THE CHANGING LANDSCAPE OF BLOCKBUSTER PUNITIVE DAMAGES AWARDS

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ABSTRACT

This article investigates the determinants of the blockbuster punitive damages awards of at least $100 million. As of the end of 2008, there had been 100 such awards with an average value of $3.0 billion. The U.S. Supreme Court decision in State Farm v. Campbell suggested a single digit upper bound on the punitive damages/compensatory damages ratio, which reduced the annual number of blockbuster awards, the total annual value of blockbuster awards, and the punitive damages/compensatory damages ratio. Applying the 1:1 ratio from Exxon Shipping Co. et al. v. Baker et al. broadly would eliminate most of the blockbuster awards.

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1. Introduction

By their very nature, punitive damages awards tend to be large. Punitive damages awards usually arise in cases where juries perceive the conduct to be particularly egregious, and the compensatory damages associated with such cases are often great as well. If the purpose of the award is to punish defendants for severe harms or to provide incentives to deter the conduct that led to these harms, then one would expect these awards to be reasonably substantial in absolute terms but not necessarily large relative to the value of compensatory damages. From the standpoint of economic efficiency, the appropriate relation between punitive damages and compensatory damages will depend on the probability of detecting and punishing the behavior to provide the appropriate economic incentives as well as perhaps on factors other than deterrence, such as punishment.[1]

Although punitive damages could serve a constructive role in some circumstances, there have been signals that the process for setting punitive damages may have gone awry. Whereas punitive awards for $1 million or more formerly garnered news attention, awards at even higher levels than that have become quite common. The extreme outliers involve much greater stakes than $1 million. Hersch and Viscusi (2004) and Viscusi (2004) developed tabulations of what they called the "blockbuster punitive damages awards," which were those punitive awards of at least $100 million. Notwithstanding this quite high cutoff, they identified 64 blockbuster awards as of 2004. In this article, we update and analyze the blockbuster punitive damages award tally through 2008, which now includes 100 blockbuster awards.

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[1] Polinsky and Shavell (1998) summarize the economic theory of punitive damages.

The emergence of blockbuster awards has been coupled with a series of studies that have questioned the ability of jurors to set punitive damages levels such as these in a meaningful way. Although jurors often are able to form reasonable judgments regarding the reprehensibility of behavior, they have difficulty in mapping these concerns into a level of punitive damages in a consistent manner.[2] Jurors also are subject to a variety of behavioral anomalies, such as hindsight bias, which may lead to a judgment after the fact that the behavior is more blameworthy than it actually is.[3] Anchoring effects also may be influential to the extent that irrelevant anchors provided by plaintiffs' attorneys serve as a form of guidance to jurors in search of a damages number.[4] Unfortunately, jury instructions do not provide the type of meaningful guidance needed to overcome these shortcomings.

Extremely large punitive awards may have substantial economic consequences. A sufficiently large award may threaten the solvency of the firm. Short of such catastrophic effects on the viability of the firm, very high damages awards deter innovation and the introduction of novel products that may be subject to the risk of large awards, as novel technologies appear to be harder hit than older, but possibly riskier, technologies.[5] Costs to consumers also are increased by high damages amounts, to the extent that companies' expectations of liability costs raise product prices.[6] Because of

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[2] Sunstein et al. (2002) provide a series of results based on controlled jury experiments that explore a wide variety of limitations in how juries set punitive damages.
[3] *Ibid*.
[4] *Ibid*.
[5] See Viscusi and Moore (1993) for an empirical analysis of the effect of liability costs on innovations, such as patents and new product introductions. Some firms have also reduced their production of vaccines in response to liability costs. See Manning (1994) for discussion of the effects of tort liability on the production of childhood vaccines.
[6] Rubin et al. (1997) provide a thorough analysis of the law and economics of the effect of punitive damages on prices.

their unpredictability, punitive awards may have little constructive effect in promoting efficient behaviors, such as appropriate levels of product safety.[7]

Controversies over the appropriateness of punitive damages awards combined with the size of the awards and the economic repercussions from very large awards have prompted several U.S. Supreme Court reviews of cases involving punitive damages. The decisions in the early 1990s generally supported the awards, but subsequent decisions focused on whether there should be limits on the ratio of punitive damages to compensatory damages.[8] In the 1991 decision in *Pacific Mutual Life Insurance Company v. Haslip,* the Court concluded that a ratio of punitive damages to compensatory damages of four to one was not improper.[9] The 1993 decision in *TXO Prod. Corp. v. Alliance Res. Corp.* affirmed a punitive damages judgment in which the ratio of punitive damages to compensatory damages was over 526.[10] In 1996 in *BMW of N. Am., Inc. v. Gore*, the Court remarked that the "most commonly cited indicium of an unreasonable or excessive punitive damages award is its ratio to the actual harm inflicted on the plaintiff."[11] Subsequently, the 2003 U.S. Supreme Court Decision in *State Farm v. Campbell* issued more precise guidance for the reasonableness of punitive damages awards based on this ratio, which the court believed should not exceed a single-digit ratio: "Our jurisprudence and the principles it has now established demonstrate, however, that in practice few

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[7]Viscusi (1998a,b) examines the weak incentive effects of punitive damages empirically.

[8] In addition to its rulings on the ratio of punitive to compensatory damages, in 2007 the U.S. Supreme Court decided that a jury can consider harm to non-parties when deciding how reprehensible the conduct of the defendant, but it cannot consider such harm in determining the level of punitive damages. See *Philip Morris USA v. Williams*, 127 S. Ct. 1057 (2007). This decision has resulted in the reversal and a new trial to determine punitive damages in *Bullock v. Philip Morris, Inc.* (Cal Ct. App., No. B164398, 1/30/08), a case analyzed in this paper.

[9] *Pac. Mut. Life Ins. Co. v. Haslip*, 499 U.S. 1 (1991).

[10] *TXO Prod. Corp. v. Alliance Res. Corp.*, 509 U.S. 443 (1993).

[11] *BMW of N. Am., Inc. v. Gore*, 517 U.S. 559 (1996). Eisenberg and Wells (1999) found no effect of the *BMW* decision on the ratio of punitive damages to compensatory damages based on a sample of published opinions.

awards exceeding a single-digit ratio between punitive and compensatory damages, to a significant degree, will satisfy due process."[12] In 2008 the U.S. Supreme Court supported a punitive damages/compensatory damages maximum ratio of 1.0 in *Exxon Shipping Co. v. Baker*, which it viewed as an appropriate upper bound ratio for maritime oil spill cases.[13] In her opinion that dissented in part, Justice Ginsburg hypothesized that the 1:1 ratio of punitive damages to compensatory damages might have broader applicability in future cases: "On next opportunity, will the Court rule, definitively, that 1:1 is the ceiling due process requires in all of the States, and for all federal claims?"[14]

Our focus on the implications of the recent U.S. Supreme Court decisions is twofold. First, we analyze the trends in the blockbuster awards throughout the era in which blockbuster awards have occurred to identify the determinants of these awards as well as whether there has been any decline in these very large awards in the wake of the *State Farm* case. Second, we explore the implications of Justice Ginsburg's conjecture by also undertaking an analysis of how a lower ratio of 1:1 based on the *Exxon Shipping Co. v. Baker* decision would affect blockbuster awards if this ratio were applied more generally.

Whereas the main focus of the previous studies of blockbuster awards was primarily on the overall distribution of awards, this article examines their economic underpinnings. How responsive is the magnitude of the blockbuster awards to the level of compensatory damages? Are particular industries subject to larger punitive awards even after taking into account the level of compensatory damages? Have the number of

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[12] *State Farm Mut. Auto Ins. Co. v. Campbell*, 538 U.S. 425 (2003).
[13] *Exxon Shipping Company, et al., Petitioners v. Grant Baker et al.* No. 07-219, Supreme Court of the United States (2008 U.S. LEXIS 5263).
[14] *Ibid*.

blockbuster awards been on the rise or have they become less frequent? Has the total

amount of the blockbuster awards exhibited a rising or falling trend over time? If there

has been a trend, is it related to the *State Farm* decision, which one would have expected

to lead to a dampening of blockbuster awards? The overall result is that such awards have

been on the rise, but after the *State Farm* decision there has been a statistically significant

drop in the number of blockbuster punitive damages awards, their amount, and the ratio

of punitive damages to compensatory damages.

2. An Inventory of Blockbuster Punitive Damages Awards

        The set of blockbuster cases with punitive damages awards of $100 million or

more (in nominal dollars) was found through a wide-ranging search of a number of

sources including, but not limited to, the following: LEXIS combined jury verdicts and

settlements, Lexis-Nexis and Westlaw databases, *Lawyers Weekly USA*, and

VerdictSearch's annual "Top 100 Jury Verdicts" for 2006, 2007, and 2008. Basic case

information, such as the year of the award, amounts of punitive and compensatory

awards, and type of industry involved was drawn mainly from news articles and

published court opinions. We identified 100 blockbuster punitive damages awards for

the time period January, 1985 through December, 2008. We have not identified any

blockbuster awards before 1985. Table 1 lists the blockbuster awards by year. Appendix

Table A1 sorts these awards by the size of the award.

Figure 1 illustrates the distribution of the blockbuster punitive damages awards for the sample, where all awards have been converted to 2008 dollars.[15] Due to the enormous range of the award amounts, the figure plots the frequency of the natural log of punitive damages awards on the horizontal axis. For reference, the scale at the top of the graph indicates the corresponding levels of punitive damages. Even using a logarithmic scale, the distribution of punitive damages is greatly skewed right, or positively skewed. Almost 20 percent of the awards have real values less than or equal to $150 million, and the vast majority (73 percent) of the awards fall under the $500 million mark. Nearly 85 percent of the awards are less than or equal to $1 billion, but there are 6 cases (6 percent of the sample) that exceed $5 billion in 2008 dollars.

Table 2 summarizes the distribution of the punitive damages awards by type of defendant. In almost all instances, the defendant in punitive damages cases is a corporate entity rather than an individual or a government agency. One-fourth of the awards in the sample are against firms in the energy or chemical industry. The 1995 punitive damages award against Exxon Corporation, which has since become the Exxon Mobil Corporation, of $5.0 billion for damages related to the Exxon Valdez oil spill is perhaps the best known of these awards. However, this is by no means the only such award in the multi-billion dollar range for firms in the energy and chemical industry. There was also an $11.8 billion punitive damages award in 2003 for Exxon's alleged accounting violations in *Exxon Mobil Corporation v. Alabama Department of Conservation and Natural Resources*, a $3.4 billion punitive damages award in 1997 in *In re New Orleans*

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[15] The inflation adjustment factors are based on the Consumer Price Index, All Urban Consumers (CPI-U). Authors' calculations from data downloaded from the Bureau of Labor Statistics <http://www.bls.gov/cpi/#tables>.

Tank Car Leakage Fire Litigation, and a $3 billion award in 1985 in *Pennzoil v. Texaco*. These cases involve a mix of financial harms or serious environmental harms.

Firms in the finance, investment, and insurance industry account for close to one-fourth of all blockbuster punitive damages awards. The 1996 *State Farm* case is perhaps the best known of these 23 blockbuster award cases. The largest punitive award in this group is a $2.1 billion bench award against members of the Uzan family of Turkey in 2003 for fraud in loan transactions with Motorola Credit Corporation; this award was later reduced to $1 billion, an amount upheld by a federal appeals court.[16] The mean punitive damages amount for these cases is $546.3 million, approximately one-third of the level for the energy and chemical industry punitive damages mean. Also, the mean ratio of punitive to compensatory damages is about two-thirds of the ratio for the energy and chemical industry, but the average ratio is still in the double digits, above the *State Farm* single digit guidelines.

The third largest industry group of firms in terms of the number of blockbuster punitive damages awards consists of those firms in the pharmaceutical or health care industry, which account for 16 blockbuster cases.[17] The magnitude of these awards is about the same as for the finance, investment, and insurance industry category. The prominence of the pharmaceutical and health care industry is not surprising, as litigation involving medical malpractice, medical devices, and prescription drugs has long been noted as being a major contributor to perceptions of the existence of a tort liability crisis.[18] Whether there is or has been a so-called "crisis" is beyond the scope of this

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[16] *Motorola Credit Corp. v. Uzan*, 2007 U.S. App. LEXIS 26867.
[17] This category also includes professional medical practitioners or medical practices.
[18] See Manning (1994) for further discussion of this industry. More generally, Kakalik and Pace (1986) and Hensler et al. (1987) review the areas of tort liability that have generated the largest costs.

article, except to the extent that the analysis here indicates that there is evidence of an

imbalance between the punitive damages and compensatory damages amounts for the

blockbuster cases affecting this industry. Within the set of firms with punitive damages

at the blockbuster level, pharmaceutical and health care firms are well represented but are

by no means outliers in terms of the magnitude of the awards.

By far the greatest outlier category is the cigarette industry. The five blockbuster

awards average $44.5 billion, and even after excluding the $145 billion award in the

Engle Florida class action in 2000, the mean punitive damages value is $10.2 billion.

