TAMING BLOCKBUSTER PUNITIVE DAMAGES AWARDS

Benjamin J. McMichael[*]
W. Kip Viscusi[**]

Blockbuster punitive damages awards, i.e.*, those awards exceeding $100 million, attract attention based on their sheer size. While there have been fewer such awards in the last decade, they remain an important presence in the legal landscape. Taking notice of these and other large punitive damages awards, courts and state policymakers have taken steps to both constrain them and render them more predictable. States have enacted punitive damages caps to limit the amount of punitive damages courts can award, but these caps often contain a number of exceptions and apply only to damages under a specific state's law. At a broader level, the Supreme Court has announced a general limitation on punitive damages under the Due Process Clause of the Fourteenth Amendment, which applies to all cases and contains few exceptions. Under* State Farm v. Campbell*, punitive damages awards that exceed the accompanying compensatory award by more than a factor of ten will generally violate due process. This limit, however, is substantially higher than the punitive damages caps that some states have put in place.*

This Article provides the first empirical analysis of the effect of state punitive damages caps on blockbuster awards and offers the first comparison of the effect of these reforms with the effect of the Supreme Court's current constitutional doctrine on punitive damages. Understanding the roles of these legal regimes in how the largest punitive damages awards are imposed provides unique insight into how different factors affect courts' decisions to award punitive damages. Relying on this insight, as well as previously developed empirical evidence, we argue that it is time for a new constitutional doctrine on punitive damages. In particular, we argue that the Supreme Court should incorporate the lessons learned from the different effects of state punitive damages caps to lower the limit placed on punitive damages under the Due Process Clause. For cases involving financial loss, punitive awards that are more than three times the

[*] Assistant Professor of Law, Hugh F. Culverhouse Jr. School of Law at the University of Alabama. We wish to thank participants at the Southern Economic Association Annual Meeting for helpful comments on earlier drafts of this Article.

[**] University Distinguished Professor of Law, Economics, and Management, Vanderbilt University Law School.

size of the accompanying compensatory award will generally violate due process. For cases involving severe injuries, such as wrongful deaths, the total value of punitive damages and compensatory damages should not exceed economic estimates of the value of a statistical life, which is an economic deterrence measure. This proposed structure would better achieve the Court's goal of returning predictability to punitive damages awards, blockbuster and otherwise.

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I. INTRODUCTION

Talcum powder is a remarkably common substance. Whether applying it as part of an infant's care routine, having it brushed on following a haircut, or using it in hundreds of other ways, talcum powder has been an important presence in American life for many years. As such, it may have been surprising that a California jury awarded $347 million in punitive damages to punish Johnson & Johnson for failing to warn consumers about the links between talcum powder and cancer.[1] While such a large punitive damages award—accompanying,

1. Richard Winton, *L.A. Jury Hits Johnson & Johnson with $417-Million Verdict over Cancer Link to its Talc*, L.A. TIMES (Aug. 21, 2017, 2:50 PM), http://www.latimes.com/local/lanow/la-me-ln-cancer-talc-verdict-20170821-story.html. The Los Angeles Superior Court later granted the defendant's motion for a new

in this case, a $70 million compensatory damages award[2]—may be unusual, such extreme awards are not unprecedented. In fact, while this award would qualify as a "blockbuster punitive damages award" because it exceeds $100 million, it does not even rank among the forty largest punitive damages awards.[3] Even if the award had been ten times its current size, the talcum powder award would still not make the top five punitive damages awards.

Because of their extreme size and their concomitant ability to influence the behavior of potential defendants, blockbuster awards such as the talcum powder award have received substantial attention from courts, policymakers, and scholars.[4] While these awards may be justified as necessary to punish particularly reprehensible conduct and deter its repetition in the future, courts have expressed concern over the predictability of punitive damages awards in general because imposing large awards on defendants with little prior warning undermines "[e]lementary notions of fairness."[5] In an effort to preserve these notions of fairness and return a degree of predictability to punitive damages, the Supreme Court has on several occasions addressed punitive damages awards under the Due Process Clause of the Fourteenth Amendment.[6] Currently, the Court's constitutional doctrine on punitive damages centers around a limit on the ratio between punitive damages and compensatory damages announced in *State Farm v. Campbell*.[7] There, the Court held that "in practice, few awards exceeding a single-digit ratio between punitive and compensatory damages, to

trial based on a lack of specific causation with respect to the alleged injuries. Joe Mullin, *Judge Overturns $417M Verdict Over Johnson & Johnson Baby Powder*, ARS TECHNICA (Oct. 24, 2017, 4:58 PM), https://arstechnica.com/tech-policy/2017/10/judge-overturns-417m-verdict-over-johnson-johnson-baby-powder/. After the California case, a Missouri jury imposed a $4.69 billion punitive damages award on Johnson & Johnson based on findings that its talc-based baby powder products contained asbestos, which caused women to develop ovarian cancer. Tina Bellon, *Jury Orders J&J to Pay $4.7 Billion in Missouri Asbestos Cancer Case*, REUTERS (July 12, 2018, 3:38 PM), https://www.reuters.com/article/us-johnson-johnson-cancer-lawsuit/jury-orders-jj-to-pay-550-million-in-missouri-asbestos-cancer-case-idUSKBN1K234U.

2. Winton, *supra* note 1.

3. Any punitive damages award exceeding $100 million qualifies as a "blockbuster award." For previous work on blockbuster awards and the coining of the "blockbuster punitive damages award" designation, see Alison F. Del Rossi & W. Kip Viscusi, *The Changing Landscape of Blockbuster Punitive Damages Awards*, 12 AM. L. ECON. REV. 116 (2010); Joni Hersch & W. Kip Viscusi, *Punitive Damages: How Judges and Juries Perform*, 33 J.L. STUD. 1 (2004) [hereinafter Hersch & Viscusi, *Punitive Damages*]; W. Kip Viscusi & Benjamin J. McMichael, *Shifting the Fat-Tailed Distribution of Blockbuster Punitive Damages Awards*, 11 J. EMPIRICAL L. STUD. 350, 363–64 (2014) [hereinafter Viscusi & McMichael, *Shifting the Fat-Tailed Distribution*]; W. Kip Viscusi, *The Blockbuster Punitive Damages Awards*, 53 EMORY L.J. 1405 (2004).

4. *See, e.g.*, Philip Morris USA v. Williams, 549 U.S. 346 (2007) (representing one instance of an appellate analysis of a blockbuster award); Viscusi & McMichael, *Shifting the Fat-Tailed Distribution*, *supra* note 3, at 363 (analyzing the fat tailed distributions of blockbuster awards).

5. BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 574 (1996).

6. *See, e.g.*, State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408 (2003); Pac. Mut. Life Ins. Co. v. Haslip, 499 U.S. 1, 19 (1991).

7. *State Farm*, 538 U.S. at 425–26.

a significant degree, will satisfy due process."[8] Effectively, the Court held that the ratio between punitive and compensatory damages could not exceed 10:1.[9]

Beyond the Court's attempts to rein in large punitive damages awards, individual states have taken legislative action by capping punitive damages at a specific dollar amount or at a multiple of the accompanying compensatory award.[10] These caps are often set much lower than the ratio limit imposed in *State Farm*, placing stricter limits on punitive awards. For example, Colorado allows a ratio of no more than 1:1.[11] However, unlike the Court's limit, which applies to any punitive damages award imposed in the United States, state caps apply only to cases under a specific state's law (and sometimes only to a subset of cases).[12] Also, unlike the Court's limit, state caps often contain specific exceptions that allow courts to impose awards in excess of the cap amount.[13]

In general, *State Farm* and punitive damages caps have different strengths and weaknesses, and the differential impact of these two legal regimes on punitive damages awards can elucidate which factors are most salient in both limiting punitive damages awards and rendering them more predictable. There is very little empirical evidence, however, on the comparative effect of these two regimes.[14] Importantly, no prior work has examined the impact of punitive damages caps on the punitive damages awards most likely to violate notions of fairness or otherwise attract attention—the blockbuster awards. The principal contributions of this Article are to provide the first empirical evidence on the effect of punitive damages caps on blockbuster awards as well as evidence on the comparative effects of caps and the ratio limit announced in *State Farm*.

Estimating a series of multivariate regression models, we analyze the effect of both *State Farm* and punitive damages caps to find that, consistent with their different structures, they have different restraining effects on blockbuster awards. Our empirical evidence demonstrates that *State Farm* has reduced both

8. *Id.* at 425; *see also id.* ("When compensatory damages are substantial, then a lesser ratio, perhaps only equal to compensatory damages, can reach the outermost limit of the due process guarantee.").

9. Because the Court offered no specific numbers, the most conservative interpretation of the "single digit ratio" is 10:1 because, technically, $9.\overline{99}$ is a single digit and $9.\overline{99} = 10$. *See id.* ("Single-digit multipliers are more likely to comport with due process, while still achieving the State's goals of deterrence and retribution, than awards with ratios in range of 500 to 1[.]").

10. *See, e.g.*, CONN. GEN. STAT. § 52-240b (2015) (limiting punitive damages to twice the amount of compensatory damages); IND. CODE § 34-51-3-4 (2018) (limiting punitive damages to the greater of $50,000 or three times the compensatory award).

11. COLO. REV. STAT. § 13-21-102 (2018). This ratio increases to 3:1 in limited circumstances. *Id.*

12. *See, e.g., State Farm*, 538 U.S. at 425.

13. *See, e.g.*, FLA. STAT. §§ 768.73, 768.735, 768.736 (2018) (allowing the cap on punitive damages to increase in specific situations).

14. To date, some work has independently evaluated punitive damages caps and *State Farm*, but only one study has examined the two regimes together. *See, e.g.*, Theodore Eisenberg & Michael Heise, *Judge-Jury Difference in Punitive Damages Awards: Who Listens to the Supreme Court?*, 8 J. EMPIRICAL L. STUD. 325, 346–52 (2011) (examining the effect of *State Farm* on a national sample of punitive damages awards). *But see* Benjamin J. McMichael & W. Kip Viscusi, *The Punitive Damages Calculus: The Differential Incidence of State Punitive Damages Reforms*, 84 S. ECON. J. 82, 93 (2017) [hereinafter McMichael & Viscusi, *The Punitive Damage Calculus*] (studying the effect of punitive damages caps and *State Farm* in the same empirical models).

the frequency with which punitive awards over $100 million have been imposed as well as the size of those blockbuster awards that are imposed. In contrast, the findings reported here indicate that punitive damages caps only have an effect on the frequency of these awards, suggesting that their effect is limited to preventing awards from crossing the $100 million threshold (*i.e.*, having no effect on the size of the awards that cross this threshold). Interestingly, this evidence contrasts somewhat with prior empirical evidence derived from a national sample of punitive damages awards, *i.e.*, a sample of "typical" awards.[15] This earlier evidence suggests that *State Farm* has little effect on either the frequency with which punitive damages are imposed or the size of these awards, while caps have a statistically significant and negative impact on award size.[16]

This contrast in empirical findings provides a unique opportunity to consider which aspects of a limitation on punitive damages are most effective. In particular, the effect of *State Farm* on large awards (and the absence of an effect on small awards) and the effect of caps on small awards (with less of an effect on large awards) offers insight into how the Supreme Court might refine its current doctrine on punitive damages to better achieve its goal of rendering these awards more predictable. And we argue that, if the Court takes this goal of restraining such outlier awards seriously, it should take advantage of the available empirical evidence to formulate a new approach to governing punitive damages under the Due Process Clause. By lowering the current ratio limit from 10:1 to 3:1 for damages relating to financial harm, the Court could maintain the current doctrine's efficacy in limiting large awards but better restrain (and thus render more predictable) smaller punitive damages awards in the same way state punitive damages caps do. For damages pertaining to fatalities and serious bodily injuries, a total damages cap based on the value of a statistical life can serve as the pertinent deterrence-based measure of damages. To be sure, limiting punitive damages will decrease the penalties for purposes of punishing and deterring reprehensible behavior, but the Court has made clear that it is willing to trade off punishment and deterrence for predictability.[17] And, from the standpoint of deterrence, the pertinent objective should be to provide economically efficient levels of deterrence that are commensurate with the magnitude of the harms. Taking seriously the Court's statements on predictability, then, we offer new insight based on empirical evidence into how the Court may better achieve predictability in punitive damages.

The remainder of this Article proceeds as follows. Part II engages with the legal and economic theories of punitive damages, as well as the existing evidence as to the predictability of these awards. Part III discusses the 137 blockbuster awards we have found, including many that have not been identified in

15. McMichael & Viscusi, *The Punitive Damages Calculus*, *supra* note 14, at 93–95. By "typical," we mean awards that are imposed in a large sample of all case types. We do not mean to imply that punitive damages are at all typical. Indeed, they are imposed in less than 5% of all cases. *Id.* at 92.

16. *Id.* at 94.

17. We do *not* offer a normative argument that limiting the ability of punitive damages to punish and deter reprehensible conduct is, on balance, best for society. Instead, we argue that, if the goal is to increase predictability, our proposal can achieve that goal.

previous studies. Part IV provides the first empirical analysis of the effect of punitive damages caps on these awards and offers a comparison between this effect and the impact of *State Farm*. Part V analyzes this evidence along with prior evidence to arrive at a specific suggestion for how the Court can update the current punitive damages doctrine to better achieve its goal of predictability, while maintaining meaningful economic sanctions.

II. PUNITIVE DAMAGES: THEORY, FRAMEWORK, AND EVIDENCE

Punitive damages occupy a unique place in the United States legal system. Unlike compensatory damages, punitive damages do not exist to compensate injured parties.[18] While they are not equivalent to full criminal sanctions,[19] punitive damages, as their name suggests, exist to punish reprehensible conduct.[20] They also have a general deterrence role by serving to deter others from engaging in similar conduct in the future.[21] They accomplish these twin goals by forcing defendants to internalize costs associated with their actions above and beyond the amount required to compensate victims. The Supreme Court has explicitly limited punitive damages to these goals.[22] But before detailing the legal framework in which punitive damages are awarded, we examine the means by which they accomplish the goals of punishment and deterrence. Specifically, we review the economic theory of punitive damages, which clarifies how punitive damages function in the legal system.

A. The Roles of Punitive Damages: The Economic Theory

The manner in which punitive damages accomplish the goal of punishment is straightforward. Defendants would obviously prefer to pay less in damages, and by increasing award amounts, courts can punish defendants. The manner in which punitive damages accomplish the goal of deterrence, however, is not as straightforward. The key to understanding the role of punitive damages in deterrence is appreciating that not every wrongdoer is held liable for his or her actions.[23] Because of this, these wrongdoers may engage in conduct that is

18. Cooper Indus., Inc. v. Leatherman Tool Grp., Inc., 532 U.S. 424, 432 (2001) ("[Punitive damages] operate as 'private fines' intended to punish the defendant and to deter future wrongdoing.").

19. *See id.* (noting that punitive damages "have been described as 'quasi-criminal'"); *see also* Pac. Mut. Life Ins. Co. v. Haslip, 499 U.S. 1, 19 (1991) (O'Connor, J., dissenting).

20. Gertz v. Robert Welch, Inc., 418 U.S. 323, 350 (1974) ("[Punitive damages] are not compensation for injury. Instead, they are private fines levied by civil juries to punish reprehensible conduct and to deter its future occurrence.").

21. *Id.*; *see also* BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 568 (1996) ("Punitive damages may properly be imposed to further a State's legitimate interests in punishing unlawful conduct and deterring its repetition.").

22. *See Gertz*, 418 U.S. at 350.

23. *See* A. Mitchell Polinsky & Steven Shavell, *Punitive Damages: An Economic Analysis*, 111 HARV. L. REV. 869, 888 (1998) (explaining reasons wrongdoers escape liability for their actions). *See generally* STEVEN SHAVELL, FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW 244 (2004) (explaining how punitive damages account for the probability that a wrongdoer will not be caught).

harmful to others because it simply "isn't worth it" to take the precautions necessary to avoid harming others.

For example, suppose Chemicorp, Inc., manufactures chemicals for use in industrial processes. In so doing, it produces harmful byproducts that it can either store onsite or safely dispose of through a special procedure, which converts the byproducts into harmless substances. Chemicorp has not invested the $5 million necessary to buy the equipment required to complete the safe disposal procedure and is currently deciding whether to do so. Chemicorp knows that if it stores the byproducts onsite, they will eventually leak out of their containment vessels and cause $10 million worth of harm to the surrounding community—though, it keeps this knowledge a closely guarded secret. Given the nature of the harm and the nuances of the legal system, Chemicorp knows that it faces only a 40% chance of liability for this $10 million harm.[24]

Thus, Chemicorp faces the following investment decision with respect to the safe disposal procedure. It can pay the $5 million necessary to begin the safe disposal procedure or it can roll the dice that it will not be held liable for the $10 million harm it knows will eventually occur if it stores the byproducts onsite. The expected cost of this gamble is only $4 million since there is only a 40% chance that Chemicorp will be required to compensate the victims.[25] Comparing the $5 million cost of investing in the safe disposal procedure with the $4 million expected cost of storing the harmful byproducts onsite, Chemicorp's profit-maximizing choice is clear—store the products onsite, despite this resulting in a $10 million harm to the surrounding community.

