To Regulate, Litigate, or Both

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Abstract

In the United States insurance is regulated both by state insurance commissions and class action litigation. The interaction of these two systems has not been extensively studied. We examine four different facets of the regulation litigation tradeoff. The first is to examine whether regulator's interest in a particular cause of action reduces the likelihood that class actions covering this cause of action will be filed in the regulator's home state. We also examine several measures of regulatory stringency in the state to determine whether there is a substitution effect between regulatory action and litigation. We also examine whether class actions are less frequent when regulators issued an administrative decision on a particular issue previously or if there are no existing state laws on the particular issue. We examine the impact of electing judges on patterns of filing. The hypothesis is that elected judges are more sympathetic to plaintiffs and hence class actions are more likely to be filed in states that elect their judges. Lastly, we examine the impact of pervious litigation both in the state and the specific line of litigation.

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The Relation between Regulation and Class Actions: Evidence from the Insurance Industry

INTRODUCTION

Michael Avery, Mark Covington, Sam DeFrank, Carly Vickers and Todd Shadle were each involved in separate relatively minor traffic accidents in the early 1990s. Each of their accidents required minimal repairs to their vehicles.[1] Their insurer, State Farm, had a policy of repairing damaged cars with parts that were not made by the original equipment manufacturer (OEM). The use of non-OEM parts would have reduced each individual's bill between $45 and $155. Avery and Shadle opted for OEM parts and paid the cost difference themselves. The others had their vehicles repaired using non-OEM parts.

In 1997, these five drivers along with almost[2] all other State Farm customers who had non-OEM parts installed on their vehicles or who paid the difference between OEM and non-OEM parts were included in a class of about 4.5 million people.[3] The plaintiff class alleged that State Farm's policy of using non-OEM parts was a breach of contract because the insurer promised to restore their cars to their pre-loss conditions.[4] They further alleged that State Farm had committed fraud by violating Illinois consumer

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[1] Michael Avery was a resident of Louisiana, Mark Covington, of Mississippi; Carly Vickers, of Pennsylvania, and Todd Shadle, of Massachusetts. Sam DeFrank was a resident of Illinois, the state in which the case was adjudicated.

[2] Residents from Arkansas and Tennessee were not included.

[3] Avery v. State Farm Mut. Auto. Ins. Co., WL 955543 and WL 1022134 (not reported in N.E., 2d, 1999) (Ill. Cir., 1999). See State Farm Media Backgrounder for estimate of class size available at http://www.statefarm.com/about /media/backgrounder/avery_sf.asp (last accessed on March 12, 2009).

[4] WL 955543

protection statutes.[5] The alleged violation resulted, according to the plaintiffs, from the inferiority of OEM parts.

In many ways this litigation illustrates the tension between administrative regulation and class action litigation. The alleged damages to each individual plaintiff in the case were so small that the action would not have been brought without the class action procedural mechanism. The question at issue was whether non-OEM parts were really inferior to OEM parts.

In this class action, State Farm faced litigation on behalf of anyone in 48 states who had her car repaired with non-OEM parts. The aggregated damage judgment in the initial cases was 1.2 billion dollars.[6] This represents a sum equal to one third of State Farm's net income in 2007.[7] Faced with the possibility of such large damages most defendants would have settled and discontinued the use of non-OEM parts. State Farm did the latter but it did not settle. The judgment against State Farm was overturned but not before the case had altered company policy toward non-OEM parts in 48 states. [8] While the State Farm case is atypical in its size, the cumulative effects of several class actions against a company can have a similar effect on a firm's practices.[9]

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[5] WL 1022134

[6] WL 955543 and WL 1022134

[7] 2007 Annual Report to State Farm Mutual Policyholders available at http://www.statefarm.com/_pdf/2007annualreport.pdf (last accessed on March 12, 2009).

[8] The class was certified on July 1997 in Williamson County, Ill. On October 4, 1999 a jury awarded $456 million to the plaintiffs for breach of contract. This award was followed four days later by an additional award of $730 million dollars for consumer fraud made by Judge John Speroni. The award included $600 million in punitive damages. On April 5, 2001 the Appellate Court reduced the verdict by $130 million but let stand $1.05 billion of the award. In 2005, the Illinois Supreme Court overturned judgment against State Farm. The Court unanimously ruled that class should not have been certified because it was too broad and that the plaintiffs failed to demonstrate either a breach of contract or consumer fraud.

[9] See Nicholas M. Pace, Stephen J. Carroll, Ingo Vogelsang, Laura Zakaras. Insurance Class Actions in the United States (2007) for a discussion of the size distribution of insurance class actions.

This change in policy would not be surprising if virtually every state had not previously regulated the issue of whether insurers could use non-OEM parts. In the majority of states such regulations existed implying the states had examined the issue. Non-OEM parts were allowed in Illinois if their use was disclosed on the consumer's estimates, the parts were of like kind and quality, the manufacturer was identified on the part, and a warrantee was provided. Illinois already had regulations designed to balance the competing goals of lower costs versus higher quality repairs. In effect, the litigation created a parallel system of regulation.

On one level operating a system of state regulation and a parallel system of regulation through the courts is redundant and potentially contradictory. Further the system generates its own administrative costs. In the 27 cases in the RAND Insurance Class Action database that reported attorneys' fees, the average fee award constituted 29 percent of the gross common fund. The median award was 30 percent, and the largest award was 41 percent.[10] This is slightly higher than the Eisenberg and Miller estimate of 22 percent,[11] but it is consistent with some other findings in the literature.[12] This does not include defense costs or the cost of administering the case by the courts.

The operation of potentially redundant and expensive regulatory systems might be justified on two grounds:

1) Administrative regulation and class actions can both be used in the process of controlling behavior with states alternating in their use depending on which one

[10] Pace, supra note 9, xxiii.
[11] Theodore Eisenberg and Geoffrey Miller. Attorney Fees in Class Action Settlements: An Empirical Study. 1 J. Emp. Leg. Stud. 27, 51-52 (2004).

can be operated more cheaply on the margin. That is, the two systems serve as substitutes in the regulatory production function in the same way that manufacturers use both labor and capital in producing goods but, on the margin, more labor implies less capital and vice versa;

2) Class actions allow consumers to influence regulatory policy when administrative regulators are captured by industry.

The first hypothesis is that regulation via an administrative office and regulation by the courts using class actions are simply substitutes. In the context of insurance class actions, if the regulators prevent insurers from defrauding customers, then there is no harm to generate litigation in the future. We should observe class actions more frequently when regulators allow more harm to occur and hence more damage to generate litigation. In effect regulation represents a floor. The choice is not either administrative regulation or class actions; administrative regulation represents the minimum standard that courts can go beyond if the agency in question has not protected consumers at the relevant legal standard. In effect regulation represents a minimal level of deterrence that does not require litigation but if that level is insufficient, then litigation will provide the additional deterrence required.

To take a prominent example, the Securities and Exchange Commission (SEC) has long argued that private security litigation is a substitute for SEC fines. This division of

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[12] Thomas Willging, Laurel Hooper, and Robert Niemic. Empirical Study of Class Actions in Four Federal District Courts: Final Report to the Advisory Committee on Civil Rules, 14 (1996) available at http://www.fjc.gov/public/pdf.nsf/lookup/rule23pdf/$file/rule23.pdf (last accessed on March 12, 2009).

labor, it is argued, frees up enforcement resources and allows the SEC to target firms that private attorneys would not.[13]

The second justification for operating a dual system is the possibility of regulatory capture. Economists, starting with Stigler, have argued that regulators are likely to be captured by the industry they regulate.[14] The source of this capture is a collective action problem. The cost to an industry resulting from regulation is concentrated, while the benefits to consumers from the regulation are diffuse. For example, in the case of price regulation, no consumer has an incentive to lobby the regulator to control prices as the individual gains are too small to warrant the effort of lobbying. Regulated industries, on the other hand, have incentives to lobby for more generous rate increases.[15]

Pace, et al argue that since courts are less likely to be captured by industry than a regulatory agency with a single jurisdiction, class actions can represent a check on the ability of industry to determine regulatory policy.[16] The point extends beyond regulated prices. In the case of breast implants, Hersch argues that the initial motivation of the consumer class actions was a perception that regulation was lax because the FDA was unwilling to actively monitor medical devices.[17] In some cases, such as lawsuits against handgun manufacturers, the argument goes even one step further. The political process, according to proponents, is deadlocked and unable to produce meaningful safety

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[13] For a critical view of this position, see Amanda Rose. Reforming Securities Litigation Reform: Restructuring the Relationship Between Public and Private Enforcement of Rule 10B-5. 108 Colum. L. Rev. 1301, 1309 (2008).
[14] George Stigler. The Theory of Economic Regulation 2 Bell J. Econ. Mgmt. Sci. 3 (1971).
[15] See Dennis Mueller. Public Choice III, 344-345 (2003) and cites therein.
[16] Pace et al, supra note 9, 68.
[17] Hersch, Joni. Breast Implants: Regulation, Litigation and Science. Regulation through Litigation, W. Kip Viscusi, editor, AEI-Brookings Joint Center for Regulatory Studies, Washington, D.C. (2002).

regulation. The courts offer an avenue to a "more rational" standard for consumer protection.[18]

In this article, we examine the two competing justifications for the parallel system using evidence from insurance class actions and regulation. Insurance regulation in the United States is largely in the hands of the states. Although regulatory agencies are similar in many respects, it is not an overstatement to say that the US has 51 separate regulatory regimes for insurance. State regulation generally focuses on two areas: solvency regulation and market regulation. Solvency regulation, which requires insurers to maintain adequate reserves and guaranty funds and meet financial disclosure requirements, is relatively homogenous across states. But market regulation, which regulates insurance products, practices, and prices, varies dramatically. We use this variation to evaluate the link between insurance regulation and class action litigation.

We test whether regulation and litigation are substitutes on the margin. Specifically, if regulation has some deterrent value, the probability that a company commits a wrongful act is a function of the level of regulation. This implies that more active regulators should be associated with less harm in their jurisdictions. Once a harm or perceived harm occurs, the case enters the civil justice system if the plaintiff's attorney expects that the case is likely to be successful and financially viable.[19]

We use data from the National Association of Insurance Commissioners concerning the regulatory environment in each state. We link this data to a unique

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[18] Philip Cook and Jens Ludwig. Litigation as Regulation: Firearms. Regulation through Litigation, W. Kip Viscusi, editor, AEI-Brookings Joint Center for Regulatory Studies, Washington, D.C. (2002).

[19] Eric Helland and Jonathan Klick. The Tradeoffs Between Regulation and Litigation: Evidence from Insurance Class Actions. 1 J. Tort. L. Article 2 (2006) examines the relationship between harm generation while controlling for the likelihood of litigation.

dataset, the RAND Insurance Class Action database. The data on class actions[20] contains information on class actions against firms in the insurance industry for 748 distinct cases that were open at least once during the period of 1992 to 2002. Because the data is reasonably comprehensive for the companies responding to the survey, we are able to link the frequency of class action litigation to the states' insurance regulation data.

We examine four different facets of the regulation litigation tradeoff. The first is to examine whether regulator's interest in a particular cause of action reduces the likelihood that class actions covering this cause of action will be filed in the regulator's home state. We also examine several measures of regulatory stringency in the state to determine whether there is a substitution effect between regulatory action and litigation. For example, we use state regulatory budgets as a proxy for regulatory stringency, a factor that varies enormously from state to state, examining the relationship between levels of stringency and the incidence of class actions.

We also examine whether class actions are less frequent when regulators issued an administrative decision on a particular issue previously or if there are no existing state laws on the particular issue. In a system where regulation and litigation are substitutes, if regulators are silent, then the private attorneys are more likely to step in. Using OEM parts cases, we examine whether states that have not issued rulings on the use of non-OEM parts have more OEM class actions. Since the issue is unsettled, the theory goes, class actions in effect fill the regulatory void.

To test the second hypothesis—that regulatory capture induces insurance class actions—we examine differences in insurance rates between states that elect their

[20] For a full description of this dataset, see Pace et al, supra note 9.

insurance commissioners and those that appoint them. Several studies have examined the link between insurance rates and whether insurance commissioners are chosen through elections or by appointment. The findings from these studies suggest that regulatory capture, which is revealed in the form of higher prices, is less likely when commissioners are elected then when they are appointed. Building on these studies, we look for a relationship between the election of commissioners and the frequency of class actions in a state.

Finally we examine other factors, not directly related to the two hypotheses that potentially determine the likelihood of a class action filing. While these factors do not directly speak to the link between regulation and class actions, they are related to the potential influences on the observed patterns of class action filings. Specifically we examine the impact of electing judges on patterns of filing. The hypothesis is that elected judges are more sympathetic to plaintiffs and hence class actions are more likely to be filed in states that elect their judges. Lastly, we examine the impact of pervious litigation both in the state and the specific line of litigation.

Understanding the relationship between litigation and regulation, especially as it relates to the insurance industry, takes on special importance given the current financial crisis. The uproar over the government's $170 billion commitment to bailout American International Group (AIG),[21] along with similar (though less dramatic) problems among other insurers, may be a harbinger of sweeping changes in how we regulate the insurance industry in the U.S.

[21] See, for example, Gretchen Morgenson. A.I.G. Bailout Priorities Are in Critics' Cross Hairs. New York Times, March 17, 2009.

The next section discusses the nature of insurance regulations and provides some background on class action litigation necessary to motivate our empirical investigation. We then discuss the data and examine the evidence for a substitution between administrative regulation and class actions. Section 2 provides evidence on the relationship between regulatory capture, as measured by the election of insurance commissioners, and class action frequency. Section 3 provides comprehensive regression results from a model including all of determinants of class action filings and presents evidence on the relationship between filing decisions as the outcome of previous class actions in the state. Section 4 offers some concluding remarks and directions for further study.

I. CLASS ACTION LITIGATION AS REGULATION

There are several theoretical motivations for why we might observe a tradeoff between regulation and class actions. In particular, the seminal Shavell model of the relationship between regulation and litigation provides a useful starting point.[22] Shavell's model provides conditions for the efficient use of both regulation and litigation in a system geared toward incentivizing individuals to take the socially optimal level of care. As is evident from the Shavell model, liability and regulation serve as substitutes on the margin. That is, all other things equal, as the regulatory standard (or enforcement level in the real world setting where not all violations are discovered by the regulator[23]) is raised,

[22] Steven Shavell. A Model of the Optimal Use of Liability and Safety Regulation. 15 RAND J. Econ. 271 (1984) and Steven Shavell. Liability for Harm Versus Regulation of Safety. 13 J. Leg. Stud. 357 (1984).
[23] Although the Shavell model does not distinguish between the standard and its enforcement (i.e., he assumes that any standard can be enforced perfectly), in the real world, standards are not self-enforcing. This implies that for any given standard, care achieved will be a function of enforcement. For simplicity, we will use the term standard to imply enforcement levels throughout this paper.

there is less need for liability in generating socially optimal behavior.[24] In fact, in the limit, if the regulatory standard is set above the social value of the harm avoided, we will have too much care taken in which case any additional care induced by liability will be pure social waste. Further, as a positive matter, the higher the regulatory standard, the less harm that will occur, leaving a smaller domain for litigation, all other things equal.

For our purposes, another element of Shavell's model that is interesting is his claim that regulation is most useful in contexts where harm across parties is similar, whereas litigation is most useful when there is a high degree of variability across parties.[25] By focusing on class actions, where, by definition, the harms are similar across parties, we mitigate the importance of this element of the Shavell model.[26]

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[24] This is seen most easily in Steven Shavell. A Model of the Optimal Use of Liability and Safety Regulation. 15 RAND J. Econ. 271, 275 (Figure 2) and 276 (Figure 3) (1984).

[25] Steven Shavell. A Model of the Optimal Use of Liability and Safety Regulation. 15 RAND J. Econ. 271, 274 (1984).

[26] One important element of Shavell's model is that it deals with the impact of a change in the impact of a change in the marginal level of regulation or litigation on the marginal level of deterrence. In the Shavell model, both regulation and litigation are inputs to deterrence and, hence, citizens of a state are "choosing" the level of each input based on its relative cost in order to achieve the desired level of deterrence. By contrast our results deal with the impact of average litigation or regulation on average deterrence. Implicitly the diagrams that follow assume that all states have the same desired level of deterrence and hence tradeoffs between regulation and litigation would be evident. If this is not true, it is possible that a state has both higher levels of litigation and regulation because its residents desire more deterrence and hence purchase more of both inputs than a state which has lower levels of both regulation and litigation. Consider two states, Pennsylvania and California which desire different levels of deterrence. If California residents desire higher levels they may to choose legal rules that facilitate more litigation and spend more on insurance regulation. One method for reducing the impact of across state differences in the desired level of deterrence is to estimate a fixed effect model in which the fixed effects control for all omitted variables that are constant through time. In the regressions below we estimate the model using both state fixed effects and more restrictively state-allegation fixed effects that will capture the effects of different desired levels of deterrence to the extent that these are constant during our sample period. If these assumptions hold our fixed effect regressions test whether Shavell's normative conclusions are followed in practice (See Wooldridge, J.M. (2002), Econometric Analysis of Cross Section and Panel Data. Cambridge: MIT Press.)

A. Data Background

To investigate the relationship between litigation and regulation, we use a unique data source covering the experience of insurance companies with class action litigation. The dataset, described more completely in Pace et al., contains information on class actions against firms in the insurance industry derived from 988 case-level surveys from 130 insurance companies, describing 748 distinct cases that were open at least once during the period of 1992 to 2002.[27] The information was gathered through a survey that concentrated on larger insurance companies in the property-casualty, life, and health markets. The complete dataset contains information on cases filed between 1984 and 2002. The survey asked the responding companies to describe, for each such case in which they were a named defendant, the courts of filing and disposition, the names of other defendants in the case, whether there were also similar cases filed earlier or in other jurisdictions, the lines of insurance involved, the key allegations of the plaintiffs, key statutes involved, whether the issue of regulatory jurisdiction was raised by any of the parties, the description of the actual or putative class, the geographical scope of the actual or putative class, the outcome of any certification process, the manner in which the case was resolved, and the details of any settlement or trial verdict for the plaintiffs.[28] Table 1

[27] Pace, supra note 9, Chapter 2.