The smallest of the cigarette blockbuster punitive damages awards is $150 million in the

2002 case, *Schwarz v. Philip Morris, Inc.*, in the state of Oregon. This award is

nevertheless strikingly large given that it is an individual smoker case. The imbalance

between the punitive damages and compensatory damages in this case is reflected in the

case's ratio of punitive damages to compensatory damages, which is 882.4. The second

smallest blockbuster cigarette award is the $3 billion award in the 2001 individual

smoker case, *Boeken v. Philip Morris, Inc*. The ratio of punitive damages to

compensatory damages in this California case was 541.5, or two orders of magnitude

beyond the single digit guidance in the *State Farm* case. The largest punitive damages

award in an individual smoker case was the $28 billion award in 2002 in *Bullock v. Philip

Morris, Inc*. This case, which involved the same plaintiff's attorney, Michael Piuze, as in

the *Boeken* individual smoker cigarette case, had a ratio of punitive damages to

compensatory damages of approximately 43,000, which is the highest ratio for any

blockbuster punitive damages award.[19] A very large cigarette punitive damages award

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[19] We have excluded *Garamendi v. Altus Finance, S.A.* from this comparison; since compensatory damages were zero in this case, the ratio is infinite.

was in the 2003 Illinois "lights" cigarette class action, *Price v. Philip Morris, Inc.*, in which the judge in this Madison County, Illinois bench trial awarded $3.1 billion in punitive damages, with a ratio of punitive damages to compensatory damages of 0.4.[20] The final blockbuster cigarette award was the $145 billion award in *Engle v. Philip Morris, Inc.* That case's punitive damages/compensatory damages ratio of 11,417.3 overstates the actual ratio that would be observed if it were possible to calculate the full value of compensatory damages for the entire class and not just the compensatory damages for the class representatives, which was the focus of the jury award. Of all the blockbuster cigarette awards, only the punitive damages/compensatory damages ratio in the *Price* case would be under the single-digit *State Farm* threshold, and all other punitive awards for the cigarette industry are at the triple-digit level or beyond. The cigarette industry has experienced particularly extreme blockbuster awards in terms of their levels, but the industry has not had as many awards of this type as have some broader industry groups in Table 2.

Our data set includes seven unusual cases involving punitive damages against the perpetrators of violent crimes. The largest punitive award in this category was in *Swan v.*

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[20] This very high award in a bench trial is one of two bench trials and one of twelve punitive awards in the sample in excess of $1 billion (in nominal dollars). The role of a Madison County judgment in terms of its outlier status is not too surprising given Madison County's reputation as "The Lawsuit Capital of the World" and "Class Action Paradise," as noted by Amalia Deligiannis, "Madison County: A Corporation's Worst Nightmare," 14 *Corp. Legal Times* 52 (2004). Other designations of Madison County as the number one "Judicial Hellhole" and a "jackpot jurisdiction" have been provided by the American Tort Reform Association, *Bringing Justice to Judicial Hellholes 2003*, at 3 (2003). The Illinois Supreme Court overturned Judge Byron's verdict and in August, 2007 turned down a request by plaintiffs to reopen the case. Illinois also has been a prominent state for class actions. In 1995-1996, based on reported judicial decisions, Illinois ranked first in terms of the number of consumer cases, third in torts, and second in securities. The 1996-1997 Illinois class action rankings were first in consumer cases, second in torts, and fifth in securities. Illinois ranked in the top five states in terms of the frequency of class actions per population for all these groupings. See Hensler et al. (2000). With respect to medical malpractice cases, Vidmar (2005) found that an analysis of Madison County and St. Clair County produced "no evidence to support the perception that medical malpractice jury awards in these counties are frequent or that jury verdicts for plaintiffs are outrageous." Medical malpractice cases do not figure prominently in punitive damages awards, in general, but six of the blockbuster cases in Table 1 are medical malpractice cases.

Einhorn in 1999. The parents of the victim were awarded $155 million in compensatory damages and $752 million in punitive damages in a civil trial. The second largest verdict was handed down in 2004 in *Brown v. Dorsey*. That case involved a conspiracy by sheriff's department employees culminating in the murder of the sheriff-elect. The civil trial in 2004 led to a judgment of $326.1 million in compensatory damages and $450 million in punitive damages against the former sheriff and two co-conspirators. Two 2008 blockbuster awards, *Estate of Mack v. Mack* and *Estate of LoCascio v. LoCascio,* involved children of murder victims seeking damages from family members who were convicted of murdering their mothers. The punitive damages awarded in *Mack* equaled $405 million (with compensatory damages of $185 million), and in *LoCascio* the punitive damages award was $100 million (with compensatory damages of $25.1 million). Another $100 million punitive damages award was given to a murder victim's family in the 2006 "American Beauty" case, *de Villers v. Rossum*.[21] The remaining two violent crime cases were a 2007 sexual battery civil case, *Martin v. Swain* and a 2008 wrongful-death claim against the Cuban government and its leaders, the *Estate of del Pino v. The Republic of Cuba*. In the *Martin* case the verdict was $155 million in compensatory damages and $100 million in punitive damages against a father for many years of sexual abuse of his daughter. In the *del Pino* case, the award of $252.5 million, $250 in punitive damages alone, was given to the children of a man who was allegedly tortured and killed by hanging by the Cuban government. The ratios of punitive damages to compensatory damages in these cases are generally small relative to the other blockbuster cases, ranging from 1.4 in *Brown v. Dorsey* to 16.7 in *de Villers v. Rossum*. An exception is the case

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[21] Rossum, the murderer, attempted to make de Villers' death appear to be a suicide by placing a wedding photo, her opened diary indicating their marriage was failing, and rose petals near her husband's body. See Natalie White, "$106 Million in 'American Beauty' Murder," *Lawyers Weekly USA*, April 24, 2006.

against the Cuban government, which has a ratio of 100. Excluding the latter award, which is unusual in that the defendant is a foreign government, the mean ratio for the other six violent crime punitive damages awards is 6.5 and the median ratio is 4.4.

These violent crime cases are clearly different from other blockbuster punitive damages awards and the group shares a number of characteristics. All but *Martin v. Swain* concerned a highly visible, publicity-generating murder, and in all, liability is already established in the civil trial, as each defendant had already been convicted and was serving lengthy terms. Also, these cases are the only ones in the data set in which both litigants are individuals rather than corporate or government parties.[22] In the murder cases, family members of the victims claim a key purpose of the civil suit, and for seeking punitive damages in particular, is to make sure that the murderer can never profit from the murder. In fact, the plaintiff's attorney in the *Einhorn* case claimed that Einhorn had been approached to write a book about the case, enabling him to profit from the murder.[23] The plaintiffs in *de Villers v. Rossum* brought in testimony from a professor of marketing about Rossum's potential earnings through selling her story to various national media or selling movie or book rights. The Brown family's attorney said in an interview, "'Let's be honest: nobody has this type of money…But as I discussed with the jury, and I think they understood, this prevents any of the defendants from ever profiting from any sort of media deal…'" [24] Other reasons for the verdicts, noted by attorneys and family members, are to reflect the egregious nature of the crime and to 'send a message,' with the avowed intent of deterring future crimes. One juror in the case against the Cuban

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[22] The exception in this group is the *del Pino* award which involved a national government as a defendant and which did not have a criminal trial proceeding.
[23] Alan Fisk, "Pressing on for a fugitive's debt: Ira Einhorn owes $907 million. But how much is collectible?" *National Law Journal*, Volume 23, Number 51, August 13, 2001.
[24] "Top Ten Jury Verdicts of 2004," *Lawyers Weekly USA*, October 24, 2005.

government noted that they wanted to send a "political statement."[25] None of these plaintiffs has received any compensation to date.

Several states have reputations for having courts in which plaintiffs seeking large awards have more favorable prospects. Consistent with this view, Table 3 shows that the distribution of the awards does differ substantially across states, as blockbuster awards tend to be concentrated geographically. Exactly half the states (25 states) have had any blockbuster punitive damages awards. California and Texas are the leading states in terms of the total number of blockbuster cases, with 21 in California and 20 in Texas. California has the highest total value blockbuster punitive damages award, $49.7 billion, over four times greater than the total value of the punitive damages for Texas and nearly 3 times greater than the state with the second highest total value, Alabama.

It is interesting to compare the California and Texas experiences with that of New York. These three states have the largest populations, and California and New York both have been the site of prominent cigarette cases. However, New York has had only two blockbuster punitive damages awards. The average per capita value of the total blockbuster punitive damages awards in the state from 1985–2008 is $136 in New York, as compared to $1,429 in California, more than 10 times higher. This and other per capita damages amounts in Table 3 pertain to the average across the 24 years in the sample of the total blockbuster award amounts in 2008 dollars, divided by the state's population in the year of the awards. The per capita value of the total damages in Texas is $629, as most of these awards tend to be at or just above the $100 million lower bound to be in the sample, which is still 4.6 times greater than for New York State. The

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[25] "Jury in Florida awards nearly $253 million to children of Castro foe who died in Cuban jail," Associated Press, April 5, 2008.

empirical analysis below will examine whether Texas and California are outliers

controlling for other case characteristics, such as the industry involved.

Table 4 describes other key characteristics of the 100 blockbuster cases, including

the *Engle* case. Some of the breakdowns are of interest even though they did not prove to

be statistically significant in the regression analysis reported below. In terms of the types

of damages sought, 10 percent were for environmental harm, 40 percent were personal

injury and fatality cases, and 50 percent were cases involving monetary damages for

pecuniary harms. Six percent of the cases involved individual litigants in which private

individuals were both plaintiffs and defendants; these correspond to the violent crime

cases discussed above, excluding the *del Pino* award. The most common pattern

involved individuals paired against corporate or business entities, as 53 percent of the

cases involved an individual plaintiff and a business or corporate defendant.[26] The

remainder of the cases involved plaintiffs and defendants who were both business or

government entities.

3. Temporal Trends of Blockbuster Punitive Damages

Blockbuster punitive damages are a comparatively new phenomenon. The first

punitive damages award that we have identified as breaking the $100 million barrier was

in 1985.[27] The two blockbuster awards in 1985 were in the California case, *Micro/Vest v.*

ComputerLand, and a $3 billion award in the highly publicized case of *Pennzoil v.*

Texaco. As the awards roster in Table 1 indicates, no awards earned blockbuster status in

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[26] This group also includes the *del Pino* award which involved individuals against a national government
and its leaders. In the interest of simplicity, the label on this variable in the regressions below is "Individual
and Business Litigants."
[27] While there may have been an earlier blockbuster award, this is the first award identified in the searches
for this paper or in Hersch and Viscusi (2004) or Viscusi (2004).

1986, 1987, 1990, or 1992, so in the early blockbuster awards era the number of punitive awards meeting that criterion were not great. However, after 1992 every year through 2008 has had at least one award at the blockbuster level.

While the 2003 U.S. Supreme Court *State Farm* decision is relatively recent, 31 percent of the sample of blockbuster cases came in 2004 or thereafter, providing a basis for assessing whether there has been a shift in the punitive damages landscape after this decision, holding fixed other case characteristics. The exploration below will not only compare the performance of the blockbuster cases before and after the *State Farm* decision, but will also assess whether the emergence of blockbuster cases has been affected by the *State Farm* decision, as one might expect.

Figure 2 illustrates the temporal trend in the number of blockbuster awards by year. The number of blockbuster awards in any given year tends to be small, reaching a peak of 12 in 1999, with 8 occurring in 2003, but never more than 7 in any other year. Because of the small numbers, one should be cautious in generalizing with respect to the overall trend in the absence of a formal statistical analysis that distinguishes which effects are statistically significant and which are not. For example, there are few awards in 1997 and 1998 before the spike in awards in 1999, and there are few awards in two of the years after 1999. The 1999 spike in awards did not start a new upward trend, but the tripling in the number of blockbuster awards in 1999 from the levels in the previous two years may not be entirely random either.

What may have accounted for a jump in punitive damages awards in 1999? One hypothesis is that the Master Settlement Agreement in the cigarette litigation at the end of 1998 may have led juries to think in terms of billions rather than millions in setting

damages awards. The lawsuits filed by the states seeking to recoup damages relating to the states' share of the Medicaid costs of smoking were settled for over $200 billion, including $206 billion to 46 states, $36.8 billion to four states that settled individually, as well as other costs.[28] If jurors use the value of this highly publicized settlement as an anchor in setting punitive damages awards,[29] then one would expect both the frequency and the level of blockbuster awards to rise after this settlement.

There are two special cases that will be distinguished in the subsequent statistical analysis because their ratios of punitive damages to compensatory damages are misleading or undefined. First, *Engle v. R.J. Reynolds Tobacco Co.* is a Florida tobacco class action case in which the compensatory damages amount of $12.7 million pertains to the class representatives, while the punitive damages amount of $145 billion is for the entire class. Thus, while the punitive damages value is pertinent, the ratio of punitive damages to compensatory damages will be misleading and overstated. The *Engle* case also involved the largest punitive damages value in the sample, and including it in some of the analyses may distort the average performance of the sample in terms of measures such as the mean damages value. Second, there are some statistical problems raised in the subsequent analyses by *Garamendi v. Altus Finance, S.A.*, which had zero compensatory damages and $700 million in punitive damages. As a result, the ratio of punitive damages to compensatory damages for this case is infinite. At different junctures below, we will present results with and without these cases in the sample, as is appropriate.

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[28] See Viscusi (2002) for a breakdown of these costs.
[29] See Sunstein et al. (2002) for discussion of experimental results demonstrating anchoring effects on punitive damages.