While this choice is clear from Chemicorp's perspective, it is equally clearly the wrong choice from society's perspective. By investing $5 million in the safe disposal procedure, Chemicorp could avoid a $10 million harm to society. From a social perspective, Chemicorp could generate $5 million in value for society by paying $5 million to avoid a harm of $10 million. The problem, of course, is that Chemicorp does not compare $10 million to $5 million but the $4 million expected cost of liability to the $5 million certain cost of investing. From the perspective of deterrence, the legal system's job is to align Chemicorp's incentives with those of society's so that it makes the right social choice. Yet by only awarding compensatory damages—here $10 million—if Chemicorp is held liable, courts cannot force Chemicorp to internalize the full cost of the harm it is imposing on society. Chemicorp will always discount the compensatory damages by the probability that it is held liable for those damages, so the legal system essentially has two options to increase Chemicorp's cost of storing the byproducts onsite—increase the probability of being held liable or increase the damages Chemicorp must pay if it is held liable.

The first option (increasing the probability of liability) may be feasible in the criminal context where the legal system may be able to increase policing or

24. This 40% chance could be due to the difficulty in tracing any harm to Chemicorp's actions. Perhaps the byproducts cause types of cancer that are both difficult to detect and difficult to trace to the byproduct.

25. More specifically, the expected cost is the cost of being held liable ($10 million) discounted by the probability of being held liable (40%), and 0.4 * ($10,000,000) = $4,000,000.

prosecution efforts. But increasing the probability in the civil context is more difficult, as private actors maintain responsibility for enforcement.[26] Thus, the legal system has turned to the second option to align Chemicorp's incentives with those of society by increasing the damages it must pay if it is held liable. Punitive damages fulfill this role by increasing the cost of being held liable for Chemicorp. In this example, punitive damages of $15 million would be required to perfectly align Chemicorp's incentives with those of society. If Chemicorp is held liable, it will pay $10 million in compensatory damages and $15 million in punitive damages for a total of $25 million. Multiplying this total by the 40% chance of being held liable, Chemicorp faces an expected cost of $10 million by storing its byproducts onsite, which is exactly the cost it imposes on society by doing so.

The economic theory of punitive damages is a generalization of the above example.[27] Suppose that a defendant will be held liable with probability p and will pay compensatory damages of CD if it is held liable. Thus, the expected cost of liability is $p * CD$. Assuming that the compensatory damages capture the harm imposed on society as a result of the defendant's actions as they should, this defendant's incentives to avoid potentially harmful actions are not aligned with those of society since it discounts the cost of the harm by the probability of being held liable. To realign the defendant's incentives with those of society, a court can impose punitive damages of PD, meaning that the defendant pays $CD + PD$ if it is held liable and faces an expected liability cost of $p * (CD + PD)$.

To perfectly realign the incentives of the defendant with those of society, the court should impose the amount of punitive damages that forces the defendant's expected liability costs to equal the costs it imposes on society, *i.e.*, $p * (CD + PD) = CD$. Rearranging this equation, we can derive a simple formula for the amount of punitive damages required to force the defendant to internalize the full amount of the cost it imposes on society: $PD = ((1 - p)/p) * CD$. In other words, the amount of punitive damages necessary to properly align the defendant's incentives is the amount of compensatory damages in the case multiplied by an amount that depends on the probability of being held liable.[28] Law and economics scholars have extended this

26. *See* Steven R. Salbu, *Developing Rational Punitive Damages Policies: Beyond the Constitution*, 49 FLA. L. REV. 247, 276–77 (1997) (describing the role of punitive damages in encouraging private litigants to hold wrongdoers accountable); *see, e.g.*, Exxon Shipping Co. v. Baker, 554 U.S. 471, 511 (2008) (discussing enforcement by a private actor).

27. Our discussion of the economic theory of punitive damages closely follows that provided by SHAVELL *supra* note 23, at 243–47 and Hersch & Viscusi, *Punitive Damages*, *supra* note 3, at 3–4. *See also* Polinsky & Shavell, *supra* note 23, at 887–96 (offering an in-depth discussion of the theory of punitive damages).

28. *See* Polinsky & Shavell, *supra* note 23, at 874 ("When an injurer has a chance of escaping liability, the proper level of *total damages* to impose on him, if he is found liable, is the harm caused multiplied by the reciprocal of the probability of being found liable.").

simple theory of punitive damages in numerous ways.[29] A full review of these detailed mathematical extensions is beyond the scope of this Article, but the simple equation above captures the essence of the theory.

The amount of punitive damages captured in the above equation is often referred to as the "optimal" amount of punitive damages because it results in the "optimal" deterrence of the defendant.[30] The amount is optimal because it perfectly aligns the defendant's expected costs of liability with the costs it imposes on society.[31] If the amount of punitive damages were smaller, then some defendants, facing liability costs that are too low, will engage in harmful conduct because they do not face the full costs of that conduct. This case of under-deterrence is essentially what happened in the Chemicorp example. On the other hand, if the amount of punitive damages were greater, then some defendants will fail to engage in conduct that would benefit society.

For example, consider a power plant that—like many power plants—emits pollution as a byproduct of producing electricity. This pollution is harmful, but if courts impose punitive damages beyond those necessary to force the power plant to internalize the costs of pollution (and take measures to mitigate its polluting activities accordingly), the power plant may simply decide to stop producing electricity altogether because the liability costs are too high. In this case, local residents may find themselves facing much higher prices for electricity that must be purchased from other, more distant, power plants. Scholars often refer to this case of over-deterrence as a chilling effect,[32] as the power plant fails to engage in socially beneficial activities because of excess liability costs.

In general, courts must engage in a delicate balancing game when awarding the optimal amount of punitive damages to avoid under- or over-deterring defendants. This game is made more difficult by the facts that compensatory damages often do not perfectly capture the harm imposed on society for a variety of reasons—*e.g.*, the jury cannot effectively calibrate compensatory damages to the harm suffered by the plaintiffs—and that the probability of being held liable is generally unknown, difficult to estimate, and of little interest to courts (beyond its role in ascertaining punitive damages).[33] Moreover, the role of punitive damages in punishing defendants could conflict with their role of deterring behavior, making optimal deterrence more difficult to achieve.[34]

29. *See, e.g.*, Yasuhiro Ikeda & Daisuke Mori, *Can Decoupling Punitive Damages Deter an Injurer's Harmful Activity?*, 11 REV. L. ECON. 513, 513 (2015) (developing a model in which punitive damages are decoupled so that they are paid into a state-administered system instead of to plaintiffs).

30. Hersch & Viscusi, *Punitive Damages*, *supra* note 3, at 3.

31. *Id.* at 3–4.

32. Polinsky & Shavell, *supra* note 23, at 962 n.36 ("Obviously, any damages imposed on such a party are excessive and will chill participation in activities in which such mistakes occur.").

33. *See* Reid Hastie & W. Kip Viscusi, *What Juries Can't Do Well: The Jury's Performance as Risk Manager*, 40 ARIZ. L. REV. 901, 902 (1998).

34. For example, a defendant may engage in particularly reprehensible conduct that society deems worthy of harsh punishment, but the probability of liability for that conduct may be high. In that case, the punishment rationale for punitive damages would require a greater amount of damages than the deterrence rationale.

Compounding the complicated role punitive damages play in the legal system is the requirement that defendants not only be able to ascertain the costs of their conduct and the probability of liability (as required in the economic theory of punitive damages)[35] but predict how courts will determine these costs and probability. If defendants cannot effectively predict what their punitive damages will be in the event of liability, then the value of these damages in deterring defendants is diminished since defendants will make decisions based on erroneous expectations of damages.

The difficulty of calibrating punitive damages to achieve their goals does not undermine the theoretical conclusion that awarding punitive damages can be optimal in many cases. It has, however, led the Supreme Court and state governments to impose certain controls that address the practical problems inherent in awarding punitive damages. The next Section reviews the current legal framework surrounding punitive damages.

B. Awarding Punitive Damages: Federal and State Law

Because of their unique role, the legal framework for awarding punitive damages is quite different from that for compensatory damages. Both federal and state law play a role in the imposition of punitive damages, but the bases of the federal and state interventions into punitive damages awards stem from different considerations. Federal requirements for punitive damages arise from the Due Process Clause of the Fourteenth Amendment and are primarily directed at protecting defendants from "grossly excessive" punitive damages.[36] While this objective is effectively a concern about over-deterrence, state law interventions into punitive damages awards are more explicit in their concern with over-deterrence. Moreover, unlike the constitutional considerations that drive federal law requirements, state law interventions are generally driven by specific policy considerations. We begin by examining the constitutional framework of punitive damages before reviewing the policy concerns and specific state interventions into these damages.

1. Fuzzy Math and the Constitutionality of Punitive Damages

The Supreme Court has evaluated the constitutionality of punitive damages under the Fifth, Eighth, and Fourteenth Amendments,[37] and though it has

A similar tension arises if the probability of liability is low and the conduct is not deemed worthy of punishment.

35. *See infra* Section II.A.

36. Pac. Mut. Life Ins. Co. v. Haslip, 499 U.S. 1, 17–18 (1991).

37. The Court has also addressed questions concerning punitive damages under the Seventh Amendment. These questions pertain, however, to issues of how federal appellate courts review punitive damages. *See, e.g.*, Cooper Indus., Inc. v. Leatherman Tool Grp., Inc., 532 U.S. 424, 436 (2001) ("Our decisions in analogous cases, together with the reasoning that produced those decisions, thus convince us that courts of appeals should apply a *de novo* standard of review when passing on district courts' determinations of the constitutionality of punitive damages awards."); *see also, e.g.*, *id.* at 437 ("Unlike the measure of actual damages suffered, which

always held that punitive damages in general remain constitutional, it has imposed several limitations on how they are awarded. Beginning with the Court's earlier forays into this area, it held in *United States v. Halper* that no violation of the Double Jeopardy Clause of the Fifth Amendment occurs when a defendant faces a civil award for punitive damages following criminal sanctions for the same conduct.[38] The Court later held that punitive damages do not violate the Excessive Fines Clause of the Eighth Amendment.[39] In *Browning-Ferris Industries of Vermont v. Kelco Disposal*, the Court held that the "Excessive Fines Clause does not apply to awards of punitive damages in cases between private parties."[40] The Court noted that it had "never held, or even intimated, that the Eighth Amendment serves as a check on the power of a jury to award damages in a civil case."[41] Instead, the Eighth Amendment and the protections it provides are concerned "with criminal process and with direct actions initiated by government to inflict punishment."[42] The Court explained that "[a]wards of punitive damages do not implicate these concerns"[43] and therefore declined to restrict the imposition of punitive damages under the Eighth Amendment.[44]

Having declined to bar or even impose limitations on punitive damages under the Fifth or Eighth Amendments, the Court subsequently reviewed punitive damages awards under the Fourteenth Amendment.[45] After skirting the question of the constitutionality of punitive damages awards under the Fourteenth Amendment in several cases,[46] the Court first addressed a challenge to punitive damages under the Due Process Clause in *Pacific Mutual Life Insurance v. Haslip*.[47] Reviewing both state and federal jurisprudence, the Court concluded that nothing in the common law method of imposing punitive damages—*i.e.*, allowing the jury to decide the amount of punitive damages to award—violated due process.[48] Noting its "concern about punitive damages

presents a question of historical or predictive fact . . . the level of punitive damages is not really a 'fact' 'tried' by the jury." (quoting Gasperini v. Ctr. for Humanities, Inc., 518 U.S. 415, 459 (1996) (Scalia, J., dissenting))).

38. 490 U.S. 435, 451 (1989), *abrogated by* Hudson v. United States, 522 U.S. 93 (1997) ("[N]othing in today's opinion precludes a private party from filing a civil suit seeking damages for conduct that previously was the subject of criminal prosecution and punishment. The protections of the Double Jeopardy Clause are not triggered by litigation between private parties.").

39. Browning-Ferris Indus. of Vt., Inc. v. Kelco Disposal, Inc., 492 U.S. 257, 260 (1989).

40. *Id.*

41. *Id.* at 259–60.

42. *Id.* at 260.

43. *Id.*

44. *Id.*

45. *See* Pac. Mut. Life Ins. Co. v. Haslip, 499 U.S. 1, 15 (1991).

46. *See, e.g.*, *Browning-Ferris*, 492 U.S. at 276–77 (1989) (explaining that because a Fourteenth Amendment challenge was not properly before the Court, that challenge "must await another day"); *see also, e.g.*, Bankers Life & Casualty Co. v. Crenshaw, 486 U.S. 71, 87–89 (1988) ("Appellant has touched on a due process issue that I think is worthy of the Court's attention in an appropriate case[; however,] . . . [t]his due process question, serious as it is, should not be decided today.").

47. 499 U.S. at 15.

48. *Id.* at 17.

> So far as we have been able to determine, every state and federal court that has considered the question has ruled that the common law method for assessing punitive damages does not in itself violate due pro-

that 'run wild,'" however, the Court considered whether the Due Process Clause imposes certain limits on punitive damages, even if it does not bar their imposition altogether.[49]

Though the Court "[could] not draw a mathematical bright line between the constitutionally acceptable and the constitutionally unacceptable that would fit every case" it could "say . . . that general concerns of reasonableness and adequate guidance from the court when the case is tried to a jury properly enter into the constitutional calculus."[50] With respect to the punitive damages award in *Haslip*, the Court concluded that state law appropriately cabined the discretion of the jury so that punitive damages were "confined to deterrence and retribution, the state policy concerns sought to be advanced."[51] Reviewing the numerous factors that juries were required to consider under state law when awarding punitive damages,[52] the Court further concluded that "[t]he application of these standards . . . impose[d] a sufficiently definite and meaningful constraint on the discretion of . . . factfinders in awarding punitive damages."[53]

The Supreme Court returned to the question of the constitutionality of punitive damages under the Fourteenth Amendment in *TXO Production Corp. v. Alliance Resources Corp.*[54] The Court explained that certain awards may be so "'grossly excessive' as to violate the Due Process Clause of the Fourteenth Amendment" and that a general concern of reasonableness underlies any inquiry into whether a given award is grossly excessive.[55] Examining the reasonableness of the award in *TXO*, which was 526 times as large as the accompanying compensatory damages award, the Court refused to hold that due process requires any particular mathematical relationship between punitive and compensatory damages.[56] The Court explained that the award in *TXO* was not so unreasonable to render it "grossly excessive" and, in doing so, endorsed the

cess. In view of this consistent history, we cannot say that the common law method for assessing punitive damages is so inherently unfair as to deny due process and be per se unconstitutional.

Id. (internal citations omitted).

49. *Id.* at 18.

50. *Id.*

51. *Id.* at 19.

52. *See id.* at 21–22.

It was announced that the following could be taken into consideration in determining whether the award was excessive or inadequate: (a) whether there is a reasonable relationship between the punitive damages award and the harm likely to result from the defendant's conduct as well as the harm that actually has occurred; (b) the degree of reprehensibility of the defendant's conduct, the duration of that conduct, the defendant's awareness, any concealment, and the existence and frequency of similar past conduct; (c) the profitability to the defendant of the wrongful conduct and the desirability of removing that profit and of having the defendant also sustain a loss; (d) the "financial position" of the defendant; (e) all the costs of litigation; (f) the imposition of criminal sanctions on the defendant for its conduct, these to be taken in mitigation; and (g) the existence of other civil awards against the defendant for the same conduct, these also to be taken in mitigation.

Id.

53. *Id.* at 22.

54. 509 U.S. 443, 446 (1993).

55. *Id.* at 458.