[28] There are several important limitations of the RAND insurance class action data that are discussed more fully in Pace et al. 2007. The data is biased towards the experiences of insurers responsible for the top 65% of all premiums written in their respective markets since the survey was more likely to be returned by larger insurers (Pace et al. 2007) Since larger insurers are more likely to be the target of litigation, the sample is likely fairly comprehensive. The surveys were only sent to those companies identified in AM Best's data as property and casualty, life, or health insurers. Thus class actions filed only against re-insurers or companies not otherwise included in AM Best are not captured by the data. This potentially affects the geographic distribution of case as the respondent group, like the insurance industry generally, is dominated by relatively larger writers of automobile private passenger policies. Thus the jurisdictions in which the reported cases were litigated are likely to reflect the market penetration of the responding companies. Not all insurance companies write policies in all 50 states and the District of Columbia. Even

contains the distribution of cases by insurance line. The vast majority of cases in the data concern automobile insurance.

Table 1: Lines of Insurance Involved in the Case

Lines	Percent of All Cases
Automobile	67.5
Homeowners	12.8
Life	7.1
Workers' Compensation	6.3
Health	2.4
Multiple Lines	1.2
Annuities	1.2
Earthquake	1.2
Mobile Home	0.9

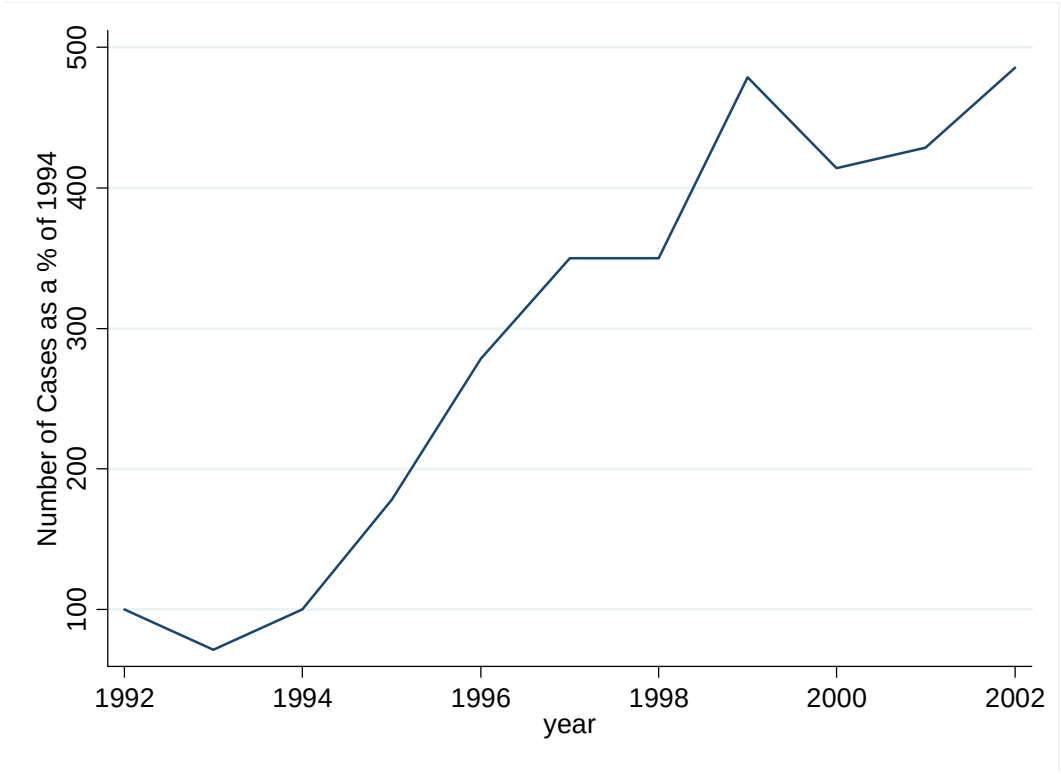
Source Pace et al. 2007

Figure 1 presents the trends in the overall number of insurance class actions filed per year for the 12 companies which were able to provide complete information on their experience with class actions between 1994 and 2002. Taking 1994 as the base year we then divide the number of cases by 12 to produce a growth rate relative to a base of 1994. While the actual numbers of cases remain small, 14 cases in 1994 rising to 68 in 2002, the percentage increase is dramatic. The growth in cases alleging nationwide or multi-state classes, shown in Figure 2, is also substantial. The data show the number of nationwide and multi-state cases rising from one alleging nationwide status and another alleging a multi-state class, up to a high of 19 cases alleging multi-state status in 1999

those that do have a national presence do not have the same relative share of the market in each state. If the likelihood that a insurer would be the subject of a class action in a specific jurisdiction bears any relationship to the degree to which the insurer writes business in that same jurisdiction, then the geographical distribution of our cases will be quite different than if all companies originally contacted had responded. One final caveat on the data is required. The cases reported in the survey took place prior to the enactment of the Class Action Fairness Act of 2005 (CAFA). It is possible that many of the state court cases in the sample would have been removed to federal court under CAFA. If cases continued to be filed

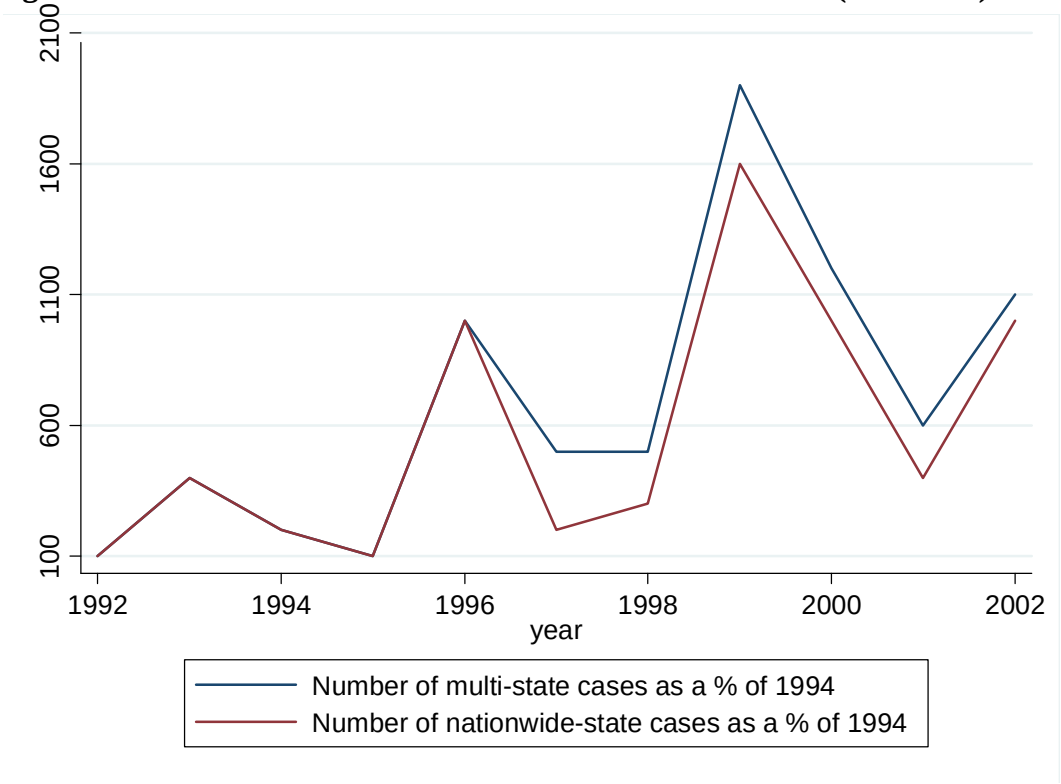
and another 16 with an allegation of a nationwide class. It seems likely that the importance of insurance class actions as an alternative regulatory device has grown as well.

Figure 1: Growth in Insurance Class Actions (1994 base)



in state court and removed to federal court, the case the state filing rates used in this study would be similar. A more likely scenario is that the filing patterns in this study have been altered by CAFA.

Figure 2: Growth in Multi-State or Nationwide Class Actions (1994 base)



How definitive can we be about the growth in insurance class actions? Two important caveats are required about the trends presented above. Respondents are more likely to have reported newer cases. A number of responding insurers indicated that older class actions litigated near the start of our study period were not tracked in a way that would allow them to be as identifiable. For this reason the growth may be less dramatic then it appears.[29] The second limitation is that we do not generally know the size of the class. A simple explanation of the growth of class actions may well be that

[29] See Pace, supra note 9, 30 for a discussion of the issues involved in determining the trend of insurance class actions

earlier cases represented more individuals than later case meaning the overall impact of class actions litigation during this period is unchanged.[30]

The cases also concern a number of different allegations. About half of the cases involved allegations related to health care providers as assignees of medical benefits in automobile policies (either as part of personal injury protection plans in "no-fault" states or as 1st party medical payments coverage in "add-on" states), various property coverage claims, claims by policyholders or beneficiaries under automobile uninsured\underinsured motorist coverage, diminished value claims related to first party automobile coverage, and various workers' compensation issues. Diminished value allegations were the most frequently cited in our data. Appendix Table A1 contains the breakdown from the sample of allegations which occur 5 or more times in the data.

B. Aggregate Relationship between Regulatory Interest and Litigation

To confirm that our regulators and class actions are operating in the same domains (as is required for us to draw any inference about their substitutability) we examine the evidence that the relevant regulators view the issues underlying these class actions as falling within their purview. At a general level, we must address is whether regulators are even interested in the same issues as those being litigated in class actions. Regulatory interest is clearly related to substitution. If regulators have the first opportunity to deter a harm, the substitution hypothesis would predict that when

[30] For this reason in addition to case counts we will examine the number of cases per 1000 residents as a proxy for class size (see below). One concern is that the any relationship between resources and class action frequency could simply be generated by more populous states having insurance commissions with more resources. We would expect, for example that California with its large population would have a greater number of class actions than North Dakota.

regulators are interested in a specific type of harm that harm is less likely to be alleged in a future class action filing, since it is less likely that the harm ever occurred.

First, we report on a survey that asks state regulators whether they view the allegations contained in our sample as coming under their regulatory mandate. To determine the relationship between regulator interest and class actions, the RAND Institute for Civil Justice conducted a survey in 2005 of staff members of state departments of insurance. Seventeen states completed the survey. The survey asked the regulators to rank the 260 key allegations made by the plaintiffs in our cases by their relationship to the traditional activities of the regulator. Each allegation was ranked on a five point scale. A rating of "1" implied little or no relationship between the particular allegation and the regulators traditional activities. A rating of "5" implied a significant overlap with the regulators activities. A more complete discussion of the results is contained in Pace et al.[31]

The across state average rankings ranged from 2.0 for claims alleging that the defendants "failed to have settlements reached with minors reviewed and approved by a judge" to an average of 5.0 for claims that "the defendants sold coverages in insolvent plans or with unlicensed carriers." The mean and median adjusted responses were about 3.6. In the appendix Column 4 and 5 of Table A1, we present the results of a survey of state insurance regulators for all allegations which generated more than five cases in the class action data.

Pace et al. (2007) classify regulatory issues with an adjusted response above the 80th percentile (i.e., those greater than 4.07) as having the "strongest" potential

relationship to a state's regulatory regime. They further label issues in the bottom 20th percentile of all adjusted responses (3.15 and below) as having the "weakest" relationship. Those issues between the 20th and 80th percentile are ranked as having a "modest" relationship.[32]

Substitution between administrative regulation and class action would predict that class actions alleging a particular cause of action should be more frequent when surveyed regulators respond that the cause of action is outside their regulatory mandate. Thus, if regulators in a state viewed causes of actions alleging that companies "offered inadequate amounts for personal mileage reimbursement" (ranking of 2.44) as outside their regulatory authority and therefore a type of damage best handled by the courts, we would expect to see more cases of this type in the state.

However, most insurers responded to the survey saying that vanishing premium cases were within their regulatory mandate (rank of 4.35).[33] Given the level of interest in the harm generated by vanishing premiums, we would expect them to be rare in the data. In fact, however, our analysis shows that class action frequency has no relationship to regulatory interest. Figure 3, which plots the RAND DOI survey results against the number of cases in the data making the specific allegation, shows that cases dealing with allegations that are highly salient to local regulators are no more or less frequent that those of little interest.

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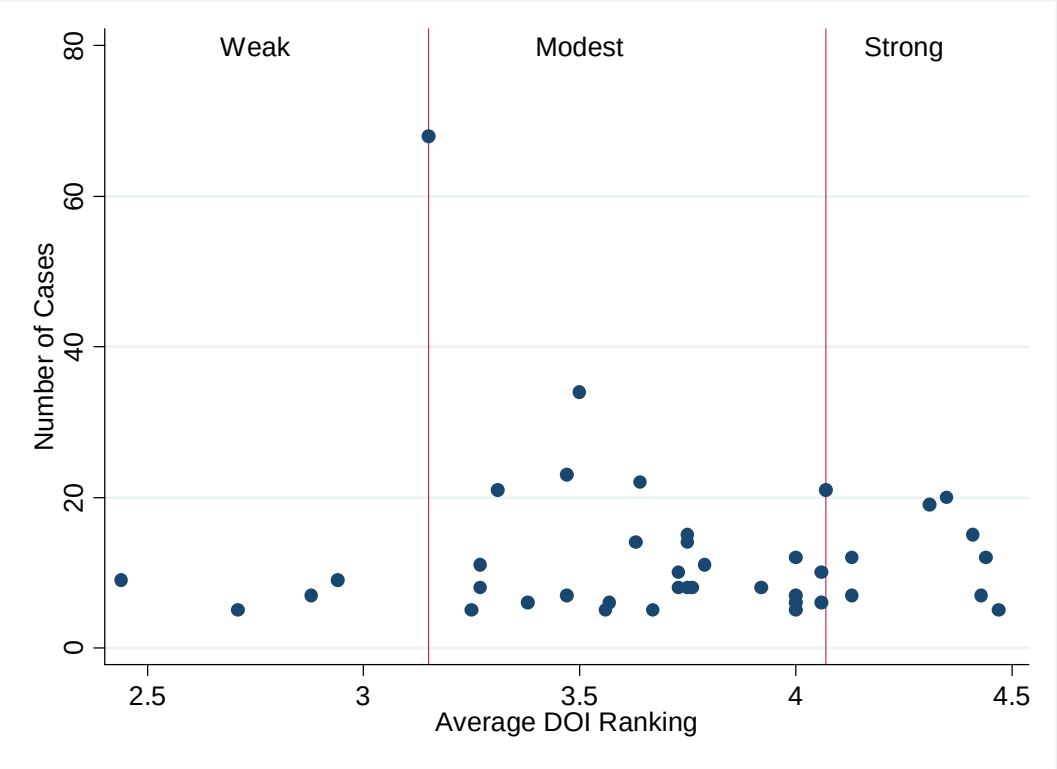
[31] Pace, supra note 9, Chapter 4.
[32] Ibid.
[33] Vanishing premium cases are causes of action generated by an insurer's claim that premiums would vanish over time offering coverage without a lifetime of payments while reality premiums failed to disappear because the assumptions behind the project premiums were unrealistic.

Figure 3: DOI Ranking of Allegation and Allegation Frequency



The results of the survey do not suggest that regulation and class actions are substitutes at least in terms of regulatory interest. Class actions alleging a particular cause of action are no less frequent when the surveyed regulators claim they are more interested in that cause of action than when state regulators claim they are less interested in that cause of action. Most of the cases fall into the area of modest regulatory interest and in relatively few cases do regulators express a weak interest. Regulators and class actions appear to be concerned with similar issues.[34]

[34] Ideally we would like to have information on whether regulators survey responses match their actions. Our regulatory data such as budgets and fines are not disaggregated by allegation. We do however have data on whether the regulators intervened in specific cases. There is relatively little difference in the likelihood that the regulator will intervene in the case. For cases with a strong rank, by Pace et al.'s measure, regulatory intervene 8.97% of the time. For cases ranked less with less than strong interest the intervention rate is 7.12%. See Pace et al. supra note 9, chapter 4

C. Regulatory Resources

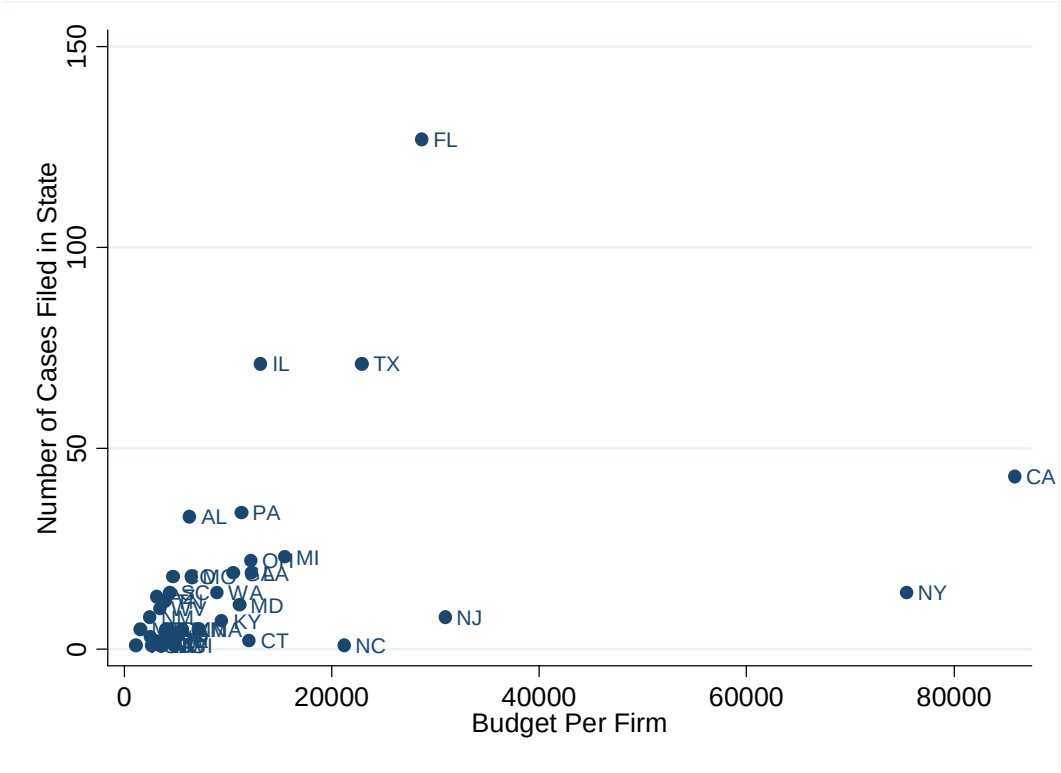
One limitation of the survey is while state regulators may be interested in the same issues as those being litigated, they may lack the resources to take action. It is possible that regulation and class actions are substitutes in deterring harm not because regulators do not view deterring a potential harm as outside of their mandate but because, at least in some states, funding constraints limit their ability to regulate as many different types of harm as states with higher funding levels.