Table 5 summarizes the general characteristics of the blockbuster awards and their pattern before and after the pivotal *State Farm* case. Panel A provides the characteristics of the full sample, while Panels B and C, respectively, summarize the comparable statistics before and after the 2003 *State Farm* decision. As noted earlier, to ensure comparability, we converted all award values reported in tables and used in the regressions to 2008 dollars using the Consumer Price Index. The mean punitive damages amount across all cases excluding the *Engle* case is $1.2 billion, and is $3.0 billion including that case. The median blockbuster award value is considerably less, reflecting the highly skewed nature of the distribution of blockbuster awards. The punitive damages amounts ranged from $100 million to $33.5 billion excluding the *Engle* case, with a high of $181.3 billion including *Engle*, which is the largest punitive damages award in the sample. Compensatory damages averaged $368.8 million excluding the *Engle* case. If we exclude both *Engle v. R. J. Reynolds Tobacco Co.* and *Garamendi v. Altus Finance, S.A.* in analyzing the ratio of punitive damages to compensatory damages, the median ratio is 7.2, which is within the single digit ratio limit articulated in the *State Farm* decision. However, the mean ratio is 502.4, while the maximum ratio is over 43,000, so there clearly is very wide variation in the relationship between punitive damages and compensatory damages.

Comparison of the statistics in Panels B and C of Table 5 indicates a possible effect of the *State Farm* decision on blockbuster awards. The mean punitive damages/compensatory damages award ratio exhibits significant declines in Panel C as

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compared to Panel B.[30] The median value of this ratio also drops significantly for cases

decided after the *State Farm* decision, and the median ratio is below the single-digit limit

for cases decided since 2003 but above that limit for earlier awards.[31] These overall

effects are suggestive of a *State Farm* effect but do not take into account other influences

on the trend of punitive damages awards over this time period, which may also have led

to lowering of award amounts and ratios in the absence of the case.

     The general patterns shown in Table 5 are also borne out if the *Bullock* case is

excluded. Unlike the *Engle* case and *Garamendi v. Altus*, the *Bullock* case has a

meaningful positively valued compensatory damages award so that a valid ratio can be

computed. However, the *Bullock* case has an extremely high ratio of punitive damages to

compensatory damages that influences the average values for the sample. As the

statistics in Appendix Table A2 indicate, excluding the *Bullock* case has negligible effect

on the median statistics, but lowers the mean punitive damages value to $826.8 million

overall and to $1.0 billion before the *State Farm* decision. The mean ratio of punitive

damages to compensatory damages is 63.4 overall and 85.4 in the period before the *State

Farm* decision without the *Bullock* award, compared to 502.4 and 717.7, respectively,

with the award. Both the mean ratio and the median ratio exhibit significant declines

after the *State Farm* decision even if the *Bullock* case is excluded.[32]

     To explore the determinants of the number of blockbuster cases over time, Table

6 presents the negative binomial regression results for the number of blockbuster punitive

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[30] The test statistic using the Wilcoxon-Mann-Whitney test for equality of means for the ratio is z=3.51, which has a p-value of 0.0004. The decline in the mean punitive damages amount is not statistically significant at the usual levels.

[31] The Pearson chi-squared test of the equality of the medians yields a chi-squared test statistic equal to 6.92 (p-value=0.009) and equal to 5.81 (p-value=0.016) with a continuity correction.

[32] The Wilcoxon-Mann-Whitney test statistic is z=3.44 (p-value=0.001). The Pearson chi-squared test statistic equals 6.60 (p-value=0.010) and equals 5.52 (p-value=0.019) with a continuity correction.

damages awards by year, from 1985–2008. The dependent variable, the number of

awards in each year, is a discrete variable that involves a small number of counts, which

sometimes take on a zero value. Consequently, we use a negative binomial regression

model, rather than using ordinary least squares, to estimate the effects of time-related

variables on the number of blockbuster awards in any year.[33] The coefficients, reported

in Table 6, provide the estimated effect on the log of the expected number of cases in any

year due to a one unit change in the variable. Consequently, the exponential of the

coefficient (minus 1) provides the percentage change in the number of cases for a one

unit change in the variable.[34]

      To control for the time trend in the volume of cases, the regressions in Table 6

also include the number of civil court cases filed by year.[35] An alternative measure of the

possible set of cases that might generate blockbuster awards would be the number of

punitive damages awards generally, but these are not feasible to construct on an annual

basis for the sample period. [36]

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[33] One cannot reject the hypothesis that the parameter α that serves as a measure of overdispersion in the negative binomial model equals zero. In all regressions, likelihood ratio tests (null hypothesis that alpha equals zero) yield chi-squared statistics virtually equal to zero. The Poisson model is a special case of the negative binomial model when alpha equals zero, and the negative binomial results in Table 6 are not distinguishable from Poisson estimates of the same equations.

[34] As an example, in the first equation of Table 6, the coefficient on the time trend variable is 0.140 and exp(0.140)=1.150. Thus, each additional year increases the expected number of cases by 15 percent.

[35] These data are from the Court Statistics Project, *State Court Caseload Statistics*, 1985-2006. (National Center for State Courts 1985-2006.) Because data for 2007 and 2008 were unavailable, the number of civil filings was set equal to zero for those two years and an indicator for missing state filings is included in the regressions. Regressions excluding 2007 and 2008 yielded virtually identical results.

[36] Using data from the Civil Justice Survey of State Courts (CJSSC), it is possible to calculate the number of punitive damages awards by year for three years, but these data are samples of cases from large counties and not a census of cases from these counties. The counties represented vary a bit over time, and in any given year the sampling procedure imposes caps on the number of case types to be included so that the comprehensive tallies in the National Center for State Courts data are a more meaningful index of civil case trends. Only one "blockbuster" case is included in the CJSSC data. Keeping these limitations in mind the total number of cases with nonzero values for punitive damages and compensatory damages was 184 in 1992, 180 in 1996, and 153 in 2001. The probability of a punitive damages award given a compensatory damages award is 0.056 in 1992, 0.040 in 1996, and 0.043 in 2001. Authors' calculations.

The number of state civil suit filings is never statistically significant. However, the time trend counter variable has a significant positive effect, indicating that the number of blockbuster awards increased over the 1985–2008 period. Each year that elapses increases the number of punitive damages awards by about 14 to 15 percent. However, there is a muting of such effects in the post-*State Farm* period from 2004–2008. We use two different formulations to examine the effect of the *State Farm* decision on the annual number of blockbuster awards. The result using an indicator variable for years after the *State Farm* decision implies that the number of blockbuster cases is 52 percent less in post-*State Farm* years, controlling for a general upward time trend (based on equation 1 regression coefficient). An alternative specification in equation 2, interacting the time trend with the After *State Farm* indicator, shows a statistically significant reduction in the upward temporal trend to an 11 percent increase per year post-*State Farm*. The inclusion in equations 3 and 4 of an indicator variable for 1999, the year following the Master Settlement Agreement, reflects the spike in the number of cases (2.5 times the number of cases in other years), but it has little effect on general time trends. Similarly, in results not reported here we found that an indicator variable for 1999-2008 (all years since the Master Settlement Agreement) is not statistically significant and does not eliminate the *State Farm* effect.

Whether blockbuster awards are exhibiting any discernible trend depends not only on the number of awards in any year but also on their magnitude. However, because of the enormous size of the outlier blockbuster award in the *Engle* case, the trend in the total value of punitive damages over time may be dominated by this extreme outlier. To better reflect the trend in the award amounts by year, Figure 3A presents the total blockbuster

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award amounts by year for all cases, and Figure 3B excludes the *Engle* case. In each instance blockbuster awards are on the rise, and as before, 1999 appears to be a year in which the awards increased compared to previous years. The results in Figure 3B are more informative in that they make clear that the total value of blockbuster awards has been on the decline since 2002. That year exhibited a spike due to the $28 billion award in the *Bullock* individual smoker case. It is conceivable that the jurors confused millions for billions when setting the award level, and the trial judge reduced the punitive damages amount to $28 million.[37] Irrespective of the seemingly random factors that lead to such jury awards, there appears to be a consistent downward trend in the total scale of blockbuster damages in recent years. To the extent that one defines crises in the courts in terms of trends in damages rather than simply absolute levels, then the fact that blockbuster damages are not on the rise but are perhaps becoming less prominent is an encouraging signal.

To attempt to place a magnitude on the trends of Figures 3A and 3B, we fit regressions of the total value of punitive damage awards per year. Because of the skewed nature of the distribution of damages, the dependent variable is the natural log of blockbuster punitive damages in any given year. In some years, the total blockbuster awards amount is zero. We address this by adding 1 to the value of both compensatory damages and punitive damages in each year so that the regression results reported in Table 7 will be with respect to variables that have finite values. We report Tobit estimates of the equation rather than ordinary least squares, and the coefficient estimate and marginal effects are both reported, although there is very little difference between the two. The log total blockbuster award regression results in Table 7 include two

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[37] See p. 1450 of Viscusi (2004).

specifications each using the entire sample and the sample excluding the *Engle* award. The marginal effect of ln(compensatory damages) is not significantly different from 1.0 in each instance. That is, one cannot reject the hypothesis that there is a unitary elasticity of blockbuster awards with respect to the value of compensatory awards, controlling for the other variables in the equation. However, because this equation deals only with annual totals, the role of specific case characteristics is not taken into account.

The first of the other included variables is the time trend variable, which has a positive effect that is statistically significant at the 5 percent level. Thus, while compensatory damages have a proportional influence on punitive damages, there is an additional upward drift in the total award amounts of 16 percent per year without the *Engle* award and about 23 percent per year including the *Engle* award even after controlling for inflation.

We explored two different formulations for how the *State Farm* case might have affected total blockbuster punitive damages. The first specification interacts the indicator variable for the post-*State Farm* era with the time trend variable, and the second specification interacts the *State Farm* indicator variable with ln(total compensatory damages), as the decision's focus on punitive damages/compensatory damages ratios should have affected the relationship between punitive damages and compensatory damages. Each of these formulations leads to a statistically significant negative effect for both the full sample of cases as well as the sample excluding the *Engle* case.[38] The time trend interaction with *State Farm* has a negative effect that eliminates about three-fourths of the upward temporal trend in the real value of total damages: total blockbuster awards

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[38] Inclusion of both of the *State Farm* interaction variables in the same equation did not lead to statistically significant effects.

increase at a rate of 5 percent per year post-*State Farm* (3 percent excluding the *Engle* award). Alternatively, if one formulates the effect of *State Farm* in terms of how total compensatory damages are linked to total punitive damages, the effect is to dramatically reduce the elasticity from about 1.0 to the range of 0.5-0.6. The latter elasticities are different from unitary elasticity at a significance level of 5 percent or better. From either perspective, the *State Farm* decision dampened the total value of blockbuster punitive damages as well as reducing the number of blockbuster punitive damages awards in any year.

In contrast to the number of blockbuster awards per year, there is little evidence that the annual magnitude of the awards has been affected by the Master Settlement Agreement. In results that are not reported, neither an indicator variable for 1999 nor an indicator for the post- Master Settlement Agreement years is statistically significant when controlling for a general time trend and the level of total compensatory damages.

4. Determinants of Awards in Individual Cases

In addition to analyzing the determinants in the annual trends in the number and level of blockbuster awards, it is instructive to analyze the individual awards themselves. Doing so expands the range of questions that can be examined, such as whether particular industries have been especially hard hit by blockbuster awards.

The particular hypotheses being explored are conditional in nature. Given that there was a blockbuster punitive damages award in a particular case, did the characteristics of the case influence the magnitude of the award? This is a quite different issue than determining whether a particular case type is likely to lead to a blockbuster

punitive damages award. Answering that question would require a quite different sample of cases, including those without blockbuster punitive damages awards, to determine whether some cases are more likely to generate a blockbuster punitive damages award and, if so, how large an award this will be.[39]

The first dependent variable in the regression analysis in this section is the value of ln(punitive damages) for each particular case. In contrast, the regressions above focused on the natural log of total damages for all cases in each year. Because the relationship between punitive damages and compensatory damages is a central concern, we exclude from the sample the *Garamendi v. Altus Finance, S.A.* case in which there were no compensatory damages; thus, the sample consists of 99 observations. We include the *Engle* case in the regression but add a separate interaction of *Engle* with the compensatory damages variable in recognition of the narrower scope of the compensatory damages amount as compared to the class-wide punitive damages amount. Below we present sensitivity tests, excluding the *Engle* case.[40]

Table 8 reports four sets of OLS regression results. Each equation includes the ln(compensatory damages) and the interaction of this variable with the *Engle* case for that observation. Equations 2 and 4 include the non-overlapping indicator variables for the violent crime cases and the following five major industry groups: automobiles; cigarettes; energy and chemicals; finance, investment, and insurance; and pharmaceuticals and

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[39] Two previous studies, Hersch and Viscusi (2004) and Viscusi (2004), explored these relationships using earlier samples of blockbuster cases. These authors found no significant relation between punitive damages and compensatory damages for the sample. However, there is a significant relationship between the log of punitive damages and the log of compensatory damages, as well as a tobacco case dummy variable. See Eisenberg and Wells (2006). All three of these articles relate more generally to the issue of predictability of punitive damages. For another perspective on the predictability of punitive damages and what is meant by predictability, see Polinsky (1997).

