The Effect of Bad-Faith Laws on First-Party Insurance Claims Decisions

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ABSTRACT

This study sets forth the legal distinctions among bad-faith laws and provides a theoretical foundation for our hypotheses that bad-faith laws affect both economic and noneconomic damage amounts. We use data that include information about uninsured and underinsured "closed claims"—that is, claims that have either been settled or been paid or closed after trial—under automobile policies from over 60 insurance companies in 38 jurisdictions in 1992. While controlling for multiple other factors that are expected to be associated with the size of settlement payments, we exploit differences in state laws that govern insurer bad faith to examine empirically whether bad-faith remedies affect the size of settlement payments and the allocation of settlement payments between economic and noneconomic damages. We find a positive correlation between the existence of a bad-faith remedy and higher settlement payments. This correlation exists for both economic and noneconomic damages.

1. INTRODUCTION

One of the most notable and debated developments in the law of insurance and tort during the past 25 years has been the recognition, in most states, of an extracontractual cause of action against insurers for bad-faith denial of a claim filed by an insured for benefits allegedly due to the insured under the policy. Although the notion that an insurer's obligation of "good faith and fair dealing" has a long history, the breach

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of this obligation traditionally gave rise only to a contractual remedy (Jerry 1994). This contractual remedy usually was restricted to the economic consequences of the breach and did not include mental anguish damages or punitive damages. During the 1980s, however, a majority of states expanded this remedy. Usually, this expansion took the form of a tort cause of action for "breach of the duty of good faith and fair dealing" in handling a claim filed by an insured.¹ Under this theory, insureds could recover not just their economic losses—the policy amount and consequential economic damages—but mental anguish and, upon proper proof, punitive damages.²

This relatively new tort cause of action continues to generate controversy. Many courts and scholars believe that the content and application of bad-faith law have stabilized and become more predictable (Abraham 1994). Nonetheless, bad-faith laws still present a potent threat of liability to insurers, and the legal system—including the highest courts in many states—continues to struggle over how to define and apply the bad-faith tort.³ For instance, the Texas Supreme Court recently debated whether to retain the tort at all; after the divided court agreed to keep the tort, the court struggled with how to reformulate the tort to make its application by juries and courts more understandable and workable (*Universe Life Insurance v. Giles*, 950 S.W.2d 48 [Tex. 1997]).

The literature on bad-faith law includes considerable analyses from various perspectives, including economics (Sykes 1996), fairness- or justice-based views,⁴ and practice-oriented research (see, for example

1. The development refers to a claim filed by an insured, sometimes referred to as a "first-party claim." This is a claim that the insured files for loss incurred by the insured, such as claims for property damage under homeowner or automobile policies. By contrast, under "third-party" or "liability" coverage, the insured requests that the insurer pay some third party for a loss caused by the insured, such as the injuries suffered by a pedestrian when the insured driver strikes the pedestrian. For more detail, see pp. 359–60.

2. Many states also enacted unfair-claims-processing statutes, which among other features included a remedy for unreasonable or bad-faith denials of first-party claims. As with the tort cause of action, these statutory causes of action are not limited to economic damages but often include noneconomic damages and penalty damages, such as a sum two or three times the amount of the actual damages found.

3. For a general introduction to the debate over the fairness or efficiency benefits of bad-faith laws, see *Texas Law Review* (1994). For analyses of the various costs and benefits of a tort-based cause of action for bad-faith denials of first-party claims, see Abraham (1986), Gergen (1994), Jerry (1986), and Sykes (1996).

4. Most scholars draw in part on fairness- or justice-based analysis in their work on insurance and bad faith. For a superb introduction to justice-based goals of insurance law, see Abraham (1986, pp. 18–36). For discussion of justice-based goals as they relate to bad-faith doctrines, see Baker (1994) and Pryor (1994).

Shernoff, Gage, and Levine 1992).⁵ Yet virtually no empirical work on the effects of bad-faith laws has appeared in the literature of law or insurance economics. In part, this results from the well-known difficulties of conducting empirical research on the tort law system.⁶ Some of these difficulties apply with particular force to research on a subcategory of tort claims such as bad-faith claims. For instance, any research based on state court filings or jury verdict reports would require that the underlying data distinguish between claims for bad faith and claims grounded in contract or some other type of tort. For the most part, state court records do not make these distinctions (Pryor and Silver 1994).

This article represents the first empirical study of the effect of bad-faith laws on claims decision making by insurance companies. We make use of the 1992 database developed by the Insurance Research Council (IRC) drawn from thousands of "closed claims" under automobile insurance policies from over 60 insurance companies. The work product of the IRC study consisted of a sample of claims closed by participating insurers in 1992 in which the claims adjuster recorded extensive information about the claim, such as demographics, attorney involvement, amounts paid out in numerous categories (including economic and non-economic), time lapse between claim and payment, and other factors.

Starting with our underlying theory and detailed closed claims information, we fashioned a study made possible by two features of bad-faith law. First, although the IRC data consist of a distinct set of liability claim data—a type of claim that for various reasons we did not include in this study⁷—it also consists of distinct data relating to claims made

5. Continuing legal education programs and practice-oriented journals frequently focus on various issues in bad-faith law.

6. For an introduction to the difficulties posed by, and gaps in, empirical research on the tort system, see Saks (1992). Much quality empirical research exists now on various features of the tort system, but virtually none of this applies to tort or tortlike causes of action for bad faith.

7. Most states do recognize a tort-based cause of action in the third-party insurance claim setting: the insurer's breach of the "duty to settle." This duty, which is not specifically stated in standard policies, is based on the conflict of interest that can arise between the carrier's and insured's interests when the injured claimant makes a settlement demand that is at or within policy limits and when the claim, if it went on to trial, could well result in a higher verdict. Recognizing this conflict, most courts impose on the carrier a duty to evaluate a within-limits settlement offer in light of the expected value of the suit, disregarding the policy limits that cap the insurance company's own exposure. For classic and detailed expositions of the duty to settle and its rationale, see Keeton (1954) and Syverud (1990). For a recent economic treatment, see Sykes (1994). As with first-party bad faith, the effects of the duty to settle have been studied analytically, but little empirical work exists. A very different type of study, however, would have to be designed for this pur-

by the insured against his or her own insurer under the uninsured motorist (UM) or underinsured motorist (UIM) coverage under the policies. Most states that recognize an extracontractual cause of action for bad faith include UM and UIM coverage. Thus, the final data set used in this study includes over 2,000 claims subject in many states to an extracontractual claim filed by an insured against its insurer. Second, not all states recognize an extracontractual cause of action for bad-faith denials or delays of claims by insureds against insurers. For example, in 1992, the year of the IRC data, 15 states in our final sample did not recognize an extracontractual bad-faith cause of action, whether grounded in tort or in statute.

We reasoned that by controlling for other variables that plausibly are associated with the amount of the payments made on UM and UIM claims—variables that include significance of injury, tort reform measures, attorney involvement, and others—we could determine whether the presence of a bad-faith remedy affected the amount, timing, or allocation of payments made to the insured. Put another way, do the data support a conclusion that the “shadow of the law” of bad faith has any effect on the amount, timing, or allocation of payments to the insured?

In theory, several answers to this question are plausible. First, the presence of a bad-faith remedy in a given jurisdiction might have no effect on the amount, timing, or allocation of payments to the insured. This finding would suggest that the presence of a bad-faith remedy has less effect on overall claims practices than is usually assumed.

Second, the presence of a bad-faith remedy might increase the amount of the overall payment to the insured. If this is the result, then a further proposition can be tested: whether this increase in the overall payment amount is attributable to an increase in payments for economic damages, an increase in payments for noneconomic damages, or an increase in both.

To explain this further point, consider that, under the terms of UM and UIM coverage, the UM and UIM payments reflect the tort payments to which the insured would have been entitled had the tortfeasor been adequately insured. Tort payments, of course, consist of monies both for out-of-pocket losses (past and future) and for intangible losses such as pain and suffering, mental anguish, or impairment. Thus, UM and

pose. We chose to focus on first-party bad faith because the data lent itself more readily to this and because the rationales and benefits of the first-party tort—which is of more recent vintage than the duty to settle—have been more controversial than the duty to settle.

UIM payments include some amount reflecting the economic (out-of-pocket) losses and some amount reflecting the noneconomic losses of the plaintiff. Thus, if the presence of a bad-faith remedy increases the overall amount paid, is this increase significantly attributable to economic damages or to noneconomic damages? Or is the increase spread across both categories? Theory alone does not tell us which result is most likely; indeed, in theory, any of the three possibilities could be expected. As we will show, however, the data indicate that the increased payments in bad-faith states are tied to both economic and noneconomic damages.

