable chance for benefit.”); see also *Cohen v. Beneficial Indus. Loan Corp.*, 337 U.S. 541, 548 (1949) (“Suits sometimes were brought not to redress real wrongs, but to realize upon their nuisance value. They were bought off by secret settlements in which any wrongs to the general body of share owners were compounded by the suing stockholder, who was mollified by payments from corporate assets. These litigations were aptly characterized in professional slang as ‘strike suits.’”).

supply an answer for generations.³⁶ The challenge in testing the connection between the merits and outcomes in stockholder litigation is that the merits are usually hidden.³⁷ Plaintiffs' attorneys may search through mountains of documents and depose scores of potential witnesses before they can determine whether a claim has merit. The researcher—with neither access to the fruits of discovery nor the time to review them—has little hope of estimating a lawsuit's merit.³⁸

Early academic work on the merits of stockholder litigation drew inferences from observed variation in settlement amounts and attorneys' fees.³⁹ Janet Cooper Alexander's influential study, for example, examined nine securities class actions and found little variation in the settlement amounts,⁴⁰ with most settling for twenty-five percent of the alleged stockholder loss.⁴¹ The critical assumption of Alexander's study was that the merits varied across the cases,⁴² and the invariance of the settlement amount suggested that the merits did not affect settlement.⁴³ Alexander's study,

³⁶ Franklin Wood produced perhaps the first study of the topic and reached dire conclusions. See generally FRANKLIN S. WOOD, SURVEY AND REPORT REGARDING STOCKHOLDERS' DERIVATIVE SUITS 112-13 (1944) (concluding that derivative lawsuits chiefly benefit attorneys).

³⁷ See Grundfest, *supra* note 14, at 739 ("As Samuel Johnson long ago explained to Boswell, 'Sir, you do not know . . . [a cause] to be good or bad till the Judge determines it.' A settlement means that a judge will never determine a cause and that its merits therefore never will be known.") (footnote omitted); see also Janet Cooper Alexander, *Do the Merits Matter? A Study of Settlements in Securities Class Actions*, 43 STAN. L. REV. 497, 506 (1991) ("Testing these competing empirical claims would be impossible if it required a direct comparison of the merits of particular cases.").

³⁸ See Alexander, *supra* note 37, at 506 ("[E]ven if these obstacles could be surmounted, the conclusions of such a study would ultimately amount to little more than the researcher's subjective view of the merits.").

³⁹ See David L. Gilbertson & Steven D. Avila, *The Plaintiffs' Decision to Sue Auditors in Securities Litigation: Private Enforcement or Opportunism?*, 24 J. CORP. L. 681, 687 (1999) (noting that the authors "assum[e] that cases differ with respect to their merits and that these differences are randomly distributed throughout the sample"); Alexander, *supra* note 37, at 511-12 (charting the decrease in market value for certain companies from the Initial Public Offering (IPO) to March 30, 1984 and noting whether the company was sued over its IPO).

⁴⁰ See Alexander, *supra* note 37, at 512.

⁴¹ *Id.* at 517 (showing that five of the nine cases studied "settled for between 24.5 and 27.5 percent of the amount at stake" and that although the remaining cases fall outside this narrow range, "they can be explained by factors not related to the merits").

⁴² See *id.* at 507 ("[E]xperimental method is limited by the fact that we do not know for certain whether the cases studied actually vary as to their strength on the merits, or how they vary However there is reason to believe that the sample cases . . . were not all equally strong.") Under that assumption, the uniformity across the settlements could only grow out of "a settlement process that is not responsive to the merits." *Id.* Other studies have made this same assumption. See, e.g., Gilbertson, *supra* note 39, at 687 (noting that they "assum[e] that cases differ with respect to their merits and that these differences are randomly distributed throughout the sample").

⁴³ *Id.*

alongside the contemporaneous work of Roberta Romano,⁴⁴ suggested that the outcomes of stockholder litigation had little relationship to the underlying strength of the claims, and thus the fundamental mechanism of deterrence through litigation was broken.⁴⁵

Most work in this area has focused on federal securities litigation, and the common empirical approach is to rely on variables that ought to correlate with merit. James Bohn and Stephen Choi, for example, used an ambitious variety of proxies for merit in their 1996 study of securities class actions against IPOs prior to the Private Securities Litigation Reform Act of 1995 (PSLRA).⁴⁶ They examined underwriter quality, the fraction of total holdings that insiders sell in the IPO, the fraction of outsiders on the pre-offering board of directors, the potential damages (the difference between the IPO price and the price at the end of the class period, multiplied by the number of shares offered), and the capital market reaction to the filing of the securities suit.⁴⁷

In post-PSLRA work, Marilyn Johnson, Karen Nelson, and A.C. Pritchard examined what they termed “factors related to fraud”: accounting restatements, earnings forecasts, and insider trading.⁴⁸ Additionally, drawing on an insight of Joseph Grundfest,⁴⁹ Choi used as proxies for merit two measures based on the ultimate settlement amount in his study of post-PSLRA securities IPO litigation.⁵⁰ This study treated a suit as meritorious if it settled for more than \$2 million,⁵¹ reasoning that “the maximum amount defendants will settle a nuisance claim typically will not exceed \$2 million.”⁵²

⁴⁴ See Roberta Romano, *The Shareholder Suit: Litigation Without Foundation?*, 7 J.L. ECON. & ORG. 55, 61 (1991) (failing to make any estimates of merit beyond the amount of settlement). See also, Stephen J. Choi, *The Evidence on Securities Class Actions*, 57 VAND. L. REV. 1465, 1486 (2004) (“While Romano did examine settled versus dismissed cases, a mix of both frivolous and meritorious suits within the set of settled cases may exist.”).

⁴⁵ Alexander, *supra* note 37, at 596-98.

⁴⁶ James Bohn & Stephen Choi, *Fraud in the New-Issues Market: Empirical Evidence on Securities Class Actions*, 144 U. PA. L. REV. 903, 906 (1996).

⁴⁷ *Id.* at 949-79.

⁴⁸ Marilyn F. Johnson, Karen K. Nelson & A.C. Pritchard, *Do the Merits Matter More? The Impact of the Private Securities Litigation Reform Act*, 23 J.L. ECON. & ORG. 627, 630 (2007).

⁴⁹ See Grundfest, *supra* note 14, at 741 (suggesting that settling for more than the costs of defending the claims would provide “a critical signal of the defendants’ own perception of the merits of plaintiffs’ claims”).

⁵⁰ Stephen J. Choi, *Do the Merits Matter Less After the Private Securities Litigation Reform Act?*, 23 J.L. ECON. & ORG. 598, 613-14 (2007).

⁵¹ See *id.* at 613 (noting that “settlements over \$2 million are likely meritorious”).

⁵² *Id.*

As an alternative measure, the study treated suits as meritorious if the settlement amounts exceeded five percent of the IPO offering amount.⁵³

James Cox and Randall Thomas have employed a measure they term “provable loss.”⁵⁴ This is a market-adjusted measure of the stock’s abnormal returns in response to the disclosure of the information that corrected the alleged misstatement or omission underlying the securities claim.⁵⁵ The larger the share of provable loss that a case recovers, the stronger the inference that it was meritorious.⁵⁶ Robert Thompson and Randall Thomas considered an extensive catalog of factors in trying to assess the merit of cases in their study of stockholder litigation in the Delaware Court of Chancery during 1999 and 2000.⁵⁷ They considered the involvement of controlling stockholders, the unadjusted merger premia offered by acquirers, and the size of the monetary settlement to be signals of potential merit.⁵⁸ They also relied on various case characteristics that were “perhaps the most commonly discussed perceived ‘abusive’ features of representative litigation.”⁵⁹

Some recent papers have attempted to quantify the merits of certain discrete legal claims more precisely in other contexts. In their study of mutual fund litigation, one of the authors of this Article and John Morley examined lawsuits between 2000 and 2009 alleging excessive fee liability under section 36(b) of the Investment Company Act.⁶⁰ During the period they studied, the legal standard for 36(b) liability was that the fee in question must be “so

⁵³ See *id.* at 614 n.36 (“The mean offering amount for sued firms pre-PSLRA is \$48.4 million (in 1999 dollars); the 5% threshold therefore to an average cutoff of \$2.43 million.”).

⁵⁴ James D. Cox & Randall S. Thomas, *Does the Plaintiff Matter? An Empirical Analysis of Lead Plaintiffs in Securities Class Actions*, 106 COLUM. L. REV. 1587, 1625-26 (2006); James D. Cox & Randall S. Thomas, *SEC Enforcement Heuristics: An Empirical Inquiry*, 53 DUKE L.J. 737, 768 (2003).

⁵⁵ Cox & Thomas, *SEC Enforcement Heuristics*, *supra* note 54, at 768 n.100 (“The standard measure of damages for securities class actions is the price at which the investors purchased or sold the security and what that price would have been but for the misrepresentation. We refer to this as the provable loss for the class.”).

⁵⁶ See generally *id.*

⁵⁷ Robert B. Thompson & Randall S. Thomas, *The New Look of Shareholder Litigation: Acquisition-Oriented Class Actions*, 57 VAND. L. REV. 133, 165 (2004).

⁵⁸ See *id.* at 200 (“[A controlling stockholder] transaction is accompanied by a high likelihood of substantial management agency costs.”); *id.* at 202 (“[T]he impact of the monetary class action settlements is to raise the premium paid in the lowest-priced control shareholder transactions above the average level for all of these transactions in our sample. In other words, acquisition-oriented class action litigation polices the worst control shareholder deals . . .”).

⁵⁹ See *id.* at 182-92 (examining how quickly suits were filed after the announcement of a transaction, how many suits were filed challenging a transaction, the size of the defendants, whether plaintiffs are repeat players, the concentration of the plaintiffs’ attorneys, settlement rates, and attorney fee awards).

⁶⁰ Quinn Curtis & John Morley, *An Empirical Study of Mutual Fund Excessive Fee Litigation: Do the Merits Matter?*, 30 J.L. ECON. & ORG. 275, 275 (2012).

disproportionately large that it bears no reasonable relationship to the services rendered and could not have been the product of arm's-length bargaining."⁶¹ For each fund in the universe of mutual funds subject to 36(b), Curtis and Morley determined the fund's unadjusted expense ratio and produced variables to measure the excessiveness of the fees as alternative estimates of merit.⁶² They found a "somewhat modest" relationship between fund fees and the incidence of a lawsuit.⁶³ By contrast, they found a strong relationship between fee litigation and fund family size.⁶⁴

Charles Korsmo and one of the authors of this article examined litigation challenging mergers and acquisitions involving Delaware-incorporated target firms.⁶⁵ They collected the universe of merger transactions between 2004 and 2012 where both of the major associated legal remedies—fiduciary class actions and stockholder appraisal petitions—were available.⁶⁶ To estimate the merits of either legal claim, they computed a merger premium residual by subtracting the actual merger premium from a predicted merger premium based on size, industry, and year.⁶⁷ They also used a going-private dummy as a proxy for merit.⁶⁸ They found very little relationship between the merit estimates and the incidence or intensity of fiduciary class actions.⁶⁹ By contrast, the incidence of appraisal—where plaintiffs can proceed only on their own behalf and not on behalf of the entire class of absent shareholders—was strongly associated with low premium residuals.⁷⁰ The Korsmo and Myers paper shares a basic similarity with the Curtis and Morley paper in that the legal claims in both contexts are relatively one-dimensional. For this reason, the legal claims in those contexts are susceptible to an unusually transparent quantitative measure of merit.⁷¹

Stock options backdating is of interest to us because it presents an even more tantalizing opportunity to measure the merits of legal claims.

⁶¹ *Gartenberg v. Merrill Lynch Asset Mgmt.*, 694 F.2d 923, 928 (2d Cir. 1982).

⁶² See Curtis & Morley, *supra* note 60, at 285-86 ("The value of the 'Unadjusted Expense Ratio' variable in our data set for each quarter is the mean of CRSP-reported expense ratios (minus load fees) over the four quarters prior to the quarter of observation.").

⁶³ *Id.* at 297.

⁶⁴ See *id.* at 290 (explaining that "the only family-level fee variable that is positive is the one that adjusts for family size").

⁶⁵ Charles R. Korsmo & Minor Myers, *The Structure of Stockholder Litigation: When Do the Merits Matter?*, 75 OHIO ST. L.J. 829, 868 (2014).

⁶⁶ *Id.*

⁶⁷ *Id.* at 872.

⁶⁸ *Id.* at 874.

⁶⁹ *Id.* at 836.

⁷⁰ *Id.*

⁷¹ See Curtis & Morley, *supra* note 60, at 277 ("[T]he merits of excessive fee lawsuits are uniquely easy to perceive.").

