

# NAIC

National Association of Insurance Commissioners

# J I R

# Journal of Insurance Regulation

## 2017 Issue

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- State and Local Policy Instruments for the Promotion of Catastrophe Mitigation
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- State-Based Retirement Plans: Why or Why Not?
- Denied and Resisted Life Insurance Claims: Recommended Changes to Schedule F



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# JOURNAL OF INSURANCE REGULATION

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Cassandra Cole and Kathleen McCullough  
Co-Editors

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2. To provide wide distribution of rigorous, high-quality research regarding insurance regulatory issues;
3. To make state insurance departments more aware of insurance regulatory research efforts;
4. To increase the rigor, quality and quantity of the research efforts on insurance regulatory issues; and
5. To be an important force for the overall improvement of insurance regulation.

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# Journal of Insurance Regulation

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Anti-rebate laws were introduced more than 100 years ago, after agents' use of rebates threatened the solvency of life insurance companies and raised questions around unfair discriminatory practices. Supporters of the initial law claimed that they provided market stability, prevented unfair discrimination and kept the focus on the quality of the insurance product versus the size of a rebate. On the other hand, opponents suggest the law infringes upon their rights to competition and stifles innovation. Today, most states have enacted anti-rebate statutes and many have enacted the NAIC model *Unfair Trade Practices Act* (#880). Over time, several of these states have carved exceptions to the anti-rebating law. While many states have the same categories of exceptions and similar statutory language, the application of the language varies.

This paper evaluates the recent call for change or repeal of the current anti-rebate laws by reviewing the evolution of the anti-rebating statutes, evaluating the current application and exceptions to the laws and discussing the options in favor of and against repeal. The paper concludes with recommendations for those states considering change to current laws.

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*Jill Bisco*

Life insurance is generally purchased to protect against the economic consequences associated with premature death. Consumers and producers may assume that all life insurance companies settle death claims in one way—full payment of the life insurance proceeds. This is not always the case. Life insurers may deny or resist paying life insurance claims, and these claims are reported on the Schedule F of the statutory financial statement. This paper analyzes the claims that have been denied and resisted by life insurers and makes recommendations to modify the current Schedule F so that it is more informative to consumers, producers and state insurance regulators.

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The insurance regulatory landscape continues to evolve quickly. The 2017 articles highlight many of the major issues facing regulators, the insurance industry and consumers. The issues are diverse, but all have important implications for our economy. The careful analysis of the authors helps to support those tasked with making regulatory decisions across the country.

This year, the impact of changes in the health care market continues to raise important questions. One of the articles provides a state-level analysis of the market structure and profitability of the U.S. health insurance market. As the issues associated with the implementation of the federal Affordable Care Act (ACA) continue to unfold, it will be important for researchers to continue to analyze the changing landscape of this market and its impact on a variety of stakeholders.

Issues related to property insurance also remain important in many areas, especially Florida and the Gulf Coast. Two of the articles investigate these issues by looking at public policy decisions and alternatives. Additionally, some of the more timeless regulatory issues related to rate regulation, captives and material misrepresentation are addressed, as the states still make key decisions in these areas.

Other issues that remain important to the insurance industry, such as the interpretation of insurance contracts, subrogation, and anti-rebating laws, are the topics of other articles in this year's journal. One article explores the potential need for changes in schedule F of the life insurance statements. Another study looks at the impact on international insurance regulation on reinsurance and insurance-linked securities. This issue also includes a study that examines state-based retirement plans which now exist in five states.

Finally, there is an invited article on the subject of Own Risk and Solvency Assessment (ORSA). The article serves as a primer on the subject. As the states continue to adopt the NAIC *Risk Management and Own Risk and Solvency Assessment Model Act* (#505) and the first wave of ORSA reporting requirements go into effect, this will be an important issue for insurers.

In the coming election year, insurance regulatory issues will remain at the forefront. In addition to health care topics, funding of flood and other catastrophes will be debated. Further, the implementation of ORSA and international accounting standards will spur additional debate related to financial standards in the states. Finally, as emerging risks such as drones become more common, insurers and regulators will be tasked with creating insurance-related and regulatory solutions.

The *Journal of Insurance Regulation* will continue to generate articles aimed at analyzing these types of issues and providing unbiased resources for the regulatory and insurance communities.

# An Analysis of Interpretation of Insurance Contracts: Common Law Versus Strict *Contra Proferentem*

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Randy D. Henry \*

## I. Introduction

The majority of states recognize insurance policies as contracts of adhesion, in which the applicant must either accept the terms of the policy as written by the insurance company or reject the terms and accept similar terms from another insurance company (Plitt, 2010). As of June 2014, 44 states have adopted special rules interpreting insurance contracts to balance unequal bargaining power.<sup>1</sup> One common alternative to traditional contract law is strict *contra proferentem*, which interprets ambiguous terms against the drafter without reviewing extrinsic or parol evidence. A second alternative, known as the reasonable expectations doctrine, interprets unambiguous policy language using the reasonable person standard.

Maryland is part of the majority of states that still interprets ambiguous consumer insurance contracts using standard contract law principles, including extrinsic and parol evidence.<sup>2</sup> In February 2015, the Maryland Court of Appeals,

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1. Brief for Petitioner, *People's Ins. Counsel Div. v. State Farm Fire and Cas. Ins. Co.*, 2014 WL 4147804, at \* 14 (Md. 2014) (hereinafter "Brief for Petitioner").

2. See, e.g., *Cheney v. Bell Nat'l Life Ins. Co.*, 315 Md. 761, 766-68 (1989) (holding that "the intention of the parties is to be ascertained is reasonably possible from the policy as a whole. In the event of an ambiguity, however, extrinsic and parol evidence may be considered.").

Maryland's highest court, heard arguments on *People's Insurance Counsel Division v. State Farm Fire and Casualty Insurance Co.* ("People's Insurance").<sup>3</sup> Despite the case's potential impact on thousands of Maryland homeowners, the court declined to decide whether to change its nearly 200-year-old practice of interpreting insurance contracts using traditional contract law principles. As a result, the court did "nothing to clarify or advance [Maryland's] insurance laws."<sup>4</sup> However, the case did bring to light the differences that still exist among states as it relates to interpreting insurance contracts.

This article provides a discussion of the methods available to courts as it relates to interpreting ambiguous insurance contracts. The next section reviews various states' common law approaches, interpreting insurance contracts using contract law principles and strict *contra proferentem*. This is followed by sections discussing the arguments for interpreting insurance contracts using standard contract law and strict *contra proferentem*. The final section discusses the potential implications for the insurance industry that could result from changing methods interpreting insurance policies.

## II. Legal Background

A typical insurance policy contains coverage-granting provisions, coverage exclusions and limitations (policy terms that say certain types of losses are not covered), definitions and sometimes warranties (facts or circumstances the insured "warrants" to be true), and claims-processing provisions (Baker, 2013). Generally, courts interpret insurance policies based on general contract law principles, strict *contra proferentem* (interpretation against the drafter) or reasonableness.

Though the reasonable expectations doctrine will not be reviewed in detail, essentially the rule provides insureds with coverage using an insured's reasonable expectation of coverage. American courts reason based on equity and fairness, not contract law principles.<sup>5</sup> An insured may be entitled to coverage despite unambiguous language in the policy to the contrary.<sup>6</sup> Furthermore, courts excuse policyholders from reading the insurance policy.<sup>7</sup>

Less commonly, courts also have regulated the insurer-insured relationship using extra-contractual doctrines of equitable estoppel and negligent misrepresentation (Fridman, 1974). In *Darner Motor Sales, Inc. v. Universal Underwriters Ins. Co.*,<sup>8</sup> the Supreme Court of Arizona applied equitable estoppel and negligent misrepresentation to find coverage when an insurance agent

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3. *People's Ins. Counsel Div. v. State Farm Fire and Cas. Co.*, 442 Md. 55 (2015). See the appendix for a detailed summary of the case.

4. *Id.* at 64 (Adkins, J., dissenting).

5. *C&J Fertilizer, Inc. v. Allied Mutual Ins.*, 227 N.W.2d 169 (1975).

6. *Id.* at 176.

7. *C&J Fertilizer*, 227 N.W.2d at 176.

8. *Darner Motor Sales, Inc. v. Universal Underwriters Ins. Co.*, 140 Ariz. 383 (1984).

negligently gave the lessor erroneous information about the policy coverage. The court stated, “There are strong reasons to recognize a rule which allows an insured to raise the issue of estoppels to establish coverage contrary to the limitations in the boiler-plate policy when the insurer’s agent had represented the coverage greater than the language found in the printed policy.” In reaching its conclusion, the court observed that courts struggle to apply contract rules to standardized agreements “as if they were traditional agreements reached by bargaining between the parties.” Thus, the estoppel and negligent misrepresentation doctrines evidence judicially created doctrines to enforce insurance contracts in favor of the insured.

As a preliminary matter, when interpreting insurance contracts, the primary purpose is to effectuate the parties’ mutual intention by looking at the contract’s written provisions.<sup>9</sup> In ascertaining the parties’ intent, the court will look to the plain meaning of the contract language<sup>10</sup>—that is, the ordinary meaning a lay person would use.<sup>11</sup> When the insurance provisions are unambiguous, the court will go no further; it must interpret the language according to the plain and ordinary meaning.<sup>12</sup> But when contract language is ambiguous or unclear, then a different analysis is required.

### *A. The Basics of General Contract Law Interpretation Principles*

Most state courts rely on general contract law to interpret ambiguous insurance contracts and do not follow the minority of jurisdictions that strictly interpret ambiguous policy terms against the insurer.<sup>13</sup> Automatic construction against the insurer goes against contract law principles by removing the consideration of extrinsic evidence.<sup>14</sup> A Maryland court applied contract law principles in holding that only if there is no extrinsic or parol evidence or if a term remains ambiguous after the examination of any extrinsic or parol evidence should courts construe an ambiguous term against the insurer.<sup>15</sup> As Judge Glenn Harrell explained in *Empire Fire & Marine Insurance Co.*:

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9. *McEvoy v. Sec. Fire Ins. Co. of Baltimore*, 110 Md. 275 (1909).

10. *Id.*

11. 45 C.J.S. *Insurance* § 575 (2015).

12. *Id.*

13. Jurisdictions applying *contra proferentem*: Texas (*Carrizales v. State Farm Lloyds*, 518 F.3d 343, 346 (5th Cir. 2008) (applying Texas law); Virginia (*Granite State Ins. Co. v. Bottoms*, 243 Va. 228, 234 (1992); Indiana (*Am. Nat’l Fire Ins. Co. v. Rose Acre Farms, Inc.*, 1007 F.3d 451, 457 (7th Cir. 1997) (applying Indiana law); Oregon (*Andres v. Am. Standard Ins. Co. of Wisconsin*, 205 Or. App. 419, 424 (2006); Florida (*Washington Nat. Ins. Corp. v. Ruderman*, 117 So. 3d 943, 952 (Fla. 2013); Mississippi (*J&W Foods Corp. v. State Farm Mut. Auto. Ins. Co.*, 723 So. 2d 550, 552 (Miss. 1998); New Jersey (*see* 1 David L. Leitner, Regan W. Simpson & John M. Bjorkman, *Law and Practice of Insurance Coverage Litigation* § 1:11 (2012); Idaho (*Moss v. Mid-America Fire and Marine Ins. Co.*, 103 Idaho 298 (1982); and Pennsylvania (*Mohan v. Union Fidelity Life Ins. Co.*, 207 Pa. Super. 205 (1966).