Section 2 outlines in more detail the design of the study. This includes our reasoning for drawing on UM and UIM claims, some details about bad-faith laws and legal distinctions that are relevant to this study, and the theoretical underpinnings of our hypotheses. Section 3 describes more precisely the methodology of the study, including a description of the data and the variables for which we controlled and the formula of analysis. Section 4 sets out the findings, and Section 5 contains some concluding observations.

2. DESIGN OF THE STUDY

2.1. First-Party Bad-Faith Liability

To understand the design of the study, some additional explanation is necessary about the bad-faith legal framework and how UM and UIM insurance fits within it. Extracontractual remedies for insurer bad faith exist for the insurer's handling of both third-party coverage and a first-party claim. First-party claims are filed by insureds seeking recovery for losses sustained directly by the insured. Third-party insurance, by contrast, provides coverage to the insured for damage or loss that the insured has caused to some third party. Loosely speaking, most liability insurance is third-party insurance. This includes, for instance, the liability portions of an automobile policy or homeowner's policy and the commercial general liability insurance policy. Obviously, then, some insurance policies contain both first-party and third-party coverage.

The primary extracontractual remedy available to third-party claims is the so-called duty to settle, a duty that does not exist explicitly in the language of standard insurance policies. Rather, beginning in the 1950s, most jurisdictions eventually imposed an extracontractual duty to settle, which requires the insurer to evaluate reasonably any settlement offer

made by the third-party claimant against the insured within the limits of the policy (for a historical account, see Jerry [2002, sec. 25G(b)]; for seminal theoretical accounts of the duty to settle, see Keeton [1954]; and Syverud [1990]). The concern underlying this remedy is that insurers will favor their own interests and take a gamble on winning a lower verdict at trial instead of paying the within-limits settlement offer (Jerry 2002, sec. 25G[b], p. 155; Keeton 1954, pp. 1142–48).

The extracontractual cause of action applicable to first-party claims is of a more recent vintage (for historical background, see Jerry [1986, sec. 25G(c)]). In the late 1970s and early 1980s, a number of courts adopted a bad-faith cause of action for first-party claims.⁸ But the justifications for the first-party cause of action have always been more controversial than those for the failure to settle in the liability context. First, insurance contracts explicitly require the insurer to pay the insured for covered claims. Hence, a contract remedy is already in place, which is not the case with the duty to settle. Second, in practice it has been quite difficult to articulate and implement an extracontractual standard that will not yield too many false negatives or false positives.⁹ Most jurisdictions require the insured to prove more than that the insurer made a wrong decision; most require the insured to show that the insurer's decision was reckless and that the insurer knew this (see generally Henderson 1992).¹⁰ Whatever the precise wording, all states that recognize first-party claims require some level of aggravated error, such as recklessness.

A number of states have also adopted, either in addition to or in place of a judicially created remedy for first-party bad faith, a statutory cause of action that provides more than the usual contract remedies. An example is the Texas Insurance Code, which contains a private right of action for unfair claims-handling practices, including "failing to attempt in good faith to effectuate a prompt, fair, and equitable settlement of a claim with respect to which the insurer's liability has become reasonably

8. The key early decision was *Gruenberg v. Aetna Insurance Co.*, 510 P.2d 1032 (Cal. 1973). For a recent state supreme court decision that recounts the history and debates the merits of the first-party bad faith, see *Giles* (950 S.W.2d at 48).

9. For detailed analysis of whether the extracontractual cause of action for bad faith matches the theoretical justifications that might be advanced for the remedy, see Gergen (1994) and Sykes (1994).

10. A recent case decided by the Texas Supreme Court offers a good look at the problems with formulating and applying the bad-faith standard. See *Giles* (950 S.W.2d at 48). For analysis of the difficulties in formulating a coherent and workable standard, see Gergen (1994).

clear" (Texas Insurance Code, art. 21.21, sec. 4(10)(ii) [2004]). These statutory provisions, like the judicially created tort remedy, allow for more than the standard contract damages. But the statutory remedies usually are more bounded than the tort remedies. For instance, the statutory remedies are often some multiple, such as three times, of the actual damages. They do not always provide for punitive damages or mental anguish.¹¹

As of 1992, the year of the IRC database, most courts had adopted a first-party bad-faith remedy; of these, many had specifically applied the tort to a claim for UM or UIM benefits.¹² However, some states rejected and others had not yet accepted the tort cause of action.¹³ In

11. At the time the Alaska Supreme Court adopted the tort of first-party bad faith, claimants could pursue statutory remedies under the state's unfair-claims-processing statute. But the penalty was limited to \$25,000 and required proof of frequent commissions by the insurer of the practice. See *State Farm Fire & Casualty Co. v. Nicholson*, 777 P.2d 1152, 1157 (Alaska 1989), for an explanation of the limited nature of the statutory remedy.

12. See, for example, *Nicholson* (777 P.2d at 1154–56), on the adoption of the tort of first-party bad faith, notwithstanding contract remedies and limited statutory remedies; *State Farm Mutual Automobile Insurance Co. v. Weiford*, 831 P.2d 1264 (Alaska 1992), on the application of the tort of bad faith to a claim for uninsured motorist coverage, although it was found that the claimant had not produced enough evidence to suffice for punitive damages; *Hoskins v. Aetna Life Insurance Co.*, 452 N.E.2d 1315, 1318–19 (Ohio 1983), which recognized a tort cause of action for breach of the duty of good faith and fair dealing in the first-party context, including punitive damages upon proper proof; *Christian v. American Home Assurance Co.*, 577 P.2d 899, 903 (Okla. 1978); *Champion v. United States Fidelity & Guaranty Co.*, 399 N.W.2d 320, 322–23 (S.D. 1987), on the application of the tort cause of action for bad-faith failure to pay benefits in a workers' compensation context; *Isaac v. State Farm Mutual Automobile Insurance Co.*, 522 N.W.2d 752, 759–60 (S.D. 1994), on the application of the bad-faith tort in the context of a claim for uninsured motorist benefits; *Arnold v. National County Mutual Insurance Co.*, 725 S.W.2d 165, 167 (Tex. 1987), on the adoption of the tort cause of action for breach of the duty of good faith and fair dealing in a first-party context; *Hampton v. State Farm Mutual Insurance Co.*, 778 S.W.2d 476 (Tex. App.—Corpus Christi 1989, no writ history), on the application of the tort of breach of the duty of good faith and fair dealing to a claim for underinsured motorist benefits; *McCullough v. Golden Rule Insurance Co.*, 789 P.2d 855, 855–58 (Wyo. 1990); *Shrader v. State Farm Mutual Auto. Insurance Co.*, 882 P.2d 813, 826 (Wyo. 1994), on the application of the tort of first-party bad faith to a claim for UM coverage, and specifically rejecting the insurer's argument that a claim for UM should not be subject to the tort.

13. See, for example, *Beck v. Farmers Insurance Exchange*, 701 P.2d 795, 798–802 (Utah 1985), on the restriction of the cause of action to a contractual one, which also noted that in "unusual cases," mental anguish damages might be recoverable; *A&E Supply Co. v. Nationwide Mutual Fire Insurance Co.*, 798 F.2d 669 (4th Cir. 1986), which reviewed Virginia law and concluded that Virginia law would not recognize the tort of first-party bad faith or an implied right of action under the state's unfair claims processing statute.

other states, bad-faith causes of action were allowed, but statutes substantially limited the damages recoverable.¹⁴

This jurisdictional split provides the entry point to this study. Presumably, the most potent threats posed by a tort remedy, as distinct from a contract remedy or a limited statutory remedy, are two categories of damages that remain controversial in tort generally: mental anguish and punitive damages. Mental anguish damages are not awarded according to fixed standards, and tort reform proponents continue to cite these as one of the main sources in the unpredictability and variability of tort awards generally. As to punitive damages, a major national debate has raged for the past 20 years over the justification and merits of punitive damages in tort. Many states have enacted caps on mental anguish damages, punitive damages, or both. Sometimes these caps apply to bad-faith torts; sometimes they do not.

Despite some variation in the standards for and potential size of punitive and mental anguish damages in different states, it remains plausible to view these two categories of damages as a far more potent monetary threat than a remedy that allows only contract-based recovery (the amount that the insurer owed under the contract), whether or not the contract route also allows for attorneys' fees. Thus, we identified which states, by 1992, had recognized a tort or statutory cause of action for first-party bad faith, when that cause of action allows mental anguish and punitive damages. We also tried to identify the year when this cause of action became recognized in the state. Finally, we also identified the states that did not recognize such a cause of action in any year up to and including 1992.¹⁵

Of the 38 states included in our final sample, 24 recognized an extracontractual cause of action that clearly or likely does allow mental anguish and punitive damages upon proper proof. The balance had rejected an extracontractual claim for first-party bad faith or limited this type of claim to statutory or contract-based remedies that ordinarily do

14. See, for example, Georgia Code Annotated, sec. 33-7-11 (j) (West 2004), which provided for a penalty of not more than 25 percent of the amount of recovery and reasonable attorneys' fees.