[40] In addition, we examine regressions that exclude all cigarette cases, exclude bench awards, and include the *Garamendi v. Altus Finance, S.A.* award.

health care. The omitted category is "other industries." An indicator for cases involving

an individual plaintiff against a business or corporate defendant is included. There are

also indicator variables for the two most prominent states in the tally of blockbuster

punitive damages—California and Texas. In addition, the five cases involving a bench

trial are distinguished. Equations 3 and 4 include a post-*State Farm* interaction with the

value of ln(compensatory damages) to test whether on an individual case basis the *State

Farm* decision reduced the extent to which compensatory damages are transmitted into

punitive damages awards. For these results and all other OLS regressions, robust

standard errors are reported in parentheses and bootstrapped standard errors are in

brackets.[41] The significance levels for the coefficients are quite similar for each, so for

concreteness our discussion will focus on the robust standard errors.

Controlling for industry and other case characteristics, the overall elasticity of

punitive damages with respect to compensatory damages is between 0.21 and 0.26. This

level is far less responsive than the unitary elasticity implied by the aggregate annual data

regression results. The *State Farm* interaction with ln(compensatory damages) is

negative and statistically significant, and exhibits a small change in magnitude when case

characteristics are included. In equation 3, without detailed control variables, the null

hypothesis that the sum of the *State Farm* interaction term and the ln(compensatory

damages) coefficients, 0.04, equals zero cannot be rejected. Equation 4 results suggest

that the elasticity has declined from 0.26 prior to the Supreme Court decision to 0.13 after

the ruling (and the latter estimated elasticity is significantly different from zero at the 5

percent level).

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[41] The bootstrapped standard errors for each regression in Tables 8 through 11 are based on 1,000
replications.

We performed several other regressions reported in Table 9 to test the robustness of the effects of this U.S. Supreme Court decision. Two alternative specifications provide similar evidence of a negative effect of the *State Farm* decision on blockbuster awards. Including a time trend and interaction of the trend with a post-*State Farm* indicator variable yields no significant time trend prior to the ruling, and a 4-5 percent decrease in the size of the punitive awards for each year after the *State Farm* decision. An indicator variable for the post-*State Farm* years is negative and statistically significant and shows a 49 percent decline in punitive award levels after *State Farm* compared to cases heard before the 2003 decision. Finally, in results not reported, because the *State Farm* decision was a state court case, we added an indicator for cases heard in state courts and an interaction of state cases with the post-*State Farm* indicator variable. Although the coefficient of the indicator for state cases is consistently negative, it and the interaction variable are never statistically significant.

Industry characteristics, rather than the level of compensatory damages alone, appear to account for much of the variation in punitive damages in the results in Tables 8 and 9.[42] Moreover, the pattern of industry or product type effects is consistent with the general perceptions of which industries have been hardest hit by very large punitive damages awards. By far the greatest effect is for the cigarette industry, for which the punitive award is over 14 times the value of the omitted other industries category.[43] Next

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[42] Although the results are similar in Table 9, for concreteness we focus on the implications of the results in Table 8 (equation 4, specifically) when calculating the magnitude of these effects.

[43] Because the dependent variable is a natural log and the industry variables are indicator variables, the factor by which punitive damages awards are increased (compared to the excluded category) is equal to the exponential of the coefficient. For cigarettes cases above, $\exp(2.669) = 14.426$, so punitive awards are over 14 times greater than those of other industries, holding all else fixed. Alternatively, the percent difference attributed to an indicator variable is found by subtracting one from the exponential of the coefficient of the indicator variable and multiplying by 100. For example, the percent difference in

in prominence are the energy and chemical industry grouping and the finance,

investment, and insurance industry, which experience blockbuster awards over 130

percent greater than the other industries category. The pharmaceutical and health care

cases also have a positive blockbuster premium of over 100 percent. The violent crime

cases have a similar premium.

The one included case type category that does not have a statistically significant

premium relative to the other industries category is the automobile industry. This lack of

a differential effect is not surprising as the automobile cases tend to be more routine.

These cases involve lower transactions costs than other cases and have generally not been

associated with the various tort liability crises.[44] While products liability generally has

received substantial attention among tort reformers, within the class of products,

automobiles have a less prominent role than, for example, pharmaceutical products and

medical devices.

Cases involving an apparent mismatch of an individual against a corporate entity

generate larger blockbuster damages than those involving more equally matched parties

of the same general class. The indicator variable for cases involving an individual

against a business entity has a positive effect, ranging from 61 to 66 percent in the fourth

columns of Tables 8 and 9, respectively.

The other included variables in Tables 8 and 9 are not statistically significant, but

their lack of significance is of some interest as well. Although California and Texas are

distinguished by the greatest number of blockbuster awards, controlling for compensatory

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punitive damages for cases involving the finance, investment and insurance industry compared to the
excluded category of other industries, is $[\exp(0.834) - 1] \, x \, 100 = 130$ percent.

[44] Kakalik and Pace (1986) and Hensler et al. (1987) review the role of different lines of litigation, such as
automobile cases.

damages, industry type, and other factors, there is no statistically significant difference in the performance of these states.[45] Similarly, the coefficient for bench trials is not statistically significant, but there are only five bench trials in the sample, which may limit our ability to estimate this effect precisely. Finally, in results that are not reported, adding indicators for 1999 only or for 1999-2008 does not change the results described above, and these indicators are never statistically significant. The Master Settlement Agreement appears to have had no discernable effect on blockbuster punitive damages awards.

Table 10 reports results from several empirical tests checking the robustness of our results across different samples. The first equation excludes the *Engle* case from the sample, but doing so does not alter the statistical significance of any of the coefficients. Excluding all cigarette cases likewise yields results that are very similar to the full sample results. With the five bench trials excluded from the sample, punitive damages are more responsive to compensatory damages: the comparable elasticities are 0.30 for pre-*State Farm* and 0.15 for post-*State Farm* cases. Also, the level of punitive damages awarded in cigarette cases is of much higher magnitude in the jury trial only sample: the coefficient of 3.245 means that punitive damages in cigarette cases, holding fixed compensatory damages, are 26 times higher than other industry punitive damages (compared to a factor of 14 for the sample that includes bench awards). The coefficient on the indicator for individual and business litigants is slightly larger than the full sample results and is now significant at the 5 percent level in equation 3. Juries award punitive damages that are 68 percent higher to individual plaintiffs in cases in which they are matched against business

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[45] An indicator for Alabama cases, the second highest in total punitive damage awards, also was never statistically significant.

defendants, compared to 61 percent higher in the full sample (equation 4, Table 8),

perhaps reflecting greater consideration by juries of the relative deepness of the

defendant's pockets compared to the individual plaintiff's.

In order to include *Garamendi v. Altus Finance, S.A.*, the case with compensatory

damages equal to 0, we added $1 to the compensatory damages and punitive damages for

each case before logging each variable. There were few changes in the magnitude or

statistical significance of coefficient estimates, but there is a reduction in the coefficient

on ln(compensatory damages). With the *Altus Finance* award included, the elasticity of

punitive damages with respect to compensatory damages decreases to 0.19 pre-*State*

Farm and drops to 0.03 for cases decided after the *State Farm* decision.

A central focus of the U.S. Supreme Court decisions in the *State Farm* and *Exxon*

Shipping Co. cases has been on the ratio of punitive damages/compensatory damages.

The regression results in Table 11 examine the determinants of the natural log of this

ratio.[46] Due to the outlier status of the ratio of *Bullock v. Philip Morris, Inc.*, we present

equations with and without that case, and in equations 1 and 2 we also include an

indicator for the *Engle* award due to its unique limitation of compensatory damages

values to the class representatives, as discussed previously. Equation 3 excludes both the

Engle and *Bullock* awards. In contrast to the level of punitive damage regressions, there is

some weak evidence that bench awards have lower ratios than jury awards, although the

coefficients are not quite statistically significant, with p-values equal to 0.13 using robust

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[46] Regressions using the level of the ratio rather than the natural log of the ratio yielded no statistically significant results if the *Bullock* case is included. Without the *Bullock* case or without *Bullock* and *Engle* several coefficients are statistically significant. The cigarette industry and the finance, investment, insurance industry have higher ratios (at the 5 percent level of significance). Violent crime cases and cases involving individual versus business litigants have higher ratios (at the 10 percent level of significance). In addition, ratios are lower for cases in the post-State Farm era (at the 10 percent level of significance) using these subsamples.

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standard errors. There is some evidence that cases involving some groups of defendants have higher ratios, specifically cases against the cigarette industry, the finance, investment and insurance industry, and perpetrators of violent crimes. However, the cigarette industry coefficient estimate is not statistically significant if the *Bullock* cigarette case is excluded. In general, fewer of the industry indicator variables are statistically significant. The results seem to suggest that in blockbuster punitive damages cases juries (and judges) are more likely to penalize certain industries by changing the absolute magnitude of the punitive damages rather than the ratio of punitive to compensatory damages. The results in Table 11 indicate that cases involving individuals against a business opponent have a ratio that is 5.7 to 6 times higher than cases involving only business or government litigants. Consistent with the results from the level of punitive damages regressions, the *State Farm* decision has resulted in a decrease of 75 percent in the ratio of punitive damages to compensatory damages.

5. An Examination and Simulation of the Effect of U.S. Supreme Court Ratio Limits

The final Table 12 presents a closer examination of the two recent Supreme Court decisions regarding the ratio of punitive to compensatory damages. The *Engle* case is excluded from this analysis once again. Under the 2003 *State Farm* decision, the Court indicated that few ratios above a single-digit limit would pass due process. As can be seen in Panel A of Table 12, 45 cases or 45 percent of the blockbuster punitive awards' ratios exceed the single-digit limit, where these cases account for 74 percent of the total punitive damages award amounts, $84.3 billion. If the awards were capped at nine times the compensatory damages, the total punitive damages awards of those 45 cases would

have been $9.6 billion, or about 11 percent of the actual award amounts. This constraint

would have resulted in $39.9 billion in total punitive damages being levied, compared to

the $114.5 billion actual total of punitive damages, so that only 35 percent of the actual

total awards would remain. Under the *State Farm* single-digit ratio limit, 66 cases can

still be defined as "blockbuster" cases in the sense that their nominal punitive damages

awards are greater than or equal to $100 million with the cap imposed, including 12 cases

whose actual punitive damages awards are over the single-digit ratio limit.

In the 2008 *Exxon Shipping Co.* decision, a valid ratio, at least for maritime cases,

was limited to 1:1. A more general restriction of the ratio to less than or equal to 1:1

would reduce the awards in 84 cases (or 85 percent of the 99 cases). Limiting punitive

damages awards to be no greater than the compensatory awards would reduce the total

awards of those cases from $99.9 billion to $6.1 billion, and would decrease the overall

blockbuster punitive amount to $20.7 billion, which is 18 percent of the actual total

awards. Under the *Exxon Shipping Co.* ratio limit, 35 cases or 35 percent of the 99

awards can still be defined as "blockbuster" cases with the cap imposed; this number

includes 20 cases whose actual punitive damages are over the 1:1 limit and 15 cases with

actual ratios less than 1. Adoption of a unitary ratio for punitive damages to

compensatory damages as an upper bound would have far more sweeping effects on

blockbuster awards than a single-digit ratio.

6. Conclusion

Just over two decades ago, blockbuster awards were unprecedented. However,

the upsurge in the number and scale of blockbuster awards may be tapering off from its

peak level. A diverse series of statistical analyses indicates that the upward trend in blockbuster awards may have been dampened by the U.S. Supreme Court's *State Farm* decision. That 2003 decision provides guidelines to limit the ratio of punitive damages to compensatory damages, suggesting that a single-digit upper limit should be the usual norm. From 2004 onward, the total number of blockbuster awards per year and the growth in the total value of the blockbuster awards in any given year tapered off. Controlling for the total value of compensatory damages in each year, the upward time trend in these values has been significantly reduced. Also, the magnitude of the relationship between aggregate punitive damages and compensatory damages in recent blockbuster cases is almost half that of years prior to the *State Farm* decision, which is consistent with the *State Farm* decision's focus on bringing punitive damages to be more in line with the value of compensatory damages.

We find more evidence that the *State Farm* case has affected punitive damages awards through examination of the level of the individual awards given that a blockbuster award has been made, as the elasticity of punitive awards to compensatory awards has been reduced by more than half. A similar negative effect of the *State Farm* decision is found by examining case-specific ratios of punitive damages to compensatory damages.

Capping punitive damages using either of the Supreme Court's recent ratio limits in the *State Farm* decision and the *Exxon Shipping Co*. decision would have a large dampening effect on the total amount of blockbuster punitive damages awards and would eliminate many of the cases from the category of blockbuster cases. If strictly applied, limiting the ratio of punitive damages to compensatory damages to 1:1 would eliminate about two-thirds of the cases from the $100 million blockbuster category.