14. *Empire Fire & Marine Ins. Co. v. Liberty Mut. Ins. Co.*, 117 Md. App. 72, 97 (1997).

15. *Cheney*, 315 Md. at 767.

Essentially, Maryland courts apply the majority rule, but do so at a different point in the analytical process. Maryland courts first ascertain the intent of the parties from the policy as a whole, considering extrinsic and parol evidence to construe any ambiguity. Only if either no extrinsic or parol evidence is introduced or if an ambiguity still remains after the examination of extrinsic evidence will Maryland courts construe a policy against an insurer.<sup>16</sup>

Moreover, contractual language is ambiguous if it is general and may suggest two meanings to a reasonably prudent person.<sup>17</sup> The court refers to a reasonably prudent person as one not trained in the legal technicalities.<sup>18</sup>

### B. *The Basics of Strict Contra Proferentem*

An alternative to general contract law interpretation principles is known as strict *contra proferentem* (Rappaport, 1995). Strict *contra proferentem* jurisdictions first interpret insurance contracts by the terms of the contract itself, giving effect to the parties' intents through the contract language.<sup>19</sup> Under strict *contra proferentem*, when insurance policy terms are susceptible to more than one meaning, the court will favor the non-drafting party without considering extrinsic evidence.<sup>20</sup> When an insurer asked the court to consider extrinsic circumstances to resolve a policy ambiguity, the court responded that it "cannot look to extrinsic evidence where the language is ambiguous."<sup>21</sup> When rejecting additional clarification, courts often reason that "had that been what the insurer meant in the policy, certainly it was easy to say so."<sup>22</sup>

The essential difference between general rules of contract interpretation and strict *contra proferentem* is the consideration of extrinsic evidence to clarify an ambiguity (Randall, 2007). In the former, when the ambiguity remains after reviewing extrinsic evidence—i.e., prior negotiations, conduct after policy issuance and industry standard practices—the court construes the ambiguous term in favor of the insured.<sup>23</sup> Contract law gives the insurer a second shot to provide a

16. *Empire Fire & Marine Ins. Co.*, 117 Md. App. at 98 n.10.

17. *St. Paul Fire & Marine Ins. Co. v. Pryseski*, 292 Md. 187, 198 (1981).

18. *Ohio Cas. Ins. Co. v. Lee*, 62 Md. App. 176, 183 (1985).

19. *Forbau v. Aetna Life Ins. Co.*, 876 S.W.2d 132, 133 (Tex. 1994).

20. See *Washington National Insurance Corporation v. Ruderman*, 117 So. 3d 943 (Fla. 2013). Some commentators have also discussed a concept called modern *contra proferentem*; see, e.g., Bjorkman, Leitner & Simpson, 1 Law and Prac. of Ins. Coverage Litig. § 1:12 (2014) (though policy language is ambiguous, courts first attempt to remove ambiguity by considering relevant evidence of the parties' intent). Substantively, modern *contra proferentem* is nothing more than an application of traditional contract law.

21. *Life Insurance Co., v. Spradlin*, 526 S.W.2d 625, 629 (2nd Dist. 1975).

22. *Gaunt v. John Hancock Mutual Life Insurance Co.*, 160 F.2d 599 (2d Cir. 1947).

23. *Pacific Indem. Co. v. Interstate Fire & Cas. Co.*, 302 Md. 383, 389 (1985).



reasonable interpretation. In the latter, when the court finds a term ambiguous, it construes the term without reviewing extrinsic evidence (Nardoni, 2013). Strict *contra proferentem* jurisdictions give no additional opportunity for insurance companies to clarify their unclear policy terms.

### *C. Interpreting Insurance Contracts Using Contract Law*

At one point, every American jurisdiction interpreted insurance contracts using contract law (Johnson, 2004). Today, most jurisdictions still interpret insurance contracts using contract law principles, including extrinsic and parol evidence. (See, for example, California, New York, Vermont and Virginia.) A burgeoning number of jurisdictions, however, has supplemented its use of contract law with doctrines such as reasonable expectations. (See, for example, California, Kentucky, Louisiana, New York and Ohio.)<sup>24</sup> Pro-insured advocates erroneously view this as drastic movement in the law favoring strict *contra proferentem* over contract law.

*City of N.Y. v. Evanston Ins. Co.*<sup>25</sup> provides an example of the application of contract law principles to the insurance contract. In this case, the named insured contracted with the City of New York to perform sidewalk repair work. The insured named the City an additional insured under a “solely negligent” endorsement. While at the worksite, a contractor employee sustained injuries when he was struck by two motorcyclists. After being sued, the City sought coverage under the sidewalk contractor’s insurance policy. The insurer denied coverage under the additional insured endorsement until there was a court ruling that the sidewalk contractor was 100% responsible for its employee’s injuries. The City claimed that the term “solely” was ambiguous and maintained that it would be an additional insured under the policy if the sidewalk contractor bore some responsibility for the accident and the City itself was faultless. Agreeing with the City, the court found “as used in the policy’s blanket additional-insure endorsement, the word ‘solely’ ... ambiguous,” and acknowledged that extrinsic evidence could aid in ascertaining its intended meaning. Furthermore, the court noted that insurance contracts would be interpreted according to the reasonable expectations and purposes of ordinary businesspeople when making ordinary business contracts.

California courts also use contract law principles with reasonable expectations to interpret the ambiguous terms. For example, in *Am. Alternative Ins. Corp. v. Superior Court*,<sup>26</sup> the insurance policy at issue covered a private airplane owned by the insured. The policy provided coverage for physical damage to the aircraft. The policy also included an exclusion for physical damage caused by governmental seizures. However, the insured purchased an endorsement, which eliminated the

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24. After applying contract law principles to interpret an ambiguity, courts often use reasonable expectations to determine whether the insured reasonably expected the coverage sought.

25. 39 A.D.3d 153 (2007).

26. 135 Cal.App.4th 1239 (2006).

exclusion. The court held that the addition of an endorsement removing an exclusion based on damage caused by government seizures created an ambiguity with result to coverage. While deciding the case based on the four corners of the insurance policy, the court confirmed that the second step in interpreting an ambiguous policy involves reviewing credible extrinsic evidence and, if ambiguity still exists thereafter resolving in the insureds' favor, consistent with the insureds' reasonable expectations.

In some jurisdictions like Virginia, courts distinguish between patent and latent ambiguities and apply different interpretation rules depending on the type of ambiguity within the insurance policy. Virginia courts construe patent ambiguities—ambiguities apparent on the face of the policy<sup>27</sup>—without the aid of parol evidence, against the insurer.<sup>28</sup> On the other hand, Virginia courts construe latent ambiguities—ambiguities apparent only after discovering or developing facts<sup>29</sup>—using contract law, including extrinsic evidence.<sup>30</sup> All Virginia court decisions, however, do not clearly distinguish between patent and latent ambiguities as they relate to the admission of extrinsic evidence.<sup>31</sup> This lack of specificity regarding ambiguity type has caused and likely will continue to cause confusion over which rule Virginia courts use when interpreting insurance policies.<sup>32</sup>

Another interesting application of contract law principles came in *Equinox on Battenkill Mgmt. Ass'n. Inc. v. Philadelphia Indem. Ins. Co.*,<sup>33</sup> which involved structurally damaged balconies that the insurer refused to cover because, although there was decay, the balconies had not “collapsed.” The 2012 insurance policy between the management association and insurer provided that the insurer “will not pay for ‘loss’ caused by or resulting from ... faulty, inadequate, or defective ... design, specifications, workmanship, repair, construction, renovation, remodeling, grading [or] compaction.” In the endorsement entitled “Additional Coverage-Collapse,” the policy provided, “We will pay for ‘loss’ caused by or resulting from risks of direct physical ‘loss’ involving collapse of ‘buildings’ or any part of ‘buildings’ caused only by one or more of the following ... [h]idden decay.” The policy defined “loss” as “accidental loss or damage” and “buildings” as “buildings or structures.” The policy did not define “collapse,” except to exclude “settling, cracking, shrinkage, bulging or expansion.” Though remanding the case, the court strongly suggested the insurance policy was ambiguous. With that, the court’s

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27. For example, a contract with a price written “\$500 (five hundred fifty)”.

28. See *Granite State Ins. Co. v. Bottoms*, 243 Va. 228, 234 (1992).

29. For example, an insurance policy covering “red Corvette” when the insured owned two red Corvettes.

30. *S. Ins. Co. of Va. v. Williams*, 263 Va. 565, 570, 561 S.E.2d 730 (2002). (“It is well established that insurance contracts, like other contracts, generally are to be construed according to their terms and without reference to parol evidence. However, resort to parol evidence is proper where a latent ambiguity exists in a particular insurance contract.”)

31. See, e.g., *State Farm Mut. Auto. Ins. Co. v. Justis*, 168 Va. 158 at 167 (1937).

32. *SunTrust Mortg., Inc. v. AIG United Guar. Corp.*, 784 F. Supp. 2d 585, 593 (E.D. Va. 2011).

33. 200 Vt. 33 (2015).

concurring justice would have applied contract law but stipulated that the court could consider only “limited extrinsic evidence, including the circumstances surrounding the making of the agreement as well as the object, nature and subject matter of the writing.” This is an application of contract law, but “limited extrinsic evidence” might suggest that the court preferred a relaxed version of strict *contra proferentem*.

#### *D. Interpreting Insurance Contracts Using Strict Contra Proferentem*

*Contra Proferentem* is “a primary rule of interpretation of insurance policies” (Thomas, 2012). Most jurisdictions apply this rule of interpretation after applying the general rules of contract interpretation including extrinsic evidence; however, a small minority of jurisdictions interprets ambiguous insurance contracts without reviewing any extrinsic evidence. In *Washington Nat. Ins. Corp. v. Ruderman*,<sup>34</sup> the Florida Supreme Court rejected an insurer’s attempt to introduce extrinsic evidence purporting to show the insureds’ understandings about their benefits under home health care insurance policies. This evidence might have resolved a policy ambiguity in the insurer’s favor concerning which benefits increased annually. Rejecting this approach, the court reasoned that the insurer “as the writer of an insurance policy, is bound by the language of the policy” and that where “one reasonable interpretation of the policy provisions would provide coverage, that is the construction which must be adopted.”

Similarly, in *Andres v. Am. Standard Ins. Co. of Wisconsin*,<sup>35</sup> the Oregon Court of Appeals reiterated the Oregon Supreme Court’s *Hoffman* rule that “the interpretation of insurance policies...[is] not one that is resolved by reference to evidence extrinsic to the policy itself.” While noting that the Supreme Court of Oregon did not justify its departure from the usual analytic sequence using contract law principles to interpret insurance policy ambiguities, the court reasoned that resolving ambiguities without extrinsic evidence furthers state policy promoting indemnity.