15. In our final data set, the jurisdictions that in 1992 either did not recognize the tort of bad faith in a first-party context or limited or capped damages for first-party bad faith (for instance, a statutory remedy with attorney's fees) were Florida, Georgia, Idaho, Maryland, Minnesota, Missouri, Mississippi, New Hampshire, New York, Oregon, Tennessee, Utah, Virginia, and Washington.

not include mental anguish and punitive damages. Closed-claims data from the states falling in these two groups formed the basis of our study.

Several other points should be noted about this study's classification of the jurisdictions. First, for most states, the year of adoption was easy to identify because most state supreme courts clearly adopted the tort without years of previous appellate uncertainty about the existence of the tort. Second, in some states that recognized a first-party bad-faith tort cause of action, the case law recognized and applied the tort but did not specifically address the availability of both mental anguish and punitive damages. For instance, a given case might address the availability of punitive damages but not specifically mention mental anguish (an example is *Murray v. Nationwide Mutual Insurance Co.*, 472 S.E.2d 358, 368 [N.C. Ct. App. 1996, rev. denied]). We have assumed that when a jurisdiction clearly allows a first-party bad-faith tort cause of action, mental anguish and punitive damages are included unless specifically limited by the case law.¹⁶ Indeed, the seminal California case on first-party bad faith, frequently cited by other jurisdictions when adopting the tort, specifically held that mental anguish damages would be available as long as the plaintiff suffered "substantial" economic losses apart from the allegations of mental anguish.¹⁷

Third, some states recognized the tort cause of action for breach of the duty of good faith and fair dealing, but had not specifically applied

16. Proof of the tort cause of action, by itself, is not necessarily enough to allow a claim of punitive damages to go to the jury, so a claimant could succeed on a bad-faith claim and yet not win on the claim for punitive damages. See *Weiford* (831 P.2d at 1267-70), which applied the tort of bad faith to a claim for UM coverage, although it was found that the claimant had not produced enough evidence to suffice for punitive damages; *McCullough* (789 P.2d at 859-61), which explained why proof of the elements of the tort will not by itself allow punitive damages and that the standard for punitive damages remains that of general Wyoming law, which requires wanton or willful conduct. Nonetheless, in a jurisdiction that recognizes the tort cause of action for breach of the duty of good faith and fair dealing, the claimant might be able to recover for punitive damages, if she can satisfy the punitive-damages standard in a given jurisdiction.

17. In *Gruenberg* (510 P.2d at 1041-42), the court stated, "Here, plaintiff alleged that he suffered substantial economic losses apart from mental distress. He alleged that he suffered loss of earnings; that he was compelled to go out of business and that as a result he was unable to pay his business creditors; that he incurred that costs of defending lawsuits brought against him by his creditors; and that he incurred medical expenses. We conclude, therefore, that since plaintiff has alleged substantial damages for loss of property apart from damages for mental distress, the complaint is sufficiently pleaded with respect to the latter element of damages." Other courts seem to agree. See *Shrader* (882 P.2d at 833-34), which rejected the insurer's argument that a claim for first-party bad faith should include only economic damages and not mental anguish and cited *Gruenberg's* requirement of other economic loss.

it in a UM or UIM context. We have included such states in the category of bad-faith states, unless the case law indicated some sort of restriction on the ambit of the tort. It is plausible to assume that, once a given jurisdiction adopted a tort cause of action for first-party bad faith, a claims decision maker in that state viewed the tort as applying to claims for UM or UIM. No jurisdiction that adopted the tort of first-party bad faith has refused to apply it to uninsured or underinsured motorists, and UM and UIM coverage is widely regarded as a form of first-party coverage.¹⁸

2.2. How Uninsured and Underinsured Motorist Coverages Blend into the Bad-Faith Fabric

As noted, most of the claims data in the IRC database relate to liability claims filed by the injured person against the insured. But the IRC database also includes substantial information about any claim made by the insured against the insurer for either UM or UIM benefits. This is a form of first-party coverage, because it is a claim for losses that the insured has incurred. In most states that recognize a first-party bad-faith remedy, the remedy extends to UM and UIM insurance. A brief explanation of UM and UIM coverage is necessary to understand fully the design of the study.

Uninsured and underinsured motorist coverages are included in most standard automobile insurance policies. These coverages are aimed at addressing the not-infrequent situations in which the insured under the policy is injured by another driver who is at fault and who would be responsible in tort for damages to the insured. This other driver, however, either does not have insurance or does not have enough insurance to pay the damages for which the driver would be responsible in tort. When this occurs, the insured can make a claim under his own insurance policy for either UM or UIM benefits. The claim will be successful if the insured can show (1) that the other driver would have been liable and (2) that the other driver cannot pay some or all of what the insured driver would be entitled to receive under tort. When the insured can make this showing, he or she can receive the amount of the shortfall, up to the limit specified in the UM or UIM coverage.

At times, insurers have argued that UM or UIM recovery is not available unless and until the injured victim—the insured under the UM or UIM coverage—has obtained an adjudication of liability and damages

18. For more detail, see discussion on pp. 364–65.

against the underinsured or uninsured driver. Most jurisdictions have rejected this approach.¹⁹ Generally, therefore, the injured driver does not have to wait until trial against the other driver to request payment of the UM or UIM claim. Thus, disagreements about the extent of liability and amount of damages frequently arise under UM or UIM claims.

2.3. Theory in a Bad-Faith Environment

In conducting the study, we developed several hypotheses about insurer behavior when faced with first-party claims. Before outlining these specifically, one overall observation should be noted. Individuals and even corporations often make decisions and take actions without much awareness of, or influence by, the formal rules of law. Claims decision makers in insurance companies, however, are aware of the remedial regime that applies in a given jurisdiction. Insurers have institutional incentives to communicate this information, which can be distributed efficiently through in-house education programs or educational programs run by insurer trade organizations, and individual claims adjusters have incentives to internalize and take account of the legal consequences governing their decisions.

We posit that a claim that involves a significant component of noneconomic damages—the damages for mental anguish, pain and suffering, or impairment that the uninsured or underinsured driver would have had to pay the victim-claimant—will complicate the decision calculus for the adjuster more than would a claim involving mainly economic damages. When presented with an insurance claim, an adjuster must determine whether it is legitimate or fraudulent and must determine the amount of the claim the insurer should pay. The insurer must also determine how much to spend on the investigation of the claim. To determine the legitimacy of the claim, the adjuster may engage in a number of different investigative activities. These often include examining damage related to the loss, questioning the claimant, and reviewing documents. This investigation consumes resources and is therefore costly. In theory, a second strategy that an adjuster may adopt is to deny the claim without undertaking an investigation. Presumably, this strategy will more often result in the filing of a legal action against the insurer than that of investigation and payment or investigation and then denial. Both

19. See *Winner v. Ratzlaff*, 505 P.2d 606, 609–11 (Kan. 1973), which summarized case law on this issue and agreed with the majority position, which does not require adjudication of the underlying tort claim.

the claimant and the insurer will incur additional expenses if the claim enters the judicial system. While the judicial proceedings might not lead to complete information about the claim, much will typically be learned through this process, and the claim will be resolved one way or another.

2.3.1. Size of Overall Settlement Payments. Because insurance adjusters presumably make settlement decisions in the “shadow of the law” and the potential liability that the company will face if a wrongful decision is made, significant differences in potential liability for wrongful decision making could plausibly affect adjuster behavior in all cases. Specifically, it is plausible to suppose that, when faced with a claim for benefits in state A, which recognizes the tort cause of action for bad faith, the company will pay more frequently, more quickly, or more in total amount than would a company faced with a similar claim in state B, which allows only contract remedies and attorney’s fees.

2.3.2. Increased Payment Size for Noneconomic Damages. As just noted, a plausible hypothesis is that the overall payment amount is greater in bad-faith jurisdictions than in non-bad-faith jurisdictions, given otherwise similar claims. A further question is whether this overall higher payment is attributable to any particular category of damages. One possibility is that companies tend to “spread out” the higher payment amount across the loss categories that make up the claim: noneconomic damages such as pain and suffering and economic damages such as medical expenses, lost earnings and future earning capacity.