56. *Id.* at 458–60.

factors used by different state courts to determine reasonableness without indicating which factors were most important among them.[57]

While the Court initially refused to develop a clear test for the reasonableness of punitive damages awards in its early Fourteenth Amendment cases, it reversed this course beginning with its decision *in BMW of North America, Inc. v. Gore*.[58] In providing a more concrete test for whether an award was reasonable, the Court in *Gore* held that the predictability of awards and the ability of defendants to anticipate these awards underlies the constitutional protections against "grossly excessive" punitive damages awards.[59] Specifically, the Court explained that "[e]lementary notions of fairness enshrined in our constitutional jurisprudence dictate that a person receive fair notice not only of the conduct that will subject him to punishment, but also of the severity of the penalty that a State may impose."[60] The Court instantiated these elementary notions of fairness with respect to punitive damages through three specific "guideposts" which determine whether a particular punitive damages award is grossly excessive: (1) the "degree of reprehensibility" of the defendant's conduct, (2) the "disparity between the harm" caused by the defendant and the "punitive damages award," and (3) the "difference between [the punitive damages award] and the civil penalties authorized or imposed in comparable cases."[61]

Noting that "the most important indicium of the reasonableness of a punitive damages award is the degree of reprehensibility of the defendant's conduct,"[62] the Court explained that the instant "case exhibit[ed] none of the circumstances ordinarily associated with egregiously improper conduct."[63] Similarly, noting that "exemplary damages must bear a 'reasonable relationship' to compensatory damages," the Court recognized that the ratio of punitive to compensatory damages in this case was 500:1.[64] Though still refusing to provide a "mathematical formula" to "mark" the "constitutional line," the Court concluded that the high punitive-to-compensatory ratio in this case failed to fall into the constitutional range.[65]

57. *Id.* at 459–60 (endorsing the approaches used by the Alabama and West Virginia Supreme Courts in determining the reasonableness of a particular punitive damages award). The Court further added that the size of the potential harm to the plaintiff could be relevant in the reasonableness determination as well. *Id.* at 462.

> Thus, even if the actual value of the "potential harm" to respondents is not between $5 million and $8.3 million, but is closer to $4 million, or $2 million, or even $1 million, the disparity between the punitive award and the potential harm does not, in our view, "jar one's constitutional sensibilities."

Id. (quoting Pac. Mut. Life Ins. Co. v. Haslip, 499 U.S. 1, 18 (1991)).

58. 517 U.S. 559, 568 (1996) ("[W]e believe[ ] that a review of this case would help to illuminate 'the character of the standard that will identify unconstitutionally excessive awards' of punitive damages." (internal citations omitted)).

59. *Id.* at 574–75.

60. *Id.* at 574.

61. *Id.* at 574–75.

62. *Id.*

63. *Id.* at 580.

64. *Id.* at 580, 582.

65. *Id.* at 582.The Court also considered the third guidepost in reaching this conclusion. *See id.* at 583–84 ("In this case the $2 million economic sanction imposed on BMW is substantially greater than the statutory fines available in Alabama and elsewhere for similar malfeasance.").

Following *Gore*, courts had a clearer picture of what constituted an unreasonable punitive damages award but still lacked clarity on what ratio of punitive to compensatory damages represented the limits of reasonability. This would change when the Supreme Court decided *State Farm v. Campbell*.[66] In that case, a Utah jury had awarded the plaintiffs $2.6 million in compensatory damages and $145 million in punitive damages on claims of bad faith, fraud, and intentional infliction of emotional distress.[67] The trial court reduced the compensatory and punitive awards to $1 million and $25 million, respectively, but applying the Supreme Court's decision in *Gore*, the Utah Supreme Court reinstated the $145 million punitive damages award.[68]

The Supreme Court of the United States held that the punitive damages award in this case violated the Due Process Clause.[69] In doing so, it reiterated its "concern[] over the imprecise manner in which punitive damages systems are administered."[70] With this concern in mind, the Court applied the three *Gore* guideposts. While the first and third guideposts were marginally helpful in this case,[71] the second guidepost was most relevant. Though the Court "decline[d] again to impose a bright-line ratio which a punitive damages award cannot exceed," it held that "in practice, few awards exceeding a single-digit ratio between punitive and compensatory damages, to a significant degree, will satisfy due process."[72]

While this holding leaves room for interpretation and, at best, represents a fuzzy demarcation of constitutionality,[73] this "single-digit" ratio remains the clearest statement of the Court's approach to the constitutionality of punitive damages awards. It is also the most relevant holding in terms of furthering the Court's overall goal of maintaining predictability within punitive damages awards. Defendants, who are likely better able to forecast specific economic harms of their actions, can better predict punitive damages knowing that those damages are limited (in most cases) to a specific multiple of a forecastable dollar amount. This is not to suggest that the Court's approach is perfect, and it explicitly noted that other ratios may apply in certain circumstances.[74]

66. 538 U.S. 408 (2003).

67. *Id.* at 414–15.

68. *Id.* at 415–16.

69. *Id.* at 418 ("Under the principles outlined in *BMW of North America, Inc. v. Gore*, this case is neither close nor difficult. It was error to reinstate the jury's $145 million punitive damages award.").

70. *Id.* at 417.

71. Under the first guidepost, the Court concluded that while the conduct at issue in *State Farm* was reprehensible, it was not sufficiently reprehensible to support the punitive damages awarded. *Id.* at 419–20 ("While we do not suggest there was error in awarding punitive damages based upon State Farm's conduct toward the Campbells, a more modest punishment for this reprehensible conduct could have satisfied the State's legitimate objectives, and the Utah courts should have gone no further."). The Court declined to "dwell long on [the third *Gore*] guidepost" but noted that the Utah Supreme Court's "analysis [under this guidepost] was insufficient to justify the [punitive damages] award." *Id.* at 428.

72. *Id.* at 425; *see also id.* ("When compensatory damages are substantial, then a lesser ratio, perhaps only equal to compensatory damages, can reach the outermost limit of the due process guarantee.").

73. *See id.* ("The precise award in any case, of course, must be based upon the facts and circumstances of the defendant's conduct and the harm to the plaintiff.").

74. *See id.*

In contrast to the Court's somewhat fuzzy approach, the approaches of individual states in limiting punitive damages awards has been decidedly less so. The next Subsection details state-specific interventions into punitive damages awards.

2. Caps and Other State Interventions in Punitive Damages Awards

While a number of states have enacted caps on punitive damages awards, their approaches have not been uniform.[75] All caps place a clear limit on punitive damages, but caps vary in the limiting number that is specified and in the permissiveness of the exceptions to their limitations.[76] For example, North Carolina has enacted a simple and clear punitive damages cap that prohibits the award of damages in excess of "three times the amount of compensatory damages or two hundred fifty thousand dollars ($250,000), whichever is greater,"[77] with only one exception.[78] On the other hand, Florida has capped punitive damages at the greater of $500,000 or three times the accompanying compensatory damages award unless the defendant acted in an unreasonable manner.[79] If the defendant acted unreasonably, the cap increases to the greater of $2 million or four times the accompanying compensatory damages award.[80] Further, certain types of claims are exempt from Florida's cap.[81]

In contrast to the federal limits on punitive damages, states have taken measures beyond caps to limit punitive damages. For example, several states have increased the burden of proof for punitive damages beyond a preponderance of the evidence—the typical burden in civil trials. Georgia requires "clear and convincing evidence" to support an award of punitive damages,[82] and Colorado requires plaintiffs to "prove[] beyond a reasonable doubt the commission of a wrong" to support an award of punitive damages.[83] Beyond increasing the evidentiary standard plaintiffs must satisfy when seeking punitive damages, some states have also increased the conduct standard for defendants from neg-

> Nonetheless, because there are no rigid benchmarks that a punitive damages award may not surpass, ratios greater than those we have previously upheld may comport with due process where "a particularly egregious act has resulted in only a small amount of economic damages." . . . When compensatory damages are substantial, then a lesser ratio, perhaps only equal to compensatory damages, can reach the outermost limit of the due process guarantee.

Id. (quoting BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 582 (1996)).

75. A comprehensive listing of all of the reforms enacted by states may be found in Ronen Avraham, *Database of State Tort Law Reforms (5th)* (Univ. Texas L., L. Econ Research Paper No. e555, 2014).

76. *See, e.g.*, MISS. CODE § 11-1-65 (2018) (detailing a relatively complicated cap on punitive damages that shifts based on the net worth of the defendant).

77. N.C. GEN. STAT. § 1D-25(b) (2018).

78. North Carolina allows an exception to the cap only in the case of driving while impaired. *See id.* § 1D-26 ("[The punitive damages cap] shall not apply to a claim for punitive damages for injury or harm arising from a defendant's operation of a motor vehicle if the actions of the defendant in operating the motor vehicle would give rise to an offense of driving while impaired. . . .").

79. FLA. STAT. ANN. § 768.73(1)(a) (2018).

80. *Id.* § 768.73(1)(b).

81. *Id.* §§ 768.735–36.

82. GA. CODE ANN. § 51-12-5.1(b) (2018).

83. COLO. REV. STAT. ANN. § 13-25-127(2) (2018).

ligence to gross negligence, recklessness, or malice.[84] Finally, many states require (or allow litigants to request) bifurcated trials such that the decision of whether to award punitive damages (and how much to award) occur in a separate phase from the trial determining the defendant's liability for compensatory damages.[85]

Collectively, these reforms, while not placing a firm limit on punitive damages, reduce the chances that plaintiffs are able to successfully establish that punitive damages are warranted in a given case or, if damages are imposed, decrease the amount of damages that are awarded. Thus, these reforms play some role in furthering the goal of rendering punitive damages awards more predictable, consistent with the Supreme Court's jurisprudence in this area. Whether punitive damages awards are actually predictable, however, remains an open question, and the next Section discusses the robust body of empirical evidence that has been developed on this question.

C. Are Punitive Damages Predictable?: The Existing Evidence

As noted by Mitchell Polinsky, there are two components of predictability with respect to punitive damages: (1) whether punitive damages will be imposed; and (2) if they are imposed, what amount will be awarded.[86] In early work, Theodore Eisenberg and other scholars examined both of these components, analyzing a dataset of punitive damages awards from 1991 and 1992.[87] With respect to whether an award will be imposed, they found empirical evidence "suggest[ing] a difficulty in predicting, based on available data, in precisely which cases punitive damages will be awarded."[88] With respect to the amount of damages imposed, however, the Eisenberg group concluded that punitive damages are, to some extent, predictable. Specifically, they found that

84. *See e.g.*, GA. CODE § 51-12-5.1(b) (2018) ("Punitive damages may be awarded only in such tort actions in which it is proven by clear and convincing evidence that the defendant's actions showed willful misconduct, malice, fraud, wantonness, oppression, or that entire want of care which would raise the presumption of conscious indifference to consequences."); MISS. CODE. § 11-1-65(1)(a) (2018) ("Punitive damages may not be awarded if the claimant does not prove by clear and convincing evidence that the defendant against whom punitive damages are sought acted with actual malice, gross negligence which evidences a willful, wanton or reckless disregard for the safety of others, or committed actual fraud.").

85. *See, e.g.*, N.J. STAT. ANN. § 2A:15-5.13(a) (West 2018) ("Any actions involving punitive damages shall, if requested by any defendant, be conducted in a bifurcated trial.").

> In an action in which the claimant seeks an award of punitive damages, the trier of fact in a bifurcated proceeding shall first determine whether compensatory damages are to be awarded and in what amount and by special verdict whether each defendant's conduct was malicious, intentional, fraudulent or reckless and whether subdivision (a)(7) applies. . . . If a jury finds that the defendant engaged in malicious, intentional, fraudulent, or reckless conduct, then the court shall promptly commence an evidentiary hearing in which the jury shall determine the amount of punitive damages, if any.

TENN. CODE ANN. § 29-39-104(a)(2)–(3) (2018).

86. A. Mitchell Polinsky, *Are Punitive Damages Really Insignificant, Predictable, and Rational? A Comment on Eisenberg et al.*, 26 J.L. STUD. 663, 672–73 (1997).

87. Theodore Eisenberg et al., *The Predictability of Punitive Damages*, 26 J.L. STUD. 623, 632–33 (1997) [hereinafter Eisenberg et al., *Predictability of Punitive Damages*].

88. *Id.* at 646; *see also id.* ("[T]he model confirms the expected relationships but still leaves us unable to predict accurately precisely when punitive damages will be awarded.").

"compensatory damages explain about 47 percent of the variance in punitive damages awards," *i.e.*, higher compensatory damages awards predict higher punitive damages awards and explain much of the observed variation in punitive damages.[89] Based on this, the scholars concluded that "[i]n one respect, therefore, punitive damages awards levels may be . . . predictable."[90]

Commenting on this research, Polinksy disagreed with the Eisenberg group's conclusions, explaining that "their results are consistent with the possibility that in each jurisdiction and case category jury decisions to award punitive damages are random."[91] Specifically, he noted that, while the level of compensatory damages may help explain the level of punitive damages in a given case, the "inability to predict when . . . punitive damages will be awarded . . . negates" the conclusion that punitive damages are predictable.[92] Conducting a separate analysis, Jonathan Karpoff and John Lott found evidence consistent with Polinsky's assessment that punitive damages are not, in general, predictable.[93]

Expanding on this debate, Eisenberg and other scholars conducted a new analysis that focused specifically on how punitive damages awards differed depending on whether they were imposed by a judge or jury.[94] In general, they found no statistically significant evidence that juries were more likely to award punitive damages than judges,[95] or that juries impose higher levels of punitive damages than judges.[96] In a subsequent analysis, however, Joni Hersch and W. Kip Viscusi found consistent empirical evidence that "juries are significantly more likely to award punitive damages than are judges and award higher levels of punitive damages."[97] Eisenberg and colleagues later added that, indeed, "judges and juries perform similarly in some punitive damages tasks and differently in others."[98]

Far from an arcane, academic debate over the merits of judges and juries in the punitive damages context, this debate has played an important role in the

89. *Id.* at 650.

90. *Id.*

91. Polinsky, *supra* note 86, at 672.

92. *Id.* at 672–73.

93. Jonathan M. Karpoff & John R. Lott, *On the Determinants and Importance of Punitive Damages Awards*, 42 J.L. ECON. 527, 543 (1999) ("This result is consistent with Polinsky's prediction: we can explain the level of punitive damages if we know they will be awarded, but we have a difficult time explaining any of the overall variation in awards.").

94. Theodore Eisenberg et al., *Juries, Judges, and Punitive Damages: An Empirical Study*, 87 CORNELL L. REV. 743, 743 (2002) [hereinafter Eisenberg et al., *An Empirical Study*].

95. *Id.* at 762 ("One cannot reject the hypothesis that juries are no more likely than judges to award punitive damages."). *But see* Hastie & Viscusi, *supra* note 33, at 916 (finding experimental evidence that suggests juries are more likely to award punitive damages than judges).

96. Eisenberg et al., *An Empirical Study*, *supra* note 94, at 773–74 ("None of the models support the hypothesis that judges and juries differ in the way they set levels of punitive awards or in the amount of punitive damages awarded per unit of compensatory damages.").

97. Hersch & Viscusi, *Punitive Damages*, *supra* note 3, at 1.

98. Theodore Eisenberg et al., *Juries, Judges, and Punitive Damages: Empirical Analyses Using the Civil Justice Survey of State Courts 1992, 1996, and 2001 Data*, 3 J. EMPIRICAL L. STUD. 263, 263–64 (2006) [hereinafter Eisenberg et al., *Empirical Analyses*].

Supreme Court's approach to punitive damages. In *Exxon Shipping Co. v. Baker*, Justice Souter discussed in detail the empirical evidence generated by the Eisenberg group and others on the predictability of punitive damages awards and how this differed across judges and juries.[99] The Court then explicitly relied on these, and other empirical results, in holding that the ratio of punitive to compensatory damages could not exceed 1:1 in maritime cases.[100] Though the Court was clear that its responsibilities in deciding the appropriate ratio of punitive to compensatory damages under federal maritime law were different from its responsibilities in determining the outer contours of permissibility under the Due Process Clause,[101] the Court's heavy (in fact, nearly exclusive) reliance on empirical results in *Exxon Shipping* illustrates the importance of empirical evidence in determining the appropriate restrictions on punitive damages.

While the Court was analyzing empirical results in *Exxon Shipping*, scholars were busy analyzing the effect of the Court's decisions on their results.[102] Unsurprisingly, the Court's decision in *State Farm* has been thoroughly examined in multiple studies, given its prominence in placing the clearest constitutional limitation to date on punitive damages.[103] Returning to the Court's primary concern regarding the relationship between compensatory and punitive damages—*i.e.*, the ratio that has dominated the Supreme Court's cases over the past fifteen years—separate studies by McMichael along with Eisenberg and Heise concluded that this decision did little to reduce punitive damages awards as one might expect.[104] Instead, the evidence based on a national sample of

99. 554 U.S. 471, 499 (2008) ("A recent comprehensive study of punitive damages awarded by juries in state civil trials found a median ratio of punitive to compensatory awards of just 0.62:1, but a mean ratio of 2.90:1 and a standard deviation of 13.81." (citing Eisenberg et al., *Empirical Analyses*, *supra* note 98, at 269)).