Idaho also employs strict *contra proferentem* without resorting to extrinsic evidence to determine the meaning of unclear insurance policy terms. In *Moss v. Mid-American Fire & Marine Ins. Co.*,<sup>36</sup> the insured’s policy included a “radius endorsement,” which rendered the liability coverage ineffective if the insured made “regular or frequent” business trips outside a 300-mile radius of his or her home. Finding that reasonable minds could differ on whether the insured’s number of trips were “regular or frequent,” the Idaho Supreme Court held the policy language to be ambiguous and that the insurer did not meet its burden to use clear

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34. 117 So. 3d 943 (Fla. 2013).

35. 205 Or. App. 419 (2006).

36. 103 Idaho 298 (1982).

and precise language to restrict the scope of coverage. Accordingly, the court reversed the lower court's grant of summary judgement in favor of the insurer.

### III. Arguments for Contract Law

"Insurance policies are contracts" is often used as a rationale for using general rules of contract interpretation to clarify ambiguous insurance contracts (Wilkerson, 2011). Courts and commentators also offer other justifications for using contract law: First, contract law is a flexible and interpretative device for the foundation of the insurance business, the standard form contract (Miller, 1988). Second, general rules of contract interpretation offer adequate protection for individual consumers with unequal bargaining power by finding terms unconscionable or against public policy (Miller, 1988). More specifically, contract law does not absolve drafters from liability since ambiguities will be interpreted against the drafter even after reviewing extrinsic circumstances (Nardoni, 2013). Third, flaws of strict *contra proferentem* suggest that contract law is preferable from the standpoint of arriving at a construction that is fair and efficient.<sup>37</sup>

#### A. Benefits of Standardized Agreements

Proponents of contract law argue the benefits of standardized agreements (Cogan Jr., 2010). That is, standardizing agreements fosters reliability, consistency and predictability (Cogan Jr., 2010). In *Sharon Steel Corp. v. Chase Manhattan Bank*,<sup>38</sup> for example, the court recognized that standardized agreements result in "better and quicker understanding of provisions," "substantial savings of time" and lower transaction costs for consumers. Similarly, a court's reluctance to accept automatic construction of ambiguities in favor of coverage implicitly acknowledges that insureds benefit from more cost-effective standard form policies and the reality that some degree of imprecision is necessary to embrace a wide array of situations (Bjorkman, Leitner & Simpson, 2014). Insurance experts also argue that "[s]tandardization is critical because the insurance industry pools claims data to predict future losses and price policies accordingly; accuracy in this important endeavor requires that insurance companies offer uniform coverage." (Abraham, 2005). Thus, offering non-standard, highly customized policies likely would cause

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37. See *Empire Fire and Marine Ins. Co.*, 117 Md. App. 72, 97 (1997) (stating that "the ordinary standards of contract construction govern in order to achieve an equitable and just construction"); Miller argues that "Contract law stands as a desirable alternative to the ambiguity doctrine because it would construe insurance policies in a more equitable and efficient fashion, yet still protect vulnerable insured individuals from overreaching insurance companies." (1988).

38. 691 F.2d 1039 (2d Cir. 1982).

consumer insurance to become unaffordable for average consumers and inhibit insurance market efficiency.

### *B. Protecting Insurance Consumers*

Another rationale for applying general contract law principles is the importance of protecting vulnerable insurance consumers (Miller, 1988). Commentators argue that modern contract law is the best approach because it protects consumers against potential oppression by preventing unconscionable terms (terms that no reasonable person would agree to) (Miller, 1988). More specifically, both the Uniform Commercial Code (UCC) and the *Restatement (Second) of Contracts* provide courts with flexibility to interpret standardized agreements in favor of consumers (Miller, 1988).<sup>39</sup> For example, in *Bishop v. Washington*,<sup>40</sup> a seminal case involving Pennsylvania insurance law, the Superior Court of Pennsylvania found the UCC concept of unconscionability also applied to insurance contracts and noted an insured's unawareness of policy terms as a factor contributing to a finding of unconscionability.<sup>41</sup>

What is more important is that contract law is flexible enough to interpret ambiguous and unambiguous terms against the drafter. In *Ebert v. Miller Mutual Fire Ins. Co.*, after citing that Maryland does not construe insurance policies most strongly against the insurer, the court held that the term "fence" reasonably included the wall surrounding the building.<sup>42</sup> In that case, contract law protected the insured without regard to extrinsic evidence. In another case favoring the policyholder, *Clendenin Bros., Inc. v. U.S. Fire Ins. Co.*,<sup>43</sup> the Maryland Court of Appeals held that the insurance policy's pollution exclusion provision was ambiguous. In so holding, the court relied on the evolution of the insurance industry's treatment of pollution exclusion clauses. This case shows that contract law also protects consumers by reviewing extrinsic circumstances.

In *People's Insurance*, the court could have reached the same outcome as *Clendenin Bros.*, using traditional contract law as would occur under strict *contra proferentem* if it found the disputed term ambiguous.<sup>44</sup> While arguing to exclude extrinsic circumstances, such evidence helps the Taylors, the plaintiff—and similarly situated plaintiffs—since conduct after policy issuance and industry

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39. But see Randall advances that general rules of contract law do not afford adequate protections and that legislative reform has not gone far enough. (2007).

40. 331 Pa.Super. 387 (1984).

41. See also *Markline Co., Inc. v. Travelers Ins. Co.*, 384 Mass. 139, 142 (1981) (acknowledging the oppressive nature of standard forms and noting similarities in the protections offered by the UCC unconscionability doctrine and the Restatement's reasonable expectations doctrine).

42. *Ebert v. Miller Mutual Fire Insurance Company*, 220 Md. 602, 612 (1959).

43. *Clendenin Bros., Inc. v. U.S. Fire Ins. Co.*, 390 Md. 449 (2006).

44. Alternatively, the court could also protect the Taylors by finding the term unambiguous based on a broad interpretation, ignoring extrinsic circumstances and holding that the policy did cover carports based on its plain meaning.

standards suggests the parties most likely intended coverage under the policy.<sup>45</sup> In this context, therefore, the result obtained under general contract law could provide the court with a more substantiated finding of coverage grounded in the parties' intentions because contract law provides a process under which the court evaluates circumstances surrounding the contract. The end result would be that the extrinsic circumstances protected the insureds and clarified the ambiguous policy terms. Strict *contra proferentem* would not consider insights provided by these relevant extrinsic circumstances.<sup>46</sup>

### C. Fairness and Efficiency

The main benefit of contract law is the reliance on objective principles to evaluate contracts.<sup>47</sup> This is best illustrated by examining the drawbacks to the use of strict *contra proferentem*. Drawbacks include inefficient interpretations, uncertainty and decreased policy readability (Rappaport, 1999).

Strict *contra proferentem* often results in inefficient and often misinformed court interpretations (Rappaport, 1999). For example, Judge Charles Clark criticized the inefficiency of an approach automatically favoring consumers by causing "continuous litigation in a field of law where certainty was essentially indispensable, since it stimulated judicial interpretation to resolve the 'ambiguity' against the company, followed by [insurers'] renewed attempts to revise and refine the technical words."<sup>48</sup> He concluded that an equity-based approach, rather than interpretation, would eliminate continuing uncertainty in the law of insurance contracts.<sup>49</sup> Applying *contra proferentem* rather than contract law principles also prevents courts from discerning the parties' intent (Wilkerson, 2011). As a result, the court ignores the importance of context, language and extrinsic evidence to clarify ambiguities (Rappaport, 1999). Indeed, though more difficult to apply, commentators agree that contract law principles discern the parties' true intent better than *contra proferentem* (Rappaport, 1999) and (Miller, 1988).<sup>50</sup>

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45. After the homeowner's policy was in effect, the Taylors' claimed that prior to installing the carport, State Farm's agent confirmed that the carport would be covered under the policy. Also, regarding industry standard, the International Building Code section 202 defines building as "any structure used or intended for supporting or sheltering any use or occupancy."

46. *Contra proferentem* would protect consumers by interpreting ambiguous terms against the insurer, but it would reach that conclusion without acknowledging extrinsic circumstances such as negotiations, conduct after policy issuance and trade usage. That is, after its initial attempt to ascertain the parties' intents, the court would totally disregard both the insurer and insured's intentions. Theoretically then, insurers would only get one shot during policy drafting to explain its policy terms.

47. *Ragin v. Porter Hayden Co.*, 133 Md. App. 116, 135 (2000).

48. *Gaunt*, 160 F.2d 599, 603 (2d Cir. 1947).

49. *Id.*

50. Miller notes that the inflexible nature of strict construction against insurers causes courts to give standard-form language an interpretation at odds with the actual intentions of the parties at hand.

As noted by Rappaport (1999), strict *contra proferentem* turns “the practice of forming a contract into a gamble fraught with uncertainty” (Rappaport, 1999). Uncertainty about both how judges will interpret the contract terms and the chance judges may broaden policy coverage limits increases insurance company risks.<sup>51</sup> A New Jersey court rejected extending coverage for the benefit of the insured and to the detriment of the insurance company in holding “[the court] will not make a better contract for a party than the one it made for itself.”<sup>52</sup> Furthermore, the uncertainty is exacerbated since even the extension of coverage is indeterminable (Miller, 1988). The end result is insurance market inefficiency and, consequently, higher insurance premiums (Miller, 1988).

A third argument is that insurance contracts are long documents that contain hundreds of provisions. Most insurance consumers do not read their contracts, at least not until a loss occurs, and cannot understand their contracts after reading them (Rappaport, 1999).<sup>53</sup> Strict *contra proferentem* forces insurance companies to attempt to eliminate ambiguities, which usually requires more technical language.<sup>54</sup> Insurance companies revise and refine insurance policies to more clearly exclude a risk where courts have used *contra proferentem* and other interpretive tools to cover in previous versions of insurance policies (Baker, 2013). This language takes the form of longer clauses and additional clauses and definitions (Rappaport, 1999). This process may produce better informed consumers. In addition, some commentators argue that excluding evidence to resolve ambiguity provides insurance companies little incentive to explain or interpret policy provisions to consumers orally (Miller, 1988; Boardman, 2006).<sup>55</sup> As Chief Justice William Holohan observed, “every insurance agent will be required to do a complete review of the policy with the insured and establish some form of record to support the conclusion that the insured was advised and understood the nature, extent and limitations of the policy which was purchased.”<sup>56</sup> Consequently, the rule of strict *contra proferentem* tends to exacerbate the problem of consumer ignorance.

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51. *Bausch & Lomb Inc. v. Utica Mut. Ins. Co.*, 330 Md. 758, 782 (1993).

52. *Flynn v. Hartford Fire Ins. Co.*, 146 N.J. Super. 484, 488 (App. Div. 1977).