A second possibility is that the higher payment amount is tied, significantly, to the category of noneconomic damages. Noneconomic damages are more difficult to quantify; different decision makers faced with valuing an injury’s pain and suffering will produce answers with a greater range of variation than when evaluating, say, the amount for lost wages, medical expenses, and even future medical expenses. This valuation difficulty, combined with the presence of a bad-faith remedy, might result in higher claims payments for the noneconomic portion of the injury. A claims decision maker who faces a potent penalty for a “bad-faith” decision might tend to give higher valuations to the claim component that is harder to quantify. Put another way, a decision maker might feel that a decision about the nonquantifiable components of the claim will be more susceptible to, and harder to defend against, a later charge that the decision was in bad faith.

Still a third possibility is plausible. The higher claims payment amounts might be concentrated in the area of economic, rather than

noneconomic, damages. This would show that claims decision makers are more sensitive about the potential for bad-faith liability with respect to provable, economic losses. They might reason, consciously or unconsciously (or perhaps even company policies might train them), that should their decision on a claim ever become the subject of a bad-faith claim, the most difficult decision to defend would be any decision that is undercompensatory with respect to an economic loss.

For example, suppose a claimant submits medical and chiropractic bills for \$5,000 and also claims pain and suffering in amount of \$5,000. The adjuster might reason that “underpaying” the claim on the noneconomic will be easier to defend—in the harsh *ex post* light of a lawsuit—than underpaying the economic losses. For instance, the adjuster will be more comfortable in saying “I paid \$3,000 for pain and suffering; this was my best assessment; sure, we could go up or down, but there’s little guidance” than in saying “Well, I paid only \$3,000 for the medical and chiropractic because I thought these bills were excessive, or that the chiropractic visits were unnecessary.”

3. METHODOLOGY, DATA, AND THE EMPIRICAL MODELS

To test our hypotheses, we obtained data from a few sources. First, we have 2,223 individual UM and UIM paid and closed claims from 1992. As noted in Table 1, the majority of claims were opened in years prior to 1992. The claims that were subject to a jurisdiction that recognizes the tort of bad faith in a first-party context are indicated. The data were taken from the 1992 insurer study of automobile closed claims, conducted by the IRC. All claims embodied both economic and noneconomic damages. The IRC survey obtained information from 61 insurers, listed in the Appendix, that represent about 70 percent of the premium volume of private-passenger automobile insurance in the United States.²⁰ The data fields are numerous and include information about the accident, type and cause of loss, legal representation, geographic location, demographic traits of the claimant and the driver, occurrence of a lawsuit, and quantity of insurance coverage.

We also have state-specific tort reform information from the Amer-

20. Jurisdictions excluded because of unclear bad-faith law were Delaware, District of Columbia, Hawaii, Maine, and Massachusetts. States not represented in the data were Alabama, Alaska, Kansas, Indiana, Oklahoma, and Wyoming. North Dakota and South Dakota were omitted because they contributed only one observation.

Table 1. Number of Claims by Year and State

State	Prior to 1985	1986	1987	1988	1989	1990	1991	1992
Arkansas						4 ^a	6 ^a	8 ^a
Arizona				1 ^a	7 ^a	15 ^a	59 ^a	16 ^a
California	2 ^a	5 ^a	5 ^a	15 ^a	31 ^a	91 ^a	514 ^a	208 ^a
Colorado					2 ^a	2 ^a	3 ^a	3 ^a
Connecticut		2 ^a			9 ^a	10 ^a	18 ^a	2 ^a
Florida		1 ^a		3	7	9	28	2
Georgia					2 ^a	6	9	10
Idaho							1 ^a	4 ^a
Iowa					1 ^a	1 ^a	1 ^a	3 ^a
Illinois		1		2	7	8	41	14
Kentucky							2 ^a	4 ^a
Louisiana			3 ^a	2 ^a	6 ^a	19 ^a	32 ^a	10 ^a
Maryland				2 ^a	2	4	36	11
Michigan			4			1		
Minnesota						3	3	1
Missouri	1 ^a		1 ^a	1	2	14	28	20
Mississippi						2 ^a	10 ^a	10 ^a
Montana								2 ^a
North Carolina			1 ^a			1 ^a	19 ^a	4 ^a
Nebraska				1 ^a			1 ^a	5 ^a
New Hampshire					1	5	6	2
New Jersey		2 ^a	1 ^a	1 ^a	4 ^a	3 ^a	1 ^a	
New Mexico					1 ^a	7 ^a	8 ^a	6 ^a
Nevada			1 ^a		4 ^a	1 ^a	11 ^a	8 ^a
New York			1		3	3	6	
Ohio			1 ^a	4 ^a	3 ^a	13 ^a	27 ^a	17 ^a
Oregon						3	9	6
Pennsylvania		1 ^a	1 ^a	4 ^a	7 ^a	15 ^a	18 ^a	6 ^a
Rhode Island	1 ^a		2 ^a	1 ^a	2 ^a	3 ^a	8 ^a	4 ^a
South Carolina						1 ^a	13 ^a	10 ^a
Tennessee					1	7	18	21
Texas			1 ^a		5 ^a	43 ^a	134 ^a	100 ^a
Utah							5	3
Vermont						1 ^a	1 ^a	
Virginia		1			1	6	21	20
Washington			1	1	5	8	23	19
Wisconsin					1 ^a	6 ^a	14 ^a	8 ^a
West Virginia				1 ^a	2 ^a	3 ^a	2 ^a	2 ^a

^a Jurisdiction that recognizes the tort of bad faith in a first-party context.

ican Tort Reform Association; this information encompasses reform laws enacted 1980–92 and subsequent court interpretations of the statutes. As explained previously, we control for tort reform effects because claims decisions about UM or UIM claims depend in part on assessment of the liability that should have been paid by a third party under tort. Hence, tort reforms are expected to have at least an indirect effect on the first-party claims we examine in this research. Thus, our analysis takes account of the following reforms: modification of joint and several liability, modification of the collateral source rule, limits on noneconomic damages, limits on punitive damages, sanctions on frivolous suits or defenses, modification of rules pertaining to prejudgment interest, and provisions for structured settlements.²¹

3.1. Effect of Bad Faith by Damage Type

We begin by focusing on the association between bad-faith law and other legal rules and cost drivers and the severity of economic, noneconomic, and total claims. Our primary interests are the role of bad faith and its relationships to economic, noneconomic, and total damages. Our secondary interest is in the effects of legal variables and other variables such as environmental and demographic factors that are expected to be associated with claim values. The reforms that we consider and their empirical attributes are summarized in Table 2.

We control for claim characteristics and individual attributes as well as economic and environmental traits that are state specific and hold a plausible relationship to claim severity in the UM market.²² We consider the following log-linear specification,

$$\begin{aligned} \ln L = & \beta_0 + \beta_1 \times \text{Bad Faith} + \beta_2 \times \text{Attorney} + \beta_3 \times \text{Suit} \\ & + \beta_4(\text{Attorney} \times \text{Bad Faith}) + \beta_5(\text{Attorney} \times \text{Suit}) \\ & + \beta_6 \times \ln(\text{Urban}) + \beta_7 \times \ln(\text{Unemp}) + \beta_8 \times \ln(\text{Income}) \end{aligned}$$

21. To obtain information on current tort reform and tort reform efforts over the previous years, see the American Tort Reform Association (<http://www.atra.org>). A number of empirical studies have examined the effects of various tort reforms, beginning with the work of scholars who examined the effects of the medical malpractice tort reforms enacted in many states in the mid-1970s. See Sloan, Bovbjerg, and Githens (1991) and Danzon (1986). Researchers at the Rand Institute have conducted many of the empirical studies on the tort system. For studies relating to tort reform, see Browne and Puelz (1999), Schmit, Browne, and Lee (1997), Browne and Puelz (1996), Viscusi et al. (1993), and Viscusi (1990). See generally Saks (1992).