100. *Id.* at 513.

> On these assumptions, a median ratio of punitive to compensatory damages of about 0.65:1 probably marks the line near which cases like this one largely should be grouped. Accordingly, given the need to protect against the possibility (and the disruptive cost to the legal system) of awards that are unpredictable and unnecessary, either for deterrence or for measured retribution, we consider that a 1:1 ratio, which is above the median award, is a fair upper limit in such maritime cases.

Id. (citing Eisenberg et al., *Empirical Analyses*, *supra* note 98, at 269).

101. *Id.* 501–02.

> Today's enquiry differs from due process review because the case arises under federal maritime jurisdiction, and we are reviewing a jury award for conformity with maritime law, rather than the outer limit allowed by due process; we are examining the verdict in the exercise of federal maritime common law authority, which precedes and should obviate any application of the constitutional standard. Our due process cases, on the contrary, have all involved awards subject in the first instance to state law.

Id.

102. *See, e.g.*, Viscusi & McMichael, *Shifting the Fat-Tailed Distribution*, *supra* note 3, at 363–64 (examining the role of *Exxon Shipping* in an empirical analysis).

103. While *Exxon Shipping* has not been ignored, it has played a smaller role in empirical analyses because it was limited to federal maritime cases. *See, e.g.*, *id.* at 363–64 (examining the role of *Exxon Shipping* in an empirical analysis); Del Rossi & Viscusi, *supra* note 3 (examining the same).

104. Eisenberg & Heise, *supra* note 14, at 346–51; Benjamin J. McMichael, Note, *Constitutional Limitations on Punitive Damages: Ambiguous Effects and Inconsistent Justifications*, 66 VAND. L. REV. 961, 993–96 (2013).

state court cases suggested that *State Farm* either had no effect on punitive damages awards or actually increased those awards.[105]

Examining the same dataset of punitive damages awards, McMichael and Viscusi applied a specific mathematical model of how adjudicators impose punitive damages, accounting separately for the decision to impose any damages and the decision of what amount to impose.[106] Within this model, they found, consistent with prior work, little evidence that *State Farm* limited the size of punitive damages awards.[107] Unlike previous work, however, they extended their analysis to explicitly examine the role of state punitive damages reforms alongside *State Farm*, finding that caps on punitive damages do not affect whether adjudicators impose these awards but do reduce the amount of damages they impose.[108] Further, their results suggested that increasing the conduct standard required to support a punitive damages award above negligence decreased both the probability that punitive damages were awarded and the size of those awards. Other state-level reforms, however, such as increasing the evidentiary burden required to support a punitive award and allowing or requiring bifurcated trials, affected neither the likelihood of an award, nor the size of awards.[109]

While the effect of state-level punitive-damages reforms has received attention in the literature beyond the analysis conducted by McMichael and Viscusi, the majority of the existing research has focused on the role of these reforms on outcomes other than actual punitive damages awards.[110] And while these analyses can elucidate the roles of changes in both state and federal law on punitive damages generally—all of these studies consider a national sample of punitive awards or other sample of "typical" awards—they do not focus specifically on the types of awards that have generated the most interest among both defendants and the Supreme Court, *i.e.*, the very largest "outlier" awards.[111] These awards are discussed in the next Part.

105. Eisenberg & Heise, *supra* note 14, at 346–51; McMichael, *supra* note 104, at 993–96.

106. McMichael & Viscusi, *The Punitive Damages Calculus*, *supra* note 14, at 85–89.

107. *Id.* at 93.

108. *Id.*

109. *Id.*

110. *See, e.g.*, Ronen Avraham, *An Empirical Study of the Impact of Tort Reforms on Medical Malpractice Settlement Payments*, 34 J.L. STUD. S183 (2007) (considering the role of punitive damages caps in medical malpractice payments); Ronen Avraham & Max Schanzenbach, *The Impact of Tort Reform on Private Health Insurance Coverage*, 12 AM. L. ECON. REV. 319 (2010) (analyzing the effect of punitive damages caps on the likelihood that individuals have health insurance); Paul Rubin & Joanna Shepherd, *Tort Reform and Accidental Deaths*, 50 J.L. ECON. 221 (2007) (examining the effect of increased evidentiary standards for punitive damages on accident rates).

111. *See, e.g.*, Exxon Shipping Co. v. Baker, 554 U.S. 471, 501 (2008) ("The Court's response to outlier punitive-damages awards has thus far been confined by claims at the constitutional level, and our cases have announced due process standards that every award must pass."); *id.* at 504 ("This is why our better judgment is that eliminating unpredictable outlying punitive awards by more rigorous standards than the constitutional limit will probably have to take the form adopted in those States that have looked to the criminal-law pattern of quantified limits.").

III. THE BLOCKBUSTER AWARDS

Though the Supreme Court has never specifically defined what it means by "outlier" awards, "blockbuster" awards are likely what the Court has in mind.[112] These are awards of over $100 million at the time they are imposed and represent a significant punishment for any defendants finding themselves liable for these awards.[113] Though such large awards are not common—only 137 were imposed between 1981 and 2013[114]—they have the potential to catch the attention of even large corporate defendants and are often imposed as a strong condemnation of a defendant's behavior. For example, the first blockbuster award was imposed in *Grimshaw v. Ford Motor Co.* based on Ford's design of the Pinto and that vehicle's proclivity to catch fire following rear-end collisions.[115] Even decades after the award was handed down by a California jury, the case is interpreted as a warning to the automobile industry that consumers would not tolerate manufacturers ignoring defects and that, if they did, they would be punished accordingly.[116]

112. The Court has also referred to outlier awards in terms of a very high ratio between punitive and compensatory damages. *See id.* at 501.

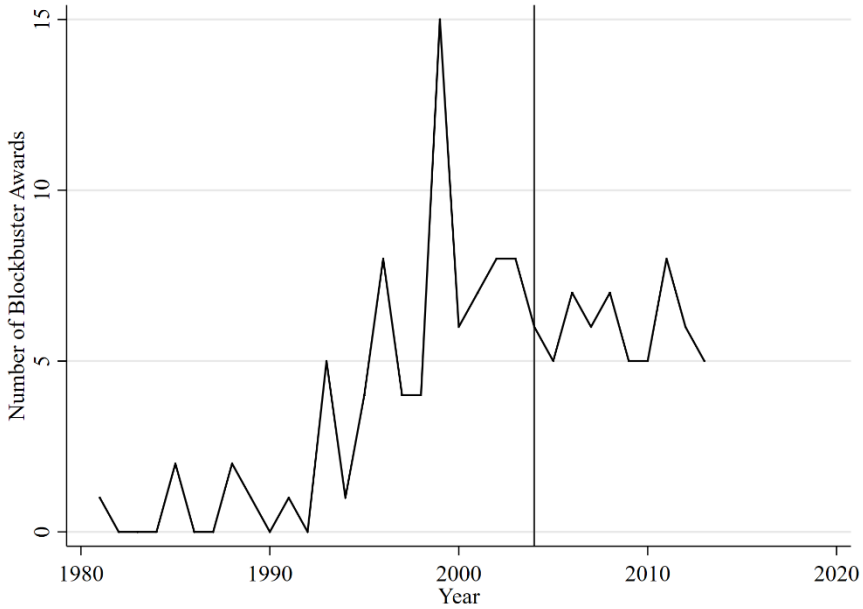
113. *See* Viscusi & McMichael, *Shifting the Fat-Tailed Distribution*, *supra* note 3, at 350 (referring to scholars considering awards of more than $100 million "blockbuster" awards).

114. *See id.* at 357.

115. 119 Cal. App. 3d 757, 771–79 (1981).

116. Carol J. Williams, *Toyota Is Just the Latest Automaker to Face Auto Safety Litigation*, L.A. TIMES (Mar. 14, 2010), http://articles.latimes.com/2010/mar/14/business/la-fi-toyota-litigate14-2010mar14 (noting that the award "signaled to the auto industry that it would be harshly sanctioned for ignoring known defects").

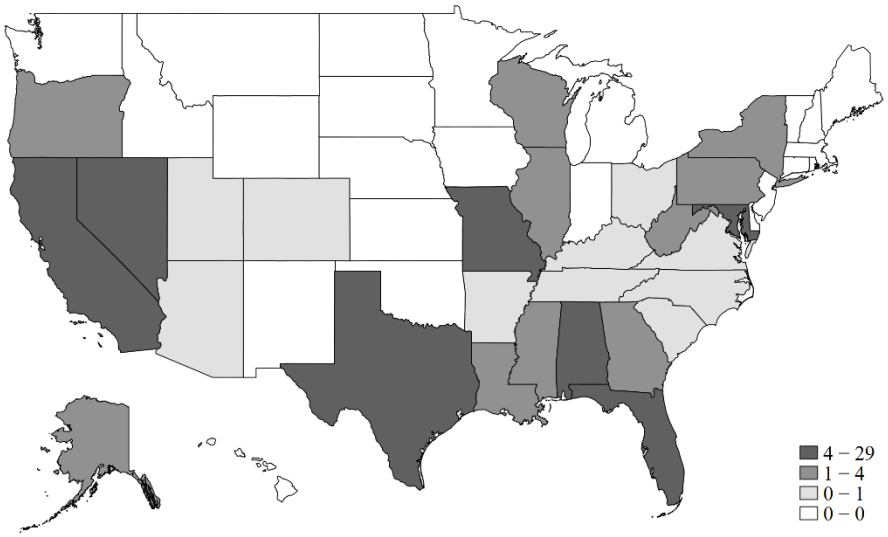
FIGURE 1: NUMBER OF BLOCKBUSTER AWARDS BY YEAR



Notes: The jagged, horizontal line represents the total number of blockbuster awards handed down each year, and the vertical line indicates when *State Farm* was decided.

Following *Grimshaw*, blockbuster awards became increasingly common in the ensuing decades, and by the early 1990s, five or more blockbuster awards per year was the norm. Figure 1 provides an overview of the number of blockbuster cases each year. Picking up steam in the 1990s, the total number of blockbuster cases peaked in 1999 with fifteen awards. Thereafter, the number per year decreased, and following the Supreme Court's decision in *State Farm*—delineated in Figure 1 with the vertical line at the 2003 mark—no more than eight blockbuster awards have been handed down in any single year. While blockbuster punitive damages awards have been mainstays of the legal world since the 1990s, not all states can lay claim to having such an award. Indeed, a few states have dominated the blockbuster landscape, and Figure 2 provides a heat map of states where blockbuster awards have been imposed, with darker states having had more such awards. Unsurprisingly, populous states like Texas and California have had the most blockbuster awards. Interestingly, however, smaller states such as West Virginia, Alabama, and Oregon have had several awards within their borders.

FIGURE 2: HEAT MAP OF BLOCKBUSTER AWARDS



Notes: All 137 identified blockbuster cases are included. Darker states have had more blockbuster cases decided within their borders.

Table 1 provides an exhaustive listing of all of the blockbuster cases we have identified between 1981 and 2013, which is the time period that will be used for the subsequent empirical analysis. Included with each case is the amount of compensatory damages ("CD") and punitive damages ("PD") awarded (in millions of dollars) and the ratio between the two. Many awards barely satisfy the blockbuster criterion of $100 million, which may be a focal damage amount for jurors, but a number of awards exceed this threshold by more than an order of magnitude. The ratio of punitive to compensatory damages, which has received most of the Court's attention, varies widely from well under 1 to over 10,000 in the most extreme cases. Collectively, Figures 1 and 2 along with Table 1 paint an interesting picture of the blockbuster landscape, and these awards have been the subject of some debate, particularly given that they are among the most extreme outlying cases that have caught the eye of the Supreme Court.

TABLE 1: BLOCKBUSTER CASES

Case Name	State	Year	Punitive	Compensatory	Ratio
Grimshaw v. Ford Motor Co.	CA	1981	125	3	40.64
Micro/Vest v. Computer-Land	CA	1985	125	400	0.31
Pennzoil v. Texaco	TX	1985	3,000	7,530	0.40
In re Tech. Equities Fed. Sec. Litig.	CA	1988	147	7	21.00
Md. Deposit Ins. Fund v. Seidel	MD	1988	322	65	4.95
Coyne v. Celotex	MD	1989	150	2	75.00
Proctor v. Davis and Upjohn Co.	IL	1991	125	3	39.55
Dominguez Energy v. Shell Oil	CA	1993	173	47	3.69
Amoco v. Lloyd's of London	CA	1993	386	36	10.73
Moseley v. Gen. Motors	GA	1993	101	4	23.82
Hedrick v. Sentry Ins. Co.	TX	1993	100	2	46.08
Rubicon Petroleum Inc. v. Amoco	TX	1993	250	125	2.00
Howell v. Blockbuster Entm't Corp.	TX	1994	109	15	7.41
In re The Exxon Valdez	AK	1995	5,000	287	17.42
Perez v. William Recht Co.	FL	1995	300	200	1.50
Smith v. Delta TV	MS	1995	167	1	334.44
O'Keefe v. Loewen Grp.	MS	1995	400	100	4.00
Hardy v. Gen. Motors Corp.	AL	1996	100	50	2.00
Forti v. Gen. Dynamics Corp.	CA	1996	100	7	13.51
Houchens v. Rockwell Int'l Corp.	KY	1996	210	8	27.27
Barnett v. La Societe Anonyme Turbomeca France	MZ	1996	175	175	1.00
Broussard v. Meineke Disc. Muffler Shops	NC	1996	150	197	0.76
Tenn. Gas Pipeline Co. v. KCS Res.	TX	1996	114	29	3.93
Bartlett v. Mitchell Energy Corp.	TX	1996	200	4	49.38
Campbell v. State Farm Mut. Auto. Ins. Co.	UT	1996	145	3	55.77
In re New Orleans Tank Car Leakage Fire Litig.	LA	1997	3,365	2	1682.50
Jimenez v. Chrysler Corp.	SC	1997	250	13	20.00
50-Off Stores Inc. v. Banque Paribas (Suisse)	TX	1997	138	13	10.70
MMAR. v. Dow Jones	TX	1997	200	23	8.81
Lockheed Litigation Cases	CA	1998	760	25	29.92
Six Flags Over Ga. v.	GA	1998	257	197	1.30

Time Warner					
Robinson v. Ford Motor Co.	MS	1998	120	25	4.82
Aaron v. Abex Corp.	TX	1998	100	16	6.41
Carlisle v. Whirlpool Fin. Nat'l Bank	AL	1999	580	1	591.84
Aultman v. Duncan Mfg.	AL	1999	100	15	6.90
Robert J. Bellott Ins. Agency Inc. v. State Farm Mut.	AK	1999	150	3	55.56
Romo v. Ford Motor Co.	CA	1999	290	5	54.72
Anderson v. Gen. Motors	CA	1999	4,775	108	44.38
Goodrich v. Aetna U.S. Healthcare of Cal.	CA	1999	116	5	25.78
Trovan Ltd. v. Pfizer Inc.	CA	1999	135	8	16.88
Martin v. ServiceMaster Co.	GA	1999	135	1	107.14
Avery v. State Farm	IL	1999	600	130	4.62
Alcorn v. Nat'l R.R. Passenger Corp.	MO	1999	120	40	2.97
White v. Ford Motor Co.	NV	1999	153	2	66.60
Swan v. Einhorn	PA	1999	752	155	4.85
Rhodes v. Sensitive Care	TX	1999	250	<1	1250.00
City of West Allis v. Wis. Elec.	WI	1999	100	5	22.22
Cowart v. Johnson Kart Mfg.	WI	1999	1,000	24	41.67
Carroll v. Interstate Brands	CA	2000	121	11	11.00
Engle v. R.J. Reynolds Tobacco	FL	2000	145,000	13	11417.32
Dorman v. Bridgestone/Firestone Inc.	MO	2000	100	5	20.00
Pioneer Commercial Funding v. Am. Fin. Mortg.	PA	2000	338	15	23.28
Timely Adventures v. Coastal Mart Inc.	TX	2000	100	2	47.62
Martin v. Children's Advanced Med. Insts.	TX	2000	137	132	1.04
Boeken v. Philip Morris	CA	2001	3,000	6	541.52
Elahi v. Islamic Republic of Iran	DC	2001	300	12	25.00
Cassoutt v. Cessna Aircraft	FL	2001	400	80	5.00
Grefer v. Alpha Tech. Servs.	LA	2001	1,000	56	17.82
COC Servs. Ltd. v. CompUSA	TX	2001	365	90	4.05
Fuqua v. Horizon/CMS Healthcare Corp.	TX	2001	310	3	114.39
Bell v. Dresser Indus.	TX	2001	100	30	3.33
Jernigan v. Gen. Motors	AL	2002	100	22	4.55
Bullock v. Philip Morris	CA	2002	28,000	1	43076.92
Claghorn v. Edsaco	CA	2002	165	6	28.95
City of Hope v. Genentech	CA	2002	200	300	0.67