Derivative suits commonly allege some fiduciary duty violation, and evaluating the merits of such a claim requires particularized knowledge that is unavailable without the benefit of discovery.⁷² Even with discovery, it would be quixotic to quantify such an evaluation of merit. But the gravamen of each backdating lawsuit is that the board retroactively granted option awards. As explained below, we can generate firm-level estimates of the likelihood of backdating and the magnitude of the damages. These measures of backdating activity provide unique insight into the merits of backdating shareholder and derivative claims. To be clear, we cannot capture every element of the legal claims that might be relevant. For example, in a derivative suit, the number of directors who participated in the backdating scheme might be relevant to whether demand is excused. In a securities suit, the state of mind of the directors or officers participating in the scheme would be relevant. Nevertheless, the ability to capture with reasonable precision the underlying wrongful activity provides a unique opportunity to evaluate stockholder litigation.

B. *The Backdating Scandal*

Attorneys described the backdating scandal of 2006 as “one of the broadest ever to sweep across corporate America,”⁷³ rivaled only by the bribery and illegal payments scandal of the Watergate era.⁷⁴ Backdating was first identified by financial economists. In the late 1990s, David Yermack studied option grants to CEOs of Fortune 500 companies and discovered that companies making option awards outperformed the market by more than two percent over the succeeding fifty days.⁷⁵ He speculated that option grants were made in advance of favorable corporate news.⁷⁶ In 2004, Erik Lie

⁷² See *id.* at 280 (“The trouble is that the merits of securities class action and corporate derivative suits are very difficult to perceive.”).

⁷³ Nancy Kestenbaum, Paul Krieger & Dan Sella, *When is Dating Illegal? Stock Options Investigations: Cases and Issues*, in *WHAT ALL BUSINESS LAWYERS & LITIGATORS MUST KNOW ABOUT DELAWARE LAW DEVELOPMENTS* 27, 29 (Practising Law Inst. 2007).

⁷⁴ See ROBERT A.G. MONKS & NELL MINOW, *CORPORATE GOVERNANCE* 322 (4th ed. 2008) (quoting Lynn Turner, former Chief Accountant at the SEC, “[t]his scandal has now touched perhaps more companies than any other single scandal, except for the one involving illegal payments and bribes during the Watergate era, which led to the Congressional mandate [that] companies have adequate internal controls.”).

⁷⁵ See David Yermack, *Good Timing: CEO Stock Option Awards and Company News Announcements*, 52 J. FIN. 449, 450 (1997) (“Companies making stock option awards to their CEOs outperform the market on a risk-adjusted basis by slightly more than 2 percent during the period beginning the day after the award and lasting approximately ten weeks (50 trading days).”).

⁷⁶ See *id.* at 450-51 (“The pattern of abnormal returns is consistent with CEOs receiving stock options shortly in advance of favorable news unrelated to the award.”). For more on this practice, known as spring-

circulated a paper showing negative abnormal returns before unscheduled option grants in addition to positive abnormal returns afterward.⁷⁷ He offered a new hypothesis to explain that pattern: “[T]he awards might be timed ex post facto, whereby the grant date is set to be a date in the past on which the stock price was particularly low.”⁷⁸ The SEC saw the paper and opened a handful of investigations,⁷⁹ which became public and attracted the attention of news media and plaintiffs’ attorneys.⁸⁰

The story took off after the *Wall Street Journal* published an extensive front-page report on backdating on March 18, 2006.⁸¹ This report—unlike the academic papers—identified individual firms that may have backdated, highlighting well-timed grants at eight firms.⁸² In the succeeding weeks, attention on backdating increased as the *Wall Street Journal* and other media outlets reported on additional companies that may have engaged in backdating.⁸³ Wall Street analysts further fanned the flames: in May 2006, Merrill Lynch produced two reports that attracted considerable attention, identifying backdating companies in the high technology industry, and the Center for Financial Research & Analysis identified additional companies with potential backdating problems from among the one hundred companies with the largest option grants before Sarbanes–Oxley (SOX).⁸⁴ As the

loading, see David Aboody & Ron Kasznik, *CEO Stock Option Awards and the Timing of Corporate Voluntary Disclosures*, 29 J. ACCT. & ECON. 73, 73 (2000) (“Our findings suggest that CEOs make opportunistic voluntary disclosure decisions that maximize their stock option compensation.”).

⁷⁷ Erik Lie, *On the Timing of CEO Stock Option Awards*, 51 MGMT. SCI. 802, 802 (2005).

⁷⁸ *Id.* at 803. A working paper by M.P. Narayanan and H. Nejat Seyhun circulated in 2005 offered similar evidence and a similar explanation. M.P. Narayanan & H. Nejat Seyhun, *Do Managers Influence Their Pay? Evidence from Stock Price Reversals Around Executive Option Grants* 3-4 (U. of Mich. Ross Sch. of Bus., Working Paper Series No. 927, 2005).

⁷⁹ See Peter Lattman, *Backdating Scandal Ends with a Whimper*, N.Y. TIMES (Nov. 11, 2010, 9:38 PM), http://dealbook.nytimes.com/2010/11/11/backdating-scandal-ends-with-a-whimper/?_r=0 [<http://perma.cc/4B59-WQLJ>]; Eliot Spitzer, *The 2007 Time 100: Erik Lie*, TIME (May 3, 2007), http://content.time.com/time/specials/2007/time100/article/0,28804,1595326_1615737_1615726,00.html [<http://perma.cc/5DR9-8F47>].

⁸⁰ See, e.g., Mark Maremont, *Authorities Probe Improper Backdating of Options*, WALL ST. J. (Nov. 11, 2005), <http://www.wsj.com/articles/SB113167728332394467> [<http://perma.cc/64ZL-T5LC>] (noting that Lie’s study offered evidence on the use of backdating).

⁸¹ Charles Forelle & James Bandler, *The Perfect Payday*, WALL ST. J., Mar. 18, 2006, at A1.

⁸² See *id.* (mentioning Affiliated Computer Services Inc., UnitedHealth Group Inc., Mercury Interactive Corp., Analog Devices Inc., Brooks Automation Inc., Comverse Technology Inc., and Vitesse Semiconductor Corp. in the text and graphics, and also Jabil Circuit in a graphic).

⁸³ See, e.g., Steve Stecklow, *How One Company Played with Timing of Stock Options*, PITT. POST-GAZETTE (July 20, 2006), <http://www.post-gazette.com/business/businessnews/2006/07/20/How-one-company-played-with-timing-of-stock-options/stories/200607200487> [<http://perma.cc/MV5X-6X5J>] (describing options backdating history at Brocade Communications Systems Inc.).

⁸⁴ See David Henry, *Backdated Options, Future Rules?*, BLOOMBERG BUSINESSWEEK (May 22, 2006), <http://www.bloomberg.com/bw/stories/2006-05-22/backdated-options-future-rules-businessweek>

scrutiny directed at companies named as potential backdaters in the media grew, many boards of directors initiated voluntary reviews of their own past grant practices.⁸⁵ By the end of the summer, backdating had become one of the biggest corporate scandals in a generation.

For implicated firms, backdating had some predictable consequences. Correcting for backdating could lead to the need to restate past financial results.⁸⁶ Companies might also violate debt covenants in the course of restating their financials, forcing them to deal with a default.⁸⁷ Backdating allegations also shook investors' confidence in a company's management and in its financial reports.⁸⁸ The losses in market capitalization following backdating allegations—on the order of hundreds of millions of dollars per

business-news-stock-market-and-financial-advice [http://perma.cc/9D32-H2AD] (discussing the identification of companies with a high risk of having backdated by a Merrill Lynch report and Center for Financial Research & Analysis report).

⁸⁵ See, e.g., Ben Rooney, *RIM Settles Option Backdating Case*, CNN MONEY (Feb. 17, 2009), http://money.cnn.com/2009/02/17/technology/RIM_Backdating/?postversion=2009021716 [http://perma.cc/GRH9-UHNG] (“RIM said it had previously disclosed a voluntary review of its stock option granting practices in 2006 . . .”).

⁸⁶ Tax and accounting rules strongly disfavored in-the-money grants. Accounting rules required that the difference be charged against earnings. FINANCIAL ACCOUNTING STANDARDS BD., STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 123 (REVISED 2004) 98 (2004). Before June 15, 2005, the governing standards were Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees*, and FASB Statement No. 123: *Accounting for Stock-Based Compensation*, originally issued in 1995. Press Release, Financial Accounting Standards Board, FASB Issues Final Statement on Accounting for Share-Based Payment (Dec. 16, 2004). Tax rules classified in-the-money options as not “performance-based” and thus subject to a \$1 million limit on deductibility. See Steven Balsam, *Taxes and Executive Compensation*, ECON. POL'Y INST., Aug. 14, 2012, at 2. By backdating option awards, companies could deliver the built-in value associated with an in-the-money option grant while capturing accounting and tax benefits by appearing to award grants at-the-money. A company with a backdating problem had to recalculate the intrinsic value of the option as of the “real” grant date and reflect that value in their financial reports. The result was to increase compensation expense in past periods, which had no effect on the company's cash position but did affect earnings. The changes were often material enough to require a restatement of prior results. On the tax front, backdated options might have to be recharacterized as in-the-money options, meaning they would no longer be performance-based compensation and thus no longer a deductible expense. The tax effect for many firms, however, was not strongly negative and in some cases was positive. See Gennaro Bernile & Gregg A. Jarrell, *The Impact of the Options Backdating Scandal on Shareholders*, 27 J. ACCT. & ECON. 2, 10 (2009) (“[T]he available evidence seems to indicate that the tax consequences of correcting for option backdating are typically negligible.”). Across the cases studied by Bernile and Jarrell, the mean reduction was 0.4% and the median reduction was 0.09%. *Id.*

⁸⁷ A number of firms were notified by debtholders of an event of default, such as Amkor, Mercury Interactive, Sanmina-SCI; Peter Lattman & Karen Richardson, *Hedge Funds Play Hardball with Firms Filing Late Financials*, WALL ST. J. (Aug. 29, 2006), <http://www.wsj.com/articles/SB115681425965147983> [http://perma.cc/5QAX-VVBN] (demonstrating how hedge funds took advantage of the backdating scandal by targeting bondholders that missed filing deadlines).

⁸⁸ See Bernile & Jarrell, *supra* note 89, at 13-14 (documenting a negative 7% return for shareholders around the first announcement of firm-specific backdating news and larger negative returns—15% or 20%—over longer windows).

firm—were far out of proportion to any estimate of the out-of-pocket costs associated with handling backdating allegations.⁸⁹

Backdating also gave rise to a substantial amount of public and private litigation. The SEC and DOJ investigated over one hundred firms and filed enforcement actions against some of them. Some worried at the time that the SEC did not pursue cases with adequate vigor.⁹⁰ But as Choi, Wiechman, and Pritchard have shown, the SEC poured enormous resources into backdating investigations, diverting attention from other areas.⁹¹ Of the criminal prosecutions,⁹² a few resulted in convictions—of former executives from Comverse Technology, Monster World, KB Home, and Brocade Communications—but not many. One commentator declared that the results had “not been as good as the earlier corporate fraud prosecutions.”⁹³

Somewhat surprisingly, federal securities suits never gained much traction in the backdating context. There were only thirty-six such suits filed and, while there were several huge settlements, most of the cases were notable for settling for less than many observers expected.⁹⁴ The common explanation

⁸⁹ Compare *id.* at 3, 24 (describing how “the cost of lawyers and accountants hired to conduct internal investigations, cooperate with government agencies, and deal with shareholder litigation has reportedly been in the order of several million dollars”), with M. P. Narayanan, Cindy A. Schipani & H. Nejat Seyhun, *The Economic Impact of Backdating of Executive Stock Options*, 105 MICH. L. REV. 1597, 1637-38 (2007) (reporting an “average value loss” of about \$389 million at firms examined).

⁹⁰ See Marcy Gordon, *Execs Falling in Options Probe*, INSIDEBAYAREA.COM (Feb. 17, 2007), https://www.insidebayarea.com/ci_5249134?source=rss [<http://perma.cc/93NW-EPZE>] (“[T]he pace of enforcement actions in corporate America’s biggest fiasco of 2006 still is lagging, in the view of some critics and observers.”).

⁹¹ See Stephen J. Choi, Anat Carmy Wiechman & A.C. Pritchard, *Scandal Enforcement at the SEC: The Arc of the Option Backdating Investigations*, 15 AM. L. & ECON. REV. 542, 549 (2013) (documenting a “quick shift in enforcement priorities suggest[ing] that the SEC declined to pursue [non-backdating] accounting cases that the SEC otherwise would have pursued in order to free up resources to pursue backdating investigations”).

⁹² The companies that were targets (or whose executives were targets) included KB Home, Brocade Communications, Comverse Technology, Monster Worldwide, McAfee, and Take-Two Interactive. See *Spotlight on Stock Options Backdating*, U.S. SEC. & EXCHANGE COMMISSION, <https://www.sec.gov/spotlight/optionsbackdating.htm> [<http://perma.cc/83C3-2YDJ>] (last visited Oct. 2, 2015).

⁹³ Peter J. Henning, *Behind the Fade-out of the Options Backdating Cases*, N.Y. TIMES DEALBOOK (Apr. 30, 2010), http://dealbook.nytimes.com/2010/04/30/behind-the-fade-out-of-options-backdating-cases/?_r=0 [<http://perma.cc/6VH5-FYGV>] (“[T]he cases turned out to be much more difficult to win because the conduct had neither the visceral appeal nor the impact that accounting fraud had. No company’s survival was threatened by backdating, and the options practices involved accounting and tax issues that were often murky, allowing defendants to argue successfully in some cases that they did not believe they were engaged in wrongdoing.”).