22. An important point, noted by a referee, is consideration of a fixed-effects model,

$$\begin{aligned}
& + \beta_9 \times \text{Gender} + \beta_{10} \times \text{Age} + \beta_{11} \times \text{Age}^2 \\
& + \beta_{12} \times \text{Claimant's Status} + \beta_{13} \times \text{Claimant's \% Fault} \quad (1) \\
& + \sum_{i=14}^{17} \beta_i \times \text{Injury Type}_i + \beta_{18} \times \text{JS} + \beta_{19} \times \text{Coll} + \beta_{20} \times \text{Caps} \\
& + \beta_{21} \times \text{Puni} + \beta_{22} \times \text{Puniins} + \beta_{23} \times \text{Puniins} \times \text{Puni} \\
& + \beta_{24} \times \text{Minor Reforms} + \beta_{25} \times \text{Eventyr} + \beta_{26} \times \text{Exceed} \\
& + \beta_{27} \times \text{Stack} + \sum_{i=28}^{37} \beta_i \times \text{Other Legal Interactions}_i + \varepsilon,
\end{aligned}$$

where the dependent variable is the natural logarithm of the individual loss. We estimate three versions of equation (1) that differ only in how the loss is defined, namely, the value of the total claim, the value of the economic claim only, or the value of the noneconomic claim only. The total-claim variable is the summation of the economic and noneconomic claims. The economic-claim variable is composed of wage losses and medical losses, where we modified the medical loss component of a claim by an index value representing the average cost of a hospital stay per patient per day in the state where the loss was incurred relative to a countrywide average. We did not utilize the same medical cost modification for the noneconomic-claim dependent variable since noneconomic claims do not incorporate medical losses. We undertake a logarithmic transformation of the dependent variable under the assumption that changes in tort reforms and other exogenous factors will have a proportional effect on the damage severity of the three dependent variables.

Our estimation of equation (1) is affected by the potential endogeneity of the variable *Suit*. For example, while we postulate that higher claim amounts are related to whether a lawsuit was filed, it is also reasonable to assume that the probability of taking formalized legal action could

in which control for individual states is instituted. We found that this was not workable for our data since claims data within a state across the time period of our study show hardly any variation. However, we did run the model with and without California claims and found no change in the bad-faith implications for these different samples.

Table 2. Empirical Treatment of the Tort Reforms

Reform	Attribute
Joint and several (JS)	Equals one if at the time of loss the state where the loss occurred has either abolished or modified the statute that allows an injured plaintiff to collect an entire award from any one defendant and zero otherwise
Collateral source rule (Coll)	Equals one if at the time of loss the state where the loss occurred has permitted insurance recovery from a victim's first-party insurer to offset the damage judgment and zero otherwise
Limitations on noneconomic damages (Caps)	Equals one if at the time of loss the state where the loss occurred has set a maximum on the recovery of noneconomic damages and zero otherwise
Limits on punitive damages (Puni)	Equals one if at the time of loss the state where the loss occurred has set a maximum on the recovery of punitive damages and zero otherwise
Minor Reforms	Takes the value of zero or one, depending on whether any of the minor reforms are in place at the time of loss; candidate reforms include prejudgment interest, provisions for periodic payments, and sanctions on frivolous suits or defenses

be related to the prospect of higher claim amounts.²³ We test for endogeneity of Suit (and its interactions) and report both ordinary least squares (OLS) estimates and instrumental variable two-stage least squares (2SLS) estimates that remedy the potential bias in the OLS parameter estimates.

As stated, our primary interest is in the relationship between the presence of a bad-faith statute and claim severity. We set Bad Faith equal to one when a jurisdiction recognizes the tort of bad faith in a first-

23. As noted by a referee, it is plausible that the Attorney variable is also endogenous. However, we think that economic reasoning suggests that Attorney is exogenous for this market of UM and UIMs who have relatively low total claim amounts—not, for example, a life insurance claim. Indeed, 66 percent of the claims in our sample had an attorney involved. Given the preponderance of law offices that focus on automobile insurance claims and our experiences, we think that the probability of legal retention is less related to the expected claim value; these firms are in business to process automobile claims and take most any claim that comes through their door that involves an insurance company. Anecdotal evidence from law practices that focus on automobile injuries in the Dallas area suggest that attorneys “sign ‘em up” and investigate later; the customer is signed up without a systematic calculus of the expected claim value.

party context and zero when a jurisdiction either does not recognize the tort of bad-faith or limits damages by statute in a first-party context. When UM incidents arise in states that will penalize an insurer through bad-faith liability for unreasonable delay or wrongful payment, we expect the adjusting calculus to be altered and hypothesize that claim amounts are higher under these circumstances.

3.2. Attorney Involvement, Lawsuit Filing, and Environmental and Demographic Factors

We define legal representation by whether the injured party retained counsel. The variable Attorney takes the value of one when an attorney is involved and zero otherwise. For both economic and noneconomic claims, we expect that a change in claim amounts associated with a change in the variable Attorney is positive, which indicates that higher claim amounts are associated with attorney involvement, although we expect that legal representation would have a more dramatic impact on noneconomic claims. Support for the attorney-involvement hypothesis in the UM market would be consistent with the empirical result that attorney involvement results in higher average automobile claim settlements (Browne and Puelz 1996). We also introduce the potentially endogenous variable Suit, which takes the value of one if a lawsuit was filed and zero otherwise. The prediction about the empirical relationship between a lawsuit filing and claim value is unclear, although theoretical work in this area boils down to the relationship between the injured party's asking price and the defendant's maximum offer, taking into account each party's litigation costs (Gould 1973; Landes 1971; Posner 1973).

We also controlled for environmental and demographic factors by including three variables for degree of urbanization, the unemployment rate, and average per capita income in 1992. Our measure for urbanization comes from the *Statistical Abstract of the United States* (U.S. Department of Commerce, various years) and is defined as the percentage of the state population living in a metropolitan area.²⁴ Higher values for the urbanization variable, $\ln(\text{Urban})$, are expected to be associated with higher injury rates and increased claim values. Higher values of the state unemployment rate variable, $\ln(\text{Unemp})$, are expected to be associated

24. "Metropolitan" refers to the 250 metropolitan statistical areas and 18 consolidated metropolitan statistical areas as defined by the U.S. Office of Management and Budget (65 Federal Register 82,228 [2000]).

with higher claim amounts.²⁵ Similarly, we expect that higher values for income are associated with higher claim levels, particularly when estimation involves claim amounts that include an economic component.

We expect claim amounts to be related to the claimant's age, since the two major determinants of economic damages, income and medical expenses, both increase with age. Noneconomic damages may also be greater, reflecting the greater severity of the injury due to age. The variable Age is the age of the claimant at the time of the accident. To account for the nonlinear relationship between age and damage amounts, we include the variable Age². We expect that individual income levels, and therefore claim values, increase at a decreasing rate as age increases. The effect of gender on claim severity is unclear. Economic damages of males may exceed those of females, as the average wage earned by males exceeds the average wages earned by females. However, if medical expenses incurred by females as a result of automobile injuries surpass those of males, then a discernible statistical relationship may be difficult. The variable Gender takes the value of one if the claimant is female and zero if male.

The variable Claimant's Status represents the relationship between the claimant for whom there is a UM claim and the underlying policy providing this coverage. Claimant's Status equals one when the claimant is either the named insured on the policy providing payment or a family member living in the household of the named insured and equals zero when the injured is a third-party claimant of the policy, that is, any other person in the insured's vehicle. Since the third-party claimant maintains the right to collect on a first-party basis under his or her own UM coverage, we expect first-party claims to be associated with higher UM claim severities. Finally, we specify the variable Claimant's % Fault, which is the percentage of the claimant's fault in the accident. In the underlying UM claim data, the assignment of percentage of fault is accounted for either through an available police report or by an interview with a witness to the accident.

3.3. Injury Type and Tort Reform Measures

We control for the injury type by following the injury categorization scheme used in the compilation of the IRC data. In the IRC question-

25. Some research indicates that unemployment is related to the willingness of injured parties and their attorneys to seek additional compensation for losses. See Danzon (1986) and Cummins and Tennyson (1996).

naire, claims adjusters were asked to assess the overall extent of the trauma, indicating the seriousness of the injury. Five categories are specified for injury types, and we let the category defined "no trauma" be our benchmark category in the empirical models. The variable Injury Type₁₄ takes the value of one for a minor injury and zero otherwise. The variable Injury Type₁₅ takes the value of one for a moderate injury and zero otherwise. The variable Injury Type₁₆ takes the value of one for a severe injury and zero otherwise. The variable Injury Type₁₇ takes the value of one for a catastrophic injury and zero otherwise. Relative to our benchmark category, injuries that are more traumatic are expected to be associated with higher damage values across all damage types.

The effect of a state's joint and several liability reform (JS equals one) on the value of economic and noneconomic claims is unclear for two reasons. On the one hand, reform will result in claims being lower if injured parties are unable to link deep-pockets defendants who are only slightly responsible for a loss. Moreover, one could predict that, anticipating lower potential court awards, a plaintiff under a reform regime may choose not to engage in legal action and may instead agree to a lower settlement amount depending on the relative costs of pursuing legal action and the probabilistic settlement amounts and trial awards. On the other hand, the recent work of Chang and Sigman (2000) suggests that joint and several liability promotes settlement and that the likelihood of settlement increases with the number of defendants. Indeed, they suggest that moving to a nonjoint rule may decrease the likelihood of settlement.²⁶

We expect the effect of a statute that modifies the collateral source rule (Coll equals one) to reduce the size of both economic and noneconomic claims since it is more likely that the injured party is precluded from receiving multiple indemnifications on a single loss. This expectation is supported by the earlier work of Viscusi (1990), who found product liability premiums to be lower in states that had collateral source rule provisions for the period prior to 1984.