Analysis of the pattern of blockbuster awards yields a variety of insights into the performance of the civil justice system more generally. Punitive damages are responsive to the level of compensatory damages overall, but after controlling for factors such as industry effects, this relationship is greatly reduced. Instead, the levels of punitive damages are often driven not by the level of compensatory damages but by the particular industry involved, as certain types of products and services seem to fare particularly badly.[47] Controlling for the level of compensatory damages, the industries that are particularly hard hit are: the cigarette industry; the energy and chemical industry; the finance, investment and insurance industry; and the pharmaceutical and health care industry. These well known litigation targets tended to fare less well than the automobile industry or miscellaneous other industry groups. This difference is consistent with differential effects of the civil justice system for different segments of the economy. Despite some reduction in the growth of blockbuster punitive awards and in the elasticity of punitive damages with respect to compensatory damages, case-specific characteristics, such as the identity of the litigants, result in punitive damages awards that vary greatly across cases. Many awards remain extremely high by any standard.

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[47] Empirical tests not reported here also explored whether the nature of the harm—personal injury, environmental harm, or financial harm—accounted for such a relationship, but these variables were not statistically significant.

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Appendix Table A1. Blockbuster Punitive Damages Awards of at Least $100 million by Size of Punitive Damages Award

Case Name	Year of Decision	State	Punitive Damages Award ($ millions)	Compensatory Damages Award ($ millions)	Ratio of Punitive Damages to Compensatory Damages
Hedrick v. Sentry Insurance Co.	1993	Texas	100.0	2.2	46.1
Forti v. General Dynamics Corp.	1996	California	100.0	7.4	13.5
Hardy v. General Motors Corp.	1996	Alabama	100.0	50.0	2.0
Aaron v. Abex Corp.	1998	Texas	100.0	15.6	6.4
Aultman v. Duncan Manufacturing	1999	Alabama	100.0	14.5	6.9
City of West Allis v. Wisconsin Electric	1999	Wisconsin	100.0	4.5	22.2
Dorman v. Bridgestone/Firestone Inc.	2000	Missouri	100.0	5.0	20.0
Timely Adventures v. Coastal Mart Inc	2000	Texas	100.0	2.1	47.6
Anadarko Petroleum Corp. v. T-Bar X Ltd. Co.	2003	Texas	100.0	40.0	2.5
de Villers v. Rossum	2006	California	100.0	6.0	16.7
Martin v. Swain	2007	Florida	100.0	10.0	10.0
Wheeling Pittsburgh v. Massey Energy Co.	2007	West Virginia	100.0	119.9	0.8
Estate of LoCascio v. LoCascio	2008	Florida	100.0	25.1	4.0
Navarro v. Austin	2006	Florida	100.1	116.7	0.9
Moseley v. General Motors	1993	Georgia	101.0	4.2	23.8
TVT Records v. Island Def Jam Music Group	2003	New York	107.0	25.0	4.3
Howell v. Blockbuster Entertainment Corporation	1994	Texas	108.9	14.7	7.4
Poliner v. Texas Health Systems	2004	Texas	110.0	256.2	0.4
Tennessee Gas Pipeline Co. v. KCS Resources	1996	Texas	114.1	29.0	3.9
Savaglio v. Wal-Mart Stores	2005	California	115.0	57.0	2.0
Goodrich v. Aetna U.S. Healthcare of California	1999	California	116.0	4.5	25.8
Robinson v. Ford Motor Co.	1998	Mississippi	120.0	24.9	4.8

Alcorn v. National Railroad Passenger Corp.	1999	Missouri	120.0	40.4	3.0
Carroll v. Interstate Brands	2000	California	121.0	11.0	11.0
Proctor v. Davis and Upjohn Co.	1991	Illinois	124.6	3.2	39.5
Micro/Vest v. ComputerLand	1985	California	125.0	400.0	0.3
Martin v. ServiceMaster Co.	1999	Georgia	135.0	1.3	107.1
Martin v. Children's Advanced Medical Institutes	2000	Texas	137.0	131.6	1.0
Adidas America Inc. v. Payless Shoesource Inc.	2008	Oregon	137.0	167.6	0.8
50-Off Stores Inc. v. Banque Paribas (Suisse)	1997	Texas	138.0	12.9	10.7
Campbell v. State Farm Mutual Automobile Co.	1996	Utah	145.0	2.6	55.8
In re Technical Equities Federal Securities Litigation	1988	California	147.0	7.0	21.0
Coyne v. Celotex	1989	Maryland	150.0	2.0	75.0
Broussard v. Meineke Discount Muffler Shops	1996	North Carolina	150.0	197.0	0.8
The Robert J. Bellott Insurance Agency Inc. v. State Farm Mutual	1999	Alaska	150.0	2.7	55.6
Schwarz v. Philip Morris	2002	Oregon	150.0	0.2	882.4
Casas v. Paradez	2006	Texas	150.0	10.0	15.0
Cal X-tra v. Phoenix Holdings II LLC	2007	Arizona	150.0	210.0	0.7
Claghorn v. Edsaco	2002	California	165.0	5.7	28.9
Smith v. Delta TV	1995	Mississippi	167.2	0.5	334.4
Dominguez Energy v. Shell Oil	1993	California	173.0	46.9	3.7
City of Modesto v. Dow	2006	California	175.0	3.2	54.7
State of Alabama v. AstraZeneca LP	2008	Alabama	175.0	40.0	4.4
Perrine v. E.I. DuPont De Nemours and Co.	2007	West Virginia	196.2	55.5	3.5
Bartlett v. Mitchell Energy Corp.	1996	Texas	200.0	4.1	49.4
MMAR. v. Dow Jones	1997	Texas	200.0	22.7	8.8
City of Hope v. Genentech	2002	California	200.0	300.1	0.7
Steele Software Corp.v. First Union Nat. Bank	2002	Maryland	200.0	76.0	2.6
Whittington v. U.S. Steel	2003	Illinois	200.0	50.0	4.0

Cook v. Rockwell International Corp.	2006	Colorado	200.2	353.7	0.6
Houchens v. Rockwell International Corp	1996	Kentucky	210.0	7.7	27.3
Ernst v. Merck	2005	Texas	229.0	24.5	9.3
ICO Global Communications (Operations) Limited v. Boeing Satellite Systems International Inc.	2008	California	236.1	370.6	0.6
Buell-Wilson v. Ford Motor Co.	2004	California	246.0	123.0	2.0
Rubicon Petroleum Inc. v. Amoco	1993	Texas	250.0	125.0	2.0
Jimenez v. Chrysler Corp.	1997	South Carolina	250.0	12.5	20.0
Burns v. Prudential Securities	2003	Ohio	250.0	12.3	20.3
Estate of del Pino v. The Republic of Cuba	2008	Florida	250.0	2.5	100.0
Hyatt v. Franchise Tax Board of the State of California	2008	Nevada	250.0	138.1	1.8
Six Flags Over Georgia v. Time Warner	1998	Georgia	257.0	197.0	1.3
Estate of Tawney v. Columbia Natural Resources	2007	West Virginia	270.0	134.0	2.0
Romo v. Ford Motor Co.	1999	California	290.0	5.3	54.7
Perez v. William Recht Co.	1995	Florida	300.0	200.0	1.5
Fuqua v. Horizon/CMS Healthcare Corp.	2001	Texas	310.0	2.7	114.4
Maryland Deposit Insurance Fund v. Seidel	1988	Maryland	322.0	65.0	5.0
Gulsby Engineering v. Gulf Liquids New River Project	2006	Texas	325.0	375.0	0.9
Pioneer Commercial Funding v. American Financial Mortgage	2000	Pennsylvania	337.5	14.5	23.3
Man Aktiengesellschaft v. Freightliner LLC	2006	Oregon	350.0	965.5	0.4
Banco Espirito Santo International LTD v. BDO Seidman LLP	2007	Florida	352.0	170.0	2.1
COC Services Ltd. v. CompUSA	2001	Texas	364.5	90.0	4.1
Amoco v. Lloyd's of London	1993	California	386.4	36.0	10.7
O'Keefe v. Loewen Group	1995	Mississippi	400.0	100.0	4.0
Cassoutt v. Cessna Aircraft	2001	Florida	400.0	80.0	5.0
IGEN International Inc. v. Roche Diagnostics GmbH	2002	Maryland	400.0	105.0	3.8
Medtronic Sofamor Danek Inc. v. Michelson	2004	Tennessee	400.0	160.0	2.5

Case	Year	State			
Estate of Mack v. Mack	2008	Nevada	405.0	185.0	2.2
Brown v. Dorsey	2004	Georgia	450.0	326.1	1.4
Carlisle v. Whirlpool Financial National Bank	1999	Alabama	580.0	1.0	591.8
Avery v. State Farm	1999	Illinois	600.0	130.0	4.6
Featherston v. Gressler	2005	Texas	600.0	6.0	100.0
Garamendi v. Altus Finance, S.A.	2005	California	700.0	0.0	--
Swan v. Einhorn	1999	Pennsylvania	752.0	155.0	4.9
Lockheed Litigation Cases	1998	California	760.0	25.4	29.9
Coleman Parent Holdings v. Morgan Stanley	2005	Florida	850.0	604.3	1.4
Coffey v. Wyeth	2004	Texas	900.0	113.4	7.9
Beckman Coulter Inc. v. Flextronics	2003	California	931.0	2.9	321.0
Cowart v. Johnson Kart Manufacturing	1999	Wisconsin	1,000.0	24.0	41.7
Grefer v. Alpha Technical Services	2001	Louisiana	1,000.0	56.1	17.8
Whittaker v. Southwestern Life Insurance Co.	2004	Alabama	1,600.0	20.0	80.0
Hayes v. Courtney Pharmacy, Inc.	2002	Missouri	2,000.0	225.0	8.9
Motorola Credit Corporation v. Uzan	2003	New York	2,130.0	2,130.0	1.0
Pennzoil v. Texaco	1985	Texas	3,000.0	7,530.0	0.4
Boeken v. Philip Morris	2001	California	3,000.0	5.5	541.5
Price v. Philip Morris, Inc.	2003	Illinois	3,100.0	7,100.0	0.4
In re New Orleans Tank Car Leakage Fire Litigation	1997	Louisiana	3,365.0	2.0	1,682.5
Anderson v. General Motors	1999	California	4,775.0	107.6	44.4
In re The Exxon Valdez	1995	Alaska	5,000.0	287.0	17.4
Exxon Mobil Corporation v. Alabama Department of Conservation and Natural Resources	2003	Alabama	11,800.0	63.6	185.5
Bullock v. Philip Morris	2002	California	28,000.0	0.7	43,076.9
Engle v. R.J. Reynolds Tobacco	2000	Florida	145,000.0	12.7	11,417.3

[a] Bench awards

Appendix Table A2. Statistics on Damages, Excluding the *Bullock* Award[a]

Statistics	Punitive Damages	Compensatory Damages	Ratio of Punitive to Compensatory Damages[b]
Panel A. Full Sample (N=98)			
Mean	826.83	372.60	63.43
Standard Deviation	1,833.36	1,736.80	209.21
Minimum	100.00	0.00	0.31
Maximum	13,807.28	15,067.00	1,682.50
Median	255.11	43.40	6.90
Panel B. Before State Farm (N=67)			
Mean	1,041.71	462.74	85.44
Standard Deviation	2,175.28	2,093.99	248.41
Minimum	117.01	0.20	0.31
Maximum	13,807.28	15,067.00	1,682.50
Median	267.53	30.45	11.00
Panel C. After State Farm Decision (N=31)			
Mean	362.43	177.76	14.30
Standard Deviation	363.09	222.30	28.82
Minimum	100.00	0.00	0.36
Maximum	1,823.61	1,031.11	100.00
Median	250.00	129.19	2.04

[a] Damages are calculated as millions of 2008 dollars. All columns exclude the *Engle* award.
[b] The ratio statistics in Panels A and C are calculated without *Garamendi v. Altus Finance, S.A.*, which has zero compensatory damages.