⁹⁴ See Cary O’Reilly, *Option Backdating Spurs Few Lawsuits*, SEATTLE TIMES, July 27, 2006, at C2 (“The options backdating that has cost at least 19 U.S. executives their jobs resulted in only eight federal class-action lawsuits in the year’s first half.”); Dawn Kopeki, *Backdating: Why Penalties Are Puny*, BUS. WEEK. (June 17, 2007), <http://www.bloomberg.com/bw/stories/2007-06->

for the absence of much securities litigation is that the stock prices of implicated companies did not drop sufficiently on backdating news to generate large damages.⁹⁵ The longer term market penalty uncovered by academic studies,⁹⁶ of course, suggests that the market reactions were in fact sometimes large, but plaintiffs' attorneys nevertheless opted against bringing many securities claims.

Derivative litigation was overwhelmingly the enforcement mechanism of choice for plaintiffs' attorneys. As we show below, shareholders filed over 600 derivative lawsuits based on backdating allegations.⁹⁷ In a derivative claim, the damages do not depend on the stock price reaction to backdating news. Instead, damages depend on the magnitude of the ill-gotten gains associated with the practice.⁹⁸

There has been very little empirical work on private litigation over backdating. Two studies that documented the extent of the multiforum trend in stockholder litigation relied on surveys of where backdating derivative suits were filed.⁹⁹ In addition, Bernile and Jarrell investigated whether the stock price movements they documented could have been due to anticipation of stockholder lawsuits, which would impose costs on firms.¹⁰⁰ Not distinguishing between securities lawsuits and shareholder derivative lawsuits, they found that plaintiffs targeted firms where backdating likely took place and firms with more assets.¹⁰¹

17/backdating-why-penalties-are-puny [http://perma.cc/LBF5-44V9] ("The more than yearlong probe into options backdating . . . is nearing completion. The surprising upshot: much smaller fines than anyone expected.").

⁹⁵ See Ashby Jones, *Firms Settle Backdating Suits: Some Private Cases End in Agreements; More Deals Ahead?*, WALL ST. J., Nov. 19, 2007, at A15 ("[B]ecause word of options backdating typically didn't lead to significant drops in share prices, only about 30 class-action lawsuits have been filed."); see also Daniel J. Morrissey, *The Path of Corporate Law: Of Options Backdating, Derivative Suits, and the Business Judgment Rule*, 86 OR. L. REV. 973, 992 (2007) (explaining that damage issues, compounded with causation questions, inhibited securities class actions).

⁹⁶ See Bernile & Jarrell, *supra* note 86, at 13-18 (charting the impact of backdating allegations on market capitalization in the days immediately following the news, and up to 80 days later).

⁹⁷ See *infra* Table 3.

⁹⁸ As Baker and Griffith have noted, "the backdating of options is . . . a paradigmatic derivative claim—any harm suffered by shareholders is strictly derivative of the harm suffered by the corporation itself." BAKER & GRIFFITH, *supra* note 9, at 29.

⁹⁹ See Minor Myers, *Fixing Multi-Forum Shareholder Litigation*, 2014 U. ILL. L. REV. 467, 479 (using filing information from two sets of case data, "derivative suits against firms implicated in the 2006 stock options backdating scandal . . . [and] class action lawsuits filed against target firms in the 250 largest mergers" from 2009 through 2011); see also John Armour, Bernard Black & Brian Cheffins, *Is Delaware Losing its Cases?*, 9 J. EMPIRICAL LEGAL STUD. 605, 611-12 (2012) (using similar filing information from case data).

¹⁰⁰ See Bernile & Jarrell, *supra* note 86, at 18 (examining stock prices' reaction to firm-specific backdating news).

¹⁰¹ See *id.* at 19 tbl. 7 (illustrating the relation of abnormal returns around news event dates).

II. DATA AND METHODOLOGY

We combine data on stock option grants with hand-collected data on the incidence of stockholder derivative litigation alleging backdating. We augment this data with additional information on securities class actions and SEC investigations. This Part describes our data and important variables used in the analysis below.

A. Methodology for Identifying Backdating Activity

We obtained data on stock option awards at public companies from the Thomson Financials Insider Filing database. The data set includes all insider transactions reported on Form 4. We construct a database of option grants by filtering on insider transactions to identify grants between January 1, 1996, and August 29, 2002, when changes to reporting rules made backdating much more difficult. We eliminate grants to low-level executives, as in Bizjak, Lemmon, and Whitby.¹⁰² This leaves a dataset of 181,852 option grants across 8520 firms.

To determine whether a particular option grant is backdated, we compute the return on the underlying stock in the twenty trading days before the grant and the 20 days after the grant.¹⁰³ The post-grant change in price minus the pre-grant change in price is the reversal. Intuitively, the reversal measures the depth of the “V” around the option grant and captures both increases in price after the grants and avoidance of losses before the grant. We compute the reversal for all grants in the dataset. We then compute the reversal for 1,000,000 hypothetical grant dates by making random draws from our sample of firms and dates over the same time period as our sample of option grants.

To estimate the probability that a grant is backdated, we match the grant to the randomly generated sample of hypothetical grant dates with the same volatility level and compute the proportion of hypothetical grants with lower reversal. Volatility is measured as the standard deviation of daily stock returns and captures the tendency of a firm’s share prices to change quickly. More volatile stocks are more likely to have a high or low reversal on a given date than less volatile stocks, so controlling for volatility is important. The

¹⁰² See John Bizjak, Michael Lemmon & Ryan Whitby, *Option Backdating and Board Interlocks*, 22 REV. FIN. STUD. 4821, 4827-28 (2009) (describing how one of the filters applied to the sample data was removing options grants to lower level executives).

¹⁰³ Our methodology for identifying backdated options is similar to Bizjak, Lemmon and Whitby. See *id.* at 4827-28 (analyzing 4,189,765 grant observations, narrowed by several filters that result in a final sample of 62,364 firm-grant-day observations). The twenty trading-day window approximately captures a calendar month.

result is a volatility-controlled estimate of the likelihood that a grant on a randomly chosen date would have a reversal at least as large as the observed reversal of the grant. This can be understood as a probabilistic measure of the likelihood that a grant was backdated.

To estimate backdating at the company level, we use a similar technique. For a company with k option grant dates in the sample, we draw 1000 samples of k options at random from the set of hypothetical grants with the same volatility decile. We compute the cumulative reversal across all k option grants for the firm in question as well as all 1000 draws of k hypothetical grants. We estimate the probability of the cumulative reversal occurring randomly by observing the proportion of random draws that have cumulative reversal larger than the observed reversal. The estimated probability that a company engaged in backdating is the proportion of random draws of k grants with lower total reversal.

Using these company-level estimates of the likelihood that the observed reversals are random, it is possible to estimate the proportion of likely backdating firms in the sample. The company-level probabilities are p-values, and we can take $p < 0.05$ percent as the confidence cutoff for backdating firms. Thirteen percent of the firms meet this cutoff. It does not follow, of course, that all of these firms backdated. Five percent of the non-backdating firms would have $p < 0.05$ by chance. While the true proportion of non-backdating firms is not directly observable, it is nevertheless possible to estimate this quantity using statistical methods developed for measuring false discoveries in mixed samples.¹⁰⁴

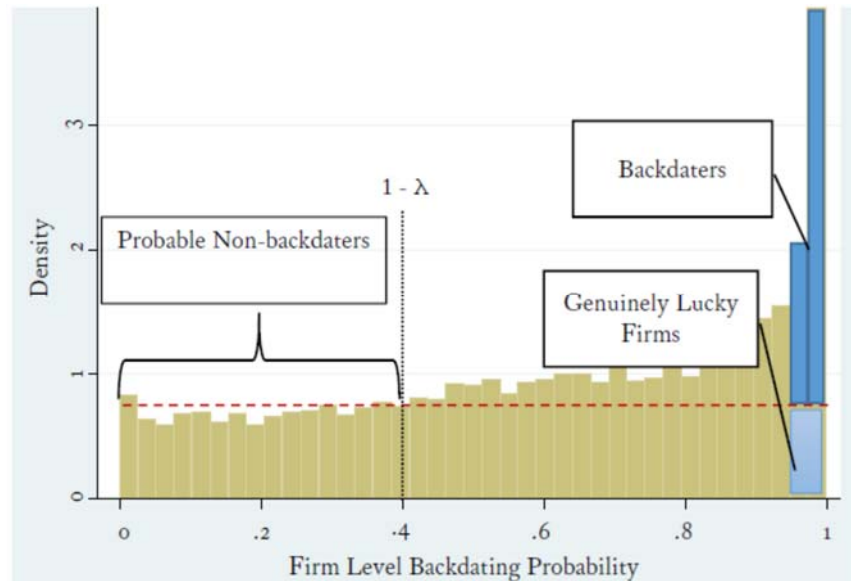
To estimate the proportion of firms with aggregate reversal with $p < 0.05$ that did not in fact engage in backdating, we first choose a cutoff p-value λ , below which we assume that no firms engaged in backdating. We use $\lambda = 0.6$. That is, we assume that firms whose cumulative reversal was worse than sixty percent of randomly generated reversals did not backdate. We then estimate the number of firms with $p < 0.05$ that did not backdate as follows:

$$\frac{W(p < 0.05)}{N} * \left[\frac{W(p > 0.6)N}{1 - \lambda} \right]$$

¹⁰⁴ See generally John D. Storey, *A Direct Approach to False Discovery Rates*, 64 J. ROYAL STAT. SOC. 479, 494-95 (2002) (proposing a new approach to multiple-hypothetical testing through analyzing false discovery rates). The methodology was applied to mutual fund performance in Laurent Barras, Olivier Scaillet & Russ Wermers, *False Discoveries in Mutual Fund Performance: Measuring Luck in Estimated Alphas*, 65 J. FIN. 179 (2010).

Where $W(p < y)$ is the number of firms with a probability of random reversal less than y , and N is the number of firms in the sample. Intuitively, this uses the proportion of firms with high p-values that likely did not engage in backdating to estimate the proportion of firms with $p < 0.05$ that did not backdate. Figure 1 illustrates why this estimation intuitively makes sense.

Figure 1: Estimation of Proportion of Backdating Firms, Controlling for Genuine Luck



Based on the equation above, we estimate that there are 855 firms in our sample—or about 10% of total firms with option grant information—that can be said with 95% confidence to have positive cumulative reversal around option grants that is not the result of random variation. This is lower than the estimate of aggregate options backdating activity of Edelson and Whisenant, who estimate that about 16% of their sample of 4008 firms engaged in backdating with 95% probability using a different methodology for measuring grant probabilities, but still much higher than the number of firms publicly implicated in the practice of backdating.¹⁰⁵

¹⁰⁵ See Rick Edelson & Scott Whisenant, A Study of Companies with Abnormally Favorable Patterns of Executive Stock Option Grant Timing 1-36 (Aug. 16, 2009) (unpublished manuscript), <http://online.wsj.com/public/resources/documents/backdate-08182009.pdf> [<http://perma.cc/B8Mp-7KUZ>].

Our methodology identifies non-random patterns in firm grants. It is of course possible that these non-random patterns are not the result of backdating, but of some other practice like spring-loading,¹⁰⁶ where the disclosure of positive news is timed to follow a grant of options. The effect for the grant recipient is essentially the same—options values are increased—but the legal analysis is different because backdating involves a deliberate violation of a stockholder-approved options plan and the filing of a demonstrably false document with the Securities and Exchange Commission.¹⁰⁷

To determine the proportion of backdating (as opposed to, say, spring loading) in our sample, we compare our primary sample of grants to grants where backdating was not possible but other methods of increasing option value, like spring loading, could have still worked. In particular, we compare our main sample of grants in the pre-Sarbanes–Oxley era, when companies had a long period in which to report option grants, to grants in the post-Sarbanes–Oxley era that were reported within one day of being issued.¹⁰⁸ Applying the methodology described above to the samples of grants, we find that the incidence of unusually lucky grants is 80% lower among grants for which backdating was impossible compared with our main sample of pre-SOX grants.¹⁰⁹ This suggests, consistent with the finance literature, that the majority of abnormal performance around grants was due to backdating.¹¹⁰

B. Description of Backdating Variables

Based on the methodology described above, we derive three measures of backdating activity. First, we use one minus the firm-level p -value on cumulative reversals around grant dates as a measure of the overall degree to which a firm is likely to have engaged in backdating. For convenience of

¹⁰⁶ See Robert M. Daines, Grant R. McQueen & Robert J. Schonlau, *Right on Schedule: CEO Option Grants and Opportunism* 41 (2015), <http://papers.ssrn.com/sol3/Papers.cfm?abstractid=2363148> [<http://perma.cc/Vn6W-8W7D>] (finding that data on abnormal returns around scheduled option grants due to spring-loading appears very similar to data on abnormal returns due to backdating).