53. But see NRS 657B.124 (Nevada enacted legislation with the intent to protect consumers from lengthy and complicated insurance policies. For example, the statute requires specific Flesch-Kincaid readability level; an index or table of contents; and minimum font size); NRS 657B.130 (disapproves policies with misleading provisions).

54. For example, a New York court found the following exclusionary clause not conspicuous enough: “the policy excludes from coverage damage or loss arising out of the: discharge, dispersal, seepage, migration, release or escape of ‘pollutants’ unless the discharge, seepage, migration, release or escape is itself caused by any of the ‘specified causes of loss.’ But if the discharge, dispersal, seepage migration, release or escape of ‘pollutants’ results in a ‘specified cause of loss,’ we will pay for the loss or damage caused by that ‘specified cause of loss.’” (*Herald Square Loft Corp. v. Merrimack Mutual Fire Ins.*, 344 F Supp. 2d 915, (SD NY 2004)).

55. Companies have little incentive to revise ambiguous insurance policies, as long as they can live with the pro-policyholders result of the few instances in which policyholders take the insurer to court.

56. *Darner Motor Sales, Inc.*, 682 P.2d 388, 402 (1994).

## IV. Arguments For Strict *Contra Proferentem*

As Professor Kenneth Abraham notes, “Courts commonly remind the parties that an insurance policy is, after all, a contract, and that departures from the contract must be limited if the contract is to have any meaning (Abraham, 2013).” In the face of such arguments, there are three common arguments against contract law that can be viewed as support for strict *contra proferentem*: 1) disadvantages of standardized agreements; 2) lack of insured’s subjective assent; and 3) need for a level playing field.

### A. *Disadvantages of Standardized Agreements*

Those who argue against using contract law to interpret insurance contracts emphasize that modern insurance contracts do not fit within the traditional elements of a contract. As Professor Susan Randall notes, general rules of contract law fail in insurance disputes because insurance contracts are offered on a take-it-or-leave-it basis (Randall, 2007). In fact, generally, claimants’ attorneys argue that applying general rules of contract interpretation “produce dramatically anti-consumer results” due to the adhesive nature of insurance policies.<sup>57</sup> This claim tends to focus on the nature of insurance contracts’ standard form characteristic. Ironically, in the 19th century, standard form contracts originated to protect policyholders (Hardy, *et al.*, 1922). One commentator noted that “no two [policies] were alike” and that “holders of policies were generally unaware of many of the important conditions which affected their business so materially, and thus, after losses, there were many disagreeable surprises, much indignation and many litigations (Hardy, *et al.*, 1922).” As a result, legislators required that insurance companies draft policies on standard forms with consistent language (Hardy, *et al.*, 1922). Non-standard, less uniform insurance contracts or perhaps proposed terms drafted by consumers would be less desirable alternatives. Therefore, the crux of the argument against standard forms must be the insured’s inability to individually negotiate contract terms.

### B. *Insurance Contracts are Non-Negotiated Agreements*

The second argument lists the key missing component in insurance contracts of the insured’s subjective assent to terms (Abraham, 2013). This point is correct since insureds have no role in drafting or negotiating insurance contract terms. Yet, Professor Randall similarly argues that insurance companies also lack freedom to contract because of state administrative controls on the insurance business (Randall, 2007). For example, the Maryland Insurance Administration (MIA) pre-approves policy terms, and the People’s Insurance Counsel Division (PICD) reviews policy

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57. Brief for Petitioner, *supra* note 1, at 14.



rates of policies already being sold or proposed to be sold in the state.<sup>58</sup> Though the MIA and PICD are consumer protection entities created to level the playing field between insureds and insurers, the restriction on both policyholders and the insurance company's ability to contract freely is undeniable (Randall, 2007). Admittedly, there are differences in degree to which insurer and insureds are contractual constrained. In the case of policy terms, insurers purchase standard policy terms from the Insurance Services Office (ISO) and then propose the same or similar policy terms to administrative agencies like the MIA. Coverage provisions are generally accepted as proposed, but exclusion clauses are given a more rigorous review (Baker, 2013). This suggests a need for better proposals by the ISO or closer scrutiny of provisions by the MIA during approval process, and not necessarily reliance on judiciary consumer protection at contract interpretation. Approving clear and unambiguous contract terms on the front end likely alleviates litigation on the back end.

### C. Purpose of Insurance, Clarity and Efficiency

The main argument for rules other than contract law is to level the playing field for individual consumers against overreaching insurance companies in a quasi-monopolistic market.<sup>59</sup> As Judge Charles Clark pointed out in *Gaunt v. John Hancock Mutual Life Insurance Co.*,<sup>60</sup> "Had ... bargaining occurred between parties with equal knowledge of the business and on equal terms, there could be little difficulty in supporting the condition precedent ... ."<sup>61</sup> In addition, consumers may not be as informed about their insurance policies because these lengthy documents contain technical terms that are unfamiliar to average consumers.<sup>62</sup> Furthermore, most consumers do not read their contracts and receive their policy only after the contract is made (Rappaport, 1999). Thus, the claim is that pro-insured rules like strict *contra proferentem* promote the purpose of insurance, permit clear contracts and promote efficiency.

What is more important, however, is that strict *contra proferentem* does not automatically ensure adequate protection for insureds.<sup>63</sup> For example, a court may find a term unambiguous to prevent clear injustices against the insurer, or exclude

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58. Md. Code Ann., State Gov't § 6-306 (West); see also *People's Ins. Counsel Div. v. Allstate Ins. Co.*, 2010 WL 2589634, at \*2 (Md.App. 2010). Though the PICD reviews policy rate increases of 10% or more filed with the MIA Commissioner by a medical professional liability insurer and homeowners' insurers issuing policies in Maryland, it has no authority to set policy rates.

59. See generally Brief for Petitioner, *supra* note 2 (PICD argues while consumers might have several insurance companies to choose from, most insurance policies are standardized forms, used industry-wide, and offered to consumers on a "take-it-or-leave-it" basis).

60. *Gaunt v. John Hancock Mut. Life Ins. Co.*, 160 F.2d 599 (1947).

61. *Id.* at 603.

62. Brief for Petitioner, *supra* note 1, at 22.

63. *Keene Corp. v. Insurance Co. of North America*, 597 F.Supp. 946, at 954 (1984).

extrinsic evidence as irrelevant or discount its weight.<sup>64</sup> In those cases, this result-driven approach might actually create judicially inefficiency where judges will search the ends of the earth for consistent understandings of terms or phrases. On the other hand, assuming strict *contra proferentem* became law, an insurer might be motivated to specify terms that are reasonably susceptible to more than one interpretation. However, quasi-regulators like the ISO and regulators like the MIA already attempt to alleviate bait-and-switch concerns by proposing and approving standard homeowner policy language.

Courts and commentators also contend that strict *contra proferentem* advances the purpose of insurance, which is to provide protection from claims and losses.<sup>65</sup> Thus, courts often give policy terms an interpretation consistent with that purpose, absent the insurance policy's express exclusions or limitations suggesting otherwise.<sup>66</sup> Judge Richard Posner's economic analysis charges that ambiguity rule protects risk-averse insureds against the possibility that they might misinterpret their insurance policy's coverage (Posner, 1992). Supporting the purpose of insurance argument, the Maryland Court of Appeals, in *Shirer*, rejected an insurance company's denial of coverage under an exclusion provision.<sup>67</sup> There, the court explained that "if [the insurer's] argument is taken literally, operation of the rig would almost never" trigger coverage under the automobile policy. Another common argument for strict *contra proferentem* is promoting clear insurance contracts.

As the drafter, the insurance company controls the contract language, and construing ambiguities against the drafter encourages clear contracts (Rappaport, 1999). Even proponents for contract law appear to agree on this point, "Placing the onus on the drafter of insurance policies and adhesion contracts makes sense...." (Horton, 2009). For example, in *Eli Lilly and Co. v. Home Ins. Co.*,<sup>68</sup> the court determined whether an insurance company could proffer evidence of what the policy language meant to say. The court concluded that the insurance company as drafter of the policy cannot rely on extrinsic evidence to clarify its obscure terms. Such a rule encourages insurers to carefully draft clear contract terms and clauses (Rappaport, 1999). Moreover, insurance companies, whose carefully trained lawyers draft the policy language, are discouraged from using imprecise terms to

64. See, for example, *Pennsylvania Threshermen & Farmers' Mut. Cas. Ins. Co. v. Shirer*, 224 Md. 530 (1961); *Megonnell v. United Servs. Auto. Ass'n.*, 368 Md. 633 (2002) (decisions dismissing industry custom as irrelevant).

65. See *Wallis v. Superior Court*, 207 Cal. Rptr. 123, 129 (Ct. App. 1984) (noting special characteristics of insurance distinguishing them from the general class of contracts such as the insured's motivation to "secure peace of mind, security, [and] future protection."); *Foley v. Interactive Data Corp.*, 765 P.2d 373, 390 (Cal. 1988) (recognizing that insureds obtain insurance to "seek protection against calamity."); *Norem v. Iowa Implement Mut. Ins. Ass'n.*, 196 Iowa 983, 988 (1923) ("The insured may generally, at least in taking out insurance, rely upon the company to issue a policy payable to the proper person and in a form to carry out its purpose."); see also *Policyholder's Guide to Insurance Coverage* § 20.03 (2004).

66. *Weinstein v. Prudential Property and Cas. Ins. Co.*, 149 Idaho 299 (2010).

67. *Shirer*, 224 Md. 530, 537 (1961).

68. 482 N.E.2d 467 (Ind. 1985).

lure potential policyholders and then later argue for a narrow interpretation of the term (Rappaport, 1999).<sup>69</sup> Strict *contra proferentem* might also dissuade some insurers from attempting to attract insureds with policy terms. However, those favoring strict *contra proferentem* may not be considering the fact that the time value of money does not motivate insurers to deny claims because: 1) prejudgment interest is routinely awarded in breach of contract cases; 2) insureds may routinely challenge wrongful denials of coverage; and 3) a reputation for denying reasonably valid claims will lead to loss of business (Sykes, 1996).

Another rationale for *contra proferentem* rather than contract law is that it promotes efficient risk allocation (Rappaport, 1999). From a judicial resources perspective, one commentator explains that strict *contra proferentem*, which rejects an examination of extrinsic evidence, eliminates unjustifiable expense and delay in coverage proceedings (Abraham, 1996). United Policyholders argued in its amicus brief, “Trial courts confronted with ambiguous policy language will have to give parties an opportunity to submit evidence.” Courts must then determine the admissibility and weight of such evidence.<sup>70</sup> The Supreme Court of Florida seemingly agreed by strictly construing an ambiguous health care coverage policy against the drafter who failed to specify whether automatic benefit increases applied to daily benefits or to all benefits.<sup>71</sup> A similar efficiency argument concerns distributive justice or risk spreading—essentially that strict *contra proferentem* places the financial burden on the party in the better position to handle the risk of loss (Horton, 2009). Insurers, as the contract drafter, can avoid unclear policy terms at the lowest cost (Burke, 2000). Undeniably, the insurance company is in a better financial position than most consumers (Burke, 2000) and can avoid the increased risk by shifting cost increases to its pool of insureds. Ultimately, any financial benefit to insureds resulting from strictly construing insurance policies against insurers may result in higher insurance premiums.