Figure 1. Distribution of Blockbuster Punitive Damage Awards
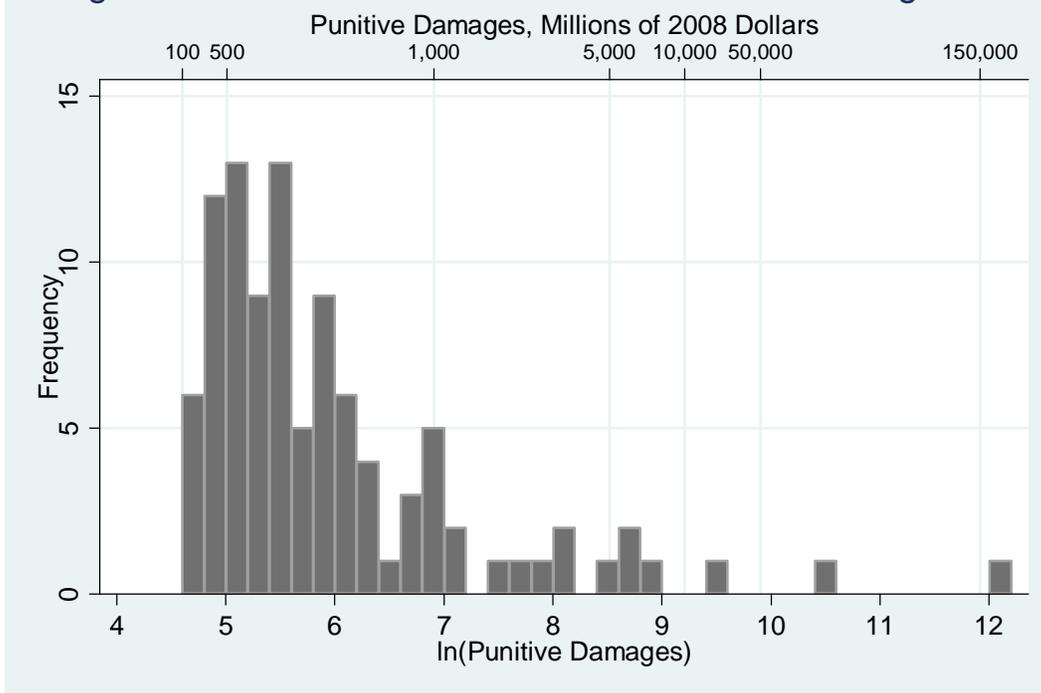
Figure 2. Number of Blockbuster Awards by Year
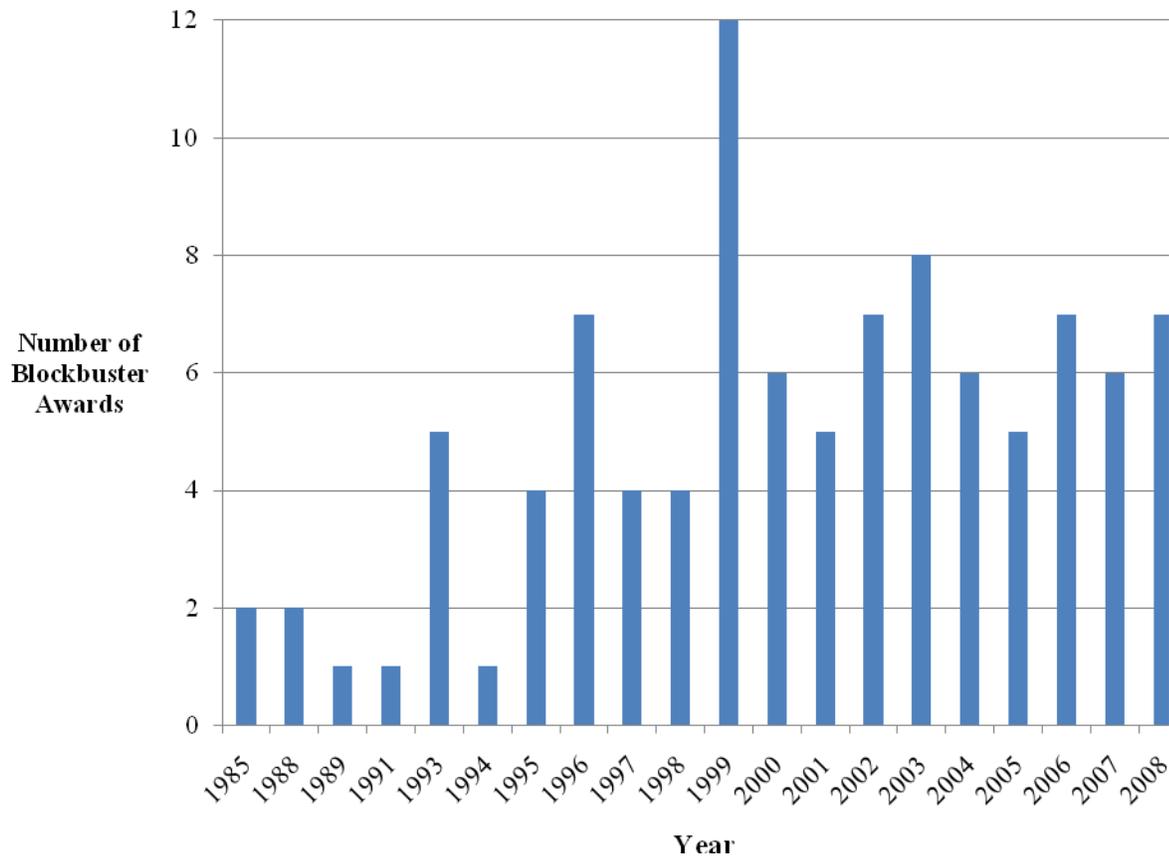
Figure 3A. Total Blockbuster Punitive Damages, Including *Engle* Case
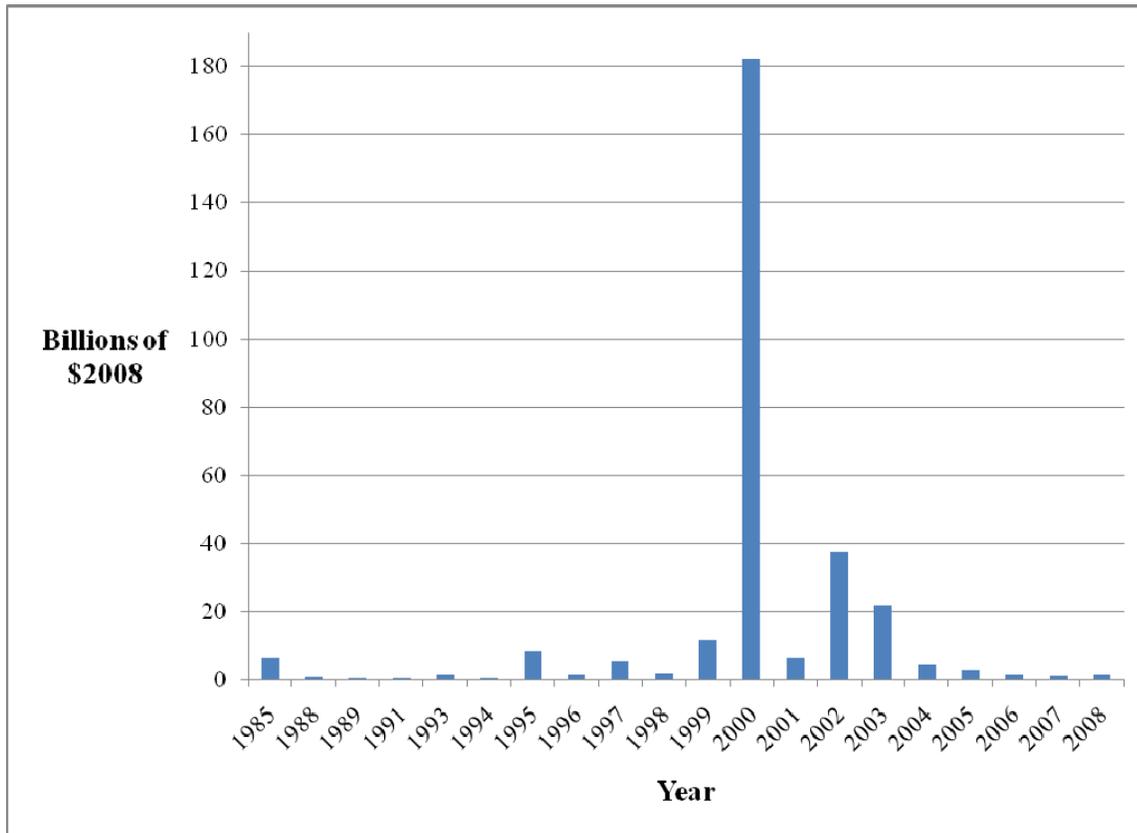
Figure 3B. Total Blockbuster Punitive Damages, Excluding *Engle* Case
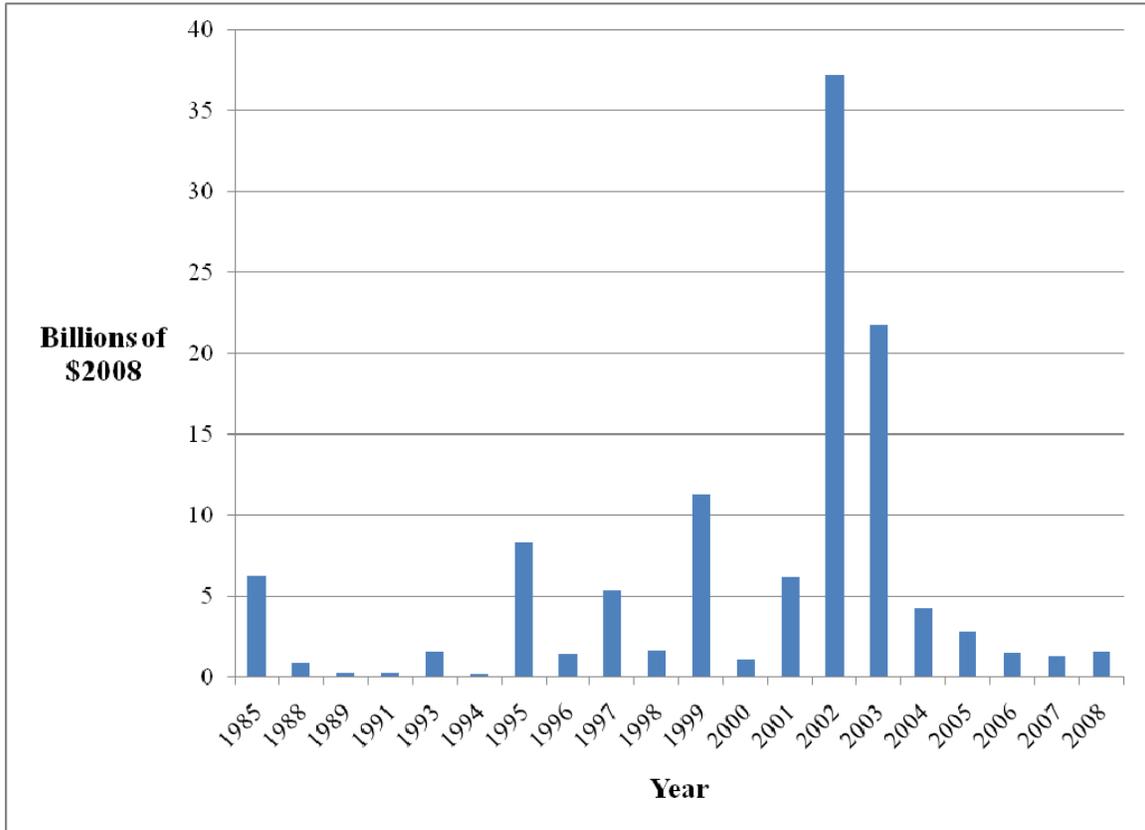
Table 1. Blockbuster Punitive Damages Awards of at Least $100 Million by Year of Decision

Case Name	Year of Decision	State	Punitive Damages Award ($ millions)	Compensatory Damages Award ($ millions)	Ratio of Punitive Damages to Compensatory Damages
Micro/Vest v. ComputerLand	1985	California	125.0	400.0	0.3
Pennzoil v. Texaco	1985	Texas	3,000.0	7,530.0	0.4
In re Technical Equities Federal Securities Litigation	1988	California	147.0	7.0	21.0
Maryland Deposit Insurance Fund v. Seidel	1988	Maryland	322.0	65.0	5.0
Coyne v. Celotex	1989	Maryland	150.0	2.0	75.0
Proctor v. Davis and Upjohn Co.	1991	Illinois	124.6	3.2	39.5
Hedrick v. Sentry Insurance Co.	1993	Texas	100.0	2.2	46.1
Moseley v. General Motors	1993	Georgia	101.0	4.2	23.8
Dominguez Energy v. Shell Oil	1993	California	173.0	46.9	3.7
Rubicon Petroleum Inc. v. Amoco	1993	Texas	250.0	125.0	2.0
Amoco v. Lloyd's of London	1993	California	386.4	36.0	10.7
Howell v. Blockbuster Entertainment Corporation[a]	1994	Texas	108.9	14.7	7.4
Smith v. Delta TV[a]	1995	Mississippi	167.2	0.5	334.4
Perez v. William Recht Co.	1995	Florida	300.0	200.0	1.5
O'Keefe v. Loewen Group	1995	Mississippi	400.0	100.0	4.0
In re The Exxon Valdez	1995	Alaska	5,000.0	287.0	17.4
Forti v. General Dynamics Corp.	1996	California	100.0	7.4	13.5
Hardy v. General Motors Corp.	1996	Alabama	100.0	50.0	2.0
Tennessee Gas Pipeline Co. v. KCS Resources	1996	Texas	114.1	29.0	3.9
Campbell v. State Farm Mutual Automobile Co.	1996	Utah	145.0	2.6	55.8
Broussard v. Meineke Discount Muffler Shops	1996	North Carolina	150.0	197.0	0.8
Bartlett v. Mitchell Energy Corp.	1996	Texas	200.0	4.1	49.4
Houchens v. Rockwell International Corp	1996	Kentucky	210.0	7.7	27.3