Steele Software Corp. v. First Union Nat'l Bank	MD	2002	200	76	2.63
IGEN Int'l Inc. v. Roche Diagnostics GmbH	MD	2002	400	105	3.81
Hayes v. Courtney Pharmacy, Inc.	MO	2002	2,000	225	8.89
Schwarz v. Philip Morris	OR	2002	150	<1	882.35
Exxon Mobil Corp. v. Ala. Dep't of Conservation & Nat. Res.	AL	2003	11,800	64	185.53
Beckman Coulter Inc. v. Flextronics	CA	2003	931	3	321.03
Price v. Philip Morris, Inc.	IL	2003	3,100	7,100	0.44
Whittington v. U.S. Steel	IL	2003	200	50	4.00
Motorola Credit Corp. v. Uzan	NY	2003	2,130	2,130	1.00
TVT Records v. Island Def Jam Music Grp.	NY	2003	107	25	4.28
Burns v. Prudential Sec.	OH	2003	250	12	20.33
Anadarko Petroleum Corp. v. T-Bar X Ltd. Co.	TX	2003	100	40	2.50
Whittaker v. Sw. Life Ins. Co.	AL	2004	1,600	20	80.00
Buell-Wilson v. Ford Motor Co.	CA	2004	246	123	2.00
Brown v. Dorsey	GA	2004	450	326	1.38
Medtronic Sofamor Danek Inc. v. Michelson	TN	2004	400	160	2.50
Poliner v. Tex. Health Sys.	TX	2004	110	256	0.43
Coffey v. Wyeth	TX	2004	900	113	7.94
Garamendi v. Altus Fin., S.A.	CA	2005	700	0	N/A
Savaglio v. Wal-Mart Stores	CA	2005	115	57	2.02
Coleman Parent Holdings v. Morgan Stanley	FL	2005	850	604	1.41
Ernst v. Merck	TX	2005	229	25	9.35
Featherston v. Gressler	TX	2005	600	6	100.00
City of Modesto v. Dow	CA	2006	175	3	54.69
de Villers v. Rossum	CA	2006	100	6	16.67
Cook v. Rockwell Int'l Corp.	CO	2006	200	354	0.57
Navarro v. Austin	FL	2006	100	117	0.86
Man Aktiengesellschaft v. Freightliner LLC	OR	2006	350	966	0.36
Gulsby Eng'g v. Gulf Liquids New River Project	TX	2006	325	375	0.87
Casas v. Paradez	TX	2006	150	10	15.00
Cal X-tra v. Phoenix Holdings II LLC	AZ	2007	150	210	0.71
Banco Espirito Santo International Ltd. v. BDO Seidman LLP	FL	2007	352	170	2.07

Martin v. Swain	FL	2007	100	10	10.00
Wheeling Pittsburgh v. Massey Energy Co.	WV	2007	100	120	0.83
Perrine v. E.I. DuPont De Nemours and Co.	WV	2007	196	56	3.54
Estate of Tawney v. Colum. Nat. Res.	WV	2007	270	134	2.01
State of Alabama v. AstraZeneca LP	AL	2008	175	40	4.38
ICO Global Communications v. Boeing Satellite Sys. Int'l Inc.	CA	2008	236	371	0.64
Estate of LoCascio v. LoCascio	FL	2008	100	25	3.98
Estate of del Pino v. The Republic of Cuba	FL	2008	250	3	100.00
Hyatt v. Franchise Tax Bd. of the State of Cal.	NV	2008	250	138	1.81
Estate of Mack v. Mack	NV	2008	405	185	2.19
Adidas Am. Inc. v. Payless Shoesource, Inc.	OR	2008	137	168	0.82
Stone v. Marcone	FL	2009	275	55	5.00
Naugle v. Philip Morris USA, Inc.	FL	2009	244	56	4.36
Ind. Recovery Capital Holdings, Inc. v. Simmons	TX	2009	145	34	4.30
Newman v. Nat'l W. Life Ins. Co.	TX	2009	150	<1	1330.54
Garner v. BP Prods. N. Am.	TX	2009	100	<1	306.51
Evans v. A.W. Chesterton Co.	CA	2010	200	9	22.67
Jackson v. Briar Hill	FL	2010	100	14	7.14
Chanin v. Teva Parenteral Meds.	NV	2010	144	361	0.40
Velez v. Novartis Corp.	NY	2010	250	3	74.24
Dillard's Inc. v. i2 Tech., Inc.	TX	2010	150	76	1.97
Middleton v. Collins	TX	2011	150,000	370	405.41
Pacesetter, Inc. v. Nervicon Co.	CA	2011	500	1,816	0.28
Allison v. ExxonMobil Corp.	MD	2011	1,045	497	2.10
Heilig v. Fluor Corp.	MO	2011	320	39	8.31
Brown v. Chevron Phillips Chemical Co.	MS	2011	300	22	13.64
Ray v. Allergan, Inc.	VA	2011	200	12	16.67
Sacks v. Sicor Inc.	NV	2011	163	20	8.08
Meins v. Bayer AG	AR	2011	125	17	7.40
Webb v. Trans Healthcare, Inc.	FL	2012	700	200	3.50

Garcia v. Apollo Beach Food Mart, Inc.	FL	2012	550	167	3.30
Nunziata v. Pinellas Park Nursing Home	FL	2012	140	60	2.33
Chopourian v. Catholic Healthcare W.	CA	2012	140	0	N/A
Juno v. Amare	AL	2012	125	43	2.93
Mansfield v. Horner	MO	2012	100	9	11.49
Townsend v. Trans Healthcare, Inc.	FL	2013	1,000	110	9.09
Lennar Corp. v. Briarwood Capital	FL	2013	200	802	0.25
Meyer v. Health Plan of Nev., Inc.	NV	2013	500	24	20.83
Aguilar v. Heckmann Water Res., Inc.	TX	2013	100	182	0.55
Carduco Inc. v. Mercedes Benz USA	TX	2013	115	27	4.19

After blockbuster awards were first classified as a subset of punitive damages awards in 2004,[117] Alison Del Rossi and W. Kip Viscusi performed a rigorous empirical analysis of these extreme awards, focusing specifically on how the pattern of blockbuster awards changed following landmark decisions. They found consistent evidence that *State Farm* reduced the size of blockbuster awards, the number of blockbuster awards, and the ratio between punitive and compensatory damages.[118] In a subsequent analysis, Viscusi and McMichael compared blockbuster punitive damages awards to other statistical outliers that are observed for natural disasters, such as hurricanes and earthquakes, because both blockbuster awards and natural disasters have what statisticians call "fat tailed distributions."[119] In particular, the extremely high loss disasters are at a level that would not be predicted if losses were normally distributed. The fact that the distribution of blockbuster awards has a fat tail means that they "occur more often and are more difficult to predict than if blockbuster awards were distributed normally."[120] Viscusi and McMichael found consistent evidence, however, that *State Farm* rendered blockbuster awards more predictable by decreasing the amount of punitive damages awarded in blockbuster cases, reducing the likelihood that cases included punitive awards in excess of the "single-digit ratio" discussed by the Supreme Court, and "effectively 'thin[ning]' the fat tail of the distribution of blockbuster awards."[121]

While the blockbuster awards have been subject to empirical analyses, one key aspect of these awards has gone unexamined—the role of state-level punitive damages reforms. To be sure, understanding the effect of *State Farm* on these outlier awards is important; however, the Supreme Court has been

117. *See* Hersch & Viscusi, *Punitive Damages*, *supra* note 3, at 2; Viscusi, *supra* note 3, at 1405.
118. Del Rossi & Viscusi, *supra* note 3, at 137–52.
119. Viscusi & McMichael, *Shifting the Fat-Tailed Distribution*, *supra* note 3, at 350.
120. *Id.*
121. *Id.* at 360–70, 376.

clear that it is willing to look to state-level reforms, such as caps on punitive damages, when determining the appropriate restrictions on punitive damages.[122] Thus, understanding the effect of these state reforms on blockbuster awards can elucidate new ways in which the Court may address future challenges to extremely large punitive damages awards. Accordingly, the next Part offers the first empirical analysis that specifically examines state-level reforms and compares them to existing restrictions under federal law.

IV. EMPIRICAL ANALYSIS

When awarding punitive damages, adjudicators face two separate—though related—decisions. First, they must decide, based on the reprehensibility of the defendants' conduct, whether these damages are warranted in a given case.[123] Second, they must decide what amount of punitive damages are appropriate to deter and punish the defendant.[124] In the context of blockbuster awards, these two decisions translate neatly into two separate empirical analyses, and we present both in this Part. We begin by examining the frequency of blockbuster awards and whether the number of awards per year has been affected by *State Farm*, state level reforms, both, or neither. While we cannot directly examine the probability that a particular case involves a blockbuster punitive damages award,[125] examining the frequency of awards can elucidate whether *State Farm* and state-level reforms effectively reduce this probability. In the second phase of our analysis, we focus on the amount of damages awarded in blockbuster cases. Before delving into the details of our analytical approach, however, we first provide an overview of the data on blockbuster awards we examine.

A. Data

Much of the data used in our analysis is reported in Table 1, which includes the year and state of each blockbuster award we have identified as well as the amount of compensatory damages and punitive damages.[126] In addition to these details, we collected information on the industry of the defendant and categorized defendants into the following industry groups: automobile, tobacco, finance and insurance, petroleum and chemical, and health care. Not all defendants fit into these categories, and we classify defendants who participate in

122. Exxon Shipping Co. v. Baker, 554 U.S. 471, 495–96 (2008).

123. State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 409 (2003).

124. Polinsky, *supra* note 86, at 672.

125. To do so, we would have to either observe every single civil case that is eligible for punitive damages across the United States—obviously beyond our capabilities—or a subset of cases that have the potential to involve a blockbuster award. Even if we could observe all of the cases necessary to develop this subset, any attempt to systematically identify these cases would almost certainly introduce bias into our analysis. Accordingly, we restrict our analysis to the frequency of blockbuster awards because a decrease (increase) in the frequency of these awards necessarily implies a decrease (increase) in the probability that they are imposed.

126. While Table 1 reports the actual amount of damages awarded in a given case, for the purposes of our empirical analysis, all damages amounts are inflated to 2013 dollars.

all other industries into a separate category. For each of these industry categories, we create an indicator variable that equals one if a particular case involved a defendant from that industry. Individual industries may have different norms, different types of damages, and different potentials to facilitate reprehensible behavior, so we include these industry indicator variables in our analysis to control for these differences.

Not all blockbuster cases involve corporate defendants, so we also created a separate indicator variable that equals one if a given case involves both individual and corporate litigants. Adjudicators may have different attitudes with respect to imposing extremely large punitive damages awards on corporations as opposed to individuals and including an indicator variable for the types of litigants involved addresses the concern that these different attitudes may bias our results. Among cases not involving corporate litigants, some involve violent crimes, and we created an indicator variable for these cases.[127] Violent crimes may be particularly well suited to blockbuster punitive damages awards because they almost certainly involve particularly reprehensible conduct. Because adjudicators may react differently to these types of cases relative to other types, we created a separate variable for whether a violent crime was the basis of a blockbuster award.

Next, we collected information on whether a judge or jury handed down each blockbuster award. As discussed above, a significant amount of scholarly attention has been focused on the differences between judges and juries with respect to punitive damages awards.[128] Therefore, we use an indicator variable for whether a judge imposed a given award throughout our analysis. Including this variable ensures that our results are not biased because judges and juries approach punitive damages differently. Finally, while creating a variable for whether a given case is subject to the limitations outlined in *State Farm* is straightforward,[129] creating indicator variables for state-level reforms is less so. As discussed above, punitive damages caps take various forms, and no two states have enacted exactly the same cap.[130] Including separate indicator variables for each cap is not statistically feasible,[131] so we rely on the Database of State Tort Law Reforms ("DSTLR") compiled by Ronen Avraham.[132] The DSTLR provides the year of enactment and statutory text for individual punitive damages caps, and we use this information to construct an indicator variable that equals one when a given state had a cap in place.[133] We also glean from

127. This indicator is created based on the nature of the conduct alleged and does not depend on whether the civil defendant was indicted, prosecuted, or convicted.

128. *See* discussion *supra* Section II.C.

129. Specifically, we created an indicator variable that equals one if an award was imposed after *State Farm* was decided.

130. *See* discussion *supra* Subsection II.B.2.

131. Such an approach is not possible without substantial quantities of data—more than are available to researchers. Additionally, including a separate variable for each state's cap would simply devolve into a qualitative analysis of individual state laws. While such an analysis could be useful, that is not our goal here.

132. *See generally* Avraham, *supra* note 75.

133. The DSTLR further providers a "clever" definition of punitive damages caps. "Clever" caps include only those that are set low enough and contain sufficiently few exceptions to effectively bind courts when im-

the DSTLR which states had enacted evidentiary reform with respect to punitive damages for use in supplemental analyses.

Using all of these data, we conduct a thorough empirical analysis of the effects of both *State Farm* and state-level reforms on blockbuster awards. The next Section describes that analysis in detail.

B. Analysis and Results

1. Award Frequency

Beginning with the frequency with which blockbuster awards are imposed, we estimate a series of empirical models to examine the impact of *State Farm* and state-level reforms, particularly punitive damages caps. Specifically, we estimate four ordinary least squares ("OLS") regression models, and throughout this phase of our analysis, the dependent variable is a count of the number of blockbuster cases that were decided in each state in each year. The independent variables of interest in these regressions are indicators for whether a state had enacted a punitive damages cap and an indicator for whether *State Farm* had been decided. In theory, the effect of both of these variables should be negative, implying that punitive damages caps and *State Farm* both reduced the frequency of blockbuster awards.[134] More interesting than the individual effects of these legal changes, however, are their comparative effects.

Ex ante, there are good reasons to believe that *State Farm* may have a stronger effect than punitive damages caps. As Supreme Court precedent, it applies more broadly than punitive damages caps, and relative to caps, the single-digit-ratio limitation contains fewer exceptions.[135] There are also good reasons to believe, however, that caps may have a stronger dampening effect on the frequency of blockbuster punitive damages awards than *State Farm*. Caps generally place stricter limits on punitive damages awards.[136] Because one might hypothesize that either *State Farm* or punitive damages caps may have a stronger effect on the number of blockbuster awards, comparing the magnitude of their effects within our empirical analysis can elucidate which legal change has been more salient.

In addition to the independent variables of interest, we include a linear time trend to account for the general growth in the number of blockbuster awards over time. Our analysis also includes indicator variables for each state, which control for any idiosyncratic factors unique to specific states that may

posing punitive damages awards. Throughout our analysis, we use the DSTLR's definition of a clever cap. *See id.*

134. *See generally* State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408 (2003); *see also* McMichael & Viscusi, *The Punitive Damages Calculus*, *supra* note 14, at 91.

135. The Court has never outlined what these exceptions may be but has implied that, in at least some cases, violating the single-digit ratio is constitutionally permissible. *State Farm*, 538 U.S. at 425 (holding that "few" awards in excess of a single-digit ratio will satisfy due process without specifying what factors may allow an award to exceed this ratio while still satisfying due process).

136. *See, e.g.*, COLO. REV. STAT. § 13-21-102 (2018) (allowing a ratio not to exceed 1:1, except for a limited set of circumstances in which 3:1 in permissible).

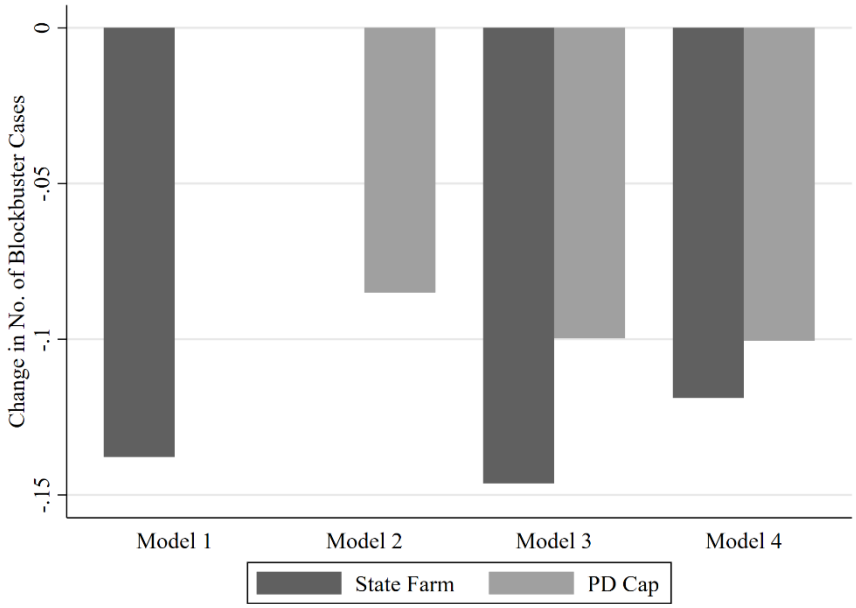
affect the frequency of blockbuster awards. Throughout our analysis, we calculate heteroscedasticity-robust standard errors.