To examine this issue, we selected four measures of regulatory stringency: the regulatory budget per insurance firm, the number of market conduct exams per insurance firm regulated by the state, the number of market conduct examiners per insurance firm regulated by the state, and the value of fines per regulated insurance company.

The data on regulatory activity comes from the National Association of Insurance Commissioners (NAIC) report the "Insurance Department Resources Report," which according to the NAIC website "Provides an in-depth look at the resources of the 55 insurance departments." Ideally, we would like information on regulatory activity specific to the line or allegation, but the data provided by the NAIC is not this specific.

Figure 4 shows the relationship between budgets and the number of class actions filed in the state. The insurance regulator's budget is the broadest measure of the resources devoted to insurance regulation in the state. As in the case of the survey data, a substitution between regulation and class actions would predict that class actions are more frequent when budgets are tighter. The results suggest that the relationship between regulatory stringency and class actions is either flat or weakly positive. When states provide more resources to regulators we see more, not fewer, class actions.

Figure 4: Number of Cases and Budget Per Firm



One concern is that the states budget might mask important differences in the scope of a state agency's regulatory activity. Our other measures of regulatory stringency are more specific. Market conduct exams are broad investigations into the business practices of insurers in the state. For example, according to the Maryland Insurance Commissioner,

> The Compliance Unit reviews insurance company operations to determine how the company operates in the market place. The examiners' review includes, but is not limited to, sales practices, advertising materials, underwriting practices and claims handling practices. Examinations often help alert companies to problems and serve as a form of consumer protection. The resulting examination report presents a detailed analysis of a company's general business practice.[35]

[35] At http://www.mdinsurance.state.md.us/jsp/availPubInfo/MarketConductExams.jsp10?divisionName=Market

Although some level of investigation is regularly conducted by state regulators, there is wide variation in the frequency of these inspections. The New Jersey Department of Banking and Insurance explains that inspections

> …may be based on an increase in complaint volume, an increase in the frequency of complaints on a particular issue, the findings of a prior exam, a change in the company's market presence or the length of time since the last exam.[36]

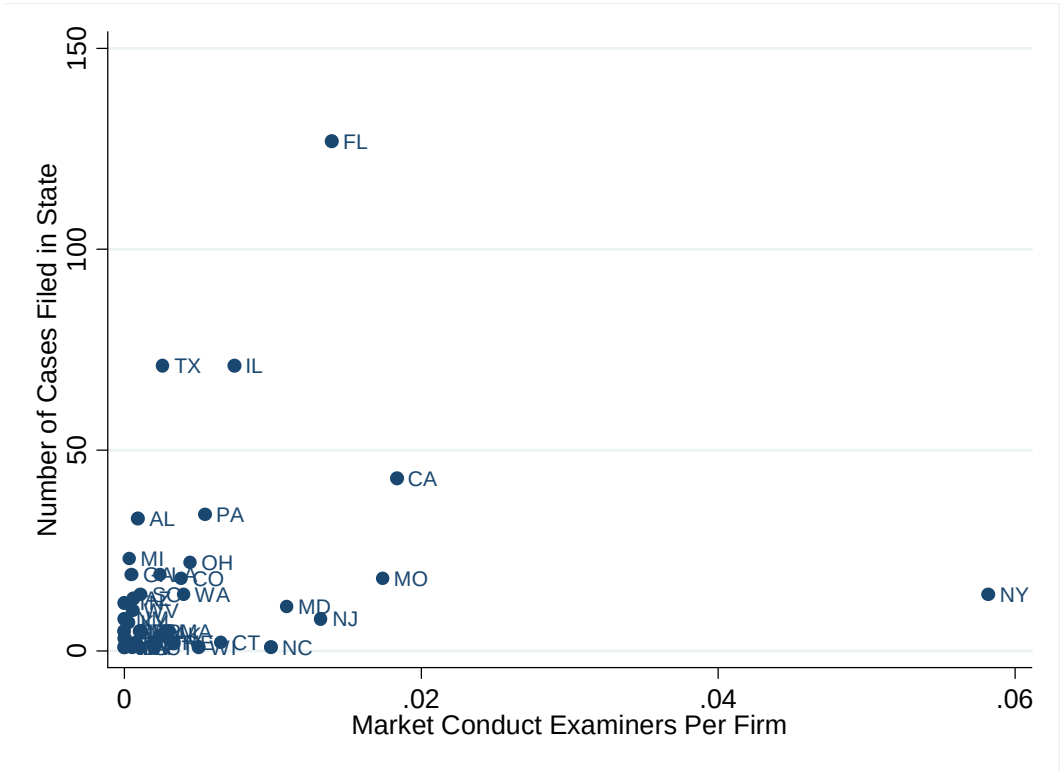
The frequency with which a firm can expect to have its business practices reviewed in the state as well as the number of inspectors the state retains to conduct these exams are useful proxies for regulatory resources. A third measure, the budget of the state insurance regulatory agency per firm, is broader but has a similar interpretation.

In Figure 5 through Figure 7 we present a plot of these measures of regulatory stringency against the number of class actions filed in the state. A few states, such as New York, stand out in the frequency with which they inspect the firms under their jurisdiction while several other states, such as Florida, stand out for the frequency with which class actions are filed in their borders, but overall, we find no evidence for the hypothesis that class actions will be more common in states with relatively weak regulatory environments.

+Conduct+Exams&pageName=/jsp/availPubInfo/MarketConductExams.jsp10 referenced on February 1, 2007

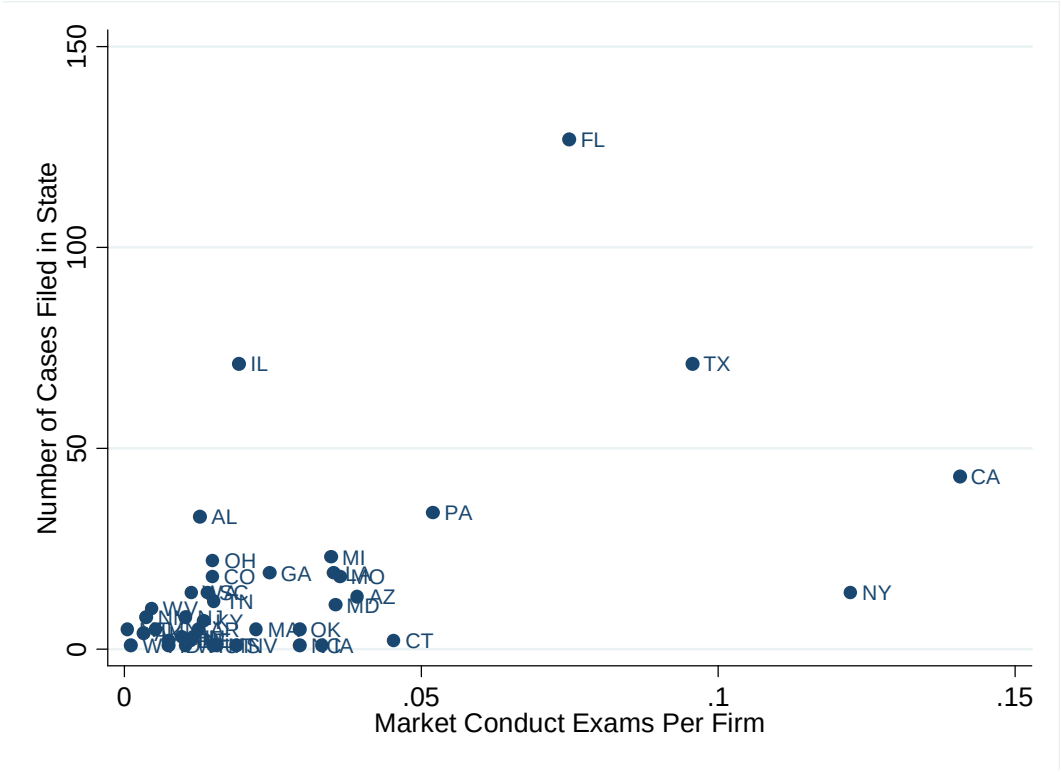
[36] At http://www.state.nj.us/dobi/mcesteps.htm referenced on February 1, 2007

Figure 5: Number of Cases and Market Conduct Examiners Per Firm



One possible reason for this divergence is that class actions can be filed in cases other than where the harm originated. A case in New York, for example, might actually cover harms in other states but is filed in New York because an insurer is headquartered there or for other idiosyncratic reasons. Figure 6 presents the number of cases filed on behalf of residents of a state regardless of where the case was filed. The intuition is that a state with lax regulation would consistently find its residents as members of a class even if the cases were not filed in that state. This is not the pattern that emerges in Figure 6. Again states which devote more resources to enforcement appear to also be more likely to feature their citizens as class members.

Figure 6: Number of Cases and Market Conduct Exams Per Firm



In Figures 7 to 9 we scale the number of class actions filed by the population of the state under the assumption that class actions may be more likely in states with larger population. The scaling does change the pictures but the broad interpretation remains the same. There is no evidence of a substitution effect between insurance class actions and the stringency of regulation.

Figure 7: Number of Cases Per 1000 Residents and Market Conduct Examiners Per Firm

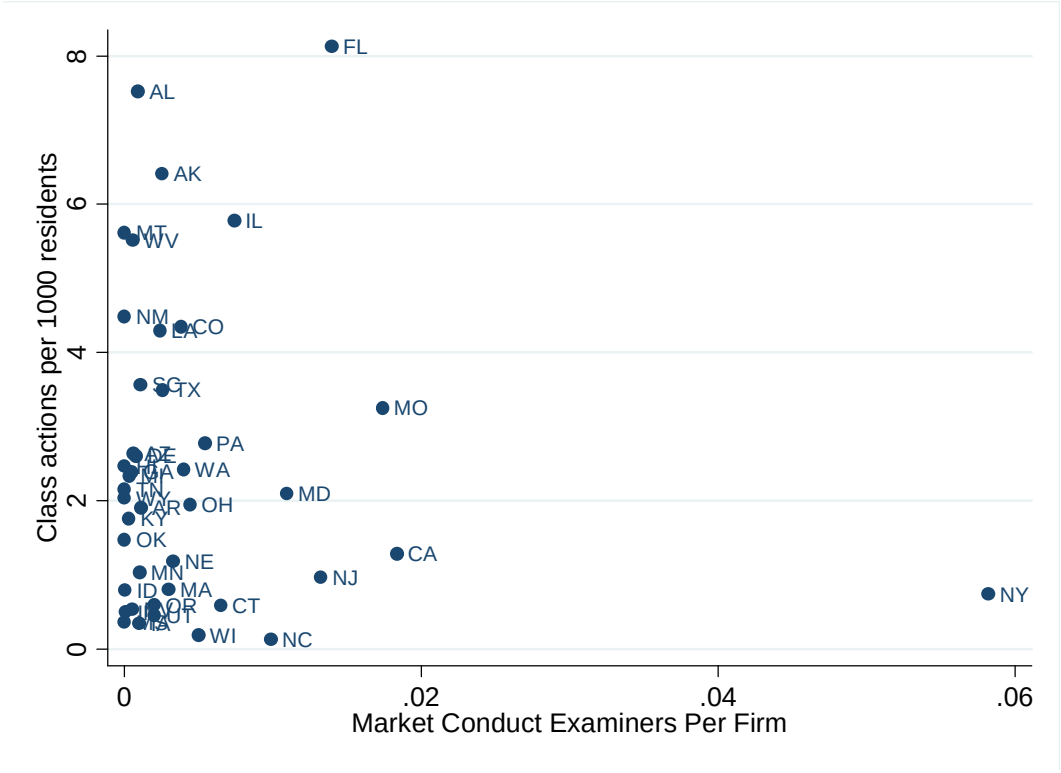


Figure 8: Number of Cases Per 1000 Residents and Market Conduct Exams Per Firm

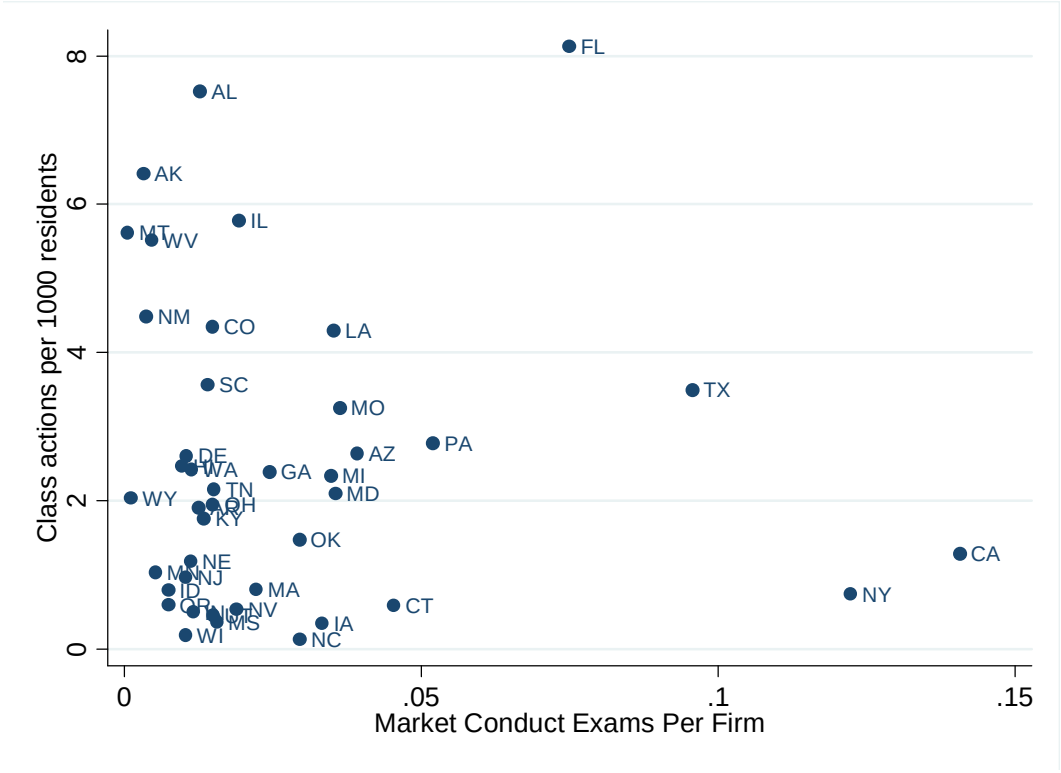
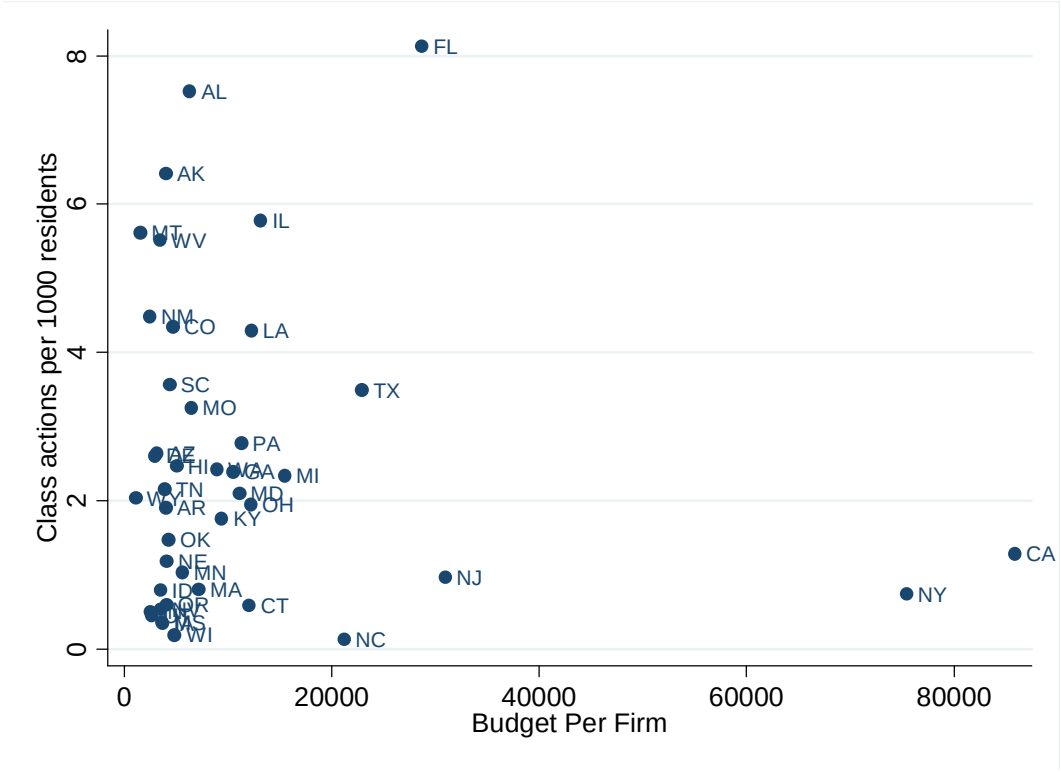


Figure 9: Number of Cases Per 1000 and Budget Per Firm



The results from the previous sections provide no evidence that administrative regulation and class actions are substitutes in the sense that class actions are more frequent when regulators are either less well funded and hence have a more limited scope of regulatory activity nor when regulators in a survey claim that specific causes of action are more tangential to their regulatory mandate. We now turn to evidence on the frequency with which regulators involve themselves in insurance class actions. One way of assessing regulatory interest is whether the frequency of regulatory involvement in cases themselves varies with resources. It is possible that class actions are filed without regard to regulatory efforts to deter the same harm but that regulators then make courts aware of their efforts in order to avoid duplication.