Caps on noneconomic damages are expected to be associated with a reduction in the severity of noneconomic claims. Since we are concerned only with UM claims, we let Caps equal zero for those states that have

26. Chang and Sigman provide the most recent empirical work to date on joint and several liability utilizing data gathered from federal civil suits under the Comprehensive Environmental Response, Compensation, and Liability Act. Furthermore, Chang and Sigman (2000) clarified earlier work by Kornhauser and Revesz (1994), who found an ambiguous relationship between joint and several rules and settlement.

either a liability limit for medical malpractice claims only or no limit at all. Since the reform limits the amount of noneconomic damages that can be awarded at trial, claims that would have resulted in awards higher than the cap will be awarded less as a result of the cap. We do not expect any statistically significant relationship between this reform and the value of claims for economic damages.

While the reforms directed at punitive damages vary, they all decrease either the likelihood that a plaintiff will receive punitive damages or the amount that a plaintiff will receive.²⁷ If reforms exist, we let Puni equal one and zero otherwise. As a result of these reforms, plaintiffs may choose in some cases not to pursue punitive damages, particularly when it is costly to do so. Awards for economic and noneconomic damages may be affected by the decision of the plaintiff not to pursue punitive damages, as the evidence brought to trial will be different. If the gathering of evidence is costly and punitive damage reforms reduce the economic payoff from doing so, less evidence will be gathered. We hypothesize that economic and noneconomic claims will be lower as a result of reforms directed at punitive damages, since the plaintiff will be less likely to gather evidence.

We also specify the variable Puniins, which equals one when claims are filed in states in which punitive damages are insurable and zero otherwise.²⁸ We have included the term, $\text{Puni} \times \text{Puniins}$, which allows the overall effect of punitive-damage tort reform on individual loss to depend on the insurability of punitive-damage claims. We expect that in states that prohibit the insurability of punitive damages, plaintiffs will have less economic incentive to invest in uncovering evidence because they have a lower likelihood of payment, and the decreased evidence at trial will result in lower economic and noneconomic claims.

The final tort reform variable, Minor Reforms, takes the value of one when, at the time a claim is filed, one of the following minor reforms is in place: limitations on prejudgment interest, provision for periodic payments, or sanctions on frivolous claims. Since these reforms either raise the cost of pursuing a legal claim or limit the value of the claim,

27. Punitive damage reform measures include setting limits on the amount that may be awarded in total or relative to compensatory damages, limiting the type of case in which punitive damages may be awarded, dictating that damage awards are paid to the state, or requiring hearings to establish a case for punitive damages before they may be sought in court. For a summary and cites to representative statutes, see Christie et al. (2004).

28. Information on the legal status of punitive damages insurability was obtained from *Fire, Casualty and Surety Bulletin* (FC&S Bulletin) (various issues).

we expect the presence of one of these reforms to be associated with a reduction in the level of both economic and noneconomic claims.

3.4. Other Control Variables and Legal Interactions

We have specified the variable *Eventyr*, which is the two-digit number that represents the year in which the claim was commenced. We expect a negative coefficient on *Eventyr*, consistent with the findings of several studies that claim that severity is higher as the number of years between the occurrence date and the settlement date increases (Browne and Puelz 1996).

Since the loss data are obtained from a sample of insurers, there is some chance that actual damages are greater than the amount of insurance, thereby triggering an upper limit and altering the behavior of the injured party. Fortunately, we have information in the data that specifies when damages exceed the policy limit. In our empirical specification, we introduce the variable *Exceed* to control for differences between damages insured and uninsured.

To provide more compensation to accident victims, some states allow the limits of UM insurance to be stacked. Stacking is accomplished by combining policy limits from the same policy (depending on the number of vehicles insured) or from a different policy, so-called interpolicy stacking.²⁹ *Stack* equals one for claims in states that permit stacking and zero otherwise. Since stacking effectively increases the expected economic benefits associated with a single loss event by increasing coverage limits, we expect stacking to be associated with high levels of claim severity in those states in which its usage is approved.³⁰

Finally, we include interaction terms for each tort reform variable with the legal variables *Attorney* and *Suit* since we expect the value of a claim to be associated with tort reforms and with whether an attorney represented the claimant and whether a lawsuit was filed.

4. EMPIRICAL RESULTS

The final sample comprised 38 jurisdictions and included 2,223 insurance claims; each claim contained an economic and a noneconomic com-

29. Stacking information is contained in *Uninsured Motorists*, published by the All-Industry Research Advisory Council (1989) and the Insurance Research Council (2000).

30. The All-Industry Research Advisory Council (1989) found that UM payments were 28 percent greater in states that permitted stacking than in those that did not.

ponent. Sample statistics of the variables used in the analyses are reported in Table 3. Means and standard deviations of the claim values are reported prior to taking logarithms. The mean values reflect the underlying characteristics of a UM claim: the average total claim value of \$11,280 is relatively low, and the injuries associated with these losses are predominately classified as minor or moderate. The mean value of the noneconomic portion of a claim exceeds the mean value of the economic portion by about 82 percent. The presence of a bad-faith statute is evident in 78 percent of our sample of claims, and an attorney was involved 66 percent of the time.

Our first task is to test for endogeneity of the Suit variable, which would indicate whether OLS results were likely to be biased. We undertook the Durbin-Wu-Hausman test (Davidson and MacKinnon 1993) for endogeneity that centers on whether a regression of the original equation, augmented with regressors that are the residuals from first-stage estimates of the potentially endogenous variables, reveals that these additional regressors are collectively different from zero.³¹ The values for the *F*-test were 1.91, .235 and 2.38 for the total, economic-damages-only, and noneconomic-damages-only claims, respectively. These values are statistically significant for total claim and noneconomic damages only and suggest that these equations are inconsistently estimated via OLS. We report both the OLS results (Table 4) and the 2SLS results (Table 5).

We obtained the estimates in Table 5 in the following manner. We chose as our initial set of instruments for Suit (and its interactions) the number of lawsuits per capita filed in the state in which the claim arose and the interaction of lawsuits per capita with our entire set of exogenous variables. Using the backward-stepwise procedure recommended by Klepinger, Lundberg, and Plotnick (1995), the actual instruments used in the first stage were identified as significant from the initial set.³² The first stage involved regressing the actual instruments against Suit (and its interactions), obtaining predictions, and then plugging the predictions

31. One outline of the procedure can be found in the Stata Frequently Asked Questions (FAQ) Statistics, "How Do I Test Endogeneity?" (<http://www.stata.com/support/faqs/stat/endogeneity.html>).

32. Note that we have seven potentially endogenous variables that include Suit by itself and each interaction term involving Suit. The backward-stepwise procedure is carried out for each potentially endogenous variable separately; therefore, the set of significant instruments used for one endogenous variable is unlikely to be the same set used for another endogenous variable. These estimations can be obtained from the authors on request.

Table 3. Sample Statistics

Variable	Mean	Standard Deviation
Claim types (\$):		
Total	11,280	28,407
Economic	3,999	13,750
Noneconomic	7,280	18,221
Legal variables:		
Bad faith	.78498	.41093
Attorney	.65902	.47415
Suit	.12461	.33035
Attorney × Bad Faith	.52857	.49930
Attorney × Suit	.12191	.32725
Environmental and demographic variables:		
Urbanization	85.457	13.821
% Unemployment Rate	7.9323	1.1833
\$ Income	16,058	1,865
Claimant's Gender	.548	.498
Claimant's Age	33.831	15.145
Claimant's Age ²	1,374	1,204
Claimant's Status	.84840	.35871
Claimant's % Fault	77.20	40.11
Injury type:		
Minor	.48808	.49997
Moderate	.40711	.49141
Severe	.07782	.26795
Catastrophic	.00135	.03672
Tort reforms:		
JS	.83446	.36874
Coll	.22582	.41322
Caps	.07692	.26653
Puni	.80387	.39716
Puniins	.38686	.48714
Puni × Puniins	.23932	.42676
Minor Reforms	.45299	.49790
Other control variables:		
Event Year	90.874	1.0630
Exceed	.01350	.11541
Stack	.02339	.15118
Other legal interactions:		
Attorney × JS	.54701	.49790
Attorney × Coll	.15520	.36217
Attorney × Caps	.06073	.23889
Attorney × Puni	.51642	.49984
Attorney × Minor Reforms	.29645	.45679
Suit × JS	.10346	.30463
Suit × Coll	.01709	.12965
Suit × Caps	.00585	.07627
Suit × Puni	.09222	.28940
Suit × Minor Reforms	.04364	.20433

Note. $N = 2,223$.

into our equation (1) for the second-stage estimation. Standard errors were obtained via White (1978).