Case	Year	State			
50-Off Stores Inc. v. Banque Paribas (Suisse)	1997	Texas	138.0	12.9	10.7
MMAR. v. Dow Jones	1997	Texas	200.0	22.7	8.8
Jimenez v. Chrysler Corp.	1997	South Carolina	250.0	12.5	20.0
In re New Orleans Tank Car Leakage Fire Litigation	1997	Louisiana	3,365.0	2.0	1,682.5
Aaron v. Abex Corp.	1998	Texas	100.0	15.6	6.4
Robinson v. Ford Motor Co.	1998	Mississippi	120.0	24.9	4.8
Six Flags Over Georgia v. Time Warner	1998	Georgia	257.0	197.0	1.3
Lockheed Litigation Cases	1998	California	760.0	25.4	29.9
Aultman v. Duncan Manufacturing	1999	Alabama	100.0	14.5	6.9
City of West Allis v. Wisconsin Electric	1999	Wisconsin	100.0	4.5	22.2
Goodrich v. Aetna U.S. Healthcare of California	1999	California	116.0	4.5	25.8
Alcorn v. National Railroad Passenger Corp.	1999	Missouri	120.0	40.4	3.0
Martin v. ServiceMaster Co.	1999	Georgia	135.0	1.3	107.1
The Robert J. Bellott Insurance Agency Inc. v. State Farm Mutual	1999	Alaska	150.0	2.7	55.6
Romo v. Ford Motor Co.	1999	California	290.0	5.3	54.7
Carlisle v. Whirlpool Financial National Bank	1999	Alabama	580.0	1.0	591.8
Avery v. State Farm[a]	1999	Illinois	600.0	130.0	4.6
Swan v. Einhorn	1999	Pennsylvania	752.0	155.0	4.9
Cowart v. Johnson Kart Manufacturing	1999	Wisconsin	1,000.0	24.0	41.7
Anderson v. General Motors	1999	California	4,775.0	107.6	44.4
Dorman v. Bridgestone/Firestone Inc.	2000	Missouri	100.0	5.0	20.0
Timely Adventures v. Coastal Mart Inc	2000	Texas	100.0	2.1	47.6
Carroll v. Interstate Brands	2000	California	121.0	11.0	11.0
Martin v. Children's Advanced Medical Institutes	2000	Texas	137.0	131.6	1.0
Pioneer Commercial Funding v. American Financial Mortgage	2000	Pennsylvania	337.5	14.5	23.3
Engle v. R.J. Reynolds Tobacco	2000	Florida	145,000.0	12.7	11,417.3
Fuqua v. Horizon/CMS Healthcare Corp.	2001	Texas	310.0	2.7	114.4
COC Services Ltd. v. CompUSA	2001	Texas	364.5	90.0	4.1
Cassoutt v. Cessna Aircraft	2001	Florida	400.0	80.0	5.0
Grefer v. Alpha Technical Services	2001	Louisiana	1,000.0	56.1	17.8

Boeken v. Philip Morris	2001	California	3,000.0	5.5	541.5
Schwarz v. Philip Morris	2002	Oregon	150.0	0.2	882.4
Claghorn v. Edsaco	2002	California	165.0	5.7	28.9
City of Hope v. Genentech	2002	California	200.0	300.1	0.7
Steele Software Corp.v. First Union Nat. Bank	2002	Maryland	200.0	76.0	2.6
IGEN International Inc. v. Roche Diagnostics GmbH	2002	Maryland	400.0	105.0	3.8
Hayes v. Courtney Pharmacy, Inc.	2002	Missouri	2,000.0	225.0	8.9
Bullock v. Philip Morris	2002	California	28,000.0	0.7	43,076.9
Anadarko Petroleum Corp. v. T-Bar X Ltd. Co.	2003	Texas	100.0	40.0	2.5
TVT Records v. Island Def Jam Music Group	2003	New York	107.0	25.0	4.3
Whittington v. U.S. Steel	2003	Illinois	200.0	50.0	4.0
Burns v. Prudential Securities	2003	Ohio	250.0	12.3	20.3
Beckman Coulter Inc. v. Flextronics	2003	California	931.0	2.9	321.0
Motorola Credit Corporation v. Uzan[a]	2003	New York	2,130.0	2,130.0	1.0
Price v. Philip Morris, Inc.[a]	2003	Illinois	3,100.0	7,100.0	0.4
Exxon Mobil Corporation v. Alabama Department of Conservation and Natural Resources	2003	Alabama	11,800.0	63.6	185.5
Poliner v. Texas Health Systems	2004	Texas	110.0	256.2	0.4
Buell-Wilson v. Ford Motor Co.	2004	California	246.0	123.0	2.0
Medtronic Sofamor Danek Inc. v. Michelson	2004	Tennessee	400.0	160.0	2.5
Brown v. Dorsey	2004	Georgia	450.0	326.1	1.4
Coffey v. Wyeth	2004	Texas	900.0	113.4	7.9
Whittaker v. Southwestern Life Insurance Co.	2004	Alabama	1,600.0	20.0	80.0
Savaglio v. Wal-Mart Stores	2005	California	115.0	57.0	2.0
Ernst v. Merck	2005	Texas	229.0	24.5	9.3
Featherston v. Gressler	2005	Texas	600.0	6.0	100.0
Garamendi v. Altus Finance, S.A.	2005	California	700.0	0.0	--
Coleman Parent Holdings v. Morgan Stanley	2005	Florida	850.0	604.3	1.4
de Villers v. Rossum	2006	California	100.0	6.0	16.7
Navarro v. Austin	2006	Florida	100.1	116.7	0.9
Casas v. Paradez	2006	Texas	150.0	10.0	15.0

City of Modesto v. Dow	2006	California	175.0	3.2	54.7
Cook v. Rockwell International Corp.	2006	Colorado	200.2	353.7	0.6
Gulsby Engineering v. Gulf Liquids New River Project	2006	Texas	325.0	375.0	0.9
Man Aktiengesellschaft v. Freightliner LLC	2006	Oregon	350.0	965.5	0.4
Martin v. Swain	2007	Florida	100.0	10.0	10.0
Wheeling Pittsburgh v. Massey Energy Co.	2007	West Virginia	100.0	119.9	0.8
Cal X-tra v. Phoenix Holdings II LLC	2007	Arizona	150.0	210.0	0.7
Perrine v. E.I. DuPont De Nemours and Co.	2007	West Virginia	196.2	55.5	3.5
Estate of Tawney v. Columbia Natural Resources	2007	West Virginia	270.0	134.0	2.0
Banco Espirito Santo International LTD v. BDO Seidman LLP	2007	Florida	352.0	170.0	2.1
Estate of LoCascio v. LoCascio	2008	Florida	100.0	25.1	4.0
Adidas America Inc. v. Payless Shoesource Inc.	2008	Oregon	137.0	167.6	0.8
State of Alabama v. AstraZeneca LP	2008	Alabama	175.0	40.0	4.4
ICO Global Communications (Operations) Limited v. Boeing Satellite Systems International Inc.	2008	California	236.1	370.6	0.6
Estate of del Pino v. The Republic of Cuba	2008	Florida	250.0	2.5	100.0
Hyatt v. Franchise Tax Board of the State of California	2008	Nevada	250.0	138.1	1.8
Estate of Mack v. Mack	2008	Nevada	405.0	185.0	2.2

[a] Bench awards.

Table 2. Damages and Ratio by Industry Type[a]

Industry Involved	Number of Awards	Mean Punitive Damages	Mean Compensatory Damages	Mean Ratio of Punitive to Compensatory Damages
Automobile Industry	9	900.71	160.89	19.12
Cigarette Industry[b]	5	10,240.92	2,078.87	11,125.31
Energy, Chemical Industry	25	1,531.59	701.61	90.09
Finance, Investment, Insurance Industry[c]	23	546.33	222.45	59.20
Pharmaceuticals, Health Care Industry	16	503.69	109.29	40.98
Violent Crime	7	350.05	114.49	19.87
Other Industry	15	273.63	103.00	13.82

[a] Damages are calculated as millions of 2008 dollars.
[b] For the cigarette industry, all columns exclude the *Engle* award.
[c] For the finance, investment, insurance industry, the mean ratio excludes *Garamendi v. Altus Finance, S.A.*, which has zero compensatory damages.

Table 3. Blockbuster Punitive Damages Awards by State[a]

State	Number of Awards	Total Punitive Damages (millions $)	Punitive Damages per Capita ($)[b]
Alabama	6	16,822	3,749
Alaska	2	7,257	11,997
Arizona	1	156	25
California	21	49,731	1,439
Colorado	1	214	45
Florida	8	2,773	163
Georgia	4	1,177	145
Illinois	4	4,834	386
Kentucky	1	288	74
Louisiana	2	5,730	1,293
Maryland	4	1,565	313
Mississippi	3	960	351
Missouri	3	2,674	472
Nevada	2	655	252
New York	2	2,618	136
North Carolina	1	206	27
Ohio	1	293	26
Oregon	3	690	188
Pennsylvania	2	1,394	115
South Carolina	1	335	87
Tennessee	1	456	77
Texas	20	11,505	629
Utah	1	199	96
West Virginia	3	588	325
Wisconsin	2	1,422	267
Total	99	114,539	---

[a] Damages are calculated as millions of 2008 dollars. Figures for Florida (and the totals) exclude the *Engle* award.
[b] Population underlying per capita calculations is by state and by year of decision.

Table 4. Description of Blockbuster Punitive Damages Awards Cases

Variable	Mean or Percent	Standard Deviation
Damages[a]		
Punitive Damages	2,958.3	18,397.3
Compensatory Damages	365.3	1,719.9
Ratio of Punitive/Compensatory Damages[b]	612.6	4,464.6
Ln(Punitive Damages)	6.0	1.3
Ln(Compensatory Damages)	3.7	2.0
State		
California	21%	
Texas	20%	
Industry Involved		
Automobile Industry	9%	
Cigarette Industry	5%	
Energy, Chemical Industry	25%	
Financial, Investment, Insurance Industry	23%	
Pharmaceuticals, Health Care Industry	16%	
Violent Crime	7%	
Other Industry	15%	
Type of Damages Sought		
Personal Injury or Fatality	40%	
Environmental/Property	10%	
Other Monetary Damage	50%	
Pairs of Litigants		
Individual and Business Litigants	53%	
Two Business or Government Litigants	41%	
Two Individual Litigants	6%	
Other Case Information		
Bench Trial	5%	
After *State Farm*	31%	

[a] Damages are calculated as millions of 2008 dollars. All calculations include the *Engle* award (N=100).

[b] The statistics for the ratio of punitive/compensatory damages exclude the *Garamendi v. Altus Finance, S.A.* award, which has zero compensatory damages.

Table 5. Statistics on Damages[a]

Statistic	Punitive Damages	Compensatory Damages	Ratio of Punitive to Compensatory Damages[b]
Panel A. Full Sample (N=99)			
Mean	1,156.96	368.84	502.35
Standard Deviation	3,757.20	1,728.32	4350.00
Minimum	100.00	0.00	0.31
Maximum	33,509.73	15,067.00	43076.93
Median	257.76	40.00	7.15
Panel B. Before *State Farm* Decision (N=68)			
Mean	1,519.18	455.95	717.66
Standard Deviation	4,490.41	2,079.06	5219.31
Minimum	117.01	0.20	0.31
Maximum	33,509.73	15,067.00	43076.93
Median	267.91	29.85	12.26
Panel C. After *State Farm* Decision (N=31)			
Mean	362.43	177.76	14.30
Standard Deviation	363.09	222.30	28.82
Minimum	100.00	0.00	0.36
Maximum	1,823.61	1,031.11	100.00
Median	250.00	129.19	2.04

[a] Damages are calculated as millions of 2008 dollars. All columns exclude the *Engle* award.
[b] The ratio statistics in Panels A and C are calculated without *Garamendi v. Altus Finance, S.A.*, which has zero compensatory damages.

Table 6. Negative Binomial Regressions of the Number of Blockbuster Punitive Damages Awards by Year[a]

	(1)	(2)	(3)	(4)
Time	0.140	0.140	0.135	0.135
	(0.025)**	(0.025)**	(0.023)**	(0.023)**
After *State Farm*	-0.734		-0.652	
	(0.165)**		(0.135)**	
Time x After *State Farm*		-0.035		-0.031
		(0.008)**		(0.006)**
Millions of State Filings	0.022	0.022	-0.025	-0.025
	(0.059)	(0.059)	(0.049)	(0.049)
Missing State Filings	0.098	0.185	-0.681	-0.603
	(0.978)	(0.984)	(0.830)	(0.830)
Indicator for 1999			0.940	0.939
			(0.160)**	(0.160)**
Constant	-0.788	-0.795	0.035	0.028
	(1.195)	(1.198)	(0.991)	(0.993)
Observations	24	24	24	24
Pseudo R-squared	0.222	0.223	0.276	0.276

[a] Dependent variable is the number of blockbuster punitive damages awards in each year, 1985-2008. Estimated using negative binomial regression. Robust standard errors are in parentheses.
+Significant at the 10% level; *significant at the 5% level; and **significant at the 1% level, two-tailed tests.

Table 7. Tobit Regressions of Total Blockbuster Punitive Damages Awards by Year[a]

	(1) All Awards	(2) All Awards	(3) No *Engle* Award[b]	(4) No *Engle* Award[b]
Ln(Total Compensatory Damages)	0.974	0.984	0.984	0.991
	(0.156)**	(0.157)**	(0.133)**	(0.134)**
	[0.974][c]	[0.983]	[0.984]	[0.991]
Time	0.226	0.218	0.161	0.155
	(0.0817)*	(0.0813)*	(0.0700)*	(0.0695)*
	[0.226]	[0.218]	[0.161]	[0.155]
Time x After *State Farm*	-0.173		-0.128	
	(0.0542)**		(0.0465)*	
	[-0.173]		[-0.128]	
Ln(Total Compensatory Damages) x After *State Farm*		-0.534		-0.396
		(0.172)**		(0.147)*
		[-0.534]		[-0.396]
Constant	-0.341	-0.312	0.0412	0.0630
	(0.921)	(0.927)	(0.784)	(0.787)
Observations	24	24	24	24
Pseudo R-squared	0.314	0.311	0.349	0.347

[a] Dependent variable is ln(total blockbuster punitive damages + 1) for 1985-2008. Estimated using Tobit regression. Standard errors in parentheses.
[b] Equations 3 and 4 exclude the *Engle* award from the totals of punitive and compensatory damages (for the year 2000).
[c] Estimated marginal effects (changes in the conditional expected value of the dependent variable) given in brackets.
+Significant at the 10% level; *significant at the 5% level; and **significant at the 1% level, two-tailed tests.