D. Regulator Intervention in Class Actions

Our survey of class action cases suggests that regulators do not typically get involved in class actions. In 7.7% of the case the some government agency files a brief, is a party to the case or works to broker a settlement.[37] In the majority of states the regulatory agency is never involved in the case. Moreover, as shown in Figures 10-12, involvement is largely uncorrelated with the resources of the insurance regulatory agency.

[37] For a more extensive discussion of government intervention see Pace, supra note __, Chapter 4.

Figure 10: Proportion of Cases with Government Involvement and Market Conduct Examiners

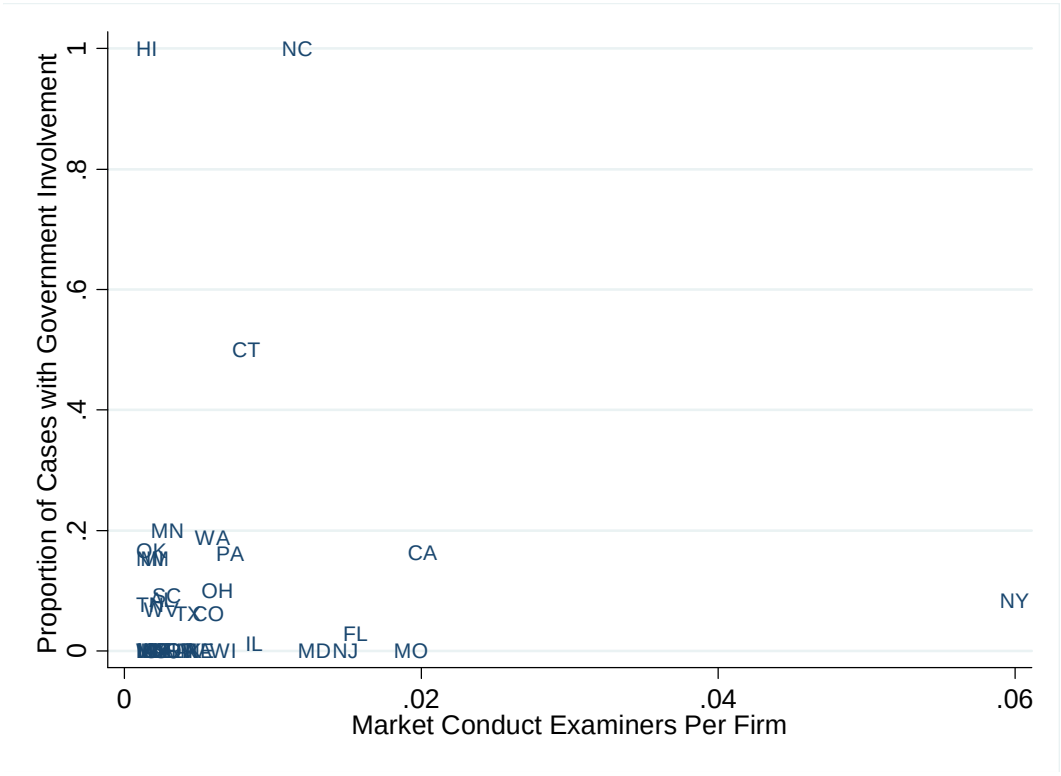


Figure 11: Proportion of Cases with Government Involvement and Market Conduct Exams

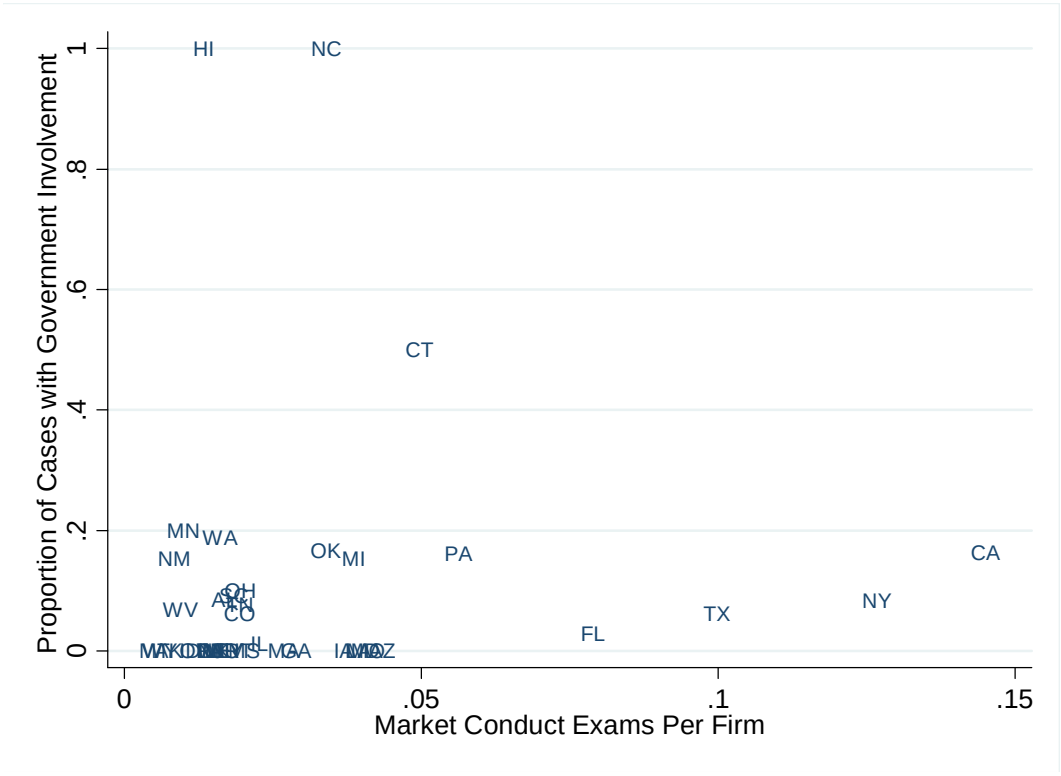
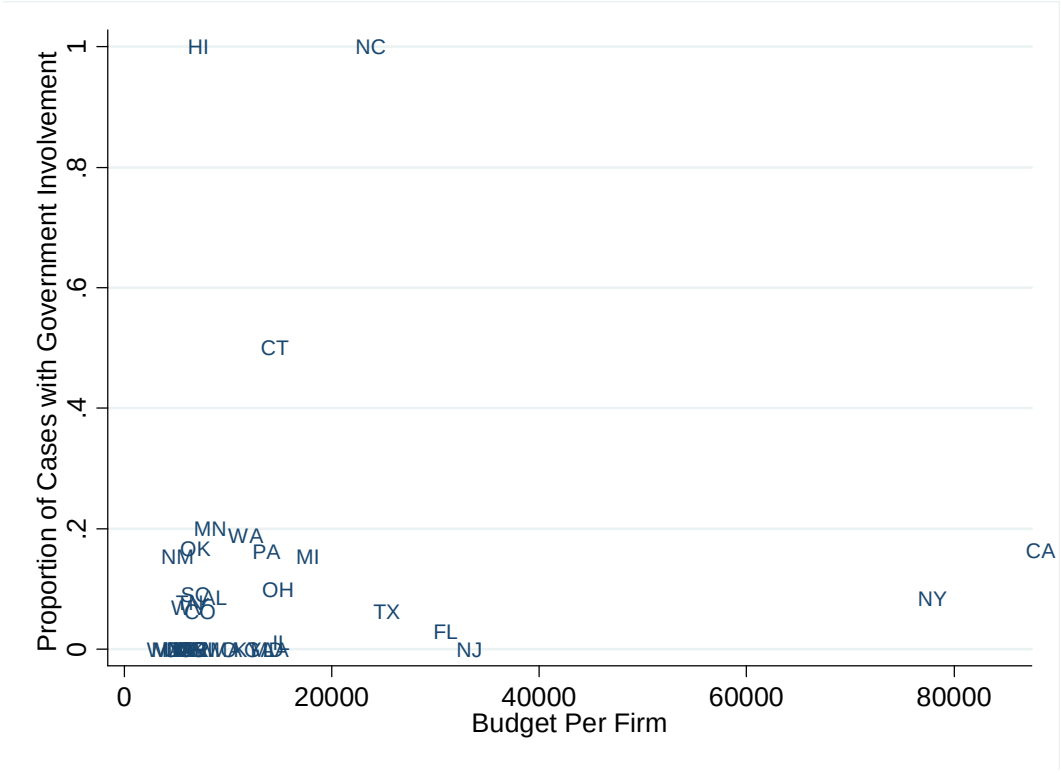


Figure 12: Proportion of Cases with Government Involvement and Budget Per Firm



The implication is that while class actions are largely filed independently of the regulatory environment in the state, the local agencies do intervene in these cases. While the exact cause of those interventions is idiosyncratic to the case, there are several states which stand out as having more frequent interventions. One issue for further research is why these states intervene and what the consequences of intervention in these cases are.

The evidence presented above is inconsistent with the hypothesis that class actions and insurance regulation are substitutes. We find no evidence that class actions are used more frequently when regulators view a cause of action as outside their mandate or when regulators have more limited resources. Further resources do not appear to determine the frequency with which regulators intervene in ongoing class action

litigation. In the next sections we briefly turn to an alternative hypothesis on the process generating observed filings.

E. A More Precise Examination of the Substitution Hypothesis

The preceding analyses rely on fairly aggregate measures of regulatory enforcement. While we believe that resources measures, on average, will capture regulatory stringency, it could be the case that the regulators are simply acting in areas that are distinct from the issues covered by the class actions. Although our regulator interest examination cuts against this interpretation of our results, at the end of the day, these are just measures of what the regulators say they are interested in and this may be distinct from what they actually spend their time and resources doing.

To get a more precise view of how litigation and regulation interact, we examine a situation where many regulators or legislatures have issued rulings or orders on the conduct in question. While class actions do not appear to result from a gap in regulatory enforcement at least in our aggregate data, it is possible they result from gaps in rules. We examine this possibility by looking at a specific allegation's frequency and whether the state regulators had existing regulatory rulings on the subject of the allegation.

Specifically, as discussed at the outset, we focus on the relationship between state laws or regulatory rulings on the use of Original Equipment Manufacturer (OEM) parts in accident repairs and the frequency with which class actions alleged harm resulting from the practice. One popular method of reducing accident repair costs is to make the repairs to damaged cars using parts that are not produced by the original equipment manufacturer (OEM). The potential downside to these repairs is that non-OEM parts may be inferior to OEM parts.

According to the GAO 40 states have enacted some form of legislation governing the use of OEM parts.[38] Of these states, 36 require companies to identify if aftermarket parts are used in the repair. A warranty is required by 27 states and 23 states require a manufacturer's ID for tracking purposes on any non-OEM parts. Although regulated, every state insurance commission and consumer product safety commission in the US allowed the practice and two states, Massachusetts and Hawaii, required it.[39] Table A2 in the appendix reproduces the GAO's catalogue of regulations as of 1999.

There has been considerable study of the safety of non-OEM parts, much of it at the behest of regulators. The outcome of these studies generally found that non-OEM parts differed only cosmetically from OEM parts and created little or no safety risk. For example, the Insurance Institute for Highway Safety found that, except for hoods, there was no safety difference between OEM and non-OEM parts. Whether or not one agrees with the regulators' decisions on OEM parts, it is hard to argue that the issue had not been evaluated and that regulators and legislators had not reached a consensus favoring the regulated used of non-OEM parts.[40]

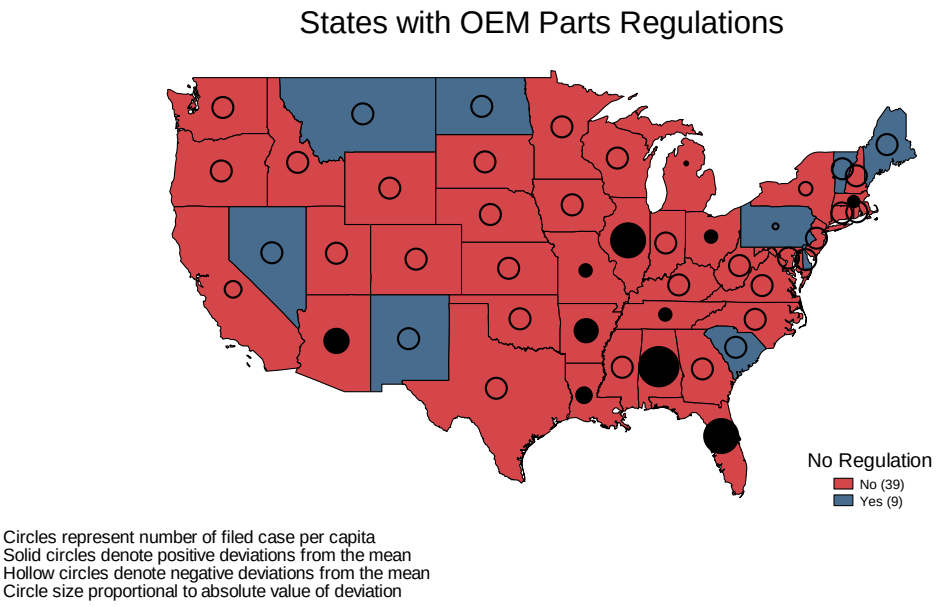
The fact that many states regulated the use of non-OEM parts provides a basis for an evaluation of class actions as a substitute for regulation. If the states that did not have rules, or disallowed certain practices had more class actions, this would be evidence of class actions serving as a vehicle to push regulation beyond some floor. If this were the case, we would expect to find those states that did not have regulations covering the

[38] The GAO notes that these laws predate the non-OEM parts cases and hence are unlikely to be caused by the class action cases. See GAO(2001) Motor Vehicle Safety: NHTSA's Ability to Detect and Recall Defective Replacement Crash Parts is Limited. GAO-01-215
[39] GAO supra note 38.
[40] Ibid.

practice of using non-OEM parts to have more OEM class actions. If regulation is vague or non-existent, private attorneys can fill the void. In fact, this is not what we observe.

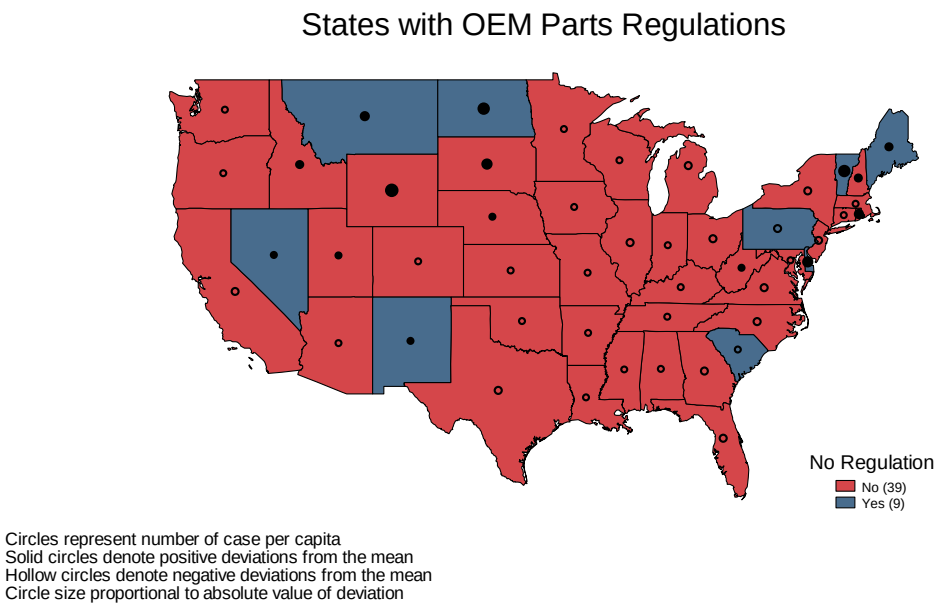
Figure 13 maps the states which had regulated OEM parts in some way (40 states) compared to those which had not (10 states) with filing data missing for one state in each category. If class actions are filling in when regulators have not issued a decision we would expect to see more class actions filed in the states in which regulators had not issued a regulation on the use of non-OEM parts. In fact, however, all of the states with above average filing totals had previously issued rulings on non-OEM parts.

Figure 13: Cases Filed per Capita in States with and without OEM Parts Regulations



The same is not true however when we consider cases filed on behalf of residents of a state but not necessarily filed in that state. As figure 14 shows the majority of states with an above average numbers of suits on behalf of residents are states which had not issued a ruling on non-OEM parts.