Using the 2SLS results, we find that the estimated empirical models for claim severity fit the data well; the model explained 46 percent of the variation in damage size in the economic-damages-only model, 47 percent in the noneconomic-damages-only model, and 59 percent of the variation in the total-damages model. The estimated parameter values for each version of equation (1) are reported in three columns of Table 5. We calculated Breusch and Pagan's (1979) Lagrange multiplier statistic to test for heteroskedasticity and rejected the hypothesis of homoskedasticity for each of our equations at the .01 significance level. The *t*-ratios reported in Tables 4 and 5 have standard errors corrected for heteroskedasticity. Each of the overall empirical models is significant at the .01 level as reflected by their *F*-statistics. The bad-faith implications of the OLS model and the 2SLS model are largely similar; however, given the endogeneity tests, we focus our discussion of the empirical results on those from the 2SLS model.³³

4.1. Hypotheses Related to the Tort of Bad Faith

A set of hypotheses is explored by looking at the empirical association between bad-faith statutes and claim value. As previously discussed, we anticipate that the presence of a bad-faith statute is associated with higher claim settlement amounts. Indeed, our findings reveal strong support for these hypotheses. The log-likelihood ratio tests reported in Table 6 indicate that there is a statistically significant relationship between the presence of a bad-faith statute in a state and the value of insurance claim loss payments.³⁴

Taken together, the bad-faith variables in the noneconomic-damages equation suggest that damages are 5.6 percent higher when the tort of bad faith is established without restriction. This suggests an upward movement in the equilibrium price of settlement as both parties value the investigative costs and potential penalty costs associated with bad

33. We also carried out a probit estimation of the potentially endogenous variables in the first stage using as actual instruments those identified with the Klepinger, Lundberg, and Plotnick (1995) procedure; however, all probit model estimations in the first stage had difficulty converging to meaningful results.

34. The log-likelihood ratio test compares the explanatory power of the model with the two bad-faith variables included at the second stage to the explanatory power of the model with the two bad-faith variables excluded at the second stage. Results indicate that the bad-faith variable makes a statistically significant contribution to explaining variation in damage amounts.

Table 4. Estimates of the Empirical Model: Ordinary Least Squares

Variable	ln(Total Claim)		ln(Economic Claim)		ln(Noneconomic Claim)	
	Coefficient	t-Ratio	Coefficient	t-Ratio	Coefficient	t-Ratio
Intercept	25.298	7.146	15.233	3.660	26.913	5.982
Legal variables:						
Bad Faith	.20252	1.869	.27677	2.195	.14999	1.155
Attorney	.97108	5.942	.98291	5.194	.89919	4.283
Suit	-.50471	-.743	-.15110	-.236	-.39982	-.522
Attorney × Bad Faith	-.21955	-1.666	-.27876	-1.755	-.06429	-.383
Attorney × Suit	.26642	.401	-.18464	-.299	.29008	.386
Environmental and demographic variables:						
Urbanization	-.15420	-1.033	-.26389	-1.592	-.18403	-1.055
ln(Unemp)	.04783	.255	.07264	.321	.19497	.832
ln(Income)	.19882	.674	.69452	1.950	.13188	.341
Claimant's Gender	-.03142	-.890	-.04891	-1.133	-.05798	-1.271
Claimant's Age	.04710	9.110	.05903	9.530	.04081	6.876
Claimant's Age ²	-.00048	-7.565	-.00064	-8.332	-.00040	-5.445
Claimant's Status	.04354	.865	.03430	.570	.08258	1.212
Claimant's % Fault	.02342	2.362	.01728	1.447	.03017	2.335
Injury type:						
Minor	.4009	2.956	.2541	1.721	.43258	3.035
Moderate	1.2743	9.303	1.1116	7.403	1.3151	8.959
Severe	2.4089	15.467	2.2574	13.151	2.3779	13.837
Catastrophic	3.2521	4.447	3.9349	5.076	2.6415	3.710

Tort reforms:						
JS	.23860	1.726	.11919	.753	.31356	1.862
Coll	-.13067	-1.221	.02278	.182	-.13451	-1.056
Caps	.22907	1.371	.11411	.491	.11170	.506
Puni	-.45409	-2.711	-.36230	-1.818	-.44170	-2.230
Puniins	-.45906	-3.153	-.23550	-1.312	-.41246	-2.249
Puni × Puniins	.60706	4.304	.55302	3.220	.48977	2.818
Minor Reforms	.02100	.240	.16353	1.588	-.09168	-.859
Other control variables:						
Event Year	-.22666	-9.581	-.17826	-6.714	-.24529	-8.551
Exceed	.23019	1.446	.30642	1.211	-.05363	-.225
Stack	.70101	4.834	.69636	4.240	.73076	3.951
Other legal interactions:						
Attorney × JS	-.00171	-.011	.06936	.389	-.13826	-.762
Attorney × Coll	-.01966	-.164	-.21077	-1.459	.06415	.451
Attorney × Caps	-.16084	-.834	-.13683	-.502	-.04074	-.162
Attorney × Puni	.01973	.139	.13133	.783	.01780	.109
Attorney × Minor Reforms	.01256	.131	-.18685	-1.644	.20882	1.701
Suit × JS	.03433	.195	-.12747	-.607	.08204	.396
Suit × Coll	-.60159	-2.802	-.38808	-1.734	-.59143	-2.381
Suit × Caps	.31991	1.235	.78880	2.509	-.06746	.180
Suit × Puni	.11586	.714	.34997	1.740	-.05808	-.306
Suit × Minor Damages	.37144	2.578	.12114	.670	.35874	1.995
Adjusted R ²	.5853		.4622		.4654	

Note. The *t*-ratios reflect standard errors that have been corrected for heteroskedasticity. *N* = 2,223.

Table 5. Estimates of the Empirical Model: Two-Stage Least Squares

Variable	ln(Total Claim)		ln(Economic Claim)		ln(Noneconomic Claim)	
	Coefficient	t-Ratio	Coefficient	t-Ratio	Coefficient	t-Ratio
Intercept	29.795	3.882	16.318	3.750	33.074	3.371
Legal variables:						
Bad Faith	.1931	1.745	.3210	2.762	.13203	.989
Attorney	1.2202	4.825	.8434	5.985	1.2400	3.909
Suit	-2.2298	-1.768	-5.5744	-.836	-1.8352	-1.267
Attorney × Bad Faith	-.2879	-2.012	-.2912	-1.551	-.11630	-.633
Attorney × Suit	.4191	.289	5.6486	.843	-.71976	-.411
Environmental and demographic variables:						
Urbanization	-.24342	-1.466	-.24447	-1.284	-.36410	-1.773
ln(Unemp)	.15410	.755	.06037	.253	.35524	1.423
ln(Income)	.17463	.442	.71707	1.414	.19236	.366
Claimant's Gender	-.00438	-.116	-.07174	-1.425	-.01060	-.223
Claimant's Age	.04786	8.949	.06009	8.971	.04241	6.951
Claimant's Age ²	-.00049	-7.528	-.00065	-7.886	-.00042	-5.635
Claimant's Status	.04297	.815	.02124	.331	.08022	1.133
Claimant's % Fault	.02571	2.549	.01472	1.115	.03536	2.650
Injury type:						
Minor	.4138	2.925	.2386	1.552	.43840	2.907
Moderate	1.3041	9.192	1.1029	7.149	1.3414	8.720
Severe	2.4395	14.938	2.3491	11.654	2.4078	13.194
Catastrophic	3.0317	3.977	4.0685	5.086	2.3550	3.176