In the interest of succinctness, the implications of our primary regression results are reported in Figure 3.[137] We estimate four separate regression models, and each bar or set of bars in Figure 3 represents the primary results from a single model. All four models include all of the control variables discussed above but successively add different variables for the effect of *State Farm* and punitive damages caps.[138] Model 1, which focuses only on the effect of *State Farm*, provides strong evidence that *State Farm* has a limiting effect on the number of blockbuster awards. *State Farm* reduced the number of blockbuster awards by about 0.1. Model 2, which focuses on the effect of punitive damages caps, provides strong evidence that, like *State Farm*, caps reduce the number of blockbuster awards. The effect of caps, however, is smaller than the effect of *State Farm*, suggesting that the latter may be slightly more effective at reducing the incidence of blockbuster awards.

137. Complete regression results are provided in the Technical Appendix.

138. Estimating multiple models and successively adding the variables of interest ensures that these variables have a consistent effect across models and acts as a robustness check on the results.

FIGURE 3: EFFECT OF *STATE FARM* AND PUNITIVE DAMAGES CAPS ON AWARD FREQUENCY



Notes: N = 957. Each bar or set of bars in Figure 3 represents the primary results from a single model, and the model numbers correspond to the models reported in Table A1 in the Technical Appendix.

Model 3 and Model 4 include both the *State Farm* and cap variables so that both effects are taken into account.[139] Model 4 also includes indicator variables for other pertinent tort reforms; in particular, punitive damages, evidentiary reform, and trial bifurcation. Across both Model 3 and Model 4, the effects of *State Farm* and punitive damages caps remain stable and statistically significant. In Model 3, *State Farm* has a -0.1460 effect on the number of blockbuster cases, compared to -0.0997 for state caps. Though not reported in Figure 3, allowing or requiring bifurcated trials does not have a statistically significant effect on the number of blockbuster awards.[140] Maintaining a lower evidentiary standard (*i.e.*, not increasing this standard to a "clear and convincing" or "reasonable doubt" standard), however, increases the number of blockbuster awards by about the same amount as *State Farm* reduces this number.

Overall, we find consistent evidence that both *State Farm* and punitive damages caps reduce the number of blockbuster awards. In all of our models, however, *State Farm* has a somewhat greater effect on the number of cases than do punitive caps. We explore the implications of *State Farm* having a larger effect than caps below. But before doing so, we first discuss the effect of *State*

139. Including both variables in the same regression ensures that one variable is not simply picking up the effect of the other.

140. *See* McMichael & Viscusi, *The Punitive Damages Calculus*, *supra* note 14, at 93–94.

Farm and caps on the amount of damages awarded because this further elucidates the comparative effects of these two legal changes.

2. Award Amounts

In examining the amount of damages awarded as part of blockbuster cases, we estimate a series of OLS regression models to determine the impact of state-level reforms and *State Farm* on the magnitude of these awards. In all of these models, the dependent variable is the natural logarithm of the amount of punitive damages awarded.[141] Importantly, all of the models examining the amount of punitive damages awarded include, as an independent variable, the natural logarithm of compensatory damages.[142] We include this variable in all of our models because prior work has consistently demonstrated a strong association between the amount of compensatory damages awarded and the amount of punitive damages.[143] Further, the Supreme Court has stated its strong interest in the relationship between compensatory and punitive damages,[144] and including a compensatory damages variable allows us to examine this relationship in detail.

As with the models focusing on the number of blockbuster cases, we sequentially add the *State Farm* and punitive damages cap variables to examine their effect on the amount of punitive damages awarded. In addition to including these variables alone, we also estimate models which include an interaction between these variables and the natural logarithm of compensatory damages. The models which include only the indicator variables allow us to examine the general effect of *State Farm* and punitive damages caps, and the models which include the interaction of these variables and compensatory damages allow us to examine how *State Farm* and punitive damages caps mediate the relationship between compensatory and punitive damages.

As discussed above, all of our models include a series of control variables, which allow us to isolate the effect of the variables of interest from other factors that may impact the amount of punitive damages awarded. In particular, we include a series of indicator variables for the different industries mentioned above and an indicator variable for whether the case involved a violent crime. We also include indicator variables for whether a case was decided in Texas or California, since these states impose more blockbuster cases than any other.[145] All of our models include a linear time trend to capture the general increase in award amounts over time. Each model also includes a bench trial indicator var-

141. The amount of punitive damages awarded exhibits a substantial right skew. To address this, we follow the standard practice in the punitive damages literature by transforming the amount of damages awarded using a natural logarithm. Eisenberg et al., *Predictability of Punitive Damages*, *supra* note 87, at 264; Viscusi & McMichael, *Shifting the Fat-Tailed Distribution*, *supra* note 3, at 360.

142. We use the natural logarithm of this variable for the same reasons we examine the natural logarithm of punitive damages.

143. Eisenberg & Heise, *supra* note 14, at 344; Hersch & Viscusi, *Punitive Damages*, *supra* note 3, at 15.

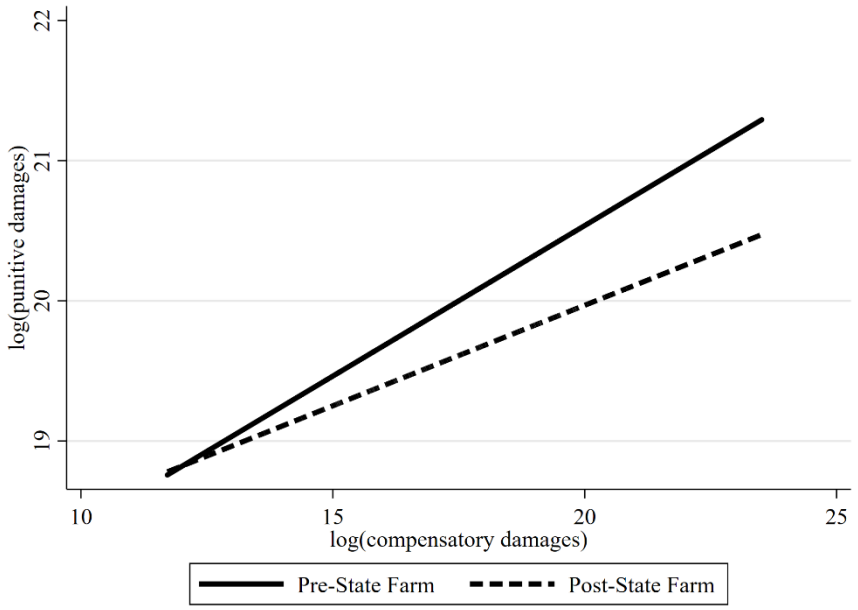
144. BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 581 (1996).

145. *See supra* Figure 2.

iable, and an indicator for whether both business and individual litigants were involved.[146]

Figures 4 and 5 summarize the relationship between compensatory and punitive damages and the effect of *State Farm* and punitive damages caps on this relationship. In both figures, a larger compensatory damages award is clearly associated with a larger punitive damages award, as the line capturing the relationship between the types of damages has a clear upward slope.

FIGURE 4: RELATIONSHIP BETWEEN COMPENSATORY AND PUNITIVE DAMAGES BEFORE AND AFTER *STATE FARM*



Notes: N = 133. The pre-*State Farm* line represents the relationship between compensatory and punitive damages prior to the *State Farm* decision and is plotted using only pre-*State Farm* cases. Similarly, the post-*State Farm* line represents the relationship between compensatory and punitive damages after the *State Farm* decision and is plotted using only post-*State Farm* cases. Additional results may be found in Table A2 in the Technical Appendix.

In Figure 4, *State Farm* has a clear impact on the relationship between compensatory and punitive damages, as it tilts this relationship downward for large compensatory damages amounts.[147] At low levels of compensatory damages, awards before and after *State Farm* had roughly the same relationship be-

146. As discussed in more detail in the Technical Appendix, we do not separately report the results from models that include variables for punitive damages, evidentiary reform, or bifurcated trials. These variables are never individually statistically significant, and including them in the models does not meaningfully affect the *State Farm* or punitive damages cap variables.

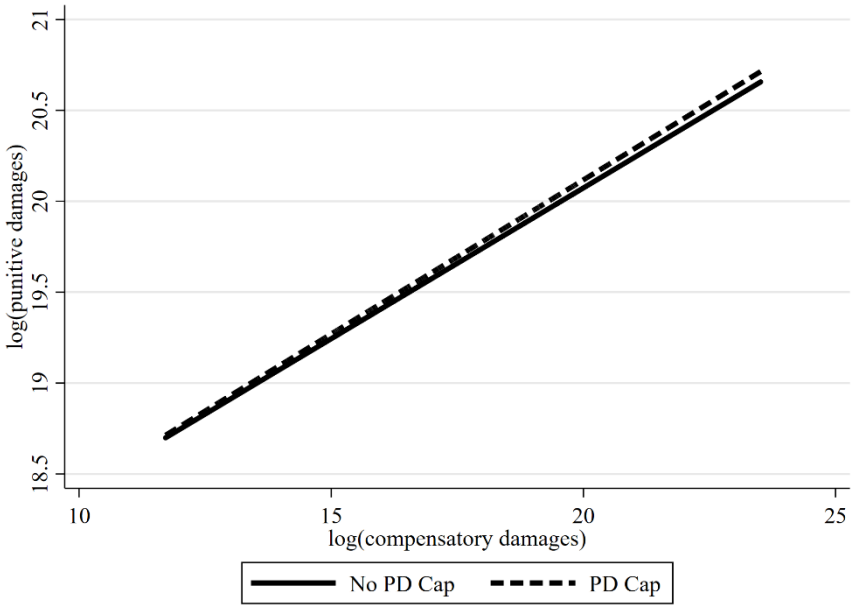
147. The two lines plotted in Figure 4 are based on two separate regressions (each of which includes a full set of control variables). The "Pre-*State Farm*" regression model includes only those awards imposed prior to *State Farm*, and the "Post-*State Farm*" regression model includes only those awards imposed after *State Farm* was decided.

tween compensatory and punitive damages; at higher levels of compensatory damages, however, cases subject to the limitations of *State Farm* have a lower ratio of punitive to compensatory damages. In other words, at lower levels of compensatory damages, an additional dollar of compensatory damages was worth about the same in terms of increased punitive damages before and after *State Farm*. At higher levels of compensatory damages, however, an additional dollar of these damages was worth much more in terms of punitive damages before *State Farm* was decided. Thus, *State Farm* changed the relationship between compensatory and punitive damages in blockbuster cases just as the Supreme Court intended.

Figure 5, which presents the effect of punitive damages caps, tells a much different story.[148] Indeed, the relationship between compensatory and punitive damages in states with a cap is virtually indistinguishable from the relationship in states without a cap. Thus, we find no evidence that punitive damages caps have had a restraining effect on the relationship between compensatory and punitive damages.

148. The two lines plotted in Figure 5 are based on two separate regressions (each of which includes a full set of control variables). The "No PD Cap" regression model includes only those awards imposed in states without a punitive damages cap, and the "PD Cap" regression model includes only those awards imposed in states with a cap.

FIGURE 5: RELATIONSHIP BETWEEN COMPENSATORY AND PUNITIVE DAMAGES IN STATES WITH AND WITHOUT PUNITIVE DAMAGES CAPS



Notes: N = 133. The No PD Cap line represents the relationship between compensatory and punitive damages prior in states without a punitive damages cap and is plotted using only blockbuster cases decided in states without a cap. Similarly, the PD Cap line represents the relationship between compensatory and punitive damages prior in states with a punitive damages cap and is plotted using only blockbuster cases decided in states with a cap. Additional results may be found in Table A2 in the Technical Appendix.

The relative effects of *State Farm* and punitive damages caps on the amount of punitive damages awarded in blockbuster cases are different from their relative effects on the frequency with which these awards are handed down. Where both *State Farm* and caps reduced the frequency of blockbuster awards, only *State Farm* reduces the amount of punitive damages awarded, with caps having no statistically significant effect. The implications of this difference in effects is discussed in the next Part.

V. PUNITIVE DAMAGES: A NEW (EMPIRICAL) CONSTITUTIONAL DOCTRINE

Though the Supreme Court has not revisited punitive damages under the Due Process Clause in the last few years, its case law in this area nonetheless remains unsettled.[149] In *State Farm* itself, the Court reversed course from decades of cases in offering something approaching a bright-line, mathematical rule for punitive damages despite having stated on multiple previous occasions

149. *See* State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 425 (2003) ("We decline again to impose a bright-line ratio which a punitive damages award cannot exceed.").

its desire to avoid doing so.[150] In *Exxon Shipping*, the Court, while technically analyzing punitive damages under federal maritime law, noted serious reservations about how punitive damages are imposed.[151] And these reservations were based, in large part, on the existing empirical evidence.[152] The empirical evidence we develop in this Article is relevant to the ongoing debate over the most appropriate way to address punitive damages, and this evidence is particularly helpful in the context of other empirical evidence on punitive damages. Therefore, we first place the evidence developed here in the broader context of the existing literature before making specific recommendations on the best ways to address punitive damages awards in the future.

A. The Evidence in Context: Blockbuster and More Typical Awards

Decomposing punitive damages awards into (1) the decision to award punitive damages (or the frequency with which they are awarded) and (2) the decision of what amount of damages to impose, the evidence presented above demonstrates that *State Farm* affects both of these decisions and punitive damages caps affect only the first decision. While these results pertain only to blockbuster awards, McMichael and Viscusi perform a similar analysis using a national sample of punitive damages awards.[153] Developing a specific mathematical model of punitive damages that separately accounts for the two decisions that comprise a punitive award,[154] they find that punitive damages caps have no statistically significant effect on the decision of whether to award punitive damages but have a negative effect on the amount of damages awarded.[155] They also find evidence inconsistent with *State Farm* having any effect on punitive damages awards.[156]

Understanding the divergence in the existing evidence with respect to both *State Farm* and state-level reforms can elucidate the best way to address punitive damages going forward. Beginning with the discrepant effects of punitive damages caps, the best explanation lies in the different types of punitive damages examined. McMichael and Viscusi consider a national sample of damages,[157] while we examine only blockbuster awards here. In theory, punitive damages caps should affect only the decision of what amount of punitive damages to award and not the decision of whether to award them because,

150. *State Farm*, 538 U.S. at 425 ("We decline again to impose a bright-line ratio which a punitive damages award cannot exceed."); *see* TXO Prod. Corp. v. All. Res. Corp., 509 U.S. 443, 458 (1993) (disclaiming the creation of any mathematical formula to govern punitive damages).

151. Exxon Shipping Co. v. Baker, 554 U.S. 471, 475–76 (2008).

152. *Id.* at 520.

153. Specifically, McMichael and Viscusi analyze data from the Civil Justice Survey of State Courts. McMichael & Viscusi, *The Punitive Damages Calculus*, *supra* note 14, at 90–92.

154. *Id.*

155. *Id.* at 96. They also find consistent evidence that, by not increasing the evidentiary standards for punitive damages, states can expect to see a greater number of punitive damages awards and a higher average award. *Id.* at 82.

156. *Id.*

157. *Id.* at 89.

while caps obviously limit the amount of punitive damages adjudicators may award, they should not affect the determination of the reprehensibility of the defendant's conduct or whether a defendant deserves to be punished.[158] Thus, in the context of the "typical" punitive damages awards considered by McMichael and Viscusi, the noneffect and effect of caps on the decision to impose damages and the decision of what amount to impose, respectively, is consistent with both the function of caps and the requirements outlined by the Supreme Court.[159]

Why, then, does the evidence presented above follow exactly the opposite pattern, with caps affecting the frequency of punitive damages but not the amount awarded? Unlike the sample of awards examined by McMichael and Viscusi, we focus our attention only on awards that exceed $100 million. This high threshold explains why caps affect the frequency of blockbuster awards and not the frequency of the more typical awards examined in earlier work. If a cap has a binding effect in a given case, it is exceedingly unlikely that such a case would involve a punitive damages award over $100 million. Thus, the effect of caps on the frequency of blockbuster awards suggests that caps do, in fact, limit punitive damages awards by decreasing the chances that any given award will cross the blockbuster threshold. Similarly, the nature of blockbuster awards (and the high threshold that must be met to become such an award) explains why caps have little effect on the amount of damages imposed. Punitive damages caps, almost invariably, include exceptions that either increase or eliminate the cap in the most egregious cases. And blockbuster awards are, by definition, the most egregious cases. Thus, it is not surprising that, conditional on crossing the (very high) $100 million threshold to qualify for blockbuster status, caps have little impact on the amount of damages awarded.