¹⁰⁷ See, e.g., *In re Tyson Foods, Inc.*, 919 A.2d 563, 592-93 (Del. Ch. 2007) (distinguishing the legal analysis of backdating from that of spring-loading).

¹⁰⁸ Post-SOX, the reporting period was shortened to two days. 15 U.S.C. § 78(p) (2012). But Lie, using pre-SOX data, showed that backdating occurred within that two-day window. Lie, *supra* note 77, at 809. As such, even the post-SOX sample is tainted by backdating. In the sample of grants reported within one day, backdating was all but impossible. Prior to SOX, almost no grants were immediately reported.

¹⁰⁹ This is consistent with Randall A. Herron & Erik Lie, *Does Backdating Explain the Stock Price Pattern Around Executive Stock Option Grants?*, 83 J. FIN. ECON. 271, 294 (2007), the paper that first identified the backdating explanation for abnormal returns.

¹¹⁰ See *id.*; see also Randall A. Herron & Erik Lie, *What Fraction of Stock Option Grants to Top Executives Have Been Backdated or Manipulated?* 55 MGMT. SCI. 513 (2009).

reference, we refer to this as the Firm-Level Backdating Probability. While this is a reasonable name for the variable, it is subject to some measurement error. For example, a firm that backdated only once but issued many options grants may be overlooked by this measure if the cumulative effect of the truly random grants conceals the effect of the backdated grant. Such a firm may be measured to have a low backdating probability even if the single grant could be shown to be backdated with near-certainty. Second, if a firm engaged in other practices that created abnormal reversal, such as timing bad news before option grants and positive news after options grants, then this could be incorporated into the backdating measure, even if the firm did not actually backdate options. Nevertheless, the firm-level measure is helpful in identifying firms that backdated frequently and with measurable economic consequences.

We also compute the *p*-value of individual option grants. We term grants that have reversal with an estimated likelihood of occurring randomly of less than 0.05 “lucky” grants.¹¹¹ Of course, some significant proportion of lucky grants were, in fact, the result of luck, since there is a one in twenty likelihood of such a grant resulting from chance. Moreover, firms that issued many grants are more likely to have lucky grants. To get a more detailed view of firm-level backdating activity, we use the percentage of each firm’s grants that were lucky to construct the variable Percent Lucky Grants, which implicitly controls for the frequency with which firms granted options. This measures the incidence of backdating but, again, does not fully capture the scope of backdating activity as it does not distinguish large grants from small ones.

To measure the total effect of backdating on firms’ financial reports, we compute the Total Abnormal Reversal. For each lucky grant, we multiply the number of options times the reversal, from twenty days prior to the grant to twenty days after, times the exercise price of the option grant. If we assume that the average reversal of non-backdated grants was zero, then this measure approximates the degree to which the option was “in the money” on the day it was issued and thus the compensation expense that should have been recorded as a result. Note that this value is different from the actual economic impact of the backdating, since the accounting standards at the time did not attempt an actual valuation of the options.¹¹²

¹¹¹ For another article using the term “lucky grants,” see Lucian A. Bebchuk, Yaniv Grinstein & Urs Peyer, *Lucky CEOs and Lucky Directors*, 65 J. FIN. 2363, 2364 (2010). In that study, the term refers to grants made on the day of the month that had the lowest stock price. *Id.* at 2364. While obviously aimed at measuring the same activity, this is a distinct definition.

¹¹² See Walker, *supra* note 3, at 564, 594 n.135 (2007) (noting that an option granted a dollar in the money may increase in value less than twenty cents to the recipient).

For our regression results, we use both the Firm-Level Backdating Probability and the Total Abnormal Reversal as the variables of interest. Firm-Level Backdating Probability captures the likelihood that a company backdated while Total Abnormal Reversal correlates with the value taken out of the firm through backdating. These variables constitute our main estimates of the merits of backdating derivative cases.

We also collect data on other measures of backdating activity that help validate our merits measures. First, our data includes a list of firms investigated by the SEC for backdating.¹¹³ One might assume, and indeed we confirm below, that the SEC focused on the worst offenders, so this variable is a strong indicator of significant backdating activity. Second, our data includes the size of restatements issued by firms that acknowledged backdating issues. While not every firm that backdated restated its financials, the size of the resulting restatement for those firms that did is a measurement of how widespread and aggressive the backdating activity was.¹¹⁴ Third, we code whether each firm appeared on one of several lists of likely backdaters produced by media and investment analysts. In unreported regressions, we confirm that all these measures of backdating are strongly correlated with Firm-Level Backdating Probability and Total Abnormal Reversal with $p < 0.01$.

We use Firm-Level Backdating Probability and, separately, Total Abnormal Reversal as estimates of the strength of a stockholder suit making backdating allegations. The variable Firm-Level Backdating Probability supplies an estimate of legal liability in a fiduciary-duty-based claim because backdating was a straightforward violation of law that gave rise to damages.¹¹⁵ The variable Total Abnormal Reversal captures the extent to which the options were in the money when granted, and since the likely remedy in a fiduciary based-suit would be rescission in one form or another,¹¹⁶ this

¹¹³ We identify the subset of firms that faced an SEC investigation by aggregating the *Wall Street Journal's* list of SEC-investigated firms with NERA's similar list. See DR. PATRICK CONROY ET AL., NERA ECON. CONSULTING, OPTIONS BACKDATING: ACCOUNTING, TAX AND ECONOMICS 9-12 (2006), http://www.nera.com/content/dam/nera/publications/archive2/PUB_Backdating_Part_2_0613.pdf [<http://perma.cc/E5SN-UFL4>]; *Perfect Payday: Options Scorecard*, WALL ST. J. (Sept. 7, 2008), <http://www.wsj.com/public/page/perfectpayday.html> [<http://perma.cc/76CM-DXFX>]; see also Choi, Wiechman & Pritchard, *supra* note 91, at 549 tbl.1 (showing the number of backdating investigations initiated by the SEC between 2004 and 2007).

¹¹⁴ See Bernile & Jarrell, *supra* note 89 at 19 tbl. 7 (including the size of restatement as a control for the market response to backdating).

¹¹⁵ See *Ryan v. Gifford*, 918 A.2d 341, 358 (Del. Ch. 2007) (holding that shareholders' allegations that company directors purposefully made false representations regarding the dates on which options were granted were sufficient to rebut the business judgment rule and defeat a motion to dismiss).

¹¹⁶ See *id.* at 361 ("Whether or not the options are exercised, the Court will be able to fashion a remedy. For example, this Court might rely on expert testimony to determine the true value of the option

variable correlates with the magnitude of the potential damages. Together, these variables are estimates of liability and damages in a fiduciary suit. They measure the merits of a claim that the company could bring against those who engaged in backdating.

In derivative litigation, the stockholder seeks to stand in the shoes of the company to press its claims. Thus, our measures of merit only apply to private litigation in which the private plaintiffs' attorney successfully gained control of the case. To do that, the private suit must survive a motion to dismiss for failure to make demand on the board.¹¹⁷ Only when the board is conflicted—meaning that the board members themselves are the targets of the backdating suit—can the private attorney avoid the demand requirement.¹¹⁸ To investigate this possibility, we examined the effect of board turnover on our results. In unreported tests, we found that director turnover at the backdating company between 2001 and 2006 had no effect on our targeting or litigation outcomes below.

C. Data on Litigation over Backdating

We compiled data on stockholder derivative cases by hand. As the backdating story grew in the news, media entities and other analysts compiled lists of firms implicated in backdating. We collected all four of these lists and combined them into one master list of firms implicated in backdating.¹¹⁹ We find 264 firms where backdating was publicly alleged to have occurred, of which the option grant and other stock price data necessary to be included in the sample was available for 255.¹²⁰

grants or simply rescind them.”); *see also* Jay W. Eisenhofer & Cynthia A. Calder, *Options Backdating from the Shareholders' Perspective*, 3 SEC. LITIG. REP. 8 (Mar. 2007) (“Shareholders who have sued to seek redress for backdating have frequently demanded outright rescission of the backdated options.”).

¹¹⁷ *See* Amy M. Koopmann, *A Necessary Gatekeeper: The Fiduciary Duties of the Lead Plaintiff in Shareholder Derivative Litigation*, 34 J. CORP. L. 895, 908 (2009) (“[O]nce a plaintiff files a claim, the court will hear motions and arguments centered on the plaintiff's claim of futility.”).

¹¹⁸ *See id.* at 902 (“[C]ourts will excuse demand when it would be futile.”).

¹¹⁹ *See* GLASS, LEWIS & CO., YELLOW CARD TREND ALERT, STOCK-OPTION BACKDATING SCANDAL app. A (2007) (listing 257 firms); RENZO COMOLLI ET AL., NERA ECON. CONSULTING, OPTIONS BACKDATING: THE STATISTICS OF LUCK 9-12 (2007) (listing 198 firms); Kevin M. LaCroix, *Options Backdating Lawsuits: Settlements, Dismissals, Denials*, THE D&O DIARY (Oct. 28, 2007), <http://www.dandodiary.com/2007/10/articles/options-backdating/the-list-options-backdating-settlements-dismissals-and-denials/> [<http://perma.cc/P4DX-L6YL>] (click on hyperlink at “here,” the last word in the first paragraph) (listing 169 firms); *Perfect Payday: Options Scorecard*, WALL ST. J. (Sept. 7, 2008), <http://www.wsj.com/public/page/perfectpayday.html> [<http://perma.cc/76CM-DXFX>] (listing 141 firms).

¹²⁰ To be included, a firm must have at least one option grant to high level executives from 1996 to 2002 reported in the Thomson Reuters Insider Filings Database, have sufficient returns data in the Center for Research in Security Prices (CRSP) database to compute reversal for twenty days

For each of these 255 firms, we examined its periodic disclosure filings with the SEC to determine whether the firm had attracted stockholder derivative litigation.¹²¹ For each firm with disclosed litigation, we collected data on all of the complaints against the firm by examining documents in court dockets, SEC disclosures, and contemporaneous news reports. For each company, we compiled the filing date, the venue, the filing attorneys, and the lead counsel (if the case was consolidated). We note the ultimate outcomes of cases: whether settled, consolidated with other cases, or dismissed. If the case was settled, we collected the details of the settlement including any amounts paid to the company, option repricings or cancellations, corporate governance changes, the plaintiffs' attorneys' fee,¹²² any D&O insurance payment (if disclosed), and whether anyone objected to the settlement. If a court dismissed the case, we noted the grounds. We also noted if the case ended in some other way, such as bankruptcy or merger.

In order to identify securities class action claims, we used a comprehensive list from Kurtzman Carson Consultants, LLC.¹²³ The list includes the companies sued, whether the case was dismissed, and the size of any settlement paid to the class.¹²⁴

One variable we could not collect was the plaintiffs' stock holdings. The plaintiffs' holdings were rarely noted in court pleadings. When disclosed, however, the holdings appeared trivial. For example, in a fight over which of three plaintiffs would be lead in a consolidated case involving Power Integrations, the judge requested information on their holdings. One plaintiff did not respond, another claimed to hold two shares, and the third plaintiff was unreachable, according to his attorney.¹²⁵

The filing dates of the derivative cases were clustered between early 2006 and early 2007, mirroring public attention on the phenomenon. Figure 2 presents a histogram of derivative filings over time. There were only a handful of backdating cases filed before the *Wall Street Journal* published its

on either side of the grant, and be listed in Compustat to permit matching between the Thomson Reuters data and the CRSP data.

¹²¹ We believe that any firms targeted by a backdating suit would have disclosed this fact in its SEC filings. Nevertheless, if a firm did not disclose a backdating suit, it would not be identified as having been sued in our sample.

¹²² We collected both the negotiated attorneys' fees, the amount requested, and the amount awarded. At Maxim, for example, the settlement stipulation allowed the plaintiffs to ask for up to \$15.5 million, but in their fee application they sought a smaller number.

¹²³ ADAM SAVERT, KURTZMAN, OPTIONS BACKDATING SECURITY CLASS ACTIONS: TALLYING UP THE SCORE 2-4 (Dec. 17, 2013).