Figure 14: Cases filed on behalf of state residents per capita



The results are similar when we break down the filing rates by specific regulation. In Table 2 column 4 we find that the number of class actions filed in a state is either indistinguishable in states that regulated certain practices or that class actions are more common in states that had explicit regulations. For four of the regulations, these differences are statistically significant: (1) States which required disclosure had almost one additional OEM parts case relative to those which did not require disclosure; (2) States which required estimates to identify non-OEM parts had an average of .93 more class actions during the sample period; (3) States requiring a warranty on non-OEM parts also had an average of one additional class action over those states that did not require warranties; and (4) States that had no regulation in place had .8 fewer cases than those with some regulation of non-OEM parts during the sample period. In short, the existence

of prior regulations on the allegation under litigation has essentially no effect on the filing rate of class actions.

Column 6 presents the means when we examine cases filed on behalf of residents of a state but not necessarily in filed in the state itself (e.g. a case filed in Illinois which includes class members who are residents of Missouri). We find no differences in the umber of cases filed on behalf of residents.

Column 8 provides the means number of cases filed per 1000 residents. There is no statistically significant difference in states with and without a particular regulation, or any regulation. The implication of this is that more populace states are both more likely to be the filing location of a class action lawsuit covering OEM parts and that these states are also more likely to have issued rulings on the use of non-OEM parts.

Finally column 10 provides the differences in means tests for filings on behalf of state residents per 1000 people. Again there are several statistically significant differences. When there are no laws requiring the disclosure of the use of non-OEM parts residents of the state are class members in 5.8 more cases per capita than states which require disclosure. When estimates must identify non-OEM parts residents of the state are class members in 8 fewer alleged class actions per capita then when estimates are not required to identify non-OEM parts. When non-OEM parts do not require warranties residents are parties in 4.29 more class actions per capita then when warranties are required. The requirement that non-OEM parts must contain a manufacturer's identification reduces the number of class actions on behalf of state residents by 5.5 alleged class actions. Finally having no regulation of non-OEM parts increases the

number of alleged class actions on behalf of residents of the state by 13.71 cases per capita.[41]

[41] There is an important limitation to the OEM parts cases. While the cases provide a rare case in which regulations are clearly specified and hence can be compared to the outcome of litigation, it is also true that OEM parts carried little measureable risk to consumers. It is possible that regulators would have intervened more frequently if consumers had faced a greater safety risk. Interestingly, 26% of the regulators ranked OEM parts cases as having a strong interest to them while overall 23% of the cases were ranked as having a strong interest. Moreover, regulators intervened in 10% of the OEM parts cases while they intervened in only 7% of other cases.

Table 2: Existing Regulations and OEM Parts Class Actions

Regulation		Number of states	Average Number of cases filed in state	T-Test	Average Number of cases with at least one class member in state	T-Test	Filed per 1000 residents	T-Test	Class members in state per 1000 residents	T-Test
Disclosure Required	Yes	33	1.061		23.12		0.13		8.85	
			(2.47)		(1.32)		(0.24)		(9.28)	
	No	17	0.118	**3.3**	23	0.103	0.01	1.36	14.65	**-5.42**
			0.33		(0.87)		(0.02)		(13.54)	
Consent Required	Yes	8	0.38		22.5		0.07		13.32	
			(0.74)		(1.07)		(0.14)		(14.72)	
	No	42	0.81	-1.3	23.19	-0.83	0.09	-0.14	10.35	2.06
			(2.22)		(1.18)		(0.21)		(10.47)	
Estimate Identify	Yes	36	1		23.11		0.18		8.6	
			(2.38)		(1.3)		(0.23)		(8.96)	
	No	14	0.071	**3.48**	23	0.086	0.01	1.36	16.56	**-6.66**
			(0.27)		(0.78)		(0.02)		(14.19)	
Aftermarket of like quality	Yes	10	1.2		22.7		0.12		11.24	
			(2.82)		(1.42)		(0.25)		(13.4)	
	No	40	0.63	1.05	23.18	-0.56	0.08	0.25	10.72	0.40707198
			(1.85)		(1.11)		(0.19)		(10.68)	
Warranty required	Yes	27	1.33		23.3		0.16		6.77	
			(2.68)		(1.44)		(0.26)		(6.22)	
	No	23	0.043	**4.06**	22.83	0.46	0.01	1.57	15.58	**-9.24**
			(0.21)		(0.72)		(0.02)		(13.65)	
Disclosure on warranty	Yes	4	None		23.25		None		6.88	
					(0.5)				(4.2)	
	No	46	0.8		23.07	0.23	0.09		11.17	-3.78

			(2.14)		(1.22)		(0.21)		(11.5)	
Cannot require non-OEM parts	Yes	1	None		23		none		4.76	
	No	49	0.76		23.08		0.09		10.95	
			(2.08)		(1.187)		(0.2)		(11.21)	
Non-OEM parts must contain a manufacturer identification	Yes	23	0.96		23.22		0.14		8.06	
			(2.01)		(1.24)		(0.25)		(6.64)	
	No	27	0.56	1.22	22.97	0.268	0.04	0.9	13.18	**-5.82**
			(2.12)		(1.13)		(0.14)		(13.55)	
No regulation of non-OEM parts	Yes	10	0.1		23		0.01		21.79	
			(0.32)		(0.82)		(0.03)		(13.56)	
	No	40	0.9	**-3.44**	23.1	-0.12	0.11	-1.35	8.08	**10.99**
			(2.27)		(1.26)		(0.22)		(8.64)	

This, combined with the evidence that class actions are more likely to be filed in states that did regulate non-OEM parts, provides some evidence regarding the dynamics of class actions filing. Although residents of states without regulation are likely to be included in the case, the actions on their behalf are taking place in states with more regulation. The decision about where to file seems to be driven as much by the size of the potential class as the existing regulations in the state. The results do suggest, however, that states without regulation of OEM parts are more likely to have cases brought on behalf of their residents but that these cases are more likely to be decided in other states.

There are reasons for concern about class actions that change the regulation in one state to create new regulation in another. Although the facts of these cases are complex and remain controversial, the important feature of the cases for our purposes is the plaintiffs' allegation that non-OEM parts were in fact unsafe and hence insurance companies breached their contracts with policy holders by using non-OEM parts. Specifically, the effect of the *Avery* case mentioned above, at least until it was overturned, was to cause a number of insurance companies to switch to OEM parts.[42]

In summary, we find that class action filing location is not determined by a lack of interest on the part of local regulators. Nor are filings more likely in states with fewer regulatory enforcement resources. We do find, however, that class actions are more frequently brought on behalf of residents of states whose regulatory authority has not issued rules in a particular area but these cases are filed in states which are more likely to have regulations in place. Thus in all but one of our tests we find no evidence of a

[42] Victor Schwartz and Leah Lorber. State Farm v. Avery: State Court Regulation Through Litigation Has Gone Too Far." 33 Connecticut Law Review 1215 (2001).

tradeoff between regulations and class actions. Moreover, the one instance where we do find evidence of a tradeoff the relationship has the unusual feature that cases are brought on behalf those who live in states with ambiguous regulations in states which have regulations specifically allowing the conduct.

Finding little support for the standard law and economics explanation for the dual regulatory and litigation system, we are left seeking other explanations. In the next section we turn to an alternative explanation for filing patterns where we examine the relationship between an industry and its regulators in political economy terms.

II. CLASS ACTIONS AND CAPTURE

A. Class Actions and Industry Capture by the Regulated Industry

While we find little evidence that regulation and class actions are substitutes in deterring harm, there is an explanation for the absence of this finding that would preserve a role for class actions in the regulatory process. Specifically class actions may serve as a method for undoing regulatory capture.

There is a large literature in economics and political science about industry co-opting regulators. One of the earliest proponents of this view was George Stigler who argued that regulation was run largely for the benefit of industry, a state of affairs often labeled regulatory capture.[43] Regulatory capture by industry would appear to recommend class actions as a backstop to allow injured parties a second venue in which to pursue their claim.

Some evidence on the role of regulatory capture in the filing of class actions can be found in the differences between elected and unelected utility or insurance commissioners. It has been documented in several studies that states that elect their insurance commissioners also have lower utility and insurance rates.[44] This difference is usually attributed to elected officials being more pro-consumer and less subject to capture.

Elections also break the "revolving door" since many insurance commissioners are looking for higher office and are hence less likely to have either been drawn from or returning to industry. The basic hypothesis is that states in which commissioners must face the voters are less likely to be captured by industry because voting offers a low cost way to punish commissioners who become too friendly with industry. If capture is driving the frequency of class actions, states which elect their commissioners would have fewer insurance class actions. The logic is that class actions and elections would serve similar functions in providing a venue for consumers to reverse pro-industry rulings by the regulator.

The maps in Figure 15 and 16 provide evidence relating to this hypothesis.[45] The color coding of the maps shows which states, during the sample period, elected insurance commissioners (blue) and which appointed (red) them. In the 31 appointed states and 11 of the 14 elected states our survey contained information on the number of class actions

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[43] Stigler, supra note __.

[44] See Timothy Besley and Stephen Coate. Elected Versus Appointed Regulators: Theory and Evidence, 1 J. Eur. Econ. Assoc. 1176 (2003) and cites therein.

[45] One complicating factor is that insurance agencies often differ in scope. The National Association of Insurance Commissioners notes that several agencies have multiple tasks. It is possible that regulators with a broader mission are more or less likely to be captured. We attempted to disaggregate insurance regulators by mission scope but found no differences in class action filings.

filed in the state. The solid black dots represent states with class action filing totals above the mean while hollow circles represent states with filing totals below the national mean. The size of the circle represents the degree to which the number of filings is above or below the national mean. What is clear from the maps is that there are several states which stand out for the number of class action filings but these states appear to be similarly divided between states with elected or unelected insurance regulators.

Figure 15: States with elected regulators and the number of class actions filed in the state

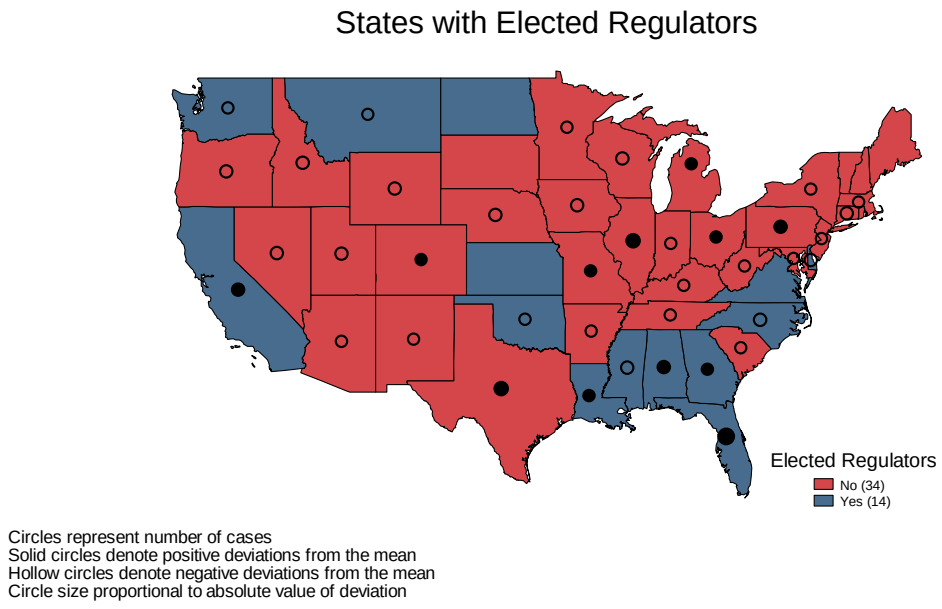
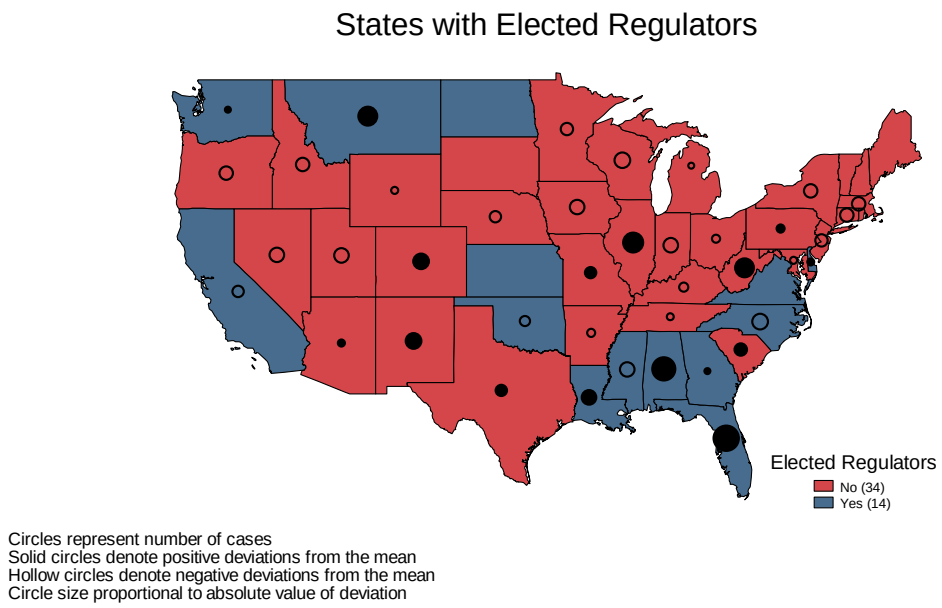


Figure 16 depicts the map with per capita filings but with similar findings.

Figure 16: States with elected regulators and the number of class actions filed in the state per capita



The mean number of cases and filings for both elected and unelected commissioners are presented in Table 3. The number of class actions and class actions per 100 residents of the state are higher in states which elect their commissioners. This is inconsistent with notion that class actions are a method by which consumers can reverse the regulatory mandate of captured regulators. Table 3 suggests that in states where electoral institutions would tend to push regulators to be more pro-consumer, we in fact see more class actions, not fewer.

Table 3: Elected Regulators and Class Action Frequency

Selection Method	Number of cases	t-test	Number of Cases per 1000	t-test
Unelected Commissioners	12.61		2.18	
	(17.51)		(1.72)	
Number of observation	31		31	
Elected Commissioners	24.45		3.29	
	(36.69)		(2.75)	
Number of observation	11	**-5.996**	11	**-2.01**

In summary, we find that at least by one measure of industry capture, states with elected regulators, who tend to be more pro-consumer, are in fact more likely to have class actions on behalf of their constituencies. This finding is inconsistent with the hypothesis that class actions are a device for reversing anti-consumer regulatory decisions by a regulator who favors industry.[46]

B. Judicial Capture: The Impact of Electing Judges

Again left without strong support for a hypothesis regarding the relationship between regulation and litigation in the form of regulatory capture, we seek other candidates. In this section we examine two factors that potentially determine filing location independent of the underlying harm. Specifically, we examine measures of how pro-plaintiff the state's judiciary is: judicial elections and the states previous treatment of class action litigation. Several authors have provided evidence that when judges stand for

[46] The finding is entirely consistent with an alternative hypothesis; regulators are more likely to be captured by industry if they are elected. Given that regulated industries have greater incentives to band together and contribute to election of favorable regulators and that consumers are relatively dispersed and have far less incentive to gather information about regulators' behavior , this alternative is entirely plausible.

election, the parties to disputes seek to influence the outcome of cases usually by contributing to judicial election funds.[47]

At first glance, the courts seem unlikely candidates for capture. Unlike insurance companies and regulators, plaintiffs and defendants are usually not repeat players in the courts.[48] Moreover, their choice of venue is limited, meaning that capturing a judge would not be sufficient. Defendants would have to capture all judges who could possibly hear their case. One would not suspect auto liability cases to be systematically more pro-plaintiff since anyone is equally likely to end up as a plaintiff or a defendant.

Class actions are different in that both parties' attorneys are potentially repeat players. If industry is not initiating the litigation, it is less likely to be able to capture a court, but the possibility of forum shopping by plaintiff's attorneys increases the likelihood of judicial capture by plaintiff's attorneys. Stories of forum shopping and "litigation hell holes" abound, but in the case of class actions there is relatively little information on the likelihood of repeat litigation in the same venue.