## V. Courts Primarily Create Rules Interpreting Insurance Contracts

Insurance regulation has two major categories (Baker, 2013). The first is a set of judicially created doctrines that manage the relationship between an insurer and

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69. See, for example, *Brownstein v. New York Life Ins. Co.*, 158 Md. 51 (1930) (noting that the conspicuously printed words “Life Income to Insured” were bound to attract the attention of the insured.).

70. Brief for United Policyholders, as Amici Curiae Supporting Respondent, *Washington National Insurance Corporation v. Ruderman*, 117 So. 3d 943 (No. SC 12-323). United Policyholders also argue that the cost of insurance coverage litigation will significantly increase, which affects not only policyholders’ ability to obtain competent coverage counsel, but also the insurance industry’s exposure to a successful policyholders attorney’s fees.

71. *Washington Nat. Ins. Corp. v. Ruderman*, 117 So. 3d 943, 952 (Fla. 2013).

its insured (Baker, 2013). This branch of insurance law is predominantly a sophisticated application of contract law, though tort law and agency law principles, as well as some statutes and administrative code, are relevant (Baker, 2013). The second major category focuses on regulating entities that engage in the insurance business (Baker, 2013). This aspect of insurance law is primarily a body of statutes enacted by state legislatures and administrative regulations developed by quasi-federal agencies and state agencies, and sometimes influenced by judicial decisions (Baker, 2013).

Though contract interpretation is usually a court function, some state legislatures have codified rules of interpretation (Baker, 2013). Courts like the *People's Insurance* court contemplating changing its reliance on contract law could invite its state legislatures to change the law.

In California, for example, the legislature determined that contract law best promotes public policy and “in case of uncertainty not removed by the preceding rules, the language of a contract should be interpreted most strongly against the party who caused the uncertainty to exist.”<sup>72</sup> Similarly, North Dakota enacted legislation favoring contract principles but also expressly requiring that *contra proferentem* be used as a rule of last resort.<sup>73</sup> South Carolina’s Senate body introduced a similar bill that would have broadly construed in favor of coverage liability insurance policies covering construction professionals.<sup>74</sup> That legislation came after a legal dispute over a general liability policy that ultimately reached the South Carolina Supreme Court, which decided in favor of the insurance company (Workman, 2015). The South Carolina Senate Committee’s primary concern was protecting homeowners from insurance companies that claimed faulty construction work was not covered under their policy (Workman, 2015). Other legislatures have taken a similar approach with health insurance policies, noting “all policies ... are to be interpreted broadly ... in favor of the insured or beneficiaries of such policy.”<sup>75</sup> Notably, these health care proposals followed Congress’ decision to regulate the health care industry and not by a court’s urging.

These instances support permitting legislatures to determine the best interpretation approach that serves broader public policy considerations. Few states, however, have proposed—much less enacted—legislation interpreting insurance contracts. For example, there have been no state legislative actions regarding the

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72. Cal. Civ. Code § 1654 (West 2014).

73. N.D. Cent. Code Ann. § 9-07-19 (West).

74. S.B. 431, 119th Leg., 1st Sess. (Sc. 2011); see also H.B.10-1394 (Co. 2010), codified at CRS §§ 10-4-110.4 and 13-20-808: (confirming that faulty workmanship claims are eligible for coverage, unless insurance policy wording specifically excludes them (with a “your work” exclusion, for example)).

75. See, for example, H.B. 924, 26th Leg., Reg. Sess. (Haw. 2011) (All policies and certificates which are submitted for approval under RSA 420-L:6 are to be interpreted broadly so as to find coverage unless plainly and clearly excluded, and in favor of the insured or beneficiaries of such policy or certificates); H.B. 1541, 163rd Leg., 2d. Sess., (N.H. 2013) (same).

construction of insurance contracts in Maryland.<sup>76</sup> This could suggest that the legislative policy in Maryland and similarly situated states is to retain the construction of insurance contracts using contract law, or more likely that legislative inaction cannot appropriately be construed as legislative approval of the status quo (Hart and Sacks, 1958).

Even assuming, *arguendo*, that legislatures adopt an interpretation rule favoring policyholders, it is likely to use reasonable expectations—not strict *contra proferentem*—to protect insurance consumers. In South Carolina, for example, the legislature proposed:

“A court may consider the objective and reasonable expectations of a [policyholder] in interpreting the policy” and “If an insurer disclaims or limits coverage under a liability insurance policy issued to a [policyholder], the insurer shall bear the burden of proving by a preponderance of the evidence that: (1) a policy limitation, exclusion, or condition bars or limits coverage for the legal liability of the insured in an action or notice of claim made pursuant to this section...; and (2) an exception to the limitation, exclusion, or condition in the insurance policy does not restore coverage under the policy.”

Legislative activism adopting the reasonable expectations test has merit since theoretically it is not an application of contract law interpretation, which is traditionally a court function (ALI, 2013). In addition, legislatures may be more inclined to use the legislative process to enact reasonable expectations since it has been adopted by the courts in nearly every American jurisdiction. Nevertheless, while a possibility for legislative action, research shows no state enacting the reasonable expectations doctrine. Only courts have adopted the rule in those 39 jurisdictions construing insurance policies according to the insured’s reasonable expectations.<sup>77</sup> A few jurisdictions such as Utah expressly reject the doctrine of reasonable expectations, while others jurisdictions, such as Oregon, have not expressly adopted, nor expressly rejected, the reasonable expectation approach.

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76. Brief for Petitioner, *supra* note 1, at 24.

77. State courts created rule of reasonable expectations: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kentucky, Louisiana, Massachusetts, Minnesota, Missouri, Montana, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Vermont, Washington, West Virginia, Wisconsin and Wyoming.

## VI. Implications

A change to Maryland's or similarly situated states' reliance on contract law when interpreting insurance contract could affect the insurance industry, including courts, insurance practitioners and insurance consumers. The following sections review the economic and behavioral consequences of maintaining the status quo contract law and changing to strict *contra proferentem*.

### A. Economic Effects

The goal for contract interpretation is to minimize contractual transaction costs, generally understood as barriers to efforts voluntarily to transfer resources to their most valuable use (Posner, 2005). The entire purpose of insurance is to disperse costs by transferring risk onto a larger group of insured parties (Baker, 2013). Against this backdrop, the primary economic consequences of interpreting insurance contracts can be broadly categorized under administrative costs, insurance premiums, liability payments and economic contraction. Though little attention has been paid to the economics of contract interpretation, a recent study found that insurance firms prefer an objective approach to contract interpretation and that courts should use narrow evidentiary bases when interpreting contracts but with the flexibility to broaden the base when necessary (Hardy, 2011). This study suggests that insurance firms recommend a mix of contract law's objective standard with something more than strict *contra proferentem*'s absolute bar of extrinsic circumstances.<sup>78</sup> States' application of contract law that interprets ambiguities against the drafter as a rule of last resort meets the insurer preference, which presumably results in an efficient insurance market for consumers. Though contract law is preferable, arguments claiming that strict *contra proferentem* will significantly increase insurance costs, specifically insurance premiums and claims payments, are not well supported. Contract interpretation likely has minimal impact on the cost of insurance. Thus, there is little economic incentive to change from traditional contract law to strict *contra proferentem*.

#### 1. Administrative Costs

In rationally choosing between these possible legal rules, one also should consider the costs of administering the rule chosen. From the court's perspective, administrative costs of adhering to contract law principles is likely greater than using strict *contra proferentem* (Schwartz, 2008). Contract law principles often require the court to determine the admissibility of extrinsic circumstances by addressing issues such as relevancy, authentication and hearsay (Imwinkelried, 2006). Compared with strict *contra proferentem*, the court's in-depth, uncertain evidentiary inquiry under standard contract law is more significant in terms of both time and money (i.e., salary and other expenses of a high-quality tribunal) (Posner,

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<sup>78</sup> See *supra* Section 2.C.

2005). Rarely, however, do insurance contract interpretation disputes involve extrinsic circumstances that courts must evaluate.

The alternative interpretation, strict *contra proferentem*, enables the court to disregard extrinsic evidence and the process of evaluating the fairness of such evidence. The court would refer to the contract policy itself and then determine ambiguity based on only the policy language. Without reviewing extrinsic circumstances, the court would minimize scarce judicial resources (Lash, 2015).

For the insurance company, administrative costs appear less expensive under contract law than *contra proferentem*. At policy drafting, contract law principles could incentivize some insurance companies to use broad language and then once a dispute arises, argue a more precise usage of the term. Under contract law, arguably, the insurance company may not be as careful when drafting terms because it would have a second chance during litigation to explain the unclear terms. Thus, administrative costs for drafting and reviewing policies are low. At the dispute stage, however, administrative costs (i.e., litigation costs) could be higher for insurance companies because they would have to gather data and information, prepare agents for testimony and interview expert witnesses to bolster their interpretation of the disputed policy term (Posner, 2005). The apparently greater costs at the dispute stage reduce the slight incentive of drafting ambiguous terms in the first instance. Of course, such reasoning ignores that insureds rarely challenge coverage denials (Rose, 2013). With that understanding, some insurance companies might rationally decide not to consider the greater dispute costs, preferring to economize on drafting costs (Posner, 2005). In summary, administrative costs for insurers under contract law are less during drafting but more expensive with a litigated dispute.

On the other hand, under strict *contra proferentem*, insurance companies would necessarily draft more conspicuous contract terms. Insurance policies will take longer to draft and become lengthier documents since they will require greater explanation of terms that might be reasonably susceptible to more than one meaning (Posner, 2005). Though policies will inevitably require more resources to draft, there might be fewer disputes over contract interpretation (Posner, 2005). Firms and practitioners, including some drafters, may argue against increasing consumer costs associated with marginally improved drafting, saying that precision is infinitely more costly and that providing for every possible contingency in a contract is prohibitive (Posner, 2005). They likely will argue spending more resources on careful contract drafting is useless given that insurance consumers generally do not read their policies. Under strict *contra proferentem*, it would appear that administrative costs are more expensive at drafting and less expensive during a dispute since courts will only examine the policy language. Nonetheless, the insurer assumes the increased transaction cost and then redistributes the increased premiums to insurance consumers. In sum, the higher transaction costs under *contra proferentem* result in higher administrative costs to insurance firms.

For the insured, administrative costs (i.e., litigation costs) will be higher under contract law than strict *contra proferentem*. Yet in some cases, the administrative

cost for insureds will be nearly equal under contract law and *contra proferentem*. For example, in *People's Insurance*, the PICD, a state agent, intervened on the insured's behalf as an advocate for consumer protection. Thus, the insured realizes lower litigation costs, with the exception of time, because services provided by the PICD are free of charge. These consumer protection cases are the exception, and most insureds will assume significant administrative costs by challenging coverage denials in court.