With respect to the different effect of *State Farm*, estimated using McMichael and Viscusi's sample of more typical awards and the sample of blockbuster awards here, the nature of the awards themselves again offers the best explanation. As the Court pointed out in *Exxon Shipping*, the median and mean ratios between punitive and compensatory damages are "just 0.62:1 [and] 2.90:1," respectively.[160] Therefore, the majority of cases do not even begin to approach *State Farm*'s ratio limit of 10:1, meaning that *State Farm* generally has no binding effect on the cases analyzed by McMichael and Viscusi.[161] In stark contrast, the median and mean ratios for the blockbuster cases are 7.40:1 and 476.54:1, respectively.[162] Of the 137 awards we have identified, 44% ex-

158. The Supreme Court has made clear that reprehensibility and worthiness of punishment are the relevant factors to consider when imposing punitive damages, so the lack of an effect of caps on these factors suggests that these reforms should not impact the decision of whether to impose punitive damages. *Id.* at 91.

159. *Id.* at 96.

160. Exxon Shipping Co. v. Baker, 554 U.S. 471, 499 (2008).

161. State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 425 (2003); McMichael & Viscusi, *The Punitive Damages Calculus*, *supra* note 14, at 92.

162. Prior to *State Farm*, the median and mean ratios were 12.26:1 and 717.66:1, respectively. After *State Farm*, the median and mean ratios were 2.04:1 and 14.30:1, respectively.

ceed the *State Farm* ratio limit.[163] Accordingly, it is not surprising that *State Farm* has a more salient effect on blockbuster awards since it represents a binding constraint much more often in these cases than in others. Indeed, the median ratio between punitive and compensatory damages decreased from 16.88:1 to 3.76:1 following *State Farm*, and the mean ratio decreased from 800.35:1 to 46.66:1.[164]

Overall, the decrease in the frequency of blockbuster awards attributable to *State Farm* occurs for the same reason as it does for punitive damages caps—once constrained, fewer awards are able to cross the blockbuster threshold. With respect to the amount of punitive damages awarded, however, *State Farm* contains far fewer exceptions—and possibly no exceptions given the lack of guidance provided by the Supreme Court—than punitive damages caps, meaning that it remains a binding constraint even on those awards that exceed $100 million.[165]

The different effects of *State Farm* and punitive damages caps on different types of punitive damages awards demonstrates that, depending on the precise structure of a limitation on punitive damages, that limitation may have very different effects. The next Section explores these different structures and makes a recommendation on how best to address punitive damages in the future based on the available empirical evidence.

B. Clarifying and Extending the Existing Doctrine

The existing evidence suggests that the structure of a limitation on punitive damages is important to that limitation's ultimate effect on awards. In particular, state-level caps are set low enough to constitute a binding constraint on adjudicators awarding punitive damages even in cases where the total amount of damages is not very high. Caps lose their effectiveness in the most egregious cases, however, because their exceptions inhibit their ability to constrain punitive awards.[166] In contrast, the single-digit-ratio limitation announced in *State Farm* is not set low enough to bind adjudicators in typical cases where punitive damages awards are not substantially greater than the accompanying compensatory damages award. *State Farm*'s limitation, however, contains so few exceptions that it represents a binding constraint on even the largest awards.[167] These differential effects can be instructive in devising a clearer constitutional doctrine to govern punitive damages than currently exists under *State Farm*.

How this should be done depends on whether the losses involve replaceable financial losses or irreplaceable health impacts, such as fatalities. Specifically, for financial losses, the Court can achieve its goal of returning predictability to punitive damages awards by establishing that, only in the rarest cases,

163. *See supra* Table 1.
164. McMichael & Viscusi, *The Punitive Damages Calculus*, *supra* note 14, at 135.
165. *See State Farm*, 538 U.S. at 426; Del Rossi & Viscusi, *supra* note 3, at 151.
166. *State Farm*, 538 U.S. at 425
167. *Id.*

may punitive damages exceed compensatory damages by more than three times, *i.e.*, establish a 3:1 ratio limit. In the case of irreplaceable losses, such as the loss of life in a wrongful death case, the pertinent deterrence value is to set the sum of compensatory damages and punitive damages equal to the value of a statistical life.[168] In this Section, we first describe the legal and empirical justifications for such limits before offering additional insight into how these limits can contribute to predictability in punitive damages awards.

Before discussing the specifics of our proposed limits, however, it is important to note that, in establishing these restrictions, the Supreme Court should abandon all pretext of avoiding a mathematical formula to govern whether a particular punitive damages award is appropriate under the Due Process Clause.[169] The Court nearly did so in *State Farm*, stating that "in practice, few awards exceeding a single-digit ratio between punitive and compensatory damages, to a significant degree, will satisfy due process."[170] In extending *State Farm* to establish a 3:1 limit, the Court should state that this limit represents a bright-line, mathematical formula. Our results above suggest that *State Farm*'s success in limiting blockbuster punitive damages awards is likely traceable to its lack of exceptions. By extending *State Farm* to include an actual bright-line rule, the Court can solidify this paucity of exceptions and ensure that *State Farm* remains effective at reducing punitive damages at all levels of awards.[171] The one exception that the doctrine should explicitly include relates to wrongful death and health-related losses. In particular, the 3:1 limit should apply in cases where no human was physically harmed or killed. In cases of physical injury or death, the Court should cap total damages at the value of statistical life. This proposal has been extensively developed by Joni Hersch and W. Kip Viscusi, and we do not repeat their analysis here.[172] Rather, we incorporate it as a specific exception to the general 3:1 limit we propose. Importantly, including this exception does not inhibit the predictability of punitive damages under our proposed doctrine because the value of statistical life is a well-defined formula

168. *See* Joni Hersch & W. Kip Viscusi, *Saving Lives Through Punitive Damages*, 83 S. CAL. L. REV. 229, 229–30 (2010) [hereinafter Hersch & Viscusi, *Saving Lives*].

> In this Article, we propose a methodology for setting punitive damages in bodily injury cases that will enable punitive damages to fulfill their proper deterrence role. The primary focus is on wrongful death cases, but the approach generalizes to other personal injury contexts. The damages structure we propose to promote efficient levels of safety uses the value of statistical life ("VSL") to establish the punitive damages award.

Id.; *see also* W. KIP VISCUSI, PRICING LIVES: GUIDEPOSTS FOR A SAFER SOCIETY (2018) (discussing the value of statistical life more generally).

169. *See* Pac. Mut. Life Ins. Co. v. Haslip, 499 U.S. 1, 18 (1991) (noting that the Court "[could] not draw a mathematical bright line between the constitutionally acceptable and the constitutionally unacceptable that would fit every case").

170. 538 U.S. at 425. *But see id.* (noting that the Court "decline[d] again to impose a bright-line ratio which a punitive damages award cannot exceed" despite offering a specific ratio to limit punitive damages).

171. *See id.* This is not to suggest that there should never be an exception to the rule, and the Court may well want to include language such as "only the rarest of awards exceeding this ratio will satisfy due process." This language leaves open the possibility that a clearly egregious case may exceed the limit without offering instructions on how to do so as state punitive damages caps do.

172. *See* Hersch & Viscusi, *Saving Lives*, *supra* note 168, at 238–42 (discussing the specifics of their proposal).

that can easily be applied by potential defendants when forecasting their potential liability.[173]

1. The Basis for a New Constitutional Limit: Exxon Shipping

Turning to the specifics of our proposed limits, the legal foundation of these limits begins with *Exxon Shipping*.[174] There, the Court faced a similar question of what specific limit to impose, and its approach is instructive here.[175] At the outset, the Court rejected the possibility of eliminating outlying punitive damages awards through verbal instructions or a dollar-amount cap, stating instead its firm preference for a ratio cap.[176] With respect to that ratio cap, the Court engaged in a detailed analysis to determine that, under maritime law, punitive damages could not exceed the accompanying compensatory award, *i.e.*, it imposed a 1:1 limit on the ratio of punitive to compensatory damages.[177] While the *Exxon Shipping* Court limited its analysis and holding to maritime law,[178] its reasoning can easily be extended to the due process context to refine the constitutional limits on punitive damages put in place by *State Farm*.

In *Exxon Shipping*, the Court arrived at its final holding with respect to the 1:1 ratio after considering three alternative approaches to limiting punitive damages.[179] First, the Court considered using the 3:1 limit that most states had adopted as part of their statutory punitive damages caps.[180] It rejected this approach, however, because the states that had implemented such a limit "appl[ied] [it] across the board."[181] The Court was concerned that such a blanket approach with a relatively high limit of three times compensatory damages was designed to accommodate too wide a range of cases involving many different types of conduct.[182] Our proposal is more nuanced than a simple 3:1 limit in that it also makes provision for establishing deterrence-based damages for cases involving personal injury. Second, the Court also rejected the 2:1 ratio limit that has become standard in many statutory schemes that allow for the trebling of damages.[183] In many instances, this limit was based on Congress's desire to induce private enforcement of statutes by providing financial incentives to po-

173. Indeed, federal agencies already incorporate the value of statistical life into their decisions. *See Mortality Risk Valuation*, EPA, https://www.epa.gov/environmental-economics/mortality-risk-valuation (last visited Nov. 6, 2018) (describing the EPA's approach to the value of statistical life).

174. *See generally* Exxon Shipping Co. v. Baker, 554 U.S. 471 (2008).

175. *Id.* at 501–02.

176. The *Exxon Shipping* Court began by rejecting the possibility of eliminating outlying punitive damages awards through verbal instructions, such as those in pattern jury instructions. Instead, the Court noted its preference for specific, quantitative limits, such as those in the criminal-sentencing context because criminal sentences seek to achieve the same goals as punitive damages and because these limits offered the best protections against arbitrary punishments. *Id.* at 504–08.

177. *Id.* at 509–13.

178. *Id.* at 513.

179. *Id.* at 503–07.

180. *Id.* at 510.

181. *Id.* at 510.

182. *Id.* ("That is, the upper limit is not directed to cases like this one.").

183. *Id.* at 511.

tential plaintiffs,[184] and these concerns were not relevant in the case of punitive damages under maritime law.[185] Ultimately, the Court decided to rely on empirical evidence in setting the final ratio limit under maritime law.[186] Noting that the evidence suggested, for all cases, a median ratio of punitive to compensatory damages of less than 1:1,[187] the Court reasoned that awards above the median would be the exceptional ones, such as those involving particularly blameworthy conduct or those with low compensatory awards that nonetheless merit punitive damages.[188] Awards below this level (*i.e.*, the median) would exclude "the unpredictable outlier cases that call the fairness of the system into question."[189] Accordingly, the Court settled on a 1:1 ratio limit in maritime cases, which it noted would preclude "awards that are unpredictable and unnecessary, either for deterrence or for measured retribution."[190]

Throughout its opinion in *Exxon Shipping*, the Court was quite clear that it was sitting as a common law court of last resort and was, therefore, engaging in a somewhat different analysis than it had when examining punitive damages under the Constitution.[191] Nonetheless, the Court's general approach to punitive damages under maritime law can, with relatively slight modifications, provide the framework for extending *State Farm* to better address the predictability of punitive damages under the Due Process Clause. The Court specifically sought to achieve the same goals in *Exxon Shipping* as it has in its line of Due Process cases, namely the elimination of arbitrary, unfair, and unpredictable awards.[192]

184. *Id.* ("We know, for example, that Congress devised the treble-damages remedy for private antitrust actions with an eye to supplementing official enforcement by inducing private litigation, which might otherwise have been too rare if nothing but compensatory damages were available at the end of the day.").

185. *Id.* at 512 ("All in all, the legislative signposts do not point the way clearly to 2:1 as a sound indication of a reasonable limit.").

186. *Id.* at 512–13.

187. This evidence was developed by Eisenberg et al., *Empirical Analyses*, *supra* note 98, at 276.

188. *Exxon Shipping*, 554 U.S. at 512–13.

> In a well-functioning system, we would expect that awards at the median or lower would roughly express jurors' sense of reasonable penalties in cases with no earmarks of exceptional blameworthiness within the punishable spectrum (cases like this one, without intentional or malicious conduct, and without behavior driven primarily by desire for gain, for example) and cases (again like this one) without the modest economic harm or odds of detection that have opened the door to higher awards.

Id.

189. *Id.* at 513.

190. *Id.*

191. *Exxon Shipping*, 554 U.S. at 501–02.

> Today's enquiry differs from due process review because the case arises under federal maritime jurisdiction, and we are reviewing a jury award for conformity with maritime law, rather than the outer limit allowed by due process; we are examining the verdict in the exercise of federal maritime common law authority. . . . Our review of punitive damages today, then, considers not their intersection with the Constitution, but the desirability of regulating them as a common law remedy for which responsibility lies with this Court as a source of judge-made law in the absence of statute.

Id.

192. *Id.* at 499.

> The real problem, it seems, is the stark unpredictability of punitive awards. Courts of law are concerned with fairness as consistency, and evidence that the median ratio of punitive to compensatory awards falls within a reasonable zone, or that punitive awards are infrequent, fails to tell us whether the spread between high and low individual awards is acceptable.

Id.

And by modifying its approach in *Exxon Shipping* to suit the due process context, the Court can achieve predictability in all punitive damages cases without fatally undermining the ability of punitive damages to punish and deter reprehensible conduct.

2. Choosing the Appropriate Limit

Returning to the *Exxon Shipping* Court's three alternatives to limit punitive damages, it chose the final alternative of a 1:1 ratio based on empirical evidence because this ratio would exclude many cases that involved particularly blameworthy conduct.[193] While such a goal seems perfectly permissible in the context of maritime law,[194] excluding large punitive damages awards warranted by particularly blameworthy conduct would be a step too far in the due process context. Indeed, punishing particularly blameworthy conduct with a large punitive damages award (or, at least, a large award relative to the accompanying compensatory award) is consistent with the purposes of punitive damages.[195] Thus, categorically prohibiting large awards of punitive damages would not be appropriate. As to the second alternative, the Court rejected imposing a 2:1 limit on the ratio between punitive and compensatory damages based on statutory frameworks allowing for the trebling of damages because the purpose of damages-trebling—inducing greater private enforcement of specific statutes—was not relevant in the context of maritime law.[196] Nothing in the constitutional context differs from the maritime context in a way that would suggest applying a 2:1 limit in the former when it was inappropriate in the latter.

That leaves only the first alternative considered by the *Exxon Shipping* Court—the 3:1 ratio that was favored by the majority of states that had enacted a punitive damages cap.[197] While the *Exxon Shipping* Court rejected this alternative as inappropriate under maritime law,[198] two compelling reasons support applying it in the due process context. First, this limitation is strongly supported by the existing empirical evidence,[199] including the evidence presented here. *State Farm*'s 10:1 ratio limit has generally failed to affect typical punitive dam-

> While States possess discretion over the imposition of punitive damages, it is well established that there are procedural and substantive constitutional limitations on these awards. . . . The reason is that "[e]lementary notions of fairness enshrined in our constitutional jurisprudence dictate that a person receive fair notice not only of the conduct that will subject him to punishment, but also of the severity of the penalty that a State may impose."

State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 416–17 (2003) (quoting BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 574 (1996)).

193. *Exxon Shipping*, 554 U.S. at 510–13.

194. *Id.* at 490.

195. *Gore*, 517 U.S. at 568 ("Punitive damages may properly be imposed to further a State's legitimate interests in punishing unlawful conduct and deterring its repetition.").

196. *Exxon Shipping*, 554 U.S. at 511.

197. *Id.* at 510 ("[T]he upper limit is not directed to cases like this one, where the tortious action was worse than negligent but less than malicious, exposing the tortfeasor to certain regulatory sanctions and inevitable damages actions.").

198. *Id.* at 511–12.

199. McMichael & Viscusi, *The Punitive Damages Calculus*, *supra* note 14, at 93–94.

ages awards but has had a substantial and negative influence on blockbuster awards.[200] Conversely, state punitive damages caps, which the Court correctly noted are often centered on a 3:1 ratio but have multiple exceptions, reduce the amount of punitive damages awarded in typical cases but not blockbuster cases.[201] By reducing *State Farm*'s ratio limit to 3:1 for financial losses while maintaining few exceptions, particularly those for personal injury and wrongful death cases, the Court can ensure that the constitutional limit on punitive damages is binding in a wider array of cases.