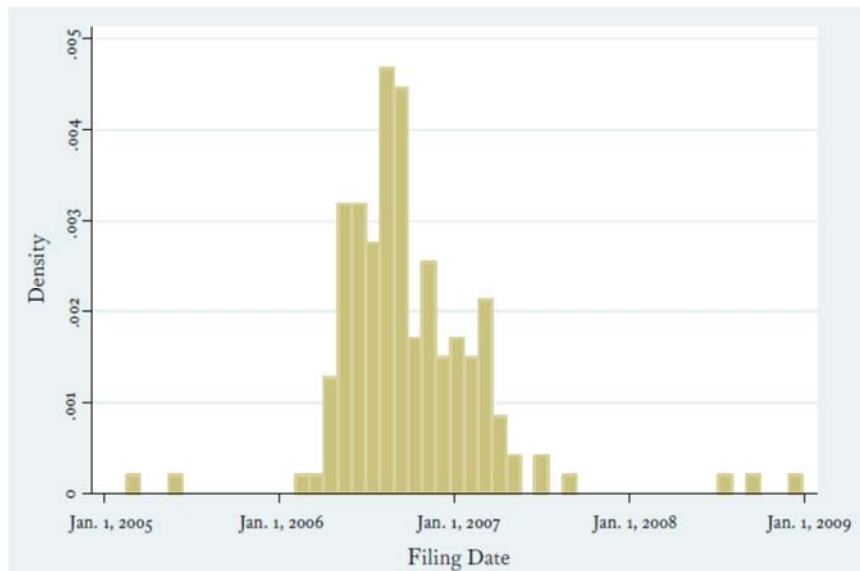
¹²⁴ *Id.*

¹²⁵ Declaration of Shawn A. Williams, *Quaco v. Balakrishnan*, No. 06-cv-02811 (N.D. Cal. Nov. 21, 2006); *see also* *Quaco v. Balakrishnan*, No. 06-cv-02811 (N.D. Cal. filed Jan. 9, 2007).

front page story on March 16, 2006.¹²⁶ Also, 90% of all cases were filed between April 2006 and March 2007.

As has been noted in other work, the venue selections by plaintiffs' attorneys were skewed towards federal court and, even when filed in state court, out of the state of incorporation.¹²⁷ Table 1 shows the venues selected by firms, sorted by the selecting firms' state of incorporation.

Figure 2: Histogram of Filing Dates



¹²⁶ Forelle & Bandler, *supra* note 81.

¹²⁷ See, e.g., Armour, Black & Cheffins, *supra* note 99, at 621 (explaining that suits against Delaware companies have become more common in non-Delaware state and federal courts).

Table 1: Venue Choices of Derivative Plaintiffs

Table 1.A: Filing Choices by Firm Incorporation

Incorporation type	No. cos.	No. suits	No. filed in fed. court	No. filed in inc. state	No. filed in other states
Delaware	119	475	266	18	190
Non-Delaware (Inc. in HQ state)	39	154	101	53	.
Non-Delaware (Inc. not in HQ state)	8	27	13	5	9

Table 1.B: Venues Ranked by Number of Filings

Venue	# filings
N.D. Cal.	150
Superior Court of California, Santa Clara County	52
C.D. Cal.	51
D. Mass.	30
S.D.N.Y.	19
Delaware Court of Chancery	18
Superior Court of California, Los Angeles County	18
Superior Court of California, Orange County	18
E.D.N.Y.	15
New York County Supreme Court	14
D. Minn.	13
D.N.J.	10

Even though the basic fiduciary allegations in backdating suits are state law claims, they can be filed in federal court either by alleging diversity among the parties or by adding a federal cause of action,¹²⁸ such as one based on faulty proxy disclosures.¹²⁹ As Table 1 shows, shareholders filed a majority

¹²⁸ See 28 U.S.C. §§ 1331–32 (2012) (granting federal courts personal jurisdiction over litigants under diversity jurisdiction or federal question jurisdiction).

¹²⁹ See 15 U.S.C. § 78r (2012) (providing a private right of action against a company that made, inter alia, “false or misleading [representations] with respect to any material fact” in its proxy disclosures).

of backdating suits outside of the incorporation state regardless of the state of incorporation.

Figures 3.A and 3.B present trees of case outcomes. Each node in the trees show the number of cases that progressed to the procedural stage indicated. Of the 255 in-sample firms that appeared on a public list of backdaters, 161 firms were sued. Only thirty-three suits were dismissed outright, with an additional dismissal occurring after a special litigation committee (SLC) was formed. Interestingly, of the thirty-nine cases that made use of an SLC, only eight SLCs recommended that the case be dismissed. In the majority of cases surviving the motion to dismiss, settlement was the most common outcome.

Table 2: Option Grant Summary Statistics

Variable	Mean	SD
Underlying Shares	184,013.6	1,361,147
Reversal (-30,30)	.0364671	.3070469
Probability of Greater Reversal	.46976	.2968888
Lucky Grant Indicator ($p < 0.05$)	.0703017	.2556558

$N=181,852$ Option Grants

Table 3: Lawsuits

Variable	Mean	SD
Distinct Grants	28.53416	14.16644
Total Complaints Filed	4.118012	2.905553
SEC Investigation Flag	0.627329	
Restatement Flag	0.57764	
Restatement Size (\$ Millions)	65.46894	233.8479

$N = 161$ Lawsuits, 663 distinct complaints

Figure 3: Outcomes for Derivative and Securities Class Action Cases

Figure 3.A: Derivative Cases

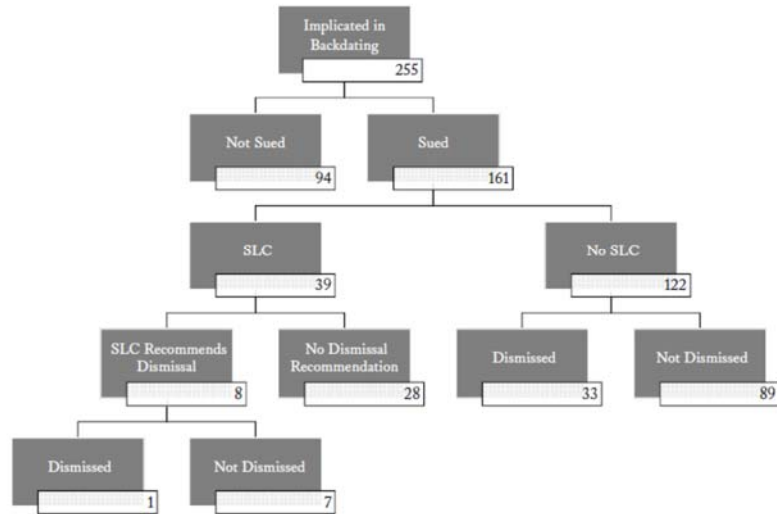
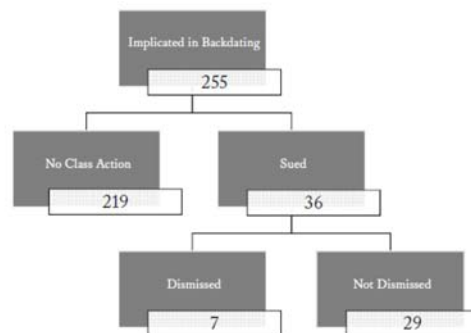


Figure 3.B: Securities Class Actions



While settlement amounts in securities class actions are readily available,¹³⁰ settlements in derivative backdating suits often involved forms of settlement consideration that are hard to value. In reviewing settlement agreements, we found that settlements often involved cancellation of some options, repricing of others, payments by certain defendants, payments by D&O insurers, and corporate governance changes. Moreover, companies often pursued some or all of these remedies outside of the process of settling the derivative claims, but nevertheless still during the pendency of the claims. Plaintiffs' attorneys sometimes executed a settlement agreement that mentioned no benefits to the company, but in their fee applications, sought to claim credit for other developments. At Semtech, for example, the plaintiffs' attorneys argued that their efforts "confer[red] substantial benefits upon Semtech and its shareholders in the form of the cancellation and/or repricing of options with a realizable value of over \$9 million and the implementation of significant corporate governance reforms, internal controls measures and equity award procedures and practices."¹³¹ The repricings and cancellations at Semtech, however, had occurred long before the settlement of the derivative claims.¹³² The settlement agreement did not even mention repricings or cancellations.¹³³ When settlements did reprice or cancel options, they were seldom explicit about which grants were cancelled, making valuation impossible.

Thus, we rely on attorneys' fees as a proxy for settlement magnitude in derivative cases. We observe attorneys' fees in 86 cases. The mean attorneys' fee in the settlement of backdating claims was \$3,006,000 and the median was \$3,751,000. When claims were pending in multiple courts, companies would sometimes reach separate settlements with the attorneys in each jurisdiction, or sometimes the settlement would expressly allocate the fees among the various attorneys.¹³⁴ We measure fees as the total settlement attorneys' fees for each targeted company.

¹³⁰ See Brian T. Fitzpatrick, *An Empirical Study of Class Action Settlements and Their Fee Awards*, 7 J. EMPIRICAL LEGAL STUD. 811, 814 (describing "plentiful" data available on federal securities class action settlement amounts).

¹³¹ Memorandum of Points and Authorities in Support of Motion for Final Approval of Derivative Settlement at 1, *In re Semtech Corp. Derivative Litig.*, No. 06-CV-03510 (C.D. Cal. Jan. 5, 2009) (No. 113).

¹³² See Semtech Corp., Amended Annual Report (Form 10-K/A) (Mar. 29, 2007) (describing the cancellations and repricings). The parties to the derivative suit reached filed notice of their settlement on June 30, 2008—more than a year after the repricings and cancellations. See *In re Semtech Corp. Deriv. Litig.*, No. 06-CV-03510 (C.D. Cal. Jan. 5, 2009) (No. 101).

¹³³ For the text of the settlement stipulation, see Stipulation of Settlement, *Semtech*, No. 06-CV-03510 (C.D. Cal. Sept. 3, 2008) (No. 105).

¹³⁴ For example, the NVIDIA settlement agreement provided as follows:

III. RESULTS

This Part presents the results of our analyses. We examine which companies were targeted by backdating lawsuits, the number of complaints filed, which claims were dismissed, settlement size for securities class actions and the related measure of attorneys' fees for derivative suits, and the use and outcomes of special litigation committees.

A. Targeting

The number of firms implicated publicly in options backdating is smaller than our estimate of the number of firms that engaged in backdating with high probability. A majority, but not all, of publicly-implicated firms were sued derivatively, and only a subset of those firms were targeted by securities class actions. This makes the question of which firms were sued for backdating an interesting one, as some companies that backdated with high confidence were never subject to suit, or even publicly implicated in backdating.¹³⁵ Our empirical estimate of the number of firms that engaged in backdating provides a partial explanation of why some firms may have escaped suit: it is not possible to determine, based purely on reversal around grant dates, whether a firm engaged in backdating, because some firms will have high reversal by happenstance.¹³⁶ While we can estimate the total number of firms that likely backdated options, identifying specific firms is

Subsequent to the negotiation of the substantive terms of the settlement of the Actions and the execution of memoranda of understanding with respect to both the California Actions and the Delaware Action, Plaintiffs' Counsel in the California Actions and the Delaware Action negotiated an attorneys' fee and expense provision with counsel for NVIDIA, reaching an agreement that NVIDIA would pay, subject to court approval, attorneys' fees and expenses in the aggregate amount of \$7.25 million to resolve on a global basis any and all claims regarding NVIDIA's historical stock option granting practices. Plaintiffs' Counsel then separately negotiated an allocation for the overall fee and expense amount of \$2,465,000 for Federal Plaintiffs' Counsel, \$2,030,000 for Santa Clara Plaintiffs' Counsel, and \$2,755,000 for Delaware Plaintiffs' Counsel.

Stipulation and Agreement of Settlement of Derivative Litigation at 19, *In re NVIDIA Corp. Derivative Litig.*, No. 06-CV-06110 (N.D. Cal. Nov. 10, 2008) (No. 157).

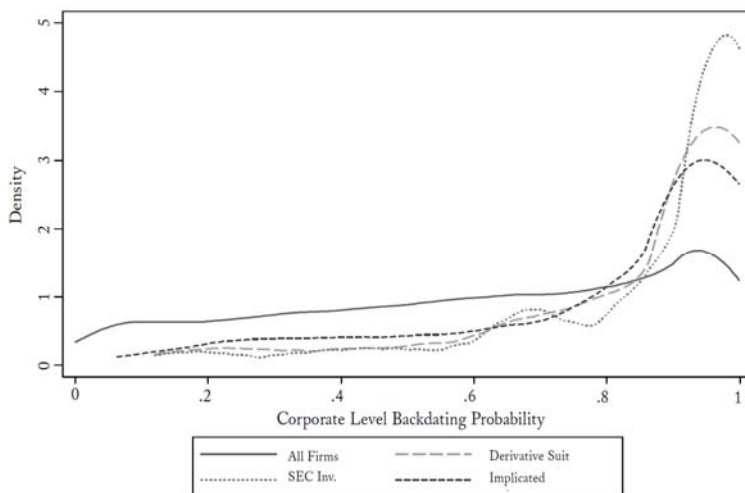
¹³⁵ Our list of firms publicly implicated in backdating numbers 264, with sufficient data to include 255 of those firms in the sample.

¹³⁶ For this reason, Lie expressed skepticism about identifying backdating at individual firms. *See Lie, supra* note 77, at 811 ("[A]lthough I show aggregate evidence that retroactive timing occurs, it is difficult, if not impossible, to prove that such timing takes place in individual cases."). The risk of Type I error—incorrectly identifying a firm as a backdater when it in fact is not—falls as our *p*-value cutoff falls. For example, Edelson and Whisenant found 141 firms that had abnormally favorable returns at a *p*-value of 0.0005, and only 2 firms would be expected to have such attractive returns by chance. Edelson & Whisenant, *supra* note 105, at 7.

another matter. Nevertheless, the question of which firms were targeted for private suit, and how those firms compare to those that are, say, targeted by the SEC is an interesting one.