## 2. Insurance Premiums

Insurance premiums are the charges to insureds for insurance coverage (NAIC, 2015). Studies illustrate that uncertainty about losses and ambiguity about probability often lead to higher premiums (Kunreuther, Hogarth and Meszaros, 1993). Under traditional contract law interpretation, insurance premiums likely will remain unchanged since there would be no change in the legal regulation of insured-policyholder relationship. Similarly, increased premiums under the alternative strict *contra proferentem* likely will be minimal.

Proponents of contract law argue that the potential increase in insurance premiums is the adverse economic effect that could occur when the insurer takes on additional risks under strict *contra proferentem* compared with contract law. However, it is the strict *contra proferentem*—not traditional contract law—interpretations that assure insurance companies that any ambiguity will be resolved against them without the need for a costly evidentiary inquiry. Strict *contra proferentem* also might curb uncertainty about losses through more careful drafting and consideration of covered and excluded property. However, it does not, nor does contract law for that matter, settle the unknown issue of when a court will consider a term ambiguous.

One statistical report provides some insight into this issue (NAIC, 2015). In 2012, the National Association of Insurance Commissioners (NAIC) published a report on countrywide and state-specific premium and exposure information for non-commercial dwelling fire insurance and for homeowners' insurance package policies (NAIC, 2015). In general, the report concluded that factors affecting home insurance premiums and loss include real estate values, building and construction costs, vulnerability to catastrophes, and the level of urbanization (NAIC, 2015). Legal (in the form of rate and form filing laws) and economic (inflation and interest rates) also cause wide variations in premiums (NAIC, 2015). Table 1 shows insurance premiums of the most common policy type, HO-3, and the most common insurance coverage amount, \$200,000–\$299,999. Across six jurisdictions in the same geographic area, the data shows minor differences in insurance premiums.

In the traditional contract law jurisdictions selected, the average insurance premiums are marginally lower than in jurisdictions using strict *contra proferentem*. Accordingly, switching interpretation methods in Maryland will not necessarily lower insureds' premiums. The fact that strict *contra proferentem* jurisdictions have marginally higher average premiums does not conclusively suggest that contract interpretation type results in a higher average premium price, however. A more reasonable interpretation of this data, and one consistent with the



NAIC report, is that judiciary regulation is one of many factors affecting the cost of home insurance. For these reasons, it is unlikely that either contract interpretation approach will increase premiums above a nominal amount, if at all.

**Table 1**

Jurisdiction	Contract Interpretation Method	Disaster Declarations Since 2011	Average Premium Price
Delaware	Contract Law	2	\$619
Maryland	Contract Law	5	\$754
New Jersey	Contra Proferentem	7	\$807
Pennsylvania	Contra Proferentem	5	\$780
Virginia	Contra Proferentem	5	\$804
Washington, DC	Contract Law	4	\$856

\*Compare Average Premium Price for Contract Law Jurisdictions=\$743 with Average Premium Price for *Contra proferentem* Jurisdictions=\$797

### 3. Claims Payments

What insurance companies pay out for their policyholders' legal defense and any judgments against them is directly linked to the cost of liability insurance premiums (Insurance Information Institute, 2014). Table 2 summarizes information obtained from the NAIC published *Report on Profitability by Line by State* (2013). For each line and each state, the publication presented aggregate statistics such as premiums earned, losses incurred, loss adjustment expenses, general expenses, investment income and estimated profits for the 2012 calendar year (NAIC, 2013). The data for incurred losses and loss adjustment expenses suggests that the average claim payments are similar between states employing traditional contract law and *contra proferentem*.

### 4. Economic Contraction

The final step in the adverse economic effects argument is that a strict regulatory environment (i.e., employing *contra proferentem*) could create economic contraction since insurers would be less likely to provide coverage (Born, 2013). Insurance "redlining" occurs when insurers identify geographic regions in which an insurance company prefers not to issue policies (Baker, 2013). In theory, a redlined area is a more risky place for banks to lend (Baker, 2013). Without available financing opportunities, fewer people invest in the area, and without investment, the area becomes a riskier place for banks, causing further economic contraction (Baker, 2013).

Table 2

Jurisdiction	Contract Interpretation Method	Losses Incurred as Percent of Direct	Loss Adjust Expense as Percent of Direct Premium Earned	Total Loss as Percent of Direct Premium Earned
Delaware	Contract Law	50.2	7.6	57.8
Maryland	Contract Law	66.5	9.9	76.7
New Jersey	Contra Proferentem	126.4	20.7	147.1
Pennsylvania	Contra Proferentem	62.2	10.1	72.3
Virginia	Contra Proferentem	55.1	8.0	63.1
Washington, DC	Contract Law	48.2	6.7	54.9

\*Compare Average Total Loss % for Contract Law Jurisdictions=63.13 with Average Total Loss % for *Contra proferentem* Jurisdictions=67.7. (New Jersey results not included in average since 2012 Hurricane Sandy causes significant distortion.)

Strict *contra proferentem* working alone likely would not cause redlining, but coupled with catastrophe-prone areas and other state regulatory and judicially created doctrines, the possibility becomes greater of less insurers issuing policies. In a 2012 report, the PICD already expressed concern to the governor and general assembly about the unavailability of homeowners insurance in coastal and bay areas (Maryland Attorney General, 2012). In one instance, Allstate discontinued writing new policies in all coastal areas of Maryland (Maryland Attorney General, 2012). In another, State Farm did not renew more than 1,200 of its policyholders living in Ocean City (Maryland Attorney General, 2012). At least in catastrophe-prone areas, such as Maryland's coastline, strict *contra proferentem* might cause other insurers to withdraw coverage or decline renewals, thereby creating significant economic contraction. For this limited reason, traditional contract law might be the better interpretation approach rather than *contra proferentem*.

### B. Insured and Insurer Responsibility

Moral and morale hazard, behavior changes when people or businesses are insured against losses, affects both insureds and insurers. Theoretically, insurance reduces incentives to: 1) protect against loss; and 2) minimize the cost of a loss (Baker, 2013). For example, pre-claim, an individual might choose to drive more carelessly since the insurer would pay if the car is damaged, or post-claim, the individual chooses more expensive repair costs as long as the insurer pays for it (Baker, 2013). In addition, insureds may intentionally cause a claim or exaggerate the value of a claim in order for monetary gain. These behavioral changes exist in insurance without regard to the application of interpretation rules. However, a court

or legislature's preferred method of interpreting insurance contracts could further affect insureds' and insurers' behavior. If viewing contract interpretation on a continuum from most to least pro-policyholder, the order is reasonable expectations, strict *contra proferentem* and then contract law. Rules allowing a broader interpretation of arguably ambiguous contract terms might encourage this type of behavior since an insured might presume additional coverage, even when that presumption is erroneous. The problem then arises that with higher potential claims, the insurer will charge higher premiums (Baker, 2013).

Insurer moral hazard also constrains the insurance market (Baker, 2013). Insurance creates a principal-agent relationship, wherein the insured (principal) appoints the insurer (agent), who is responsible for insured losses (Baker, 2013). For example, in deciding whether to pay a claim, or how much to pay, the insurer cannot help but be affected by getting to keep whatever money it does not payout for losses (Baker, 2013). Legal rules (i.e., duty to settle and damages for bad faith breach) that promote the enforcement of insurance contracts attempt to reduce such instances of insurer moral hazard (Asmat and Tennyson, 2010). Similarly, contract interpretation principles also could reduce insurers' incentives to attract insureds with broad, inconspicuous language and then deny coverage once a loss occurs. Thus, strict *contra proferentem*, which promotes the purpose of insurance by broadly favoring insureds when a policy term is unclear, should reduce insurer moral hazard in policy drafting.

## VII. Conclusion

This article discusses the advantages and drawbacks of the various ways in which insurance contracts can be interpreted. There are compelling arguments for both contract law and strict *contra proferentem*. With regard to administrative costs, neither approach appears to be universally more efficient than the other. For example, what is most efficient for the court tends to be less efficient for the insurance company. While acknowledging the possibility of increased premiums and claims payments under strict *contra proferentem*, the data suggests that any increases would be nominal. Moreover, economic contraction is unlikely to result solely from a chosen contract interpretation method. Finally, a switch to strict *contra proferentem* could reduce insurer moral and morale hazard, but at the expense of increasing insured moral hazard.

## Appendix: The People's Insurance Case

During a blizzard in the winter of 2010, Moira and Gregory Taylor's carport in West River, Anne Arundel County, collapsed under the weight of snow and ice.<sup>79</sup> The Taylors filed a claim under their homeowners insurance policy with State Farm Fire and Casualty Insurance.<sup>80</sup> State Farm denied the claim on the ground that the carport was not a "building" and that the insurance policy only covered losses due to a collapse of buildings.<sup>81</sup> The Taylors filed a complaint with the Maryland Insurance Administration (MIA) alleging that State Farm had committed unfair claim settlement practices and violated Maryland insurance law<sup>82</sup> "by refus[ing] to pay [their] claim for an arbitrary or capricious reason based on all available information" or by "fail[ing] to act in good faith" in settling their claim.<sup>83</sup>

The People's Insurance Counsel Division (PICD), the appellant, intervened on behalf of the Taylors. Following an investigation, the MIA's Property and Casualty Complaint Unit concluded that State Farm's denial of the Taylor's claim did not violate Maryland Code Section 27-303.<sup>84</sup> The Taylors challenged this determination and requested a hearing before the Associate Deputy Commissioner of the MIA. The state insurance commissioner ruled that State Farm did not violate the law because State Farm's decision to deny the Taylor's claim was based on a correct legal interpretation of the policy language.<sup>85</sup>

The PICD filed a petition for judicial review of that decision in the Circuit Court for Baltimore City.<sup>86</sup> On Aug. 9, 2012, the circuit court affirmed the MIA final decision, reasoning that "the word 'building' as used in the [State Farm] Policy is plain and unambiguous and means a structure that has a roof and walls."<sup>87</sup> The Maryland Court of Appeals granted the PICD's petition for a writ of certiorari to determine, in part, whether it should "reexamine Maryland common law constructing insurance contracts and, recognizing that such contracts are not the product of equal bargaining, hold that terms contained in an insurance policy

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79. *People's Ins. Counsel Div. v. State Farm Fire & Cas. Ins. Co.*, 214 Md. App. 438, 440 (2013).

80. *Id.*

81. *Id.* at 441.

82. Md. Code Section 27-303.

83. The MIA has jurisdiction over this administrative proceeding, but lacked jurisdiction to determine whether State Farm breached its contract with the Taylors. Also, State Farm could have breached the insurance contract but not have violated the unfair claim settlement practices. Lastly, the Taylors might have been more successful pursuing a breach of contract claim and challenging the common law interpretation of insurance contracts at a circuit court rather than filing a complaint with the MIA.