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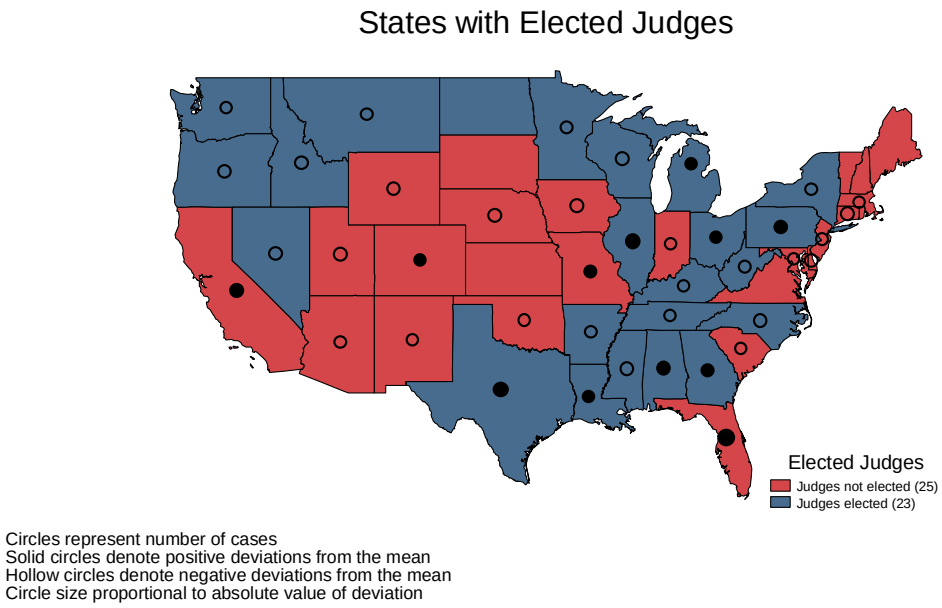
[47] There is an extensive literature in on the role of judicial elections. See e.g. Melina Gann Hall and Chris W. Bonneau, "Mobilizing Interest: The Effects of Money on Citizen Participation in State Supreme Court Elections" 52 *American Journal of Political Science* 457 (2008) (concluding that expensive judicial election campaigns increase the likelihood that citizens will vote in the election); Melinda Gann Hall and Chris W. Bonneau, "Does Quality Matter? Challengers in State Supreme Court Elections," 50 *American Journal of Political Science* 20 (2006) (concluding that electorate can successfully distinguish unqualified candidates from qualified ones); Roy A. Schotland, "Elective Judges' Campaign Financing: Are State Judges' Robes the Emperor's Clothes of American Democracy? 2 *Journal of Law and Politics* 57 (1985) (arguing that raising campaign funds creates appearance of impropriety); Charles Gardner Geyh, "Why Judicial Elections Stink." 64 *Ohio St. L. J.* 43 (2003) (same). John R. Wright, Interest Groups and Congress: Lobbying, Contributions, and Influence (1996). For a discussion of the impact of judicial elections on tort awards see Eric Helland and Alexander Tabarrok, "The Effect of Electoral Institutions on Tort Awards," *American Law and Economics Review* 4 (2):341-370 (2002) and "Exporting Tort Awards," *Regulation* 23(2) 21 (2000) and A. Tabarrok and E. Helland. "Court Politics: The Political Economy of Tort Awards." *Journal of Law and Economics* XLII (1999): 157.

[48] There are however repeat players in litigation namely plaintiff's attorneys. See Helland and Tabarrok, supra note __ and Jason Johnston and Joel Waldfogel. Does Repeat Play Elicit Cooperation? Evidence from Federal Civil Litigation. 31 J. Leg. Stud. 39 (2002).

This suggests that while we may find no relationship between the electoral institutions used to select regulatory commissioners and class action frequency, plaintiffs' attorneys are choosing to file cases in states where judges are more sympathetic. Helland and Tabarrok find that in states that elect judges in partisan elections awards against out of state defendants in tort cases are $230,092 dollars higher than similar cases tried in states that do not elect judges in partisan elections. There is some evidence that filings are more likely in states that elect their judges. Again the solid black dots represent states with filing above the national average during the sample period. Three of the above average states have appointed judges while nine have elected judges.[49]

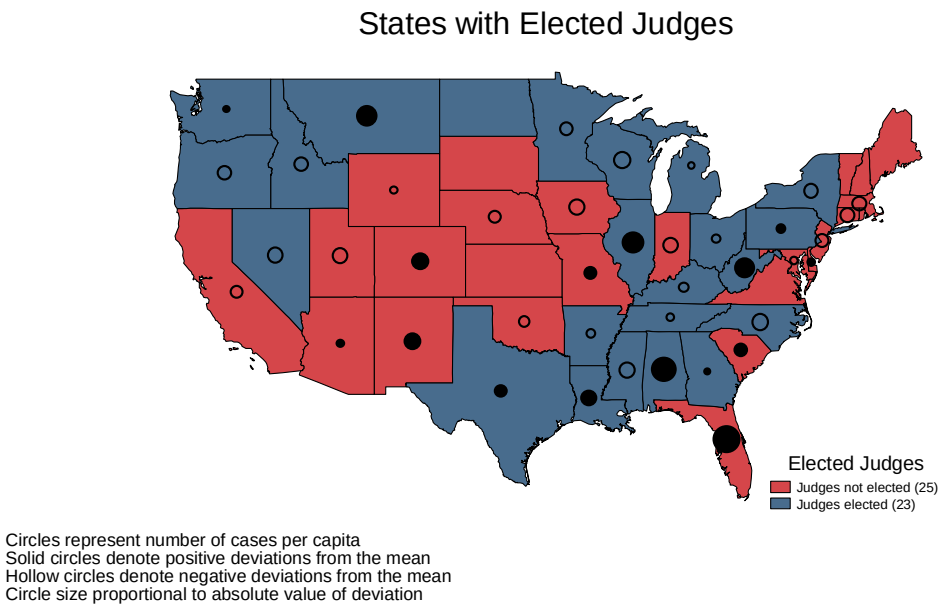
[49] Exactly which states "elect" judges is open to interpretation. We label a state electing its judges if the state Supreme Court and Appealite court judges are choose by election. We label states as having partisan elections if judges are choosen in partisan elections or if the parties choose which candidate to run in an election. For example, Ohio is partisan state because although party affliliation is not listed on the ballot in the general election the candidates are choosen in partisan primaries. We also list California as an unelected state although trial court judges are elected in California. For more detailed information see Table 4: Selection of Appellate Court Judges and Table 6: Selection and Terms of Trial Court Judges in David B. Rottman et al., State Court Organization, 2004 (Washington, DC: Bureau of Justice Statistics, 2006), and the American Judicature Society's Judicial Selection Methods in the States webpage at www.judicialselection.us.

Figure 17: States which elect judges and class action filing frequency



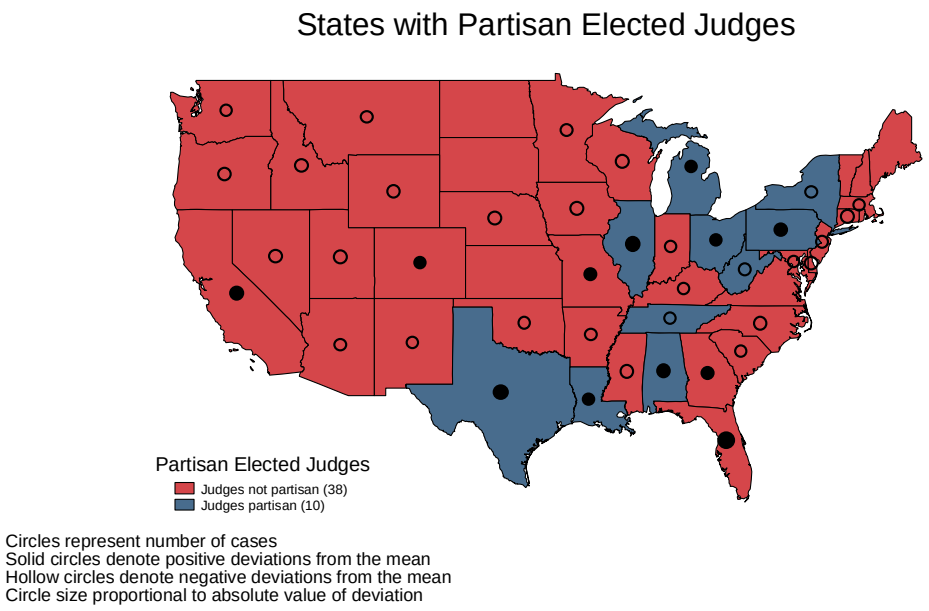
The election effect appears to be driven in part by the fact that larger states elect their judges but even when we map the number of class actions per capita more of the states with above average per capita filing rates are in elected rather than appointed states.

Figure 18: States which elect judges and per capita class action filing frequency



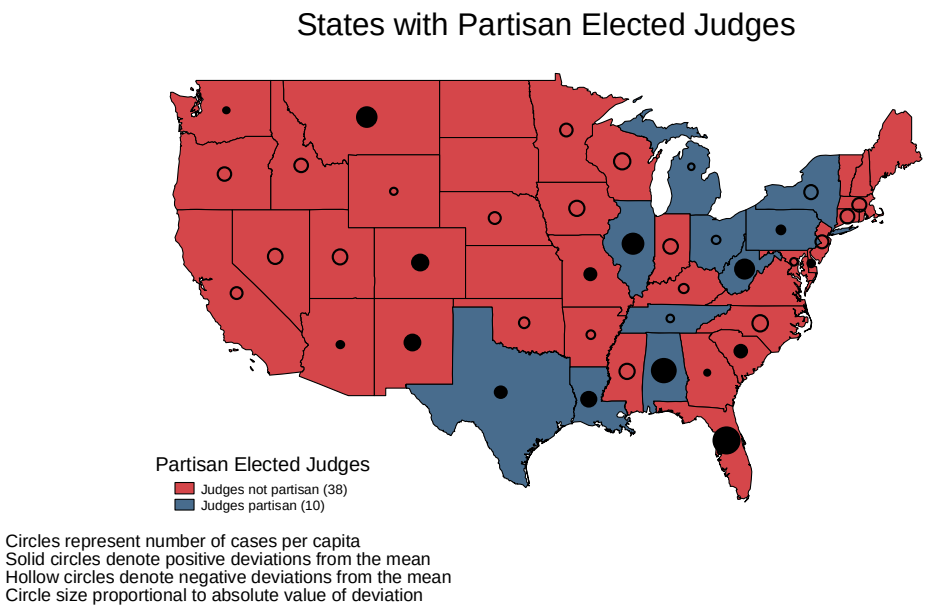
In Figure 19 we examine only states which elect judges in partisan elections. Again the majority of states with filing numbers above the national average are in states with partisan elections.

Figure 19: States with judges elected in partisan elections and number of class action filings



The results are similar when we examine per capita filings. Although the pattern is less pronounced the majority of the above average per capita filing rates are in states which use partisan elections to select their judges.

Figure 20: States with judges elected in partisan elections and per capita number of class action filings



Tables 4 and 5 test whether the difference in means between class action frequencies in elected and partisan elected states is statistically significant. The total number of filings is higher in states with elected judges although the it is not statistically significant.

Table 4: Elected Judges and Class Action Frequency

Selection Method	Number of cases	t-test	Number of Cases per 1000	t-test
Unelected Judges	14.45		2.48	
	(28.25)		(2.08)	
number of observation	20		20	
Elected Judges	16.86		2.47	
	(20.21)		(2.088)	
number of observation	22	**-1.042**	22	**-0.05**

The states which use partisan elections to select their judges the results are similar. States with judges elected in partisan elections have a higher number of filings during the

sample period and the difference is statistically significant for both the total number of cases and for per capita cases.

Table 5: Partisan Elected Judges and Class Action Frequency

Selection Method	Number of cases	t-test	Number of Cases per 1000	t-test
Unelected Judges	10.97		2.104	
	(22.85)		(1.93)	
number of observation	32		32	
Elected Judges	30.9		3.66	
	(22.59)		(2.09)	
number of observation	10	**-6.68**	10	**-5.9**

The question remains of how much to make of the fact that class action filings are similar in states which use elections to select their regulators but class action filings are more frequent in states using elections, and particularly partisan elections, to select their judges. The results are not consistent with class actions acting as a check on captured insurance regulators at least to the extent that Besley and Coate and others are correct that elected regulators are less likely to be captured by industry. The results are consistent with a broader political economy story in which interest groups compete for influence with the regulator. In this case however the "regulator" appears to be elected judges. One explanation is the plaintiffs attorneys are filing cases in venues they think will be more sympathetic to their case.

Further research is clearly needed on the connections between the electoral institutions used to select judges and class actions. For the purposes of this study it is sufficient to say that the evidence is not consistent with class actions being a method for consumers to undo regulatory capture by industry. Whatever else may be driving the filing decisions of plaintiffs' attorneys it does not appear to be related to how pro or anti

consumer the local regulators are.

III. ESTIMATING THE IMPACT OF REGULATION ON THE NUMBER OF CLASS ACTION FILINGS

The previous sections have examined the correlations between class action filings and regulation as well as the related hypothesis that regulatory inattention due to capture by industry is driving class actions. We find little evidence that class actions and regulations are substitutes. It is possible that our analysis misses important interactions between the various measures of regulatory stringency.

In this section we present the results of a regression of each of the factors mentioned in this report. The dependent variable, $cases_{ijt}$, is the number of cases filed in the state i, of a specific allegation j, in year t. We divide the factors into three categories. The first is factors related to the substitution hypothesis which we include in x_{ijt}. The factors include the log of the number of market conduct examines per firm, the log of the number of market conduct examiners per regulated firm, the log of the budget per regulated firm and the log of the number of fines per regulated firm. In addition we include the proportion of cases making a similar allegation which regulators ranked as having a strong relationship. The second factor, z_{ijt}, is whether the state insurance regulators are elected and whether the state chooses its judge using elections and whether the state chooses it judges in partisan elections. The final set of factors, w_{ijt}, relate to the existence of previous class actions concerning a given allegation in a state. It includes the proportions of cases in the previous 4 years which are remanded to federal courts, the proportions of cases in which the class was certified, the proportion of cases certified for

a multistate class, the proportion of cases certified for nationwide classes and the proportion of cases in which regulators filed a brief on behalf of the defendants. The factors are measured both by allegation, thus measuring the outcomes of cases in any state or the federal system making a similar allegation, and by state, thus measuring the impact on future filings of the outcome of other class actions in the state in the last 4 years. The specification,

$$cases_{ijt} = \beta_1 x_{ijt} + \beta_2 z_{ijt} + \beta_3 w_{ijt} + \beta_4 controls + \varepsilon_{ijt}$$

includes an error term clustered on the state-allegation cell.[50] We also estimate the model using several different controls. In all specifications we include the number of firms in our sample that offer insurance in the state to control for the impact of any differences in filings caused by market differences by state. We also include year fixed effects to control for the national trend (allowing for non-linearities) discussed above and tort reforms.[51] In other specifications we include fixed effects for state and allegation and then an interaction of the state-allegation fixed effects. The descriptive statistics are provided in Table 6.

Table 6: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Number of Cases	0.040389	0.32458	0	17
Log Market Conduct Exams	-4.36489	1.212156	-6.90776	-1.24321
Log Market Conduct Examiners Per Firm	-5.84973	1.03248	-6.90776	-2.46308
Log Budget Per Firm	15.94643	1.012368	13.0002	18.97122
Log Fines Per Firm	-5.5933	0.930081	-6.90776	-2.30523
% of allegation with strong rank	0.274213	0.270612	0	1
% of allegation with modest rank	0.551745	0.300221	0	1

[50] This allows for arbitrary non-independence across observations for a given state.

[51] These controls draw upon the database produced by Avraham, (see Avraham, Ronen, Database of State Tort Law Reforms (DSTLR 2d), at http://ssrn.com/abstract=902711), but we have also examined the relevant statutes in each state to ensure that the reforms are coded correctly as they apply to auto, bad faith, and product liability cases.

Agency Officials Elected	0.235294	0.424194	0	1
Judges chosen in election	0.470588	0.499148	0	1
Judges chosen in partisan election	0.235294	0.424194	0	1
number of out of state companies in risk set	0.972525	0.063475	0	1
Proportion of cases moved to federal court by allegation last four years	0.10179	0.165627	0	1
Proportion of cases moved to federal court by state last four years	0.102579	0.223705	0	1
Proportion of cases with approved certification by allegation last four years	0.090668	0.176659	0	1
Proportion of cases with approved certification by state last four years	0.071095	0.169218	0	1
Proportion of multistate class actions by allegation last four years	0.024949	0.09396	0	1
Proportion of multistate class actions by state last four years	0.009881	0.058711	0	1
Proportion of nationwide class actions by allegation last four years	0.022713	0.09262	0	1
Proportion of nationwide class actions by state last four years	0.007485	0.056938	0	1
Regulators have filed briefs on behalf of the defendant in this line	0.028524	0.11737	0	1
Regulators have filed briefs on behalf of the defendant in this state	0.017489	0.088563	0	1

The results are presented in Table 7. We estimate four basic models. Columns 1 through 6 estimate the number of class actions of a particular allegation filed in a state in a given year including all of the factors and several subsets of the factors but include only controls for years. Column 7 includes controls for year, allegation and state while column 8 adds a control for each state-allegation cell. The inclusion of state fixed effects necessitates the removal of state level variables that do not vary though time. Thus column 7 and 8 do not include the election variables. The difference between column 7 and 8 is that in column 7 we utilize the variation between states to estimate the allegation specific variables and the variation between allegations to estimate the state specific variables. In column 8 we estimate the model using only the within state-allegation variation. This means that the state specific variables such as state population, budget, market conduct examiners and exams, and fines will be the same in column 7 and 8 while the variables capturing the state or allegation's experience with class actions in the last four years will be different in the two columns.

Column 1 presents the full model with all of the factors. One common feature of all the models is that the log of population is significant and positive in all specifications. This suggests that potential class size is an important consideration in filing decisions.

We also find that an increase in the log budget causes a statistically significant increase in the number of class action filed in the state. The impact is relatively modest as a one standard deviation increase in budget increases the number of alleged class actions filed in a state by 1.2%. The log of the number of fines per firm also has a positive and statistically significant impact on filings. We find as a greater proportion of a specific allegation is ranked of strong interest to regulatory authorities in our survey decreases the number of alleged class actions filed in the state. The effect is quite small with a one standard deviation increase in the proportion of regulators ranking an allegation as having a strong connection to their regulatory mandate decreases the number of class actions by .2%.

Choosing judges in elections has an overall negative impact on the number of filings. However, choosing judges in a partisan election has a statistically significant and negative impact on filings. Electing a judge in a partisan election increases the number of class action filings in a state by 2% while overall states which use elections have about 1% fewer filings.

In column 2 we remove the regulatory rankings variable, which has missing observations for several allegations but find little change in the results. In columns 3 through 6 we estimate the model including only one of our proxies for regulatory stringency. Our concern is that the measures are highly correlated and hence the effect of increasing market conduct examiners per firm while holding budget constant is difficult

to interpret. When estimated independently three of our measures are positive and two, the log of budget and fines per firm, are statistically significant. Only the log of market conduct exams is negative.