We begin by plotting, in Figure 4, relative densities of Firm-Level Backdating Probability for four groups of firms: firms investigated by the SEC, firms sued privately, firms implicated in options backdating by lists compiled by the *Wall Street Journal* and other publications described above,¹³⁷ and the full sample of firms.

Figure 4: Comparative Density of Backdating Probability



¹³⁷ See *supra* notes 118–19 and accompanying text.

Figure 5: Kernel Density Plot for Non-Overlapping Groups of Firms

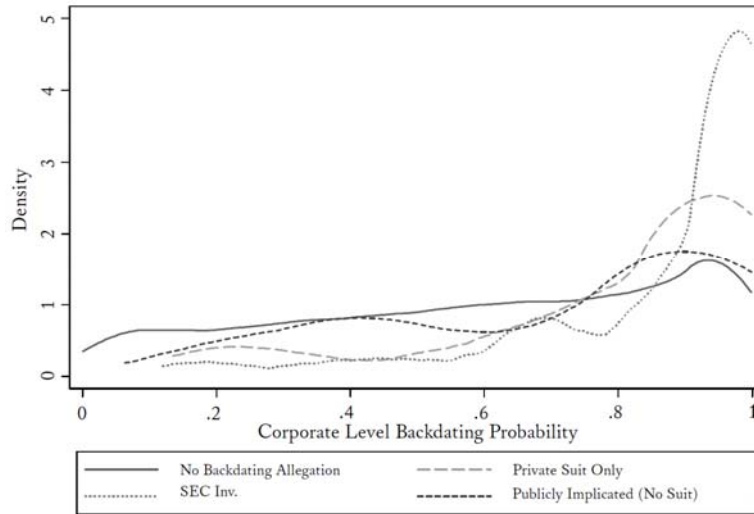
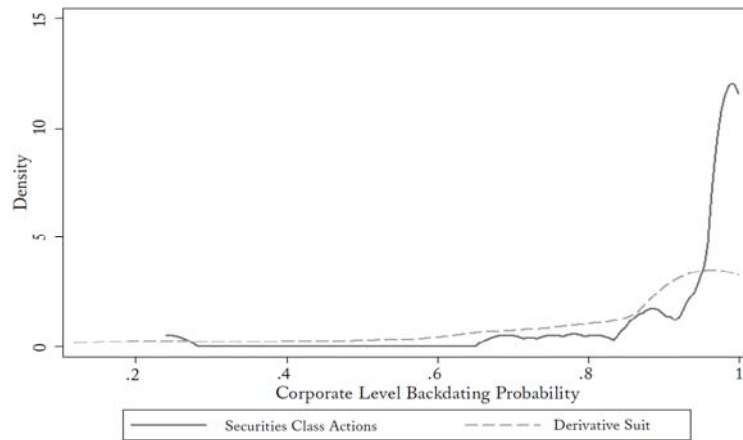


Figure 6: Comparative Density of Backdating Probability for Securities Class Actions and Derivative Suits



Firms may fall into more than one of these categories; for example, a firm may have been investigated by the SEC and also sued privately. In this plot, firms in multiple groups are treated as members of both groups. Thus, the

curve for private suits includes, for example, firms that were both sued and the subject of SEC investigations.

If option grants were assigned randomly, the density plot would be flat, and firms would be lucky and unlucky in equal numbers. The plots, however, are skewed with a greater density of firms on the higher end of the probability distribution, showing that firms implicated in backdating were indeed “luckier” in their grants than other firms. Figure 4 also reveals that sued firms and firms investigated by the SEC had even more striking grant reversals than firms publicly implicated. Such a relationship is elementary: implicated firms were very likely to have backdated, as were firms sued or investigated for backdating. What is more surprising is that the kernel density for private suits is above the curve for implicated firms. That suggests that plaintiffs’ attorneys exercised some discretion. While there are many more private suits than SEC investigations, the private suits, in the aggregate, do not appear to be of much lower quality.

Figure 5 plots slightly different kernel density curves, this time using non-overlapping groups so that the comparison is between firms with SEC investigations and privately-sued firms with no SEC investigation. The likelihood of backdating for the privately-sued firms that were not investigated by the SEC appears to be lower than that of the SEC-investigated firms but higher than that of firms publicly implicated in backdating that were not sued, once again suggesting some selection on the merits. In this plot, the curve for sued firms is well above the curve for implicated-but-unsued firms.

Figure 6 compares backdating probability in securities class actions with backdating probability in derivative suits. The figure shows that class action complaints were more likely to be brought against companies with a significantly higher likelihood of backdating than derivative suits. The class action defendants appear to be the most egregious backdaters among the firms implicated.

An important question suggested by the density plots is the extent to which plaintiffs’ attorneys were selective in targeting firms for backdating lawsuits based on the merits, controlling for other covariates that might affect selection. Tables 4.A and 4.B addresses this question using logit regressions, with the incidence of a private lawsuit as the dependent variable. The question is whether variables that measure merit matter once we include covariates that are not directly related to merit. The table presents two regressions for Firm-Level Backdating Probability and the logarithm of Total Abnormal Reversal,¹³⁸ with and without controls for SEC investigations, and

¹³⁸ There is a strong rightward skew to Total Abnormal Returns reflecting the higher baseline levels of options compensation used at large firms. To reduce the skew and improve model fit, we use the logarithm of Total Abnormal Reversal in this and the other regression tables.

also includes controls for logarithm of firm size. The sample for these regressions is the subset of firms publicly implicated in the options backdating scandal.¹³⁹ The regressions therefore implicitly control for public identification as a backdater.

Firm-Level Backdating Probability and Total Abnormal Reversal are strongly predictive of a derivative lawsuit in Figures 1 and 3. This suggests that plaintiffs' attorneys chose, from among the publicly implicated cases, a set of firms to target for suit that were more likely to have backdated, and to have done so more egregiously than the typical firm implicated in the scandal.

Models 2 and 4 include a control for an SEC investigation. In Models 2 and 4, the backdating activity measures continue to be significant, albeit weaker, when the control for SEC investigations is included, suggesting that plaintiffs' attorneys add additional selectivity on the merits. That is, plaintiffs' attorneys did not simply piggyback on SEC investigations, which would have nevertheless been a form of merit-selectivity, but independently identified cases of relatively high backdating activity.

The control for firm size is highly significant in the Firm-Level Backdating Probability models. The control is less significant, though still positive, in the Total Abnormal Reversal regressions. The reduced significance for firm size in Models 3 and 4 is likely due to a strong correlation between firm size and the logarithm of Total Abnormal Reversal, reflecting the higher value of option grants at larger firms with higher-paid executives. Nevertheless, there appears to be a correlation between firm size and the likelihood of being targeted in three of the four models, even controlling for backdating activity, potentially suggesting a deep-pockets effect.

Table 4.B presents parallel results for securities class action cases. In this set of regressions, we replace the Total Abnormal Reversal measure with the variable Backdating Revelation Abnormal Return. Backdating Revelation Abnormal Return is the cumulative abnormal return of each firm's stock computed over the ten trading days prior to the first revelation that the firm may have engaged in backdating and one day post-revelation.¹⁴⁰ We were able

¹³⁹ See *supra* note 113 and accompanying text.

¹⁴⁰ To identify this revelation date, we searched Lexis for the firm name and variations on the term "backdating." We identified the first article indicating any of the following: possible backdating issues at the firm; that the firm is delaying financial reports; or that the firm is launching an investigation related to backdating. If no news articles meet these criteria, or if the first mention in the news indicated that the firm was already implicated, we reviewed the firm's SEC filings for the first disclosure related to backdating. We were able to make such an identification for 171 of the firms in our sample, but we could not determine the dates on which the remaining firms were implicated in the scandal. We used an eleven-day window to capture the possibility that some news of backdating reached the market prior to the earliest article we were able to identify.

to identify the relevant date for 171 of the firms in our implicated sample. The stock return is a better measure of potential liability in a securities fraud case based on backdating than is the Total Abnormal Reversal, because the measure of damages in securities fraud cases is the inflation in the firm's stock price attributable to the fraudulent misrepresentation.¹⁴¹ Thus, the total value extracted from the firms due to backdating matters, which the Total Abnormal Return is closely related, is relevant to damages in a securities case only insofar as it affects the stock market's response. The regressions in Table 4.B show that both the probability of having backdated and the price response to the revelation of potential backdating are strongly correlated with the likelihood of the firm being targeted by a lawsuit. Consistent with the derivative suit findings in Table 4.A this relationship is robust to controlling for the presence of an SEC investigation.

¹⁴¹ See *Affiliated Ute Citizens of Utah v. United States*, 406 U.S. 128, 155 (1972) (holding that damages should be measured by the difference between the fair value of what the seller received and what he would have obtained absent the fraudulent conduct).

Table 4A: Incidence of Derivative Lawsuits Logit Regressions¹⁴²

	(1)	(2)	(3)	(4)
Firm Backdating Prob.	2.177*** (3.81)	1.636*** (2.77)		
Log (Total Abnormal Reversal)			0.082*** (4.70)	0.065*** (3.96)
SEC Investigation Indicator		1.661*** (5.20)		1.572*** (4.81)
Log Market Cap	0.462*** (3.01)	0.356** (2.27)	0.295* (1.86)	0.218 (1.41)
Constant	-4.808*** (-3.51)	-4.186*** (-3.02)	-1.600 (-1.29)	-1.631 (-1.34)
Observations	255	252	255	255
Pseudo R ²	0.077	0.199	0.109	0.188

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

¹⁴² These logit regressions take the incidence of at least one backdating suit against a firm as the dependent variable. The sample is the set of firms that were implicated in backdating activity by at least one public list of likely backdaters. Z statistics are in parentheses.

Table 4B: Incidence of Securities Class Action Lawsuits
Logit Regressions¹⁴³

	(1)	(2)	(3)	(4)
Firm Backdating Prob.	5.058** (2.25)	4.227** (2.07)		
Backdating Revelation Abnormal Return			-6.426*** (-2.90)	-6.943*** (-2.75)
SEC Investigation Indicator		1.396*** (3.29)		1.907*** (3.26)
Log Market Cap	0.149 (0.90)	-0.022 (-0.12)	0.229 (1.00)	0.0153 (0.06)
Constant	-7.442*** (-3.00)	-6.189*** (-2.70)	-3.752** (-1.97)	-3.459 (-1.54)
Observations	255	255	171	171
Pseudo R²	0.088	0.143	0.063	0.149

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In summary, the results in Tables 4.A and 4.B suggest that private litigation did not follow automatically from the public revelation that a firm may have backdated. Instead, we find that suits against public companies are related to the egregiousness of the backdating activity. This correlation does not follow mechanically from private litigation chasing SEC investigations, as the effect is robust to controlling for SEC activity. The results are consistent with litigants screening for more meritorious suits. This does not necessarily establish that private suits are socially valuable. A relationship between the incidence of litigation and the merits of cases is a necessary but not sufficient condition for private litigation to have social value.

¹⁴³ These logit regressions take the incidence of at least one backdating securities class action suit against a firm as the dependent variable. The sample is the set of firms that were implicated in backdating activity by at least one public list of likely backdaters. *Z* statistics in parentheses.

Nevertheless, these findings cast doubt on the view that private litigation followed automatically from public association with backdating.

Table 5 presents Poisson regressions with the number of distinct lawsuits each firm attracted as the dependent variable, conditional on at least one lawsuit being filed. In derivative litigation, there are no strong *ex ante* rules governing the appointment of lead counsel, in contrast to the PSLRA's presumption that the plaintiff with the largest holdings is most appropriate as lead.¹⁴⁴ Thus, plaintiffs' attorneys may be willing to file a claim in the hope that they will win appointment as lead counsel by, say, filing the first complaint or the most detailed complaint. In addition, derivative litigation can be filed in any court with jurisdiction, and there are no rules governing coordination of similar cases in competing jurisdictions. Thus, similar cases are often filed in different court systems, and plaintiffs' attorneys compete with each other to see who will win control of the claims.¹⁴⁵ For these reasons, the same claim can sometimes attract numerous identical lawsuits, which are all driven by plaintiffs' attorneys competing for a share of the ultimate settlement. We find only a weak relationship between the measures of backdating activity and the number of complaints, but we do find that larger firms and firms subject to SEC investigations were associated with more complaints. Both firm size and the involvement of the SEC would raise the public profile of a claim, which could reasonably be expected to draw more complaints.

¹⁴⁴ 15 U.S.C. § 78u-4(a)(3)(B)(iii)(I) (2012) (“[T]he court shall adopt a presumption that the most adequate plaintiff . . . is the person or group of persons that . . . has the largest financial interest in the relief sought by the class . . .”).

¹⁴⁵ See Myers, *supra* note 99, at 469 (explaining that shareholders file identical claims in more than one forum and compete to settle with the defendants).

Table 5: Number of Distinct Claims Poisson Regressions¹⁴⁶

	(1) Total Claims Filed	(2) Total Claims Filed	(3) Total Claims Filed	(4) Total Claims Filed
Firm Backdating Prob.	0.311 (1.19)	0.150 (0.59)		
log(Total Abnormal Reversal)			0.00210 (0.18)	-0.000989 (-0.09)
SEC Investigation Indicator		0.372*** (3.58)		0.386*** (3.59)
Log Market Cap	0.215*** (3.27)	0.189*** (2.91)	0.206*** (2.94)	0.187*** (2.77)
Constant	-0.589 (-1.10)	-0.487 (-0.94)	-0.255 (-0.46)	-0.352 (-0.65)
Observations	161	161	161	161
Pseudo R²	0.026	0.050	0.022	0.049

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

¹⁴⁶ This table presents Poisson regressions where the dependent variable is the number of distinct lawsuits observed targeting each firm that was targeted at least once. Therefore, the sample is the 161 firms with at least one backdating claim. This measures the magnitude of the “race to the courthouse” with respect to the firm.

B. *Dismissal*

The motion to dismiss is a critical threshold for private litigation as few cases go to trial;¹⁴⁷ most cases in our sample that survived the motion to dismiss ended in settlement. The requirement that a shareholder make a demand on the board before filing constitutes the major obstacle for a derivative plaintiff.¹⁴⁸ The only circumstance in which the demand requirement is excused is when it would be futile to ask the board to enforce the claims, and the common basis for futility is that the members of the board are the very people who would be targets of the claims.¹⁴⁹ Thus, one common basis for a defendant's motion to dismiss is that the plaintiff shareholder failed to make a demand on the board and did not offer sufficient allegations that doing so would have been futile. A second threat to a derivative plaintiff is the statute of limitations for fiduciary claims. The backdating scandal arose in 2006 but most backdating took place before 2002, when Sarbanes–Oxley narrowed the reporting lag for option grants.¹⁵⁰ In Delaware, for example, the limitations period is three years for fiduciary claims,¹⁵¹ although courts were willing to extend the statute of limitations given the obvious concealment associated with backdating.¹⁵² Nevertheless, many defendants would have presumably moved to dismiss claims alleging the backdating of grants more than three years before the filing of the suit.¹⁵³

Of the 161 firms that faced a backdating derivative suit, 43 of them (27%) had their claims dismissed. Figure 6 compares kernel density plots of the firm

¹⁴⁷ See Theodore Eisenberg et al., *Litigation Outcomes in State and Federal Courts: A Statistical Portrait*, 19 SEATTLE U. L. REV. 433, 444 (1996) (noting that only 3.6% of cases in federal courts are resolved through trial).

¹⁴⁸ See Koopmann, *supra* note 117, at 902 (“[O]nce a plaintiff files a claim, the court will hear motions and arguments centered on the plaintiff’s claim of futility.”).

¹⁴⁹ See *id.* (noting that doubt as to the independence of the board is one reason why a court will excuse demand). Another reason that a court may excuse demand is if sufficient facts are pled to show that the board lacked valid business judgment in carrying out the transaction at issue. *Id.* But in reality, rebutting the presumption of valid business judgment is very difficult. See Lori McMillan, *The Business Judgment Rule as an Immunity Doctrine*, 4 WM. & MARY BUS. L.J. 521, 529 (2013) (“Realistically, it is difficult for a plaintiff to rebut the business judgment rule, given that prior to discovery, the information needed might not be readily available.”).

¹⁵⁰ After Sarbanes–Oxley, the reporting period was shortened to two days. 15 U.S.C. § 78(p) (2012).

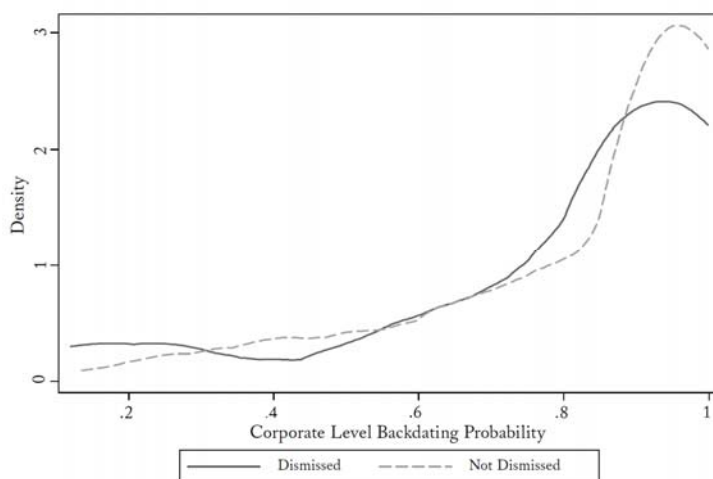
¹⁵¹ See, e.g., DEL. CODE ANN. tit. 10, § 8106(a) (2014) (“[N]o action based on . . . fiduciary relations . . . shall be brought after the expiration of 3 years from the accruing of the cause of such action . . .”).

¹⁵² See, e.g., *Ryan v. Gifford*, 918 A.2d 341, 360 (Del. Ch. 2007) (tolling the three-year statute of limitations on fiduciary claims in a backdating case and holding that “where plaintiff alleges that defendants intentionally falsified public disclosures, defendants may not rely on the statute of limitations as a defense until plaintiff is placed on inquiry notice that such filings were fraudulent”).

¹⁵³ E.g., *Motion to Dismiss or Stay* at 30, *Ryan v. Gifford*, 918 A.2d 341 (Del. Ch. 2007) (No. 2213-N) (arguing that the plaintiff’s claims are barred by the three-year statute of limitations).

level reversal p-value for the dismissed and non-dismissed claims. The claims that survived dismissal appear to have slightly lower p-values and therefore higher probabilities of backdating, but a Kolmogorov-Smirnov test¹⁵⁴ is unable to confirm that the non-dismissed cases have higher backdating probability at conventional levels of statistical significance.

Figure 7: Comparative Density for Derivative Suit Motion to Dismiss



As might be expected in light of the simple, two-sample comparisons, our regression results show little relationship between the merits of the case and surviving the motion to dismiss. Tables 6 and 7 present regressions of dismissals on variables related to backdating activity¹⁵⁵ and other covariates. We use covariates similar to the targeting regressions. We find no significant or nearly-significant results in either regression, and all of the models are quite weak as measured by pseudo R -squared. Given that the most common basis for dismissal, failure to make demand on the board, is not related to the merits, at least directly, the fate of the motion to dismiss may turn on legal details these regressions do not capture. Thus, the weak relationship of dismissal to the merits of cases is not necessarily a surprise. On the other

¹⁵⁴ The Kolmogorov-Smirnov test is a nonparametric test of the equality of continuous distributions. See generally W.J. CONNOVER, PRACTICAL NONPARAMETRIC STATISTICS 428-42 (3d ed. 1999).

¹⁵⁵ Backdating Revelation Abnormal Return, which we use in Table 4.B, also shows no strong relationship to the motion to dismiss, but, since we can identify the relevant news dates for only a subsample, and the sample is already small, we report the results for Total Abnormal Reversal.

hand, it is perhaps desirable that the motion to dismiss avoid screening out meritorious cases, which would introduce considerable noise into the deterrence function of litigation. While our measure of merit is subject to some degree of measurement error, based on these results, we cannot rule out the possibility that the motion to dismiss is inefficiently screening meritorious cases both in the derivative and class action contexts.

Table 6: Derivative Suit Dismissal Logit Regression¹⁵⁶

	(1)	(2)	(3)	(4)
Firm Backdating Prob.	-0.633 (-0.71)	-0.685 (-0.78)		
Log(Total Abnormal Reversal)			-0.0269 (-0.74)	-0.0288 (-0.82)
SEC Investigation Indicator		0.332 (0.78)		0.332 (0.79)
Log Market Cap	0.101 (0.43)	0.0909 (0.38)	0.142 (0.61)	0.133 (0.56)
Constant	-1.281 (-0.61)	-1.345 (-0.64)	-2.117 (-1.13)	-2.229 (-1.18)
Observations	122	122	122	122
Pseudo R ²	0.005	0.009	0.005	0.010

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

¹⁵⁶ These regressions take the dismissal of the suit as a dependent variable. The sample includes firms targeted by shareholder derivative suits. We exclude from the sample cases in which the corporation used a special litigation committee, since dismissal in those cases presents a different set of merits-related considerations.

Table 7: Securities Suit Dismissal Logit Regression¹⁵⁷

	(1)	(2)	(3)	(4)
Firm Backdating Prob.	-0.657 (-0.28)	-1.973 (-0.58)		
Log(Total Abnormal Reversal)			0.022 (0.71)	-0.003 (-0.06)
SEC Investigation Indicator		1.322 (0.70)		1.026 (0.64)
Log Market Cap	-0.419 (-0.66)	-0.700 (-0.92)	-0.428 (-0.68)	-0.620 (-0.86)
Constant	2.552 (0.47)	4.936 (0.73)	1.991 (0.40)	2.712 (0.52)
Observations	35	35	35	35
Pseudo R^2	0.012	0.043	0.014	0.032

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

C. Settlement

For the reasons discussed above, it is difficult to quantify the magnitude of a settlement in a derivative case alleging backdating, and the mere fact of settlement tells us little when the size of the settlement cannot be carefully measured. We do, however, observe the size of attorneys' fees awarded in cases that have settled. Since attorneys' fees are likely to be related to the magnitude of the settlement, they provide a useful proxy for the size of settlements.¹⁵⁸ Table 8 takes the logarithm of attorneys' fees in eighty-four

¹⁵⁷ These regressions take the dismissal of the suit as a dependent variable. The sample includes all firms targeted by securities class action suits.

¹⁵⁸ In their study of recovery amounts and fee awards in class action and derivative litigation between 1993 and 2008, Eisenberg and Miller find that "[t]he associations between fee and recovery

cases as the dependent variable regressed on measures of backdating activity and other covariates.

The results of the regressions show a modest relationship between merits and attorneys' fees. There is no strong relationship between Firm-Level Backdating Probability and Attorney Fee Awarded, but the log of Total Abnormal Reversal is significant at the 10% level. While this is a modest result, in light of the small sample, it is nevertheless important insofar as it provides direct evidence that payments in derivative suits are correlated to the merits of claims. Intuitively, the Total Abnormal Reversal measure should correlate closest with settlement amount since it captures the value extracted through backdating. We also find very significant size effects in these regressions. Firm size is potentially relevant if courts consider the benefit to shareholders of, say, corporate governance changes that are included in settlements. Larger firms may also have litigated more vigorously or required more extensive discovery, creating larger legal bills for plaintiffs in the process.

Table 9 repeats these measures for securities class actions. We use the log of the size of the settlement in each case. Since the settlement amounts are available for the securities class actions, there is no need to proxy them using attorneys' fees. While the presence of an SEC investigation and firm size are both significant, neither of the merits measures is significant. Backdating Revelation Abnormal Return is not available for the full sample, and the subsample for which it is measurable is too small for meaningful regression analysis.¹⁵⁹

are striking and large. The linear correlation between fee and recovery exceeds 0.94 for each time period and the slope of the relationship appears constant for the two time periods." Theodore Eisenberg & Geoffrey P. Miller, *Attorney Fees and Expenses in Class Action Settlements: 1993–2008*, 7 J. EMPIRICAL LEGAL STUD. 248, 253 (2010).

¹⁵⁹ In unreported test, we find no significant relationship between Backdating Revelation Abnormal Return and the settlement size. Since this is a relationship we expect to be significant *ex ante*, we attribute this to having only twenty-two observations and that some securities lawsuits involved allegations unrelated to backdating.

Table 8: Size of Derivative Settlement Attorney Fee Award¹⁶⁰

	(1)	(2)	(3)	(4)
Firm Backdating Prob.	0.604 (1.32)	0.440 (0.91)		
Log (Total Abnormal Reversal)			0.0303* (1.97)	0.0269* (1.72)
SEC Investigation Indicator		0.299 (1.44)		0.274 (1.30)
Log Market Cap	0.356*** (3.50)	0.326*** (3.21)	0.338*** (3.36)	0.314*** (3.06)
Constant	11.08*** (13.22)	11.28*** (13.73)	11.74*** (14.96)	11.77*** (14.59)
Observations	84	84	84	84
R ²	0.111	0.133	0.144	0.163

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

¹⁶⁰ These regressions take the log of total attorneys' fees awarded to all plaintiffs in a particular case as the dependent variable. The sample consists of all sued firms in which attorneys' fees were awarded.

Table 9: Log Securities Settlement Size Regressions¹⁶¹

	(1)	(2)	(3)	(4)
Firm Backdating Prob.	1.224 (1.59)	-0.216 (-0.22)		
Log (Total Lucky Reversal)			0.0351 (0.99)	0.0111 (0.33)
SEC Investigation Indicator		1.223* (1.88)		1.059* (1.72)
Log Market Cap	1.216*** (3.58)	0.890* (1.93)	1.213*** (3.40)	0.930* (2.06)
Constant	6.195** (2.22)	9.209** (2.44)	7.360** (2.64)	8.806** (2.63)
Observations	27	27	27	27
R ²	0.311	0.388	0.335	0.390

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

¹⁶¹ These regressions take the log of settlement payment in securities class action suits as the dependent variable. The sample is all firms sued in securities class actions that ended in settlement and for which the settlement value is available.