84. Brief for Petitioner, *supra* note 1.

85. *Id.*

86. *Id.*

87. *Id.*

must be strictly construed against the insurer.”<sup>88</sup>

After oral arguments, the court issued a written opinion dismissing the writ of certiorari improvidently granted without any explanation.<sup>89</sup> The dissenting justice, however, provided several reasons supporting when the court should dismiss a writ of certiorari as improvidently granted: 1) there was no issue of public importance in the case; 2) the issue was not preserved during lower level court proceedings; or 3) the record provided an inadequate basis for rendering useful guidance.<sup>90</sup> More importantly for purposes of this article, the dissent noted that the dismissal missed the opportunity to refine the issue of Maryland’s law on interpreting ambiguous insurance policies.<sup>91</sup>

Also, while acknowledging subtle distinctions between strict *contra proferentem* and Maryland’s reliance on general contract law principles to interpret insurance contracts, the dissent noted that the case could have been resolved relying on the court’s “well-settled rules of contract interpretation.”<sup>92</sup>

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88. *People’s Ins. Counsel Div. v. State Farm Fire and Cas. Ins. Co.*, 436 Md. 501 (2014).

89. See *supra* note 3. Perhaps the court’s reason was simply to reaffirm its longstanding precedent that relies on contract law principles without drafting another decision acknowledging the state of the law.

90. See *supra* note 3, at 59.

91. *Id.* at 61.

92. *Id.* at 63.

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# State and Local Policy Instruments for the Promotion of Catastrophe Mitigation

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## Abstract

The mitigation investment decisions of property owners are subject to multiple factors other than just the cost-benefit expectations. Uncertainty regarding cost savings, the financial capacity (and uncertainty) of the decision maker, insurance costs, and responsiveness of those costs to mitigation efforts are just some of the factors contributing to choices made regarding whether and to what extent to mitigate against disaster. Given the variety of factors that contribute to the mitigation decision, the authors assert a broad framework for public policy aimed at promoting mitigation aims first for accountable and empowered property owners, specific mitigation measures most likely to provide greatest value, an engaged and collaborative private sector, and smart messaging.

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## Introduction

Natural disasters continue to be an area of concern for public policymakers. In 2013 alone, natural disasters caused the death of more than 21,610 individuals worldwide and resulted in damages of \$118.6 billion. During the past decade, the U.S. has remained one of the top five countries most frequently hit by natural disasters (Guha-Sapir, Hoiyos and Below, 2015). Pre-loss property protection, or mitigation, efforts made by property owners are critical to reduction of the underlying risk.

Despite the public good that risk protection provides,<sup>1</sup> it still is difficult to effectively incentivize many property owners to invest in property improvements that increase the protection against damage from natural disasters. Indeed, a 2013 joint study by researchers at Florida State University and the Insurance Research Council (IRC) found although the majority of respondents to a survey of primary homeowners in 12 U.S. localities viewed their homes as not “optimally fortified” against wind or wildfire, the majority also planned to spend no money in the near future on mitigating action, despite the fact that 10 of the surveyed localities are in zones considered high risk for losses from these perils (Florida Catastrophic Storm Risk Management Center, 2013). There exists prior research that examines—both theoretically and empirically—the property owner’s mitigation decision. See, for example, Kunreuther and Kleffner (1992); Kunreuther, (1996, 2006); Kleffner and Kelly (2001); Kelly and Kleffner (2003); Ge et al. (2011); and Carson, McCullough and Pooser (2013).

Most prior research efforts in this area primarily focus on the relationship between the insurance contract, insurance decisions, and self-insurance and self-protection. Intuitively, risk-based insurance rating seems a prerequisite for optimal mitigation decisions by insureds, and the literature on the subject supports this intuitive assertion. Empirical and theoretical efforts point to the non-optimal solutions reached when insurance rates are subsidized. These findings hold in—and indeed in multiple studies are solely based on—lines of insurance and

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1. Studies regarding the social and economic effects of mitigation have consistently found that mitigation can result in both public and private good. Fonstion and Holtman (1994) found that newer homes, arguably built to lower standards in the years leading up to 1992, suffered heavier damage from Hurricane Andrew than their older, arguably sturdier, counterparts. Risk Management Solution (2008) also found homes built prior to Hurricane Andrew suffered proportionally more damage in the 2004 and 2005 storm seasons than did the newer homes built in compliance with the most up-to-date (effected after Hurricane Andrew) building codes. Mitigation increases the value of the home, decreases expected losses and decreases the burden placed on the public in the event of a catastrophic event (Kleindorfer and Kunreuther, 1999). Christoplos, Liljelund and Mitchell (2001) found that mitigation not only reduces direct losses (i.e., saves lives, reduces injuries and lowers property losses), but also measurably increases the public good through alleviation of the indirect poverty effect of catastrophes. Regarding the private good of property value enhancement, Simmons, Kruse and Smith (2002), Gatzlaff, McCullough, Meddders and Nyce (2015) and others observed increased home resale prices for homes that made a mitigation investment in a Gulf Coast city.

geographic areas heavily exposed to catastrophe potential. Unfortunately, even where insurance is optimally priced, we continue to see weak structures—existing and newly built. To the extent appropriate building codes are present and enforced, we can expect the building stock eventually will meet a minimum standard of protection against the elements of nature. Furthermore, adaptation to the dangers of the elements via redirected economic development policies may in the future reduce the risk of loss substantively. But it is in this gap wherein lie weak existing structures, limited standards of construction enforcement and increasing development in areas most prone to natural disaster that we make a case for the value of public and private policy programs for property mitigation affordability.

Regulations, building codes, product and installation standards, and land use controls may be (and often all are) used to enforce public standards for safety. Given the huge building inventory that remains unprotected or under-protected, it is clear financial incentives beyond these largely coercive measures are important to consider. Prior research efforts to explain mitigation behavior provide a wealth of information regarding what motivates (or fails to motivate) property owners to protect their properties on a pre-loss basis. Several important categories of explanatory variables considered in the literature indicate significant relationships to mitigation behavior. Property location and characteristics, decision-maker dispositions, beliefs about consequences for and beyond the household (or business), social influences, insurance pricing, and direct policy measures all have been found to correlate with mitigation decisions or practices.<sup>2</sup>

The prior literature enumerates reasons why progress in realizing the risk-reducing potential has been so limited, particularly for individuals and households. Much of this literature centers on optimal insurance contracting. Although insurance premium reductions are offered by several insurance programs and companies and in some places are mandated,<sup>3</sup> links between the insurance cost savings and the cost of mitigation have not been adequately established in the prior research. The actual value of premium reduction programs is difficult to measure on a direct cost-benefit basis. Nevertheless, we do have indirect evidence that while premium reductions, credits and discounts can effect change, they have not substantially improved the existing building stock.<sup>4</sup>

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2. A plethora of literature in the social sciences and engineering has investigated these factors. Ho et al (2008), Ge et al (2011), Carson et al (2013) and Medders et al (2015) together provide a comprehensive literature review of the many variables that are found in relation to mitigation property improvements.

3. Multiple states, such as Alabama, California, Florida, Louisiana, Maryland, Mississippi, New York, South Carolina and Texas, require companies to offer premiums discounts for relevant hazard mitigation measures.

4. The insurance price reduction must be sufficient for the hazard mitigation effect to be perceived as cost-effective over a time period considered reasonable and beneficial to the property owner. The empirical literature indicates limited effectiveness of such incentive programs, and includes Ge et al (2011), Carson et al (2013), Medders et al (2015), Gatzlaff et al (2017) enumerate such programs and outcomes.

The current study focuses on possibilities for improvement in realizing the loss-saving potential, and we turn to the role of non-insurance-based policy instruments in moving property owners closer to an optimal level of property protection. This represents an area of the literature that has been considered theoretically, but in large part neglected empirically, mostly due to lack of statistical data. Governments have a range of instruments at their disposal for exerting influence, and lessons can be learned from the experience in implementing these different measures. Non-insurance policy measures have more direct potential to create immediate and easily measurable cost savings (via grants, loans, tax deductions-credits, etc.) than do insurance policy measures (chiefly, premium reduction programs). The current study contributes to the literature on using policy instruments as mitigation strategy by providing: 1) arguments and a framework for policy strategies; and 2) three case studies for consideration. The paper ends with some thoughts on how existing policies can be made more effective.

## **I. Arguments and Framework for Effective Policy Strategy**

The literature is sparse regarding how to optimally incentivize individuals, businesses and communities to mitigate. Assuming proper insurance incentives already in place, property owners can be encouraged to make protective property improvements via financial assistance, financial offsets (often tax incentives) or both. Although the empirical literature on such mitigation programs is extremely limited, there does exist theoretical conversation on the topic, the bulk of which treats the policy instrument as a subsidy. Kelly and Kleffner (2003) and others assert that if governments were to subsidize mitigation, people would spend more on mitigation.<sup>5</sup> Kleindorfer and Kunreuther (1999) submit that often, poorly constructed homes are owned by impoverished individuals or families who cannot afford mitigation or rebuilding costs. The government is likely to provide relief for these people after a large loss at an expense to the public, so it may be particularly desirable to subsidize the direct cost of mitigation for them. Incentives from the private sector, as well as the public sector, are worthwhile for consideration. For instance, financial institutions (banks) support mitigation if the mitigation decreases the probability of mortgage default due to property loss (Kunreuther, 2006).

Critics of policy subsidies claim the existence of most policy instruments used to incentivize socially-appealing individual behaviors (especially in the areas of energy efficiency and climate mitigation) has not been justified on the basis of

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5. Notably, they also assert the mitigation efforts may serve as a substitute for insurance, at least partially, so the importance of proper insurance pricing is paramount to the achievement of the end goal of mitigation policy strategies: to reduce the underlying risk.

market inefficiencies (Jaffe and Stavins, 1994). They argue that there is no energy efficiency gap (i.e., there is no difference between the actual level of investment in improvements and the higher level that would be cost-beneficial from the consumer's and society's point of view). Critics emphasize that in a competitive and efficient market, suppliers produce what consumers want and are willing to pay for. Because there is limited evidence that consumers are willing to pay for closing a mitigation gap, detractors assert that the gap must not exist (Sutherland, 1996). Critics also note that the existence of market failure is not a sufficient justification for government involvement. Feasible, low-cost policies must be available that can eliminate or compensate for these failures. Some analysts argue that policies to date have not been low cost. In addition, they argue that policies have not been adequately evaluated by measuring consumer surplus (i.e., the difference between how much a consumer is willing to pay for a commodity such as property protection or energy efficiency and the amount that the consumer actually pays when a policy is implemented) (Braithwait and Caves, 1994).