In column 7 and 8 we include a more extensive set of controls. The addition of state controls does not alter the positive relationship between the log of fines per firm and the number of class actions. Although several of the state level variables are no longer statistically significant allegations that have more cases certified for multistate class status have more filings while those with a nationwide certification have fewer filings.

Table 7: Regression Results for the number of class actions cases filed by state, allegation and year

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log of state population	0.02478***	0.02120***	0.03767***	0.03301***	0.02077***	0.02761***	0.03385	0.15069**
	(0.00680)	(0.00590)	(0.00980)	(0.00832)	(0.00529)	(0.00695)	(0.04760)	(0.06563)
Log Market Conduct Exams	-0.00224	-0.00191	-0.00041				-0.00305	-0.00180
	(0.00267)	(0.00228)	(0.00208)				(0.00371)	(0.00336)
Log Market Conduct Examiners Per Firm	0.00142	0.00122		0.00690**			0.01591**	0.00934*
	(0.00362)	(0.00309)		(0.00339)			(0.00625)	(0.00533)
Log Budget Per Firm	0.01155*	0.00974*			0.01699**		-0.00721	-0.00391
	(0.00676)	(0.00582)			(0.00679)		(0.00735)	(0.00764)
Log Fines Per Firm	0.01543*	0.01310*				0.01500**	0.01684**	0.01925**
	(0.00800)	(0.00683)				(0.00688)	(0.00805)	(0.00903)
% of allegation with strong rank	-0.02961**							
	(0.01476)							
% of allegation with modest rank	-0.00596							
	(0.01688)							
Agency Officials Elected	0.02226	0.01921	0.02154	0.02106	0.01633	0.02138		
	(0.01717)	(0.01478)	(0.01526)	(0.01511)	(0.01372)	(0.01536)		
Judges chosen in election	-0.04595**	-0.03916**	-0.04352**	-0.04128**	-0.04103**	-0.03885**		
	(0.02032)	(0.01753)	(0.01879)	(0.01808)	(0.01748)	(0.01723)		
Judges chosen in partisan election	0.05605***	0.04807***	0.04638***	0.04741***	0.04417***	0.04701***		
	(0.01307)	(0.01118)	(0.01113)	(0.01127)	(0.01063)	(0.01115)		
number of out of state companies in risk set	-0.07018	-0.06075	-0.06920	-0.06487	-0.06452	-0.06474	-0.06066	0.32209**
	(0.04935)	(0.04221)	(0.04407)	(0.04324)	(0.04168)	(0.04275)	(0.04333)	(0.14169)
Proportion of cases moved to federal court by allegation last four years	0.07224***	0.08715***	0.09028***	0.08927***	0.08648***	0.08766***	0.03426**	0.03264*
	(0.01798)	(0.01608)	(0.01565)	(0.01568)	(0.01542)	(0.01592)	(0.01603)	(0.01686)
Proportion of cases moved to federal court by state last four years	-0.02610	-0.02326	-0.02019	-0.01859	-0.01980	-0.02309	-0.01952	-0.02055
	(0.01627)	(0.01419)	(0.01314)	(0.01289)	(0.01315)	(0.01415)	(0.01230)	(0.01298)
Proportion of cases with approved certification by allegation last four years	0.06460***	0.07459***	0.07060***	0.07070***	0.06802***	0.07297***	-0.02167	-0.02230

	(0.01525)	(0.01714)	(0.01610)	(0.01604)	(0.01608)	(0.01658)	(0.02571)	(0.02800)
Proportion of cases with approved certification by state last four years	0.00761	0.00534	0.00001	0.00499	0.00368	0.00211	-0.01291	-0.01574
	(0.01780)	(0.01535)	(0.01628)	(0.01551)	(0.01369)	(0.01574)	(0.01741)	(0.01750)
Proportion of multistate class actions by allegation last four years	1.22834***	1.34715***	1.38632***	1.38625***	1.36195***	1.36735***	1.05796***	1.06204**
	(0.38047)	(0.37984)	(0.37276)	(0.37358)	(0.37538)	(0.37644)	(0.39874)	(0.42065)
Proportion of multistate class actions by state last four years	0.38746	0.32648	0.32247	0.33402	0.36670	0.33931	0.05967	0.11727
	(0.27014)	(0.23136)	(0.23057)	(0.23381)	(0.23259)	(0.23477)	(0.26828)	(0.24382)
Proportion of nationwide class actions by allegation last four years	-1.36169***	-1.48776***	-1.52016***	-1.51984***	-1.49015***	-1.50435***	-1.12647***	-1.12694**
	(0.38250)	(0.38268)	(0.37687)	(0.37775)	(0.37839)	(0.38002)	(0.41455)	(0.43747)
Proportion of nationwide class actions by state last four years	-0.35764	-0.30241	-0.31378	-0.31785	-0.34746	-0.31870	-0.03382	-0.08870
	(0.27234)	(0.23328)	(0.23354)	(0.23600)	(0.23574)	(0.23635)	(0.27296)	(0.24735)
Regulators have filed briefs on behalf of the defendant in this line	0.02565	0.03770**	0.03656**	0.03517**	0.03107**	0.03638**	0.01404	0.01026
	(0.01866)	(0.01659)	(0.01675)	(0.01675)	(0.01439)	(0.01672)	(0.02163)	(0.02286)
Regulators have filed briefs on behalf of the defendant in this state	-0.03251	-0.02833	-0.02828	-0.03402	-0.04052*	-0.02148	0.01184	0.01921
	(0.02332)	(0.01996)	(0.02065)	(0.02110)	(0.02099)	(0.02005)	(0.02121)	(0.02024)
Year Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tort Reforms	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Allegation Controls	No	No	No	No	No	No	Yes	No
State Controls	No	No	No	No	No	No	Yes	No
Allegation*State Controls	No	No	No	No	No	No	No	Yes
Observations	14145	16605	16740	16713	17550	16686	16605	16605
R-squared	0.03	0.03	0.02	0.02	0.03	0.02	0.08	0.28
Robust standard errors in parentheses								
* significant at 10%; ** significant at 5%; *** significant at 1%								

One remaining issue is the impact of the outcome of previous cases on the decision to where to file a case. In Table 8 below we report the impact of the results of past cases on the likelihood of filing. We examine two dimensions of the filing decision: whether to file a case with a specific allegation and, if so, which state to file the case in.

There are a few surprises in the results. The proportion of cases making a similar allegation which were remanded to federal court in the past four years actually increases the likelihood of future cases making similar allegations in state court. One explanation for this finding this that cases that are more important either in terms of settlement value of the issues involved are more likely to be removed to federal court.[52] By contrast, a one standard deviation increase in the proportion of cases from a particular state that are remanded to federal court decreases the likelihood of future filings in that state by 12.8%.

Certification of cases making a similar allegation increases the likelihood that future cases making the same allegation will be filed and the more cases of any allegation that are certified in a state the more likely future cases are to be filed in state. The effect is most dramatic with cases certified for multistate cases. A one standard deviation in the proportion of cases certified for a multistate class increases the likelihood of future case making the same allegation 35%. With a one standard deviation in the proportion of the cases a state's courts certify for multistate class actions increases the likelihood of future filings by 13.2%.

Certification of a nationwide class has the opposite effect. The impact is most dramatic for the proportion of cases making a similar allegation certified for nationwide

[52] In general all of our allegation measures, i.e. proportion removed to federal court, proportion certified and proportion certified for multistate classes are all likely to measure case importance.

class action status. This is likely a preemption effect. As more cases are certified for nationwide classes the plaintiffs for future cases have already been included in ongoing cases. In fact nationwide class actions are likely to be settlement classes which suggest that this may well be the intent of the case.[53] Finally removal of a case to federal court publicizes the line of action further increasing the likelihood that other case making similar allegations on behalf of plaintiffs in other states or against other defendants will be filed.[54] The negative impact on the proportion of a states cases receiving nationwide class action status is contrary to our intuition. We would have expected a state allowing more nationwide classes to be certified to be a more attractive venue to file cases but this appears not to be the case.[55]

Finally, the impact of regulatory intervention in other class actions in the state is consistent with our expectations. Since almost all briefs filed by regulators support the defense we would expect more active regulators to discourage future filings.[56] Consistent with this theory an increase in the proportion of class actions in the state in which the regulator filed a brief reduces the number of filings in the state.

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[53] See Cramton, Roger, C. Individualized Justice Mass Torts and Settlement Class Actions: An Introduction ; 80 Cornell L. Rev. 811 (1994-1995) for a discussion of settlement class actions.

[54] These findings are consistent with previous research of forum choice. For example Hensler and her coauthors find that plaintiffs attorneys choose state courts because of a perception that state courts are more likely to certified a class Deborah Hensler et al., Class Action Dilemmas (2000) RAND ICJ and Thomas E. Willging and Shannon R. Wheatman, An Empirical Examination of Attorneys' Choice of Forum in Class Action Litigation, Federal Judicial Center 2005 (finding in a survey of attorneys that perceptions of how state versus federal judges would rule in the case, the source of law and the residence of the preponderance of the class all influenced forum choice).

[55] One possible explanation is that this variable is measuring the substantive law of class certification. States vary in how closely they follow federal Rule 23. Some states, such as Mississippi and Virginia do not have a general class action rule. See Thomas D. Rowe, State and Foreign Class-Action Rules and Statutes: Differences From—And Lessons For?—Federal Rule 23 (Duke Law School L. Stud. Paper No. 185.

[56] Pace et al supra note 9 find that only 7% of state class actions have a regulatory intervention in the case.

Table 8: Marginal Effects

Factor	% change in the number of class actions resulting from a one standard deviation increase
Proportion of cases with a similar allegation moved to federal court in the last four years	39%
Proportion of cases filed in the state moved to federal court in the four years	-12.4%
Proportion of cases of with a similar allegation approved certification in the last four years	34%
Proportion of cases in the state in the last 4 years in which the class was certified	12%
Proportion of cases certified with multistate classes with a similar allegation in the last four years	319%
Proportion of cases certified with multistate classes in the state in the last four years	58%
Proportion of cases with a similar allegation certified for nationwide classes in the last four years	-347%
Proportion of cases in the state certified for nationwide classes in the last four years	-54%
Proportion of case with similar allegation in which state regulators have filed briefs on behalf of the defendant in the last four years	11%
Proportion of case in the state in which state regulators have filed briefs on behalf of the defendant in the last four years	-13%

The results suggest that plaintiffs' attorneys are determining where to file cases based on the outcome of previous cases rather than the other factors we've examined. Filings are generally more likely where states have been more willing to certify classes and particularly multistate classes. Future cases are less likely when regulators intervene on behalf of defendants and when nationwide classes preempt future filings of a particular allegation.

In Table 9 we repeat the regressions using only nationwide class actions as our dependent variable. Since nationwide class action can, in theory, be filed in any state or at least have far greater latitude in filing location than class actions with a single state class these cases are more likely to reflect the factors impacting forum shopping than underlying harm. By contrast single state class actions can be assumed to have far less

freedom in choosing their forum. Although the case may not be filed if the state is too unfriendly the impact of state regulations should be more pronounced in these cases.

The results in Table 9, which contains nation wide class actions, and Table 10, which contains single state class actions, are broadly consistent with this view. First none of the state variables, except the log of state population are significant. By contrast the impact of state regulatory budgets and fines retain their significance from the estimates utilizing all class actions. Moreover the rankings from the survey, found in column 1 of Tables 9 and 10 is not significant for national class actions but retains it significance and negative sign for single state class actions.

The states which elect judges have a lower number of both types of filings while partisan elected judges are associated with increases in both single state and nation wide class actions. This is consistent with judges elected in partisan states being more sympathetic to plaintiffs and their attorneys. In the first case making it more likely those cases with greater ability to choose a venue will be filed in states with partisan judicial elections. In the case of single state class actions the impact suggests that other factors than forum shopping are at work. On possible explanation is that cases are simply worth more in partisan states increasing the likelihood a case is filed.

There are other differences between the results for all class action filings and those with nationwide versus single state classes. Interestingly the number of out of state companies doing business in the state is negatively related to the number of filings in all three specifications and reverses signs when state-allegation fixed effects are included. The number of out of state companies is significant and negative in the cross-sectional regressions (column 1-6) only for nationwide class actions suggesting that these cases are

more likely to be filed in states in which a large number of insurance companies are headquartered. This is consistent with the theory that a large proportion of these class actions are largely settlement classes in which the judge is certifying the class only for settlement purposes, whether explicit or not, and hence filing in the home state of the defendant, who has agreed in advance to the settlement, adds convenience without much risk since the terms are agreed to in advance.

The previous success of cases in both the state and allegation also differ in their impact on filing behavior for single state or national class actions. The proportion of cases moved to federal court has a negative and significant impact on all filings as well as nationwide and single state classes. However only for nationwide and overall filings is the impact statistically significant. This is consistent with the notion that when plaintiffs' attorneys have a choice in venue that choose venues that are more likely to avoid removal to federal court. The proportion of cases certified in the specific allegation in the last four years is positive and significant in both the overall filings and single state filings again suggesting that success in a particular allegation encourages filings. The proportion of cases in which the class is certified by state is negative and significant in nationwide filings but positive and significant for single state filings. This suggests that state level success also encourages filings presumably against different defendants or with different allegations. The negative impact on nationwide class action may simply mean that nationwide class actions are less likely if a state has already certified cases in a particular allegation.

Finally the impact of regulatory intervention in a particular allegation is positive and significant in both general filings and single state filings. By contrast intervention by

the state's regulators, regardless of allegation type, is negative and significant for general filings and single state filings. As noted above the positive impact of a brief filed by regulators in a particular line is likely measuring the importance of the case. By contrast the negative impact likely represents a higher threshold for filing when regulators are more likely to intervene in a case particularly in light of the fact that regulators almost always file briefs on behalf of defendants. The impact of regulatory intervention is about a tenth of the magnitude in nationwide class actions and not significant in any specification. There are conjectures consistent with this finding. The first is that regulatory filings on behalf of defendants are at the request of defendants and hence, if nationwide class actions are largely settlement classes, filings are unlikely and when they do occur are unlikely to alter the case. An alternative is that plaintiffs' attorneys are choosing locations in which regulatory intervention is less likely or less likely to influence the outcome of the case.

Table 9: Regression Results for the number of nation-wide class actions cases filed by state, allegation and year

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log of state population	0.00789***	0.00667***	0.00663***	0.00559***	0.00600***	0.00565***	-0.00682	0.01148
	(0.00198)	(0.00170)	(0.00182)	(0.00166)	(0.00152)	(0.00139)	(0.01437)	(0.01424)
Log Market Conduct Exams	-0.00080	-0.00068	-0.00056				-0.00024	0.00062
	(0.00079)	(0.00067)	(0.00063)				(0.00085)	(0.00088)
Log Market Conduct Examiners Per Firm	0.00125	0.00110		0.00100			0.00357**	0.00283**
	(0.00113)	(0.00097)		(0.00092)			(0.00146)	(0.00140)
Log Budget Per Firm	-0.00135	-0.00116			0.00023		-0.00474**	-0.00319
	(0.00155)	(0.00132)			(0.00138)		(0.00191)	(0.00213)
Log Fines Per Firm	0.00077	0.00067				0.00087	-0.00085	-0.00024
	(0.00154)	(0.00131)				(0.00131)	(0.00180)	(0.00200)
% of allegation with strong rank	-0.00209							
	(0.00403)							
% of allegation with modest rank	-0.00030							
	(0.00430)							
Agency Officials Elected	0.00352	0.00303	0.00278	0.00270	0.00275	0.00280		
	(0.00349)	(0.00298)	(0.00300)	(0.00298)	(0.00294)	(0.00303)		
Judges chosen in election	-0.00738*	-0.00626*	-0.00667*	-0.00618*	-0.00647*	-0.00626*		
	(0.00404)	(0.00348)	(0.00358)	(0.00359)	(0.00354)	(0.00344)		
Judges chosen in partisan election	0.01168***	0.01009***	0.00981***	0.01006***	0.00894***	0.00996***		
	(0.00387)	(0.00329)	(0.00322)	(0.00328)	(0.00303)	(0.00320)		
number of out of state companies in risk set	-0.03699**	-0.03128**	-0.03168**	-0.03036**	-0.03094**	-0.03062**	-0.01452	0.02348
	(0.01880)	(0.01556)	(0.01561)	(0.01535)	(0.01509)	(0.01546)	(0.01453)	(0.02961)
Proportion of cases moved to federal court by allegation last four years	0.02321***	0.02504***	0.02496***	0.02460***	0.02422***	0.02454***	0.01368**	0.01303**
	(0.00586)	(0.00574)	(0.00567)	(0.00568)	(0.00557)	(0.00569)	(0.00618)	(0.00653)
Proportion of cases moved to federal court by state last four years	-0.00907*	-0.00785*	-0.00804**	-0.00804**	-0.00760**	-0.00844**	-0.00344	-0.00405
	(0.00473)	(0.00408)	(0.00392)	(0.00385)	(0.00384)	(0.00407)	(0.00343)	(0.00370)
Proportion of cases with approved certification by allegation last four years	0.00284	0.00418	0.00428	0.00414	0.00374	0.00428	-0.00970	-0.00949