Table 8. Regressions of Individual Blockbuster Punitive Damages Awards[a]

	(1)	(2)	(3)	(4)
Ln(Compensatory Damages)	0.129	0.205	0.192	0.260
	(0.0765)+	(0.0706)**	(0.0785)*	(0.0761)**
	[0.0753]+	[0.0731]**	[0.0810]*	[0.0796]**
Ln(Compensatory Damages) x *Engle*	2.288	1.504	2.236	1.463
	(0.0519)**	(0.352)**	(0.0559)**	(0.358)**
	[1.110]*	[0.797]+	[1.091]*	[0.780]+
Ln(Compensatory Damages) x After *State Farm*			-0.152	-0.129
			(0.0453)**	(0.0492)*
			[0.0463]**	[0.0503]*
Automobile Industry		0.283		0.281
		(0.381)		(0.374)
		[0.395]		[0.397]
Cigarette Industry		2.696		2.669
		(0.966)**		(0.992)**
		[1.179]*		[1.228]*
Energy, Chemical Industry		0.888		0.840
		(0.336)**		(0.307)**
		[0.342]**		[0.320]**
Finance, Investment, Insurance Industry		0.862		0.834
		(0.244)**		(0.251)**
		[0.265]**		[0.264]**
Pharmaceuticals, Health Care Industry		0.613		0.700
		(0.325)+		(0.314)*
		[0.334]+		[0.320]*
Violent Crime		0.472		0.645
		(0.327)		(0.305)*
		[0.346]		[0.322]*
Individual and Business Litigants		0.486		0.474
		(0.265)+		(0.252)+
		[0.269]+		[0.259]+
California		0.284		0.227
		(0.296)		(0.290)
		[0.305]		[0.311]
Texas		-0.318		-0.353
		(0.275)		(0.261)
		[0.285]		[0.274]
Bench Trial		0.0443		-0.188
		(0.393)		(0.388)
		[0.481]		[0.548]
Constant	5.423	4.201	5.396	4.201
	(0.319)**	(0.434)**	(0.312)**	(0.414)**
	[0.323]**	[0.456]**	[0.316]**	[0.438]**
Observations	99	99	99	99
Adjusted R-squared	0.248	0.396	0.297	0.428

Table 9. Regressions of Individual Blockbuster Punitive Damages Awards: Alternative Specifications of Post-*State Farm* Effects[a]

	(1)	(2)	(3)	(4)
Ln(Compensatory Damages)	0.172	0.245	0.164	0.240
	(0.0710)*	(0.0697)**	(0.0733)*	(0.0707)**
	[0.0701]*	[0.0723]**	[0.0712]*	[0.0725]**
Ln(Compensatory Damages) x *Engle*	2.194	1.492	2.225	1.477
	(0.0743)**	(0.357)**	(0.0594)**	(0.354)**
	[1.059]*	[0.789]+	[1.062]*	[0.778]+
Time	0.0364	0.0196		
	(0.0337)	(0.0340)		
	[0.0355]	[0.0332]		
Time x After *State Farm*	-0.0460	-0.0359		
	(0.0172)**	(0.0174)*		
	[0.0177]**	[0.0171]*		
After *State Farm*			-0.677	-0.603
			(0.208)**	(0.232)*
			[0.208]**	[0.236]*
Automobile Industry		0.249		0.246
		(0.370)		(0.366)
		[0.366]		[0.401]
Cigarette Industry		2.543		2.621
		(0.992)*		(0.977)**
		[1.188]*		[1.156]*
Energy, Chemical Industry		0.885		0.862
		(0.322)**		(0.308)**
		[0.305]**		[0.312]**
Finance, Investment, Insurance Industry		0.864		0.839
		(0.251)**		(0.254)**
		[0.252]**		[0.259]**
Pharmaceuticals, Health Care Industry		0.728		0.750
		(0.314)*		(0.320)*
		[0.313]*		[0.320]*
Violent Crime		0.869		0.832
		(0.288)**		(0.295)**
		[0.310]**		[0.321]**
Individual and Business Litigants		0.513		0.505
		(0.248)*		(0.254)+
		[0.246]*		[0.256]*
California		0.288		0.267
		(0.285)		(0.290)
		[0.311]		[0.300]
Texas		-0.313		-0.331
		(0.257)		(0.267)
		[0.267]		[0.274]

Bench Trial		-0.170		-0.144
		(0.371)		(0.386)
		[0.462]		[0.521]
Constant	4.983	3.935	5.503	4.234
	(0.421)**	(0.575)**	(0.312)**	(0.414)**
	[0.459]**	[0.596]**	[0.299]**	[0.425]**
Observations	99	99	99	99
Adjusted R-squared	0.303	0.427	0.295	0.428

[a] Dependent variable is ln(punitive damages). Excluded industry category is other industry. Equations exclude *Garamendi v. Altus Finance, S.A.* award. Robust standard errors are in parentheses, and bootstrapped standard errors are in brackets.
+ Significant at 10%; * significant at 5%; ** significant at 1%.

Table 10. Regressions of Individual Blockbuster Punitive Damages Awards: Different Samples[a]

	(1) No *Engle* Award	(2) No Cigarette Awards	(3) No Bench Awards	(4) With *Altus* *Finance* Award
Ln(Compensatory Damages)	0.260	0.288	0.299	0.192
	(0.0757)**	(0.0734)**	(0.0826)**	(0.0698)**
	[0.0787]**	[0.0776]**	[0.0825]**	[0.0791]*
Ln(Compensatory Damages) x *Engle*			1.259	1.484
			(0.430)**	(0.355)**
			[0.759]+	[0.780]+
Ln(Compensatory Damages) x After *State Farm*	-0.129	-0.141	-0.139	-0.159
	(0.0490)*	(0.0479)**	(0.0505)**	(0.0541)**
	[0.0488]**	[0.0504]**	[0.0497]**	[0.0590]**
Automobile Industry	0.281	0.326	0.287	0.316
	(0.372)	(0.380)	(0.374)	(0.394)
	[0.389]	[0.394]	[0.388]	[0.410]
Cigarette Industry	2.669		3.245	2.561
	(0.987)**		(1.195)**	(0.981)*
	[1.255]*		[1.529]*	[1.219]*
Energy, Chemical Industry	0.840	0.849	0.845	0.839
	(0.305)**	(0.301)**	(0.322)*	(0.306)**
	[0.302]**	[0.290]**	[0.328]*	[0.312]**
Finance, Investment, Insurance Industry	0.834	0.786	0.804	0.821
	(0.250)**	(0.246)**	(0.278)**	(0.261)**
	[0.272]**	[0.255]**	[0.283]**	[0.272]**
Pharmaceuticals, Health Care Industry	0.700	0.741	0.718	0.733
	(0.312)*	(0.308)*	(0.328)*	(0.311)*
	[0.318]*	[0.316]*	[0.325]*	[0.320]*
Violent Crime	0.645	0.651	0.698	0.599
	(0.304)*	(0.284)*	(0.295)*	(0.343)+
	[0.322]*	[0.307]*	[0.326]*	[0.362]+
Individual and Business Litigants	0.474	0.448	0.518	0.319
	(0.251)+	(0.250)+	(0.256)*	(0.246)
	[0.256]+	[0.257]+	[0.253]*	[0.267]
California	0.227	0.0123	0.198	0.225
	(0.289)	(0.266)	(0.292)	(0.299)
	[0.297]	[0.280]	[0.303]	[0.323]
Texas	-0.353	-0.417	-0.350	-0.396
	(0.260)	(0.254)	(0.275)	(0.266)
	[0.263]	[0.259]	[0.270]	[0.272]
Bench Trial	-0.188	0.137		-0.0832
	(0.386)	(0.253)		(0.373)
	[0.547]	[0.293]		[0.522]

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Constant	4.201	4.165	4.036	4.594
	(0.412)**	(0.411)**	(0.440)**	(0.387)**
	[0.432]**	[0.428]**	[0.437]**	[0.437]**
Observations	98	94	94	100
Adjusted R-squared	0.270	0.206	0.421	0.399

[a] Dependent variable is ln(punitive damages). Excluded industry category is other industry. Equations 1, 2 and 3 exclude the *Garamendi v. Altus Finance, S.A.* award. Equation 4 adds $1 to the punitive and compensatory damages before logging each variable, and includes the *Garamendi v. Altus Finance, S.A.* award. Robust standard errors are in parentheses, and bootstrapped standard errors are in brackets.
 +Significant at the 10% level; *significant at the 5% level; and **significant at the 1% level, two-tailed tests.

Table 11. Regressions of the Ln(Ratio of Punitive to Compensatory Damages)[a]

	(1) With *Bullock* Award	(2) No *Bullock* Award	(3) No *Bullock* or *Engle* Award
Engle Case	3.544	4.921	
	(1.593)*	(1.547)**	
	[2.266]	[2.844]+	
After *State Farm*	-1.405	-1.403	-1.403
	(0.380)**	(0.381)**	(0.379)**
	[0.385]**	[0.368]**	[0.380]**
Automobile Industry	-0.149	-0.106	-0.106
	(0.464)	(0.456)	(0.453)
	[0.478]	[0.483]	[0.483]
Cigarette Industry	3.323	1.934	1.934
	(1.655)*	(1.578)	(1.570)
	[2.088]	[1.958]	[1.957]
Energy, Chemical Industry	0.788	0.798	0.798
	(0.527)	(0.521)	(0.518)
	[0.523]	[0.535]	[0.516]
Finance, Investment, Insurance Industry	1.531	1.478	1.478
	(0.502)**	(0.484)**	(0.481)**
	[0.495]**	[0.494]**	[0.516]**
Pharmaceuticals, Health Care Industry	0.855	0.882	0.882
	(0.617)	(0.607)	(0.603)
	[0.616]	[0.615]	[0.615]
Violent Crime	2.118	2.087	2.087
	(0.535)**	(0.539)**	(0.536)**
	[0.550]**	[0.590]**	[0.565]**
Individual and Business Litigants	1.799	1.748	1.748
	(0.376)**	(0.366)**	(0.364)**
	[0.374]**	[0.365]**	[0.376]**
California	0.857	0.673	0.673
	(0.487)+	(0.463)	(0.461)
	[0.471]+	[0.465]	[0.472]
Texas	-0.0326	-0.0885	-0.0885
	(0.437)	(0.428)	(0.426)
	[0.441]	[0.426]	[0.423]
Bench Trial	-1.989	-1.691	-1.691
	(1.303)	(1.113)	(1.107)
	[1.565]	[1.423]	[1.366]
Constant	0.677	0.740	0.740
	(0.410)	(0.406)+	(0.404)+
	[0.410]+	[0.415]+	[0.400]+
Observations	99	98	97
Adjusted R-squared	0.397	0.354	0.268

a Dependent variable is ln(punitive damages/compensatory damages). Excluded industry category is other industry. Excludes *Garamendi v. Altus Finance, S.A.* in all equations, excludes *Bullock v. Philip Morris, Inc.* in equation 2, and excludes the *Bullock* award and the *Engle* award in equation 3. Robust standard errors are in parentheses, and bootstrapped standard errors are in brackets.

+Significant at the 10% level; *significant at the 5% level; and **significant at the 1% level, two-tailed tests.

Table 12. Effects of U.S. Supreme Court Ratio Limits[a]

Panel A. Punitive/Compensatory Damage Ratio < 10

	Actual Awards			Awards with Ratio Limit Imposed	
	Cases with Ratio < 10	Cases with Ratio ≥ 10	All Cases	Cases with Ratio ≥ 10	All Cases
Mean	560.45	1,872.78	1,156.96	213.49	402.74
Median	251.28	267.53	257.76	57.67	156.56
Total Awards	30,264.04	84,275.28	114,539.30	9,607.13	39,871.16
Percent of Total	26.42	73.58	100	24.10	100
Number of Awards	54	45	99	45	99
Percent of Awards	54.55	45.45	100	45.45	100

Panel B. Punitive/Compensatory Damage Ratio ≤ 1

	Actual Awards			Awards with Ratio Limit Imposed	
	Cases with Ratio ≤ 1	Cases with Ratio > 1	All Cases	Cases with Ratio > 1	All Cases
Mean	974.50	1,189.55	1,156.96	72.76	209.38
Median	236.10	267.91	257.76	26.05	40.00
Total Awards	14,617.46	99,921.85	114,539.30	6,111.54	20,729.00
Percent of Total	12.76	87.24	100	29.48	100
Number of Cases	15	84	99	84	99
Percent of Cases	15.15	84.85	100	84.85	100

[a] Damages are calculated as millions of 2008 dollars. All columns exclude the *Engle* award. *Garamendi v. Altus Finance, S.A.*, which has zero compensatory damages, is included in the statistics for all cases and for cases with a ratio exceeding the limit.