In some cases, the critics may be absolutely correct. Does it make economic sense to subsidize property protection improvements for new private construction erected directly in harm's way, say along the Eastern coastline or along fault lines in California? Indeed, if a property owner can afford the property purchase and the construction, should not the same property owner afford to absorb the risk of disaster loss privately, if allowed to build in the first place? Also, although not all public policy interventions may be justified, the major need lies within the existing building stock where much of the lack of justification comes from policies that may be ill-informed or ill-motivated.<sup>6</sup>

### *How Best to Approach: Building a Framework*

Leading contemporary thought leaders contend approaches to social welfare be based on the concept that any redistribution of resources generated by economic growth be used to fund social programs that are “productivist and investment-oriented and that enhance economic participation and make a positive contribution to development” (Midgley, 1999). Consistent with these ideas, we propose a generalized framework for policy instruments to effectively promote voluntary mitigation by property owners. Financial incentives such as grants, tax credits, rebates, low-interest loans and innovative financing address the barrier of first costs. Other financial incentives may be used to somewhat offset property improvement costs less directly or reduce uncertainty regarding savings. Ongoing income tax deductions and property tax exemptions for specific, desired property improvements can serve as powerful incentives, particularly for property owners in high tax brackets. For instance, a 1995 study by Hassett and Metcalf found a

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6. The state of Florida's legislative response to the large-scale losses suffered in the 2004 and 2005 storm seasons, as well as to the insurance market challenges that ensued, has been studied heavily. Medders, Nyce and Karl (2014) provide a lengthy discussion of the market interventions and their undesirable outcomes, as well as sources of information for further study.

10 percentage point change in the tax price for energy investment would lead to a 24% increase in the probability of making an investment.

The various tax codes to which property owners (and income earners) are subject include a great number of special provisions that provide tax advantages intended to achieve non-tax goals considered desirable by policy makers. Arguably, the tax incentive is generally inferior to the direct subsidy as a means to achieving social goals, largely because their incentives may be less equitable as they benefit persons in the highest tax brackets most. On the other hand, grants provided to low-income, or low property value, households and businesses are inequitable as well (albeit in a more socially acceptable way than tax incentives) as their benefits inherently go disproportionately to those in low wealth categories. For these reasons, we submit a framework for consideration that is multi-tiered in its approach, as will be illustrated below.

Given the potential for obstacles to mitigation, as well as relevant research findings, not all mitigation incentives are the same. In addition to first and foremost making mitigation affordable, policy instruments that do the following may be most successful in effecting widespread actual mitigation improvements.

#### **Make strong and relevant building codes a foundation**

Building standards work to achieve effective mitigation. For instance, Fronstin and Holtman (2002) found that older homes in South Florida (built prior to Florida's real estate development boom in the 1960s) suffered proportionally less damage than newer homes (largely built post 1960). Residential building codes in Miami-Dade County, FL, were subsequently strengthened in 1993–1994. Risk Management Solutions (2009) demonstrated that lower losses were suffered in 2004 and 2005 by structures built in compliance with the most up-to-date (post 2002), strengthened building codes. But requirements to build to a code serve more than just a “coercive” purpose. They also signal information to homeowners regarding what building materials and processes make their homes adequately fortified for safe living in the locality where their homes are built. It is critical to the achievement of widespread, effective mitigation that building codes be adequate and enforced to withstand a significant event. Despite their value to effect loss savings, building codes in most states remain insufficient to withstand disaster that can reasonably be expected (Insurance Institute for Business and Home Safety, 2015).

#### **Make risk-based insurance pricing a foundation**

Risk-based pricing is a necessary, although possibly insufficient, condition for appropriate loss mitigation incentives (Erllich and Becker, 1972; Dionne and Eeckhoudt, 1985; Kleffner and Kelly, 2001; Kelly and Kleffner, 2003; Medders, 2011; and others). Allow (even require) insurers to set the risk (and mitigation)-based insurance premium appropriately for the specific property location, construction, maintenance and other risk factors. Regardless of policy instrument or strategy to promote mitigation efforts, without proper insurance pricing, the incentives are distorted and can result in unintended consequences. The challenge

is more difficult than it may appear on the surface, however, as political pressures to keep insurance affordable, especially after disasters, results in many states restricting the ability of insurers to charge risk-based rates (Florida Catastrophic Storm Risk Management Center, 2011; Medders et al, 2014).

### **Keep the property owner's "skin in the game"**

Ensure that owners of properties still have significant financial stake in the event of catastrophe. If a property owner has the perception that insurance settlements and/or disaster assistance after a loss void the need for financial preparation, mitigation policies may suffer (Kaplow, 1991; Kunreuther and Kleffner, 1992; Kelly and Kleffner, 2003; Medders, 2011; and others). High insurance policy deductibles in cases of catastrophic events can help curtail the problem if used appropriately, but also can result in distorted incentives for policymakers who must decide whether a particular event meets the criteria for catastrophe declaration.<sup>7</sup> Mitigation strategies can keep the property owner's financial stake in losses by not fully subsidizing the mitigation measures being incentivized.

### **Ensure the improvements promoted are best fit for risk reduction**

Not all property protection improvements are the same. Incentivize only those improvements proven to: 1) effectively reduce losses greater than the cost of the improvement; and 2) solve the greatest and most pertinent vulnerability challenge(s) for each community region targeted within reason. For instance, roof systems may be effectively improved in several ways to better protect against windstorms; a specific improvement in roof geometry (e.g., from gable to hip shape) may be highly desirable but infeasible (Florida Catastrophic Storm Risk Management Center, 2010).

### **Target property owners with incentives of "best fit"**

Use policy intuition, learning from past experiments, to determine which property owner groups of interest are likely to respond most positively to which incentive strategies. Build the strategies accordingly. Property owners are likely to voluntarily select into the most financially appealing program if multiple financial incentives are offered, so be cautious if you have specific social goals in mind (e.g., serving the low-income population with highest priority). It makes economic sense to target high-wealth individuals with indirect tax incentives, medium-

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7. The Federal Emergency Management Agency (FEMA) is currently considering implementation of a new rule that would make states' receipt of federal public assistance on a post-disaster basis contingent on a deductible. It pertains to funds for repair and replacement of public buildings and infrastructure. The deductible amount would be likely based on both a state risk index and fiscal capacity. The proposed first-year deductibles range from \$million (Alaska, North Dakota, Vermont, Wyoming) to \$52.53 million (California). The rule, as now proposed, would allow states to "buy down" the deductible by meeting mitigation standards via acceptable direct mitigation efforts and/or building codes. Details are available via the Office of the Federal Register, which published the proposed rule on Jan. 12, 2017.

wealth individuals with innovative financing instruments, and low-wealth individuals and minorities with the most highly subsidized mitigation programs.

### **Include the broader economic private sector in the solution**

Policymakers often look to the insurance market first for solutions to the social and private costs of catastrophe risk (Kleffner and Kelly, 2001; Kelly and Kleffner, 2003; Medders, et al, 2014). We assert policy strategies that invite local financial institutions and other economic stakeholders to participate in subsidizing mitigation costs to customers enhance the success of the strategies by enhancing community-level “buy in” to the programs. For instance, the inclusion of the banking-lending sector in strategies by offering mitigation loans with better-than-market terms directly “invites” the banks into solving the problem of how to make the communities they serve more sustainable. Negotiating with property improvement vendors can reduce the costs of mitigation for property owners through volume discounts or incentivizing multiple improvements simultaneously (e.g., upgrading all openings or an entire system of improvements rather than merely one improvement).

### **Educate property owners**

Property owners must recognize the risk, the cost of insurance, mitigation options (and costs) and the details of the incentive program before they can possibly be expected to desire participation. The real estate, emergency management, regional development and other stakeholders are needed to help educate the public. Effective public education addresses not only the facts (e.g., costs and benefits) but also misconceptions and misperceptions of the facts (e.g., perceived costs and benefits). And to the extent attempts to educate may be expected to fall on “deaf ears,” close-minded thinking or fixations, the way in which the message is conveyed takes on special importance (Baisley and Medders, 2017).

### **Apply peer pressure**

This element is closely related to education since peer pressure is simply strategic education by way of local example or comparison. Provide feedback on mitigation participation by neighborhood. Stress the collateral effects damage on one property can have to surrounding and nearby properties. Studies have found some evidence of the efficacy of this neighbor effect (Ge et al, 2011, and Carson et al, 2013).

It is important to note the funding mechanism plays a role in how (and how well) social and economic goals may be achieved. The framework suggested here could easily include a recommendation for private funding, at least to the extent practicable. We stop short of including a suggested source of funding only because states and local governments are inherently limited in their choice sets. Federal funding, particularly the amounts available through the Federal Emergency Disaster Agency (FEMA), is available on a competitive basis to state agencies and local communities meeting eligibility requirements. State funding also may be



available from various sources of revenue—taxes, utility fees, licenses and professional fees, and payments to state-based entities that can be made transferable. Regional and local sources of public funding tend to be extremely limited and temporary, and as such cannot be depended upon for running long-term programs. Private sources of funding—through lenders and/ or investors—is an attractive source of capital as not only does it shift the costs and financial risks of public strategies to the private sector, but by doing so, it also expands the interest in program success directly to the private sector.

### *The Benefits of the Framework*

We assert that policy instruments built thoughtfully with the framework above in mind meet social requirements, as well as have the best likelihood of reaching economic goals policymakers are charged with achieving. A caveat: We espouse strategies that *subsidize* or *finance*, rather than *provide* property mitigation against disasters. The importance of the property owner retaining some sense of private cost (however small) and thus ownership in the property improvements to be made cannot be overstated. Multiple stakeholders can benefit in numerous ways from a successful strategy, several of which are discussed briefly here.

#### **Participating individual property owners**

Current and potential property owners inarguably benefit from appropriate mitigation expenditures. We know from prior research that affordability of mitigation measures is a substantial barrier to mitigation for many homeowners. Peacock (2003), International Hurricane Research Center (2004), Kunreuther and Kleffner (1992), Kunreuther (2006), Medders (2011), and Medders, Bass and McCullough (2017) provide illustrations—theoretical empirical—of the affordability (and perceived affordability) challenges. Financial incentives that make these expenditures more affordable by reducing, offsetting or delaying costs, but that also keep the value of the subsidy at a maximum less than the total cost of the improvement, provide immediate assistance to the property owner, as well as a continued sense of interest in and responsibility for the effectiveness of the mitigation measure employed.

#### **Government**

Various levels of government, regardless of whether directly involved with a specific program, benefit from policies that incentivize individuals to pay their costs of mitigation against disasters. Privately-funded expenditures reduce the social (general tax) burden on both a pre- and post-disaster basis. Individual mitigation efforts that result in lower windstorm damages create less pressure on public assistance programs after a disaster. During disaster planning, governments whose citizens engage voluntarily in home hardening can allocate greater funds to the “common” costs of disaster mitigation and recovery, such as critical infrastructure.

Furthermore, these strategies, when details of design, implementation and promotion are accomplished at the local level, reduce the pressure on already-overburdened state and federal program funds. Municipalities and county governments participating in the design and implementation of local mitigation programs that encourage citizens to invest in windstorm mitigation would not have to compete for scarce general revenue in the state budget. They also enjoy more specific benefits from their participation. For instance, the choice of products, installers and installation techniques that receive favorable treatment can be controlled at the local level. Given the regional differences in the types of damages that are likely to be most severe, a homeowner in one locality (e.g., Miami, FL; Dauphin Island, AL) can be expected to financially benefit from a particular category of mitigation (e.g., hurricane shutters) to a greater degree than a homeowner in a different