	(0.00431)	(0.00422)	(0.00414)	(0.00414)	(0.00416)	(0.00415)	(0.01026)	(0.01046)
Proportion of cases with approved certification by state last four years	-0.01233**	-0.01057**	-0.01104***	-0.01047**	-0.01015***	-0.01096***	-0.02355***	-0.02321***
	(0.00494)	(0.00422)	(0.00427)	(0.00420)	(0.00365)	(0.00420)	(0.00828)	(0.00795)
Proportion of multistate class actions by allegation last four years	0.47147**	0.48306**	0.47843**	0.47986**	0.47966**	0.48104**	0.34052**	0.34296*
	(0.20390)	(0.20619)	(0.20388)	(0.20455)	(0.20474)	(0.20507)	(0.16756)	(0.17907)
Proportion of multistate class actions by state last four years	0.11644	0.09919	0.09964	0.10298	0.10911	0.10264	0.05869	0.06623
	(0.08201)	(0.06988)	(0.06991)	(0.07051)	(0.07014)	(0.07035)	(0.08155)	(0.08150)
Proportion of nationwide class actions by allegation last four years	-0.47595**	-0.48832**	-0.48385**	-0.48524**	-0.48465**	-0.48647**	-0.34826**	-0.35151*
	(0.20480)	(0.20735)	(0.20513)	(0.20580)	(0.20576)	(0.20635)	(0.17381)	(0.18558)
Proportion of nationwide class actions by state last four years	-0.04417	-0.03800	-0.03969	-0.04170	-0.04984	-0.04182	-0.00697	-0.01317
	(0.08909)	(0.07593)	(0.07617)	(0.07571)	(0.07598)	(0.07573)	(0.08668)	(0.08761)
Regulators have filed briefs on behalf of the defendant in this line	0.00178	0.00319	0.00327	0.00305	0.00256	0.00305	0.00617	0.00598
	(0.00688)	(0.00675)	(0.00675)	(0.00677)	(0.00567)	(0.00673)	(0.00812)	(0.00845)
Regulators have filed briefs on behalf of the defendant in this state	-0.00257	-0.00232	-0.00215	-0.00281	-0.00454	-0.00155	0.00718	0.00396
	(0.00677)	(0.00580)	(0.00539)	(0.00561)	(0.00522)	(0.00534)	(0.00655)	(0.00660)
Year Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tort Reforms	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Allegation Controls	No	No	No	No	No	No	Yes	No
State Controls	No	No	No	No	No	No	Yes	No
Allegation*State Controls	No	No	No	No	No	No	No	Yes
Observations	14145	16605	16740	16713	17550	16686	16605	16605
R-squared	0.03	0.03	0.02	0.02	0.03	0.02	0.08	0.28
Robust standard errors in parentheses								
* significant at 10%; ** significant at 5%; *** significant at 1%								

Table 10: Regression Results for the number of single-state class actions cases filed by state, allegation and year

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log of state population	0.01711***	0.01480***	0.03076***	0.02759***	0.01495***	0.02263***	0.04896	0.04896
	(0.00617)	(0.00535)	(0.00882)	(0.00747)	(0.00468)	(0.00646)	(0.04304)	(0.04480)
Log Market Conduct Exams	-0.00112	-0.00096	0.00034				-0.00262	-0.00262
	(0.00243)	(0.00207)	(0.00191)				(0.00354)	(0.00368)
Log Market Conduct Examiners Per Firm	-0.00005	-0.00009		0.00545*			0.01262**	0.01262**
	(0.00316)	(0.00269)		(0.00289)			(0.00541)	(0.00563)
Log Budget Per Firm	0.01334**	0.01128**			0.01643***		-0.00242	-0.00242
	(0.00614)	(0.00528)			(0.00600)		(0.00669)	(0.00696)
Log Fines Per Firm	0.01313*	0.01111*				0.01290**	0.01693**	0.01693**
	(0.00734)	(0.00626)				(0.00618)	(0.00720)	(0.00749)
% of allegation with strong rank	-0.02467*							
	(0.01309)							
% of allegation with modest rank	-0.00366							
	(0.01510)							
Agency Officials Elected	0.01955	0.01683	0.01948	0.01912	0.01441	0.01935		
	(0.01505)	(0.01295)	(0.01342)	(0.01329)	(0.01184)	(0.01351)		
Judges chosen in election	-0.04009**	-0.03422**	-0.03773**	-0.03619**	-0.03545**	-0.03392**		
	(0.01791)	(0.01543)	(0.01653)	(0.01587)	(0.01519)	(0.01514)		
Judges chosen in partisan election	0.04173***	0.03571***	0.03444***	0.03515***	0.03325***	0.03491***		
	(0.01144)	(0.00976)	(0.00970)	(0.00986)	(0.00927)	(0.00975)		
number of out of state companies in risk set	-0.00875	-0.00685	-0.01455	-0.01170	-0.01119	-0.01143	-0.02895	0.34165
	(0.03281)	(0.02835)	(0.02982)	(0.02942)	(0.02823)	(0.02878)	(0.03189)	(0.21823)
Proportion of cases moved to federal court by allegation last four years	0.04955***	0.06237***	0.06538***	0.06479***	0.06237***	0.06341***	0.02218	0.02138
	(0.01604)	(0.01424)	(0.01384)	(0.01385)	(0.01361)	(0.01410)	(0.01458)	(0.01538)
Proportion of cases moved to federal court by state last four years	-0.01571	-0.01426	-0.01117	-0.00965	-0.01125	-0.01340	-0.01550	-0.01550
	(0.01417)	(0.01235)	(0.01149)	(0.01132)	(0.01152)	(0.01230)	(0.01105)	(0.01151)
Proportion of cases with approved certification by allegation last four years	0.06057***	0.06910***	0.06513***	0.06540***	0.06317***	0.06735***	-0.00852	-0.00917

	(0.01352)	(0.01529)	(0.01437)	(0.01432)	(0.01412)	(0.01480)	(0.02073)	(0.02245)
Proportion of cases with approved certification by state last four years	0.02197	0.01763	0.01289	0.01710	0.01519	0.01474	0.01584	0.01584
	(0.01584)	(0.01366)	(0.01440)	(0.01383)	(0.01208)	(0.01395)	(0.01300)	(0.01353)
Proportion of multistate class actions by allegation last four years	0.53060**	0.63211**	0.67600***	0.67396***	0.65077***	0.65493***	0.53075*	0.53012
	(0.25989)	(0.25411)	(0.24830)	(0.24878)	(0.24889)	(0.25223)	(0.31176)	(0.32520)
Proportion of multistate class actions by state last four years	0.16563	0.13727	0.13295	0.13914	0.16509	0.14445	-0.09189	-0.09189
	(0.23226)	(0.19895)	(0.19846)	(0.20084)	(0.19936)	(0.20168)	(0.23085)	(0.24036)
Proportion of nationwide class actions by allegation last four years	-0.65433**	-0.76197***	-0.79915***	-0.79689***	-0.76897***	-0.78099***	-0.58824*	-0.58327*
	(0.26133)	(0.25627)	(0.25168)	(0.25224)	(0.25148)	(0.25503)	(0.32507)	(0.33938)
Proportion of nationwide class actions by state last four years	-0.21538	-0.18047	-0.18912	-0.18985	-0.20989	-0.19060	0.06032	0.06032
	(0.23297)	(0.19966)	(0.20003)	(0.20211)	(0.20107)	(0.20226)	(0.23512)	(0.24481)
Regulators have filed briefs on behalf of the defendant in this line	0.02407	0.03441**	0.03321**	0.03207**	0.02852**	0.03327**	0.00744	0.00383
	(0.01629)	(0.01444)	(0.01459)	(0.01458)	(0.01249)	(0.01456)	(0.01821)	(0.01951)
Regulators have filed briefs on behalf of the defendant in this state	-0.03800*	-0.03284*	-0.03242*	-0.03723**	-0.04186**	-0.02682	-0.00326	-0.00326
	(0.02007)	(0.01720)	(0.01803)	(0.01845)	(0.01832)	(0.01740)	(0.01749)	(0.01821)
Year Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tort Reforms	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Allegation Controls	No	No	No	No	No	No	Yes	No
State Controls	No	No	No	No	No	No	Yes	No
Allegation*State Controls	No	No	No	No	No	No	No	Yes
Observations	480	480	481	482	489	483	480	480
R-squared	0.03	0.03	0.02	0.02	0.03	0.02	0.08	0.28
Robust standard errors in parentheses								
* significant at 10%; ** significant at 5%; *** significant at 1%								

V. CONCLUSIONS AND IMPLICATIONS

The evidence presented in this paper suggests that class actions and regulation are parallel systems at least in the context of insurance. We find little evidence that increases in regulatory stringency cause decreases in the likelihood of class action filings. We also fail to confirm a regulatory capture story. Plaintiffs' filing decisions appear to be influenced by the success of previous plaintiffs in both the state and with a particular allegation. This success itself may be affected by a form of judicial capture whereby states with elected judges are more class action friendly.

When the dust clears from the current financial crisis, it is very likely that the U.S. will engage in sweeping regulatory reforms of the financial sector, including the insurance industry. In order to optimize the welfare effects of these reforms, it is of crucial importance to understand the relationship between regulation and litigation. While theoretical models imply these two systems should serve as substitutes, we provide strong evidence suggesting this is not the case in reality.

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Appendix

Table A1: Most Common Allegations Cited In Insurance Class Actions

CATEGORY	CASES	ALLEGATION	Average DOI Rating	Ranked Relationship to Regulatory Regime
Automobile 1st party coverage - Diminished value issues	68	Failed to reimburse policyholders for the diminished value of repaired vehicles.	3.15	Weak
Automobile 1st party coverage - OEM issues	34	Specified aftermarket parts for repairs rather than using OEM parts, resulting in diminished value, safety issues, or any loss (other than policy cost).	3.5	Modest
Property coverage	23	Failed to provide allowance for general contractors' overhead and profit when paying for repairs.	3.47	Modest
Workers' compensation coverage	22	Conspired with the National Council on Compensation Insurance to charge more than approved by state Board of Insurance.	3.64	Modest
Automobile no-fault, personal injury protection, or medical payments coverage – Policyholder issues	21	Systematic reduction of PIP benefits through bill review computer program.	3.31	Modest
	21	Used medical file review firms with reviewers who are unqualified, non-medical, biased, given improper incentives, or who have colluded\conspired with insureds to deny claims.	4.07	Modest
Life coverage	20	Claimed premiums would vanish over time.	4.35	Strong
Automobile uninsured\underinsured motorist coverage – Policyholder issues	19	UM\UIM election\rejection at time of initial policy purchase issues (basic and\or extended\enhanced upgrade; includes misleading representations, invalid forms, failure to offer as required, failure to obtain written rejection).	4.31	Strong
Automobile no-fault, personal injury protection, or medical payments coverage - Health care provider issues	15	Made inappropriate fee reductions on claims submitted under PIP coverage.	3.75	Modest
Property coverage	15	Systematically performed unfair or other wrongful adjustment of claims arising from a single event (e.g. hail storm or earthquake).	4.41	Strong

CATEGORY	CASES	ALLEGATION	Average DOI Rating	Ranked Relationship to Regulatory Regime
Automobile no-fault, personal injury protection, or medical payments coverage – Policyholder issues	14	Failed to pay interest on delayed claim payments.	3.63	Modest
Property coverage	14	Depreciated the amount of building materials or parts or repair\labor costs or withheld an amount for depreciation to the premises or item on partial losses to real or personal property.	3.75	Modest
Automobile 1st party coverage - OEM issues	12	Failed to disclose the use of aftermarket parts for repairs rather than using original equipment manufacturer parts.	4.44	Strong
Automobile uninsured\underinsured motorist coverage – Policyholder issues	12	Charged for multi-car stack coverage when actually only one car.	4.13	Strong
Automobile coverage - Other issues	12	Failed to fully reimburse insureds for amounts (including deductibles) insurer recovered from 3rd party tortfeasors; including failure to pay interest on recovered amounts and instances where insurer failed to obtain recovery from 3rd parties.	4	Modest
Automobile no-fault, personal injury protection, or medical payments coverage - Health care provider issues	11	Failed to pay required interest or interest on delayed payments to health care provider on claims.	3.27	Modest
Workers' compensation coverage	11	Used forms and\or rates other than those approved by Insurance Commissioner, the Department of Insurance, statute, regulation, or other authority.	3.79	Modest
Automobile 1st party coverage - Other issues	10	Used valuation software package designed to produce offers for automobile total loss at less than fair market value, actual retail price, fair retail value, or other required measure.	4.06	Modest
Automobile no-fault, personal injury protection, or medical payments	10	Denied medical claims or failed to pay claims within time limits without first obtaining report from appropriate health care provider.	3.73	Modest

CATEGORY	CASES	ALLEGATION	Average DOI Rating	Ranked Relationship to Regulatory Regime
coverage – Policyholder issues				
Automobile uninsured\underinsured motorist coverage – Policyholder issues	9	Inappropriate offset of UM\UIM payments by multiple sources of benefits (such as workers' compensation or 3rd party recovery) previously received when only one offset is actually allowed.	2.94	Weak
Automobile coverage - Other issues	9	Offered inadequate amounts for personal mileage reimbursement.	2.44	Weak
Automobile 1st party coverage - Increased value issues	8	Deducted portion of payments for vehicle repair based on alleged betterment in value of vehicle from upgraded parts or repairs.	3.27	Modest
Automobile no-fault, personal injury protection, or medical payments coverage - Health care provider issues	8	Denied medical claims or failed to pay claims within time limits without first obtaining report from appropriate health care provider.	3.73	Modest
Automobile no-fault, personal injury protection, or medical payments coverage – Policyholder issues	8	Other or undefined failure to pay proper or full PIP or MedPay benefits.	3.92	Modest
Property coverage	8	Reduced benefits by omitting sales taxes or other mandatory fees and charges (such as on the calculation of personal property losses or for building materials for partial real property losses)	3.75	Modest
Multiple types of coverages - Modal premium issues	8	Imposed premium finance service charges (or any separate finance, service, and\or installment charge or fee related to periodic payments) in violation of law or in excess of legal maximums.	3.76	Modest
Automobile no-fault, personal injury protection, or medical payments coverage – Policyholder issues	7	Systematically refused to reimburse on reasonable and customary or medically necessary or other appropriate basis without investigating particular merits of the claim or without reasonable grounds for making decision.	4.13	Strong
	7	Failure to make timely payments of medical and other bills under PIP.	4.43	Strong

CATEGORY	CASES	ALLEGATION	Average DOI Rating	Ranked Relationship to Regulatory Regime
Property coverage	7	Continued to charge same or increased premiums or used an inflation coverage endorsement on property that depreciated (such as mobile homes) while only paying actual cash value rather than replacement cost.	4	Modest
Workers' compensation coverage	7	Conspired to fix prices in violation of antitrust laws.	3.47	Modest
Multiple types of coverages - Modal premium issues	7	Failed to disclose annual percentage rate and finance charges incurred when paying premiums periodically rather than annually.	2.88	Weak
Automobile no-fault, personal injury protection, or medical payments coverage – Policyholder issues	6	Used valuation software package designed to produce offers for personal injury claims at less than full and fair value.	4	Modest
Automobile uninsured\underinsured motorist coverage – Policyholder issues	6	Sold multiple UM\UIM policies to insureds with more than one car when only one is needed.	4.06	Modest
	6	Denied right to stack UM\UIM and BI coverages in same household.	3.57	Modest
Workers' compensation coverage	6	Conspired to charge unduly high fees on businesses placed in assigned risk pool.	3.38	Modest
Property coverage	5	Discriminated based on race by refusing to insure or only offering policies with fewer benefits in particular geographic areas.	4.47	Strong
Property coverage	5	Wrongly limited coverage for water or mold damage or failed to test for same.	4	Modest
	5	Improperly denied foundation\slab or other below-ground claims on the basis of earth movement, water causes, and\or other concurrent causations.	3.56	Modest
	5	Systematically over-insured\appraised property (or used excessive replacement cost estimator, unnecessary mortgage requirements, bundling coverage, included land value, or used defective valuation process) to generate additional premiums.	3.67	Modest

CATEGORY	CASES	ALLEGATION	Average DOI Rating	Ranked Relationship to Regulatory Regime
Multiple types of coverages - Modal premium issues	5	Failed to comply with Truth in Lending Act requirements for financed portion of the annual premiums paid on a periodic basis.	2.71	Weak
Multiple types of coverages - Other issues	5	Failed to reimburse insureds or failed to disclose right for reimbursement) for lost earnings and\or other expenses related to liability defense provided by own insurer or other insurer-required legal proceeding.	3.25	Modest

(Allegations reported in five or more cases)

Source: Pace et al. 2007

Table A2: State Laws Concerning OEM parts

State	Disclosure statement required on consumer's estimate	Consumer consent required	Estimate must identify aftermarket parts	Aftermarket parts must be "of like kind and quality" to OEM parts	Manufacturer's warranty required	Disclosure required about the effect of part's use on vehicle warranty	Insurer cannot require use of aftermarket parts	Manufacturer's identification required on part	No regulation
AL	X		X		X			X	
AK									X
AZ	X		X	X	X			X	
AR	X	X	X		X			X	
CA	X		X		X			X	
CO	X		X		X			X	
CT	X		X		X				
DE									X
FL	X		X		X				
GA	X		X		X			X	
HI	X	X	X	X	X				
ID	X		X		X			X	
IL	X		X	X	X			X	
IN		X							
IA			X		X			X	
KS	X		X		X				
KY			X	X					
LA	X		X		X			X	
ME									X
MD	X					X			
MA	X		X		X				
MI	X		X		X				
MN							X		
MS	X		X		X			X	
MO	X		X		X			X	
MT									X

NE	X		X	X					X	
NV										X
NH	X		X	X					X	
NJ	X		X	X	X				X	
NM										X
NY			X	X	X					
NC	X		X	X						
ND										X
OH	X	X	X		X				X	
OK	X		X		X				X	
OR		X	X		X	X			X	
PA										X
RI	X	X	X							
SC										X
SD	X		X		X				X	
TN	X		X		X				X	
TX		X								
UT	X		X		X				X	
VT										X
VA	X		X			X				
WA	X		X							
WV	X		X			X			X	
WI	X		X		X				X	
WY	X	X	X	X						

Source: GAO, 2003