Tort reforms:						
JS	.24572	1.709	-.00948	-.049	.34094	1.924
Coll	-.12863	-1.196	-.03408	-.237	-.12018	-.937
Caps	.23968	1.441	.09731	.414	.12719	.568
Puni	-.51684	-2.864	-.23091	-1.011	-.55861	-2.589
Puniins	-.52525	-3.044	-.18450	-.861	-.52706	-2.396
Puni x Puniins	.67301	3.881	.50403	2.326	.60728	2.832
Minor Reforms	-.00395	-.043	.21405	1.924	-.13591	-1.194
Other control variables:						
Event Year	-.27111	-4.092	-.19297	-2.240	-.31364	-3.731
Exceed	.13873	.822	.26170	.956	-.20610	-.818
Stack	.73561	4.483	.63203	3.098	.76778	3.794
Other legal interactions:						
Attorney x JS	.03518	.179	.12481	.522	-.20531	-.858
Attorney x Coll	.09179	.573	-.12104	-.442	.32715	1.604
Attorney x Caps	-.44301	-1.396	-.23614	-.509	-.41266	-1.010
Attorney x Puni	-.13901	-.707	.11265	.427	-.15121	-.666
Attorney x Minor Reforms	-.19216	-1.604	-.10600	-.696	-.06672	-.424
Suit x JS	-.04920	-.073	.29946	.364	.33702	.444
Suit x Coll	-2.4582	-2.329	-.50804	-.241	-4.1460	-3.025
Suit x Caps	3.0257	1.254	2.0001	.527	3.8137	1.211
Suit x Puni	1.3713	2.023	-.25235	-.276	1.7453	2.117
Suit x Minor Damages	2.0422	3.098	-.80725	-.887	2.8408	3.504
Adjusted R ²	.5858		.4592		.4684	

Note. The *t*-ratios reflect standard errors that have been corrected for heteroskedasticity. *N* = 2,223.

Table 6. Log-Likelihood Ratio Test Statistics:
Bad-Faith Variable

Damages	OLS	2SLS
Economic	18.8**	6.6*
Noneconomic	.858	10.6**
Total	7.0*	9.6**

Note. OLS = ordinary least squares; 2SLS
= two-stage least squares.

* Statistically significant at the .05 level.

** Statistically significant at the .01 level.

faith. In addition, we find a statistically significant association between the tort of bad faith and the value of the economic portion of a claim. The model estimation suggests that economic damages are 13.7 percent higher in states with a bad-faith law, other things equal.³⁵ Finally, we find that bad-faith laws are associated with a slight upward shift of .3 percent in the total value of claims.³⁶

The coefficient estimates in each of the three models suggest that the increase in loss settlement amounts associated with bad-faith statutes is greater when an attorney does not represent the claimant. Table 7 reports the estimated increases associated with a bad-faith statute in each of the models. Estimated increases are reported for claims that involve attorney representation, those that do not involve attorney representation, and on average. In the sample, attorneys provided representation for approximately 66 percent of the claims.

While the log-likelihood ratio tests presented above provide statistical support for the hypothesized association between bad-faith laws and claims settlement amounts, the interpretation of the bad-faith variables in the models is complex. Each model contains both a bad-faith indicator variable and an interaction variable constructed by interacting the bad-faith variable with the attorney representation variable. Since both bad-faith terms are not statistically significant in any of the damages equations, the estimated effects of bad-faith statutes when attorneys represent claimants and when they do not, as reported in Table 7, need to be considered in that light. The evidence reported in Table 7 that the in-

35. Since we are focusing on bad-faith laws, we held the variable Attorney at its sample mean in the interaction term.

36. We reemphasize that the state of California is highly represented in these data. When the models were run without California, the results on the bad-faith variable were largely consistent with the full sample results.

Table 7. Increases (in %) in Loss Settlement Amounts
Associated with Bad-Faith Statutes

Damages	Attorney	No Attorney	Total
Economic	3.0	37.9	13.7
Noneconomic	1.6	14.1	5.6
Total	-9.0	21.3	.3

crease in settlements in bad-faith states is greater when the insured does not retain legal representation may be attributable to greater sympathy from juries for those who do not retain attorneys.

4.2. The Association between Claim Amounts and Other Factors by Damage Type

The relationship between the presence of an attorney and claim value was very strong across all the estimated equations. In contrast, we find no association between the filing of a lawsuit and the total value of the claim or either of its components.

Among environmental and demographic variables, the latter proved more relevant empirically. The claimant's age, age squared, and degree of fault are all statistically significant, while gender is not. For each year increase in the claimant's age, the total value of the claim increases by 4.9 percent. We also find that incrementally higher degrees of fault are associated with an increase of 3.6 percent in noneconomic damages and an increase of 2.6 percent in total claim value.

Most of the control variables for injury type are positive and highly significant and, in general, regardless of claim type, increase in magnitude in their association between the value of a UM claim and injury severity. Relative to our benchmark no-trauma category, catastrophic injuries are associated with an increase of 954 percent in the average value of the noneconomic portion of the claim and an increase of 5,747 percent in the average value of the economic portion of the claim. Injuries classified as severe are associated with a 1,011 percent increase in the value of noneconomic claims and a 948 percent increase in the value of economic claims. Even those injuries classified as minor are more costly relative to the benchmark category: 51 percent higher for total claim value and about 55 percent higher for noneconomic claims.

We control for the impact of tort reforms since the adjusting calculus of a UM claim by the first-party insurer is based on a determination,

albeit indirect, of the liability that would have been paid by a third-party under tort. Generally, we expect that tort reforms will be associated with lower levels of claim severity across all damage types, and our results, taken together, are mixed. While many of the tort reform variables showed no statistically significant association with claim values, punitive damage reforms were associated with an increase in the value of claims.

The sign of the coefficient on Eventyr in each equation is negative. This is consistent with our expectation that larger claims take longer to close. Our expectation that UM claim values are higher in states that permit stacking is strongly supported. We find that in states that permit stacking, the economic and noneconomic components of the UM claim increased by 88 and 115 percent, respectively. Finally, we were unable to detect a statistically significant relationship between reported claims that exceeded policy limits and total claim severity.

5. OBSERVATIONS AND IMPLICATIONS

Our study supports several assumptions about how the law of bad faith affects insurers' claims settlement practices. Higher overall settlement amounts are paid in states with a bad-faith remedy. Moreover, consistent with the reasoning outlined earlier, the higher overall settlements are a result of higher payments for both economic and noneconomic damages.

Somewhat surprisingly, we find that bad-faith laws are associated with a greater increase in loss settlement amounts when claimants are not represented by an attorney. We find this effect in all of our models. The presence of a bad-faith law may encourage insurers to offer greater amounts to claimants who then do not feel the need to engage the services of attorneys. If so, this would result in a change in the mix of cases represented by attorneys. To the extent that the tort of bad faith reduces litigation costs, it would also lead to a more efficient resolution of claims. If, however, the tort is resulting in inappropriately higher payments to insureds, it is contributing to unnecessarily high insurance costs. The economic efficiency of the tort of bad faith warrants future research.

APPENDIX: INSURERS IN THE DATA

Aetna Life and Casualty
ALFA Insurance Group
All Nation Insurance Group

Allstate Insurance Group
American Family Insurance Group
Amica Mutual Insurance Company
Automobile Club of Michigan Group
Auto-Owners Insurance Company
California Casualty Group
California State Automobile Association Inter-Insurance Bureau
CNA Insurance Companies
Concord General Corp. Group
Cotton States Mutual Insurance Company
Country Companies
Erie Insurance Group
Farmers Casualty Company Mutual
Farmers Insurance Group of Companies
Farmers Mutual Insurance Company of Nebraska
Fireman's Fund Insurance Companies
Foremost Corporation Group
Fortune Insurance Company
GEICO
General Casualty Company of Wisconsin
Georgia Farm Bureau Mutual Insurance Company
Indiana Farm Bureau Group
Interinsurance Exchange of the Automobile Club of Southern California
Island Insurance Group
ITT Hartford Insurance Group
Kansas Farm Bureau Mutual Insurance Company
Kemper National Insurance Companies
Keystone Insurance Company
Liberty Mutual Group
Maryland Insurance Group
Merchants Insurance Group
Meridian Mutual Group
Metropolitan Group
Modern Service Insurance Company
Motorists Mutual Insurance Company
National Farmers Union Property and Casualty Company
Nationwide Insurance Enterprise
New Jersey Manufacturers Insurance Company
North Carolina Farm Bureau Mutual Insurance Company
PEMCO Insurance Companies
Plymouth Rock Assurance Corporation
Preferred Risk Mutual Insurance Company
Prudential Property and Casualty Insurance Company

PW Group, Inc.
 SAFECO Insurance Companies
 Secura Insurance A Mutual Company
 Selective Insurance Group
 Shelter Insurance Companies
 Southern Farm Bureau Casualty Insurance Company
 State Farm Insurance Companies
 Tennessee Farmers Insurance Companies
 The Brethren Mutual Insurance Company
 The Royal Insurance Group
 The Shelby Insurance Company
 Transamerica Insurance Group
 USAA Group
 Wisconsin Mutual Insurance Company

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