D. *Special Litigation Committees*

It is possible to dismiss derivative suits using special litigation committees (SLCs). These committees are comprised of independent directors not involved in the suit who are charged with evaluating whether the suit should proceed.¹⁶² SLCs were used with some regularity in backdating cases: 24% of sued firms established an SLC. The conventional wisdom on SLCs is that they nearly always recommend dismissal,¹⁶³ but recent empirical work has cast doubt on this widely-held view.¹⁶⁴

We focus on the question of which firms elected to use an SLC. If companies wanted to use SLCs as a mechanism for sweeping strong claims under the rug, we would expect that companies facing the strongest claims of backdating would establish SLCs, and the SLCs would recommend dismissal. The regressions in Table 10 test whether SLCs are associated with stronger cases. We also include the merits-related variable High Backdating Probability Indicator, which takes the value 1 when the firm has a backdating probability of 0.99 or higher, and value 0 otherwise. We use this independent variable because an SLC may be particularly attractive when a firm is faced with a complaint that is very likely to succeed. We also include the number of individual complaints filed as an independent variable. A company facing numerous suits, possibly in multiple jurisdictions, might conclude that the costs and risk associated with establishing an SLC are worth attempting to wrest control of the case from competing sets of plaintiffs' attorneys. In this way, the number of cases against a company might be a proxy for the complexity of litigation and the challenge of consolidating and resolving numerous claims. The regression results indicate that firms with very high backdating probability and many complaints were more likely to use SLCs to resolve their claims, consistent with these hypotheses. But there is insufficient statistical power in our sample here to draw conclusions about whether the SLCs that sought dismissal were faced with less meritorious

¹⁶² See Koopmann, *supra* note 117, at 908 n.114 (“In demand futility cases, a board may form a special litigation committee to determine whether the litigation should continue after the court has excused demand.”).

¹⁶³ See Minor Myers, *The Decisions of the Corporate Special Litigation Committees: An Empirical Investigation*, 84 IND. L.J. 1309, 1314 (2009) (commenting that academics and practitioners “are nearly unanimous in the belief that SLCs always decide to dismiss derivative litigation”).

¹⁶⁴ See *id.* at 1320 (“Over forty percent of the time the SLC either settled or pursued one or more claims against one or more defendants.”).

cases than those that suggested that the litigation proceed. Notably, a majority of SLCs recommended that the litigation not be dismissed in full.

Table 10: Use of Special Litigation Committee Logit Regressions¹⁶⁵

	(1)	(2)	(3)	(4)	(5)	(6)
Firm Backdating Prob.	2.123 (1.58)	0.725 (0.57)	0.649 (0.55)			
Log (Total Lucky Reversal)				-0.024 (-0.87)	-0.052* (-1.76)	-0.056* (-1.79)
High Backdating Prob. Indicator		0.984** (2.13)	0.915* (1.92)		1.34*** (3.21)	1.27*** (2.90)
Total Claims Filed			0.236*** (3.11)			0.240*** (3.16)
Log Market Cap	0.215 (0.94)	0.251 (1.08)	0.0216 (0.09)	0.203 (0.94)	0.304 (1.29)	0.105 (0.41)
Constant	-4.725** (-2.12)	-4.191* (-1.95)	-3.313 (-1.49)	-2.772 (-1.59)	-4.123** (-2.10)	-3.569* (-1.67)
Observations	161	161	161	161	161	161
Pseudo R²	0.028	0.055	0.125	0.008	0.070	0.140

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

IV. IMPLICATIONS FOR CORPORATE LAW

Our results provide rarely-available insight into the relationship between the merits of cases and the incidence and outcomes of those cases. For this

¹⁶⁵ These logit regressions take as a dependent variable an indicator variable that takes the value 1 if the firm formed an SLC in order to address a shareholder derivative suit. The sample is all firms that were sued derivatively for options backdating.

reason, our findings have important implications for corporate law and raise a number of other questions for research. In this Part, we discuss these implications and the limitations of our findings on the filing, dismissal, and settlement of stockholder claims as well as on the use of special litigation committees, with an eye toward questions that may guide future research.

A. Filing of Derivative Claims

We show that the filing of derivative suits alleging backdating was strongly related to measures of both the Firm-Level Backdating Probability and the magnitude of the stock price reversal. Derivative suits against firms were not a mechanical function of those firms being named in the news or being the target of an SEC inquiry. Plaintiffs' attorneys, in other words, focused their energies on companies where private enforcement would make the most sense from a social standpoint. Uncovering this basic empirical relationship between the incidence of suits and their merit demonstrates a crucial link in the American system of corporate and securities law, and for this reason our findings indicate that there is hope yet for that system.

Interestingly, we find that a substantial number of firms that likely backdated were never subject to a derivative suit for backdating, despite the fact that they were publicly named. Our results suggest, of course, that these were less egregious cases of backdating, but it seems likely, given the size of attorneys' fee awards in the cases actually brought, that such cases might have been profitable for plaintiffs' attorneys to bring. This finding raises the possibility that the procedural pendulum may already have swung too far in the direction of keeping derivative claims out of court. After all, if clear and demonstrable legal malfeasance cannot be viably prosecuted by the plaintiffs' bar, then to what degree does murkier wrongdoing go unpunished?

At the same time, we cannot draw too strong of a conclusion from our backdating litigation data about derivative litigation more generally. Backdating litigation differs in important ways from other types of derivative litigation. In backdating cases, for example, the legal issues were fewer for plaintiffs' attorneys because the basic wrong was a straightforward violation of the directors' fiduciary duties and generated at least some level of liability. Perhaps liability in other contexts might present more risk to plaintiffs' attorneys, leading them to focus less on the underlying wrongdoing. Another unique feature of backdating is that the behavior can be uncovered through statistical techniques. These techniques allowed finance scholars to detect the

pattern, allowed the news media to write about it, and of course, allowed us to conduct our empirical analysis. It may also have allowed plaintiffs' attorneys to perform similar investigations into merit before filing, and thus their filing decisions in the backdating cases may differ systematically from their filing decisions in more standard corporate contexts, where the merits cannot be observed in advance.

But which way does this difference cut? If the plaintiffs' bar does a good job of selecting claims when information is available, then a colorable argument could be made that the solution to low-quality cases is not to raise hurdles that cut across both meritorious suits and strike suits. Rather, the solution would be to find ways to expand the base of information that can be used to identify promising claims at the outset, to expand the set of cases that function like backdating cases rather than tamp down litigation altogether. Suggestions in this direction might include expanded access to books and records and perhaps enhanced, if still limited, discovery when pleading demand excusal.

While caution is necessary in generalizing our findings, we nevertheless show that the filing decisions of plaintiffs' attorneys were responsive to various measures of merit. In the context of the debate over fee-shifting bylaws, for example, that finding carries important weight. By forcing shareholders to bear the costs of defending unsuccessful suits, fee-shifting bylaws would discourage derivative suits, perhaps to the point of eliminating them. Fee-shifting bylaws create extreme risks, not just for the plaintiffs' bar, but also for shareholder plaintiffs who would face fee-shifting risk on their own while being forced to share recovery with other plaintiffs. If fee-shifting indeed would have the effect that many critics suspect it would, it would inhibit the operation of a system that appeared to work well at identifying firms to target for private enforcement in the backdating context.

B. *Dismissal and Settlement of Claims*

While our findings on the incidence of suit are reassuring, our findings on dismissal and settlement are far more equivocal. On dismissal, we uncovered no significant difference in our backdating-related variables between companies for which derivative claims were dismissed, and companies for which they were not. This finding suggests that the motion to dismiss is not functioning as an effective merits-based screening mechanism. That may not be problematic, however. Many common grounds for motions to dismiss are quintessentially procedural: failure to make demand on the board, the running of the statute of limitations, and so forth. Perhaps it could make sense to apply some merits-based screen at some point in the litigation

prior to summary judgment, but in derivative litigation, there is no such screen beyond the basic civil pleading standards. For that reason, we would not expect any relationship to exist between the success of these procedure-based motions and the merits of claims. Indeed, it might suggest something amiss if procedural motions appear to be strongly correlated with merit.

On the other hand, if procedural hurdles are creating obstacles to bringing cases that allege real, demonstrable harms to shareholders, then they come at a cost in terms of deterrence. Does the demand on the board requirement, for example, provide clear benefits that offset the cost it imposes by screening out meritorious claims? Our results help give a sense of what is lost through these procedural mechanisms: meritorious claims are just as likely to fail as frivolous claims, at least in the backdating context, and that alone ought to give pause to the architects and observers of our system of corporate liability.

The settlement findings indicate some modest relationship between case outcomes and merit, but again caution is in order. Because we cannot reliably measure the settlement values, we are relying on attorneys' fees as a proxy for settlement values. The relationship we find is a weak one. One possibility is that the relationship between settlement values and the merits is strong, but we can only pick that up roughly through attorneys' fees. Another possibility is that our proxy is unreliable; it may be only the attorneys' fees that correlate with merit, and the settlement value bears little or no relationship to the strength of the claim. For these reasons, the policy implications of our findings are not nearly as suggestive as our findings on the incidence of suits. It is nevertheless encouraging from a policy and deterrence standpoint that some relationship is observable. Certainly it would be a source of concern if the relationship ran in the opposite direction.

C. Special Litigation Committees

Our findings on special litigation committees suggest that the behavior of directors called to serve in that role is far less abusive than many have supposed.¹⁶⁶ Contrary to the hypothesis that SLCs might be used to sweep egregious backdating under the rug, most of the SLCs in our sample recommended that at least some of the claims in the litigation proceed or settle, with only nine of thirty-eight SLCs recommending dismissal and only

¹⁶⁶ See Myers, *supra* note 163, at 1320 (finding that SLCs dismiss cases far less often than popular belief would hold).

one SLC successfully securing dismissal of the claim. This is broadly inconsistent with the common claim that SLCs usually dismiss derivative litigation, but consonant with more recent findings.¹⁶⁷ Given that SLC usage was associated with more numerous claims, our findings indicate that the SLC may be functioning as a form of alternative dispute resolution in the derivative context.¹⁶⁸

Our findings also suggest that the legal standards developed to police SLC decisions in derivative cases may be well calibrated. In Delaware, courts apply a two-step test when reviewing the decisions of an SLC: first, the court determines whether the committee is disinterested and followed a reasonable investigative procedure, and second, the court can review the business judgment of the board in determining how to proceed.¹⁶⁹ Some have suggested that the forces pushing board members on SLCs to favor their imperiled colleagues are so strong that the SLC may be hopelessly biased.¹⁷⁰ These backdating cases are ones where the defendants would presumably wish to have them disappear, but the SLC members declined to do so. The SLC members, of course, may have been responding to reputational concerns instead of a worry that a court would second guess their decision. But our findings suggest that SLC members are able, at least in the backdating context, to press forward with meritorious claims, putting SLCs in a positive light.

CONCLUSION

On balance, our results suggest that plaintiffs' attorneys exhibited a notable degree of merits-related selectivity in determining which backdating cases to pursue. Even controlling for SEC involvement, we find that firms with more egregious backdating practices were more likely to be sued. We find some evidence that merits continued to matter for derivative claims as cases progressed. While motions to dismiss were unrelated to merits factors, settlements in derivative cases, as proxied by attorneys' fees, were larger for

¹⁶⁷ See *id.* at 1327 (reporting that SLCs decide to settle claims 70% of the time).

¹⁶⁸ See *id.* at 1331-32 (reporting that claims involving SLCs were resolved faster than other claims and suggesting that "[a] company may appoint an SLC because doing so resolves claims faster and cheaper than the standard course of civil derivative litigation").

¹⁶⁹ See *Zapata v. Maldonado*, 430 A.2d 779, 788-89 (Del. 1981) (requiring a two-step test to examine the legitimacy of an SLC's decisions).

¹⁷⁰ See, e.g., *In re Oracle Corp. Derivative Litig.*, 824 A.2d 917, 942-43 (Del. Ch. 2003) (drawing upon "human nature" to conclude that it would be difficult for SLC members to be unbiased in the face of extensive ties to the defendant board and the local community); Claire Hill & Brett McDonnell, *Sanitizing Interested Transactions*, 36 DEL. J. CORP. L. 903, 929-30 (2011) (noting that "voluminous social science literature" demonstrates that there are many conscious and unconscious factors that might bias those on an SLC).

more meritorious cases, albeit with modest statistical significance. Securities class actions appeared to target particularly egregious cases, but the settlements for class actions were not related to the amount of backdating activity. Finally, we contribute to the literature on special litigation committees by demonstrating that SLCs in the backdating context seldom recommended dismissal.

While the unique setting of our empirical findings cautions against easy generalization, our measures of merit suggest that derivative litigation showed signs of functioning well in the backdating context. Moreover, derivative litigation was the preferred remedy for shareholders faced with backdating managers. As such, it seems prudent that proposed reforms to derivative litigation, including fee-shifting bylaws, be approached with caution so as not to undermine the pursuit of meritorious claims.