Second, the Court in *Exxon Shipping* expressed its strong support for a ratio limit based on empirical evidence.[202] Not only do the regression results above and from other work support a 3:1 ratio limit, but the raw data from blockbuster awards similarly support such a limitation. In *Exxon Shipping*, the Court chose a 1:1 ratio because it excluded the most egregious cases based on particularly blameworthy conduct.[203] Eliminating large punitive awards across all case types under the Due Process Clause would not be appropriate because doing so would eviscerate the ability of punitive damages to achieve the goals of punishing and deterring blameworthy conduct. A 3:1 ratio, however, is obviously higher than a 1:1 ratio and so would still allow many cases involving particularly blameworthy conduct to pass constitutional muster. More importantly, as an empirical matter, our proposed 3:1 ratio is remarkably close to the median ratio of 3.76:1 observed in blockbuster cases following *State Farm*.[204] Thus, imposing a 3:1 ratio in the due process context is justified for the same reasons as imposing a 1:1 ratio in the more limited maritime context is—it eliminates the unpredictable, outlying awards while still permitting awards that are designed to punish and deter.[205] Blockbuster cases involve the most egregious conduct, so limiting punitive damages based on the median blockbuster ratio effectively screens out the most egregious of the most egregious, consistent with the reasoning of *Exxon Shipping* and the more general goals of *State Farm*.[206]

Overall, there is no legal impediment to importing the reasoning from *Exxon Shipping* to the due process context, as the Court in both the maritime and due process contexts has been concerned with the predictability of punitive damages awards.[207] And imposing a 3:1 ratio under the Due Process Clause is supported by similarly strong, if not stronger, empirical evidence as that which supported the imposition of a 1:1 ratio in maritime law.[208] While this limit will necessarily inhibit the ability of punitive damages to punish and deter in limited

200. *See generally* Eisenberg & Heise, *supra* note 14; Viscusi & McMichael, *Shifting the Fat-Tailed Distribution*, *supra* note 3.

201. McMichael & Viscusi, *The Punitive Damages Calculus*, *supra* note 14, at 94.

202. *Exxon Shipping*, 554 U.S. at 511–13.

203. *Id.* at 513.

204. *Id.* at 515.

205. *Id.* at 513.

206. *Id.* at 512–13; State Farm Mut. Auto. Ins. Co. v. Campbell, 538 U.S. 408, 425–26 (2003).

207. *Exxon Shipping*, 554 U.S. at 507.

208. *Id.* at 506–07.

instances, the Court has made clear the importance of predictability in addressing large punitive damages awards.[209] The next Subsection offers additional insight, based on previously developed evidence, as to why our proposed 3:1 ratio limit will improve the predictability of punitive damages awards.

3. But Will It Work?: Improving Predictability

In one of the earliest empirical entries in the debate over punitive damages, Eisenberg and colleagues claimed that these damages may be predictable because the amount of compensatory damages provided substantial explanatory power as to the amount of punitive damages.[210] Polinsky pointed out, however, that even if the amount of compensatory damages explained the amount of punitive damages, an "inability to predict when . . . punitive damages will be awarded" means that these damages remain unpredictable.[211] Polinsky is correct that predicting punitive damages involves predicting both when they will be awarded and the amount in which they will be awarded. Moreover, the amount of compensatory damages is not known in advance at the time of the wrongful conduct. Thus, even if the level of compensatory damages has a positive statistical correlation with the value of punitive damages, the injurer must be able to predict both the level of compensatory damages and its relation to subsequent punitive damages in order to determine the expected liability costs. Existing evidence suggests that both *State Farm* and punitive damages caps can reduce the randomness in this process by decreasing the frequency with which punitive damages are awarded and the size of the awards that are imposed.[212] And, as explained above, reducing the *State Farm* ratio limit to more closely approximate those found in state punitive damages caps will provide for even stronger effects across the entire range of punitive damages awards.[213] While reducing the frequency and size of awards does not technically render punitive damages more predictable on Polinksy's terms, these reductions can nonetheless play an important role in facilitating the predictability of punitive damages.

In particular, blockbuster punitive damages awards follow a fat-tailed distribution in which there are extreme outliers at the upper end of the damages scale.[214] Accordingly, extremely large awards are much more common than if these awards followed a normal distribution.[215] Moreover, at the highest end of the spectrum, the largest awards can dwarf the next largest awards.[216] These aspects of fat-tailed distributions make predicting large punitive damages awards

209. *State Farm*, 538 U.S. at 425 (noting that awards satisfying a ratio limit are more likely to comport with due process "while still achieving the State's goals of deterrence and retribution").

210. Eisenberg et al., *Predictability of Punitive Damages*, *supra* note 87, at 646.

211. Polinsky, *supra* note 86, at 672.

212. *See supra* Subsection III.B; *see also* McMichael & Viscusi, *The Punitive Damages Calculus*, *supra* note 14, at 93–95.

213. *See supra* Section V.B.

214. Viscusi & McMichael, *Shifting the Fat-Tailed Distribution*, *supra* note 3, at 354–55.

215. *Id.*

216. *Id.*

exceedingly difficult, and a reduction in the size of these awards alone (even if unaccompanied by an increase in the ability to predict when they will occur) makes them inherently more predictable.[217] Viscusi and McMichael compare these awards to natural disasters, which also follow fat-tailed distributions.[218] Continuing this analogy, consider predicting the yearly damage caused by hurricanes. Even if one's ability to predict when hurricanes will occur remains unchanged, a decrease in the severity of these hurricanes will naturally render predicting the yearly damage caused by hurricanes easier. This is precisely the type of reduction—and commensurate increase in predictability—offered by extending the *State Farm* decision to impose a 3:1 ratio limit on punitive damages awards. Indeed, the Supreme Court in *Gore* recognized this type of increase in predictability, noting that "[e]lementary notions of fairness enshrined in our constitutional jurisprudence dictate that a person receive fair notice . . . of the *severity of the penalty* that a State may impose."[219] Our proposed ratio limit can achieve exactly this.

The 3:1 ratio limit, combined with a well-defined exception for wrongful death cases, may be broadly consistent with economic theories of punitive damages in which punitive damages are linked to the probability of detection. Although the courts have shown no inclination to embrace this law and economics theory,[220] our proposal is consistent with making some adjustment for a probability of detection below 1.0. Under the economic theory of punitive damages, total damages should equal the level of compensatory damages divided by the probability of detection.[221] If the probability of detection is 0.25, then total damages should equal four times the value of compensatory damages, which is what the 3:1 ratio limit for punitive damages achieves. If the probability of detection is higher than 0.25, then a 3:1 ratio will lead to larger punitive damages than specified by the theory. If the probability of detection is lower than 0.25, such as 0.1, then the 3:1 ratio limit would result in lower punitive damages than specified by the economic theory. Thus, the ratio limit is only excessively constraining for very low probabilities of detection. Attempting to pinpoint the probability of detection and incorporating it into the punitive damages formula may introduce additional uncertainty into a damages proposal that is designed to decrease unpredictability. Given that the case has been brought to trial, the wrongful conduct has been detected *ex post* with complete certainty.

217. *Id.* at 376.

218. *Id.* at 355.

219. 517 U.S. at 574 (emphasis added).

220. Courts have clearly demonstrated their awareness of the economic theory of punitive damages—specifically with respect to the need to increase punitive damages to compensate for a low probability of detection and liability. *See* Exxon Shipping Co. v. Baker, 554 U.S. 471, 494 (2008) ("Regardless of culpability, however, heavier punitive awards have been thought to be justifiable when wrongdoing is hard to detect (increasing chances of getting away with it)."); BMW of N. Am., Inc. v. Gore, 517 U.S. 559, 582 (1996) ("A higher ratio may also be justified in cases in which the injury is hard to detect."). Despite calls from respected scholars, however, such as Polinsky & Shavell, *supra* note 23, at 957–58, courts have declined to bring judicial practice in line with economic theory. *See Exxon Shipping*, 554 U.S. at 495–96 (reviewing various approaches to addressing punitive damages with no mention of employing economic theory).

221. Polinsky & Shavell, *supra* note 23, at 874.

Ascertaining the probability of detection that the wrongdoer anticipated at the time of the wrongful conduct is typically not known with precision and is likely to be a highly speculative exercise.[222] Establishing a 3:1 ratio cap promotes greater predictability with respect to punitive damages, while also accommodating some aspects of the more general law and economics theory of punitive damages.

VI. CONCLUSION

While the Court has not revisited its constitutional doctrine on punitive damages in several years, these damages awards continue to play an important role in the legal system. By allowing courts to punish reprehensible behavior and better achieve the optimal level of deterrence, they can more closely align the damages in a given case with society's interests. When improperly calibrated, however, punitive damages can become unpredictable and ultimately violate fundamental notions of fairness. Many blockbuster awards are good examples of this problem, as courts impose large amounts of punitive damages on defendants who have little ability to predict that their activity will lead to such extreme punishment.

This Article provides important, novel information on the ways in which different legal regimes affect blockbuster awards. *State Farm*, and its single-digit ratio, reduce both the frequency and size of blockbuster awards, while state punitive damages caps reduce only the frequency—most likely by preventing awards that would otherwise have qualified as blockbusters from crossing the $100 million threshold. While this evidence offers new insight into blockbuster awards generally, when combined with previous evidence, it offers a unique opportunity to examine which interventions into punitive damages awards are most effective.

Using this insight, we propose a new approach to governing punitive damages awards under the Due Process Clause. Specifically, by lowering the current ratio limit from 10:1 to 3:1, coupled with an exception for wrongful death cases, the Court can realize the benefits of the current doctrine with respect to the largest awards as well as the benefits of punitive damages caps with respect to more typical awards. Though our proposed doctrine will limit the ability of punitive damages to punish and deter, the Court has made clear that it

222. Indeed, Viscusi conducted a series of experiments in which potential jurors were provided with instructions on how to set punitive damages consistent with economic theory so that the total amount of damages would achieve optimal deterrence. W. Kip Viscusi, *Deterrence Instructions: What Jurors Won't Do*, *in* PUNITIVE DAMAGES HOW JURIES DECIDE 142, 143 (Cass R. Sunstein et al. eds., 2002). However, "[v]ery few of the 353 jury-eligible respondents in [the] sample carried out the basic elements of the deterrence calculation, even though they had the assistance of a table that gave them multipliers for translating compensatory damages values into deterrence values." *Id.* Moreover, "[r]espondents were very insensitive to changes in the probability of detecting a violation, which should have been the key concern for setting deterrence values based on law and economics principles," and "respondents were not sensitive to the degree of stealthiness of the defendant's behavior, which should have been a pivotal factor influencing the punishment value for damages." *Id.* Thus, even if courts were inclined to operationalize the economic theory of punitive damages, the process of calculating punitive damages would be, at best, speculative.

is willing to trade off accomplishing these goals to achieve more predictability in punitive damages awards. Overall, the evidence suggests that incorporating more elements from state punitive damages caps into the constitutional doctrine on punitive damages can better achieve the aims laid out by the Supreme Court.

TECHNICAL APPENDIX

Specification and Other Details

To estimate the effect of state reforms on the frequency of blockbuster awards, we use the following specification:

$$(1)\quad (Blockbuster\ case\ count)_{st} = \beta_1(State\ Farm)_t + (Punitive\ reforms)'_{st}\beta_2 + \beta_3(Time\ trend)_t + \delta_s + \varepsilon.$$

In this equation, *Blockbuster case count* is the number of blockbuster awards in state *s* in year *t*. We control for the effect *State Farm* may have had on the number of blockbuster awards across the country. The *State Farm* indicator assumes a value of 1 for the year 2004 and all subsequent years. While it was actually decided in 2003, we allow a grace period to allow for the full implementation of the decision by lower courts. The vector *(Punitive reforms)* includes indicators for the following reforms: punitive damages cap, punitive evidence reform, and bifurcated trial. (*Time trend*) is a linear time trend to control for the growth of punitive damages awards over time. We also include a series of indicators for states, δ, to control for state fixed effects.

To examine the effect of state reforms on the amount of blockbuster punitive damages awarded at trial, we use the following specification:

$$(2)\quad log(PD)_{ist} = \beta_1 \log(compensatory\ damages)_{ist} + \beta_2(State\ Farm)_t + \beta_3(PD\ Cap) + \beta_4 Bench_{ist} + (Industry)'_{ist}\beta_5 + \beta_6(Litigant\ Type)_{ist} + (State)'_{ist}\beta_7 + \varepsilon.$$

In this specification *log(PD)* is the natural logarithm of the punitive damages awarded in a given case. Similarly, *log(compensatory damages)* is the natural logarithm of the compensatory damages in a given case. The indicator variables *State Farm* and *PD Cap* are the variables of interest and equal one when a case was decided after *State Farm* and when a case was subject to a state punitive damages cap, respectively. In addition to including the indicator variables, we estimate separate models with an interaction between the compensatory damages variable and these indicator variables. We sequentially add the variables of interest to different models in order to test the robustness of our results.

Bench is an indicator for a bench trial. The vector *Industry* includes indicator variables for the following industries of defendants: automobile, tobacco, finance/investment/insurance, energy/chemical, pharmaceutical/health industries, and violent crime. While violent crime is obviously not an industry, we control for whether the case involved the defendant committing some sort of crime. Litigant type is an indicator for whether both business and individual litigants were involved in a case. The vector *State* includes indicators for California and Texas since these states are associated with relatively more frequent and relatively larger awards.

Throughout our analysis, we exclude four cases from the blockbuster regressions. First, we exclude the two largest cases as outliers: *Middleton v. Col-*

lins and *Engle v. R.J. Reynolds Tobacco.* Additionally, we exclude *Garamendi v. Altus Finance, S.A.* and *Chopourian v. Catholic Healthcare West* because the courts in these cases awarded no compensatory damages, rendering the ratio between compensatory and punitive damages undefined.

In unreported specifications, we include indicator variables for whether a state allowed or required bifurcated trials (such that punitive damages are awarded in a separate phase of trial) and whether a state maintained a lower evidentiary burden for punitive damages. These variables are never statistically significant themselves, and including them has little effect on the variables of interest.

Results Tables

TABLE A1: EFFECT OF *STATE FARM* AND PUNITIVE DAMAGES CAPS ON AWARD FREQUENCY (BLOCKBUSTER CASE COUNT)

	(1)	(2)	(3)	(4)
Variables				
State Farm	-0.138**		-0.146***	-0.119**
	(0.0558)		(0.0560)	(0.0568)
Punitive damages cap		-0.0850**	-0.0997***	-0.100***
		(0.0342)	(0.0339)	(0.0352)
Punitive damages evidence reform				0.114***
				(0.0381)
Bifurcated Trial				-0.0341
				(0.0425)
Observations	957	957	957	957
R-squared	0.249	0.244	0.252	0.257

Notes: All columns report OLS regression results with the number of blockbuster punitive damages awards in a given state in a given year as the dependent variable. All specifications include a linear time trend and a full set of state indicator variables. Robust standard errors are reported in parentheses. *** significant at 1% level; ** significant at 5% level; * significant at 10% level.

TABLE A2: EFFECT OF *STATE FARM* AND PUNITIVE DAMAGES CAPS ON AWARD AMOUNTS (LOG PD)

Variables	(1)	(2)	(3)	(4)	(5)	(6)
State Farm	-0.621*		-0.622*			
	(0.324)		(0.327)			
log(CD) x *State Farm*				-0.0363**		-0.0363**
				(0.0178)		(0.0180)
PD Cap		0.00661	-0.0158			
		(0.221)	(0.215)			
log(CD) x PD Cap					0.000343	-0.000518
					(0.0121)	(0.0116)
log(CD)	0.186***	0.166***	0.185***	0.200***	0.166***	0.200***
	(0.0503)	(0.0514)	(0.0502)	(0.0516)	(0.0517)	(0.0520)
Observations	133	133	133	133	133	133
R-squared	0.335	0.310	0.335	0.338	0.310	0.338

Notes: All columns report OLS regression results with the natural log of punitive damages as the dependent variable. All awards are in 2013 dollars. All specifications include an indicator for business and individual litigants, a vector of indicators for different industries, and indicators for whether a case was decided in Texas or in California. The industry vector includes indicator variables for the following industries of defendants: automobile, tobacco, finance/investment/insurance, energy/chemical, pharmaceutical/health industries, and violent crime. The excluded industry category is other industry. All specifications exclude the *Garamendi* and *Chopourian* cases which involved no compensatory damages and the *Engle* and *Middleton* cases which involved the two largest PD Awards in the dataset. Robust standard errors are in parentheses.

*** significant at 1% level; ** significant at 5% level; * significant at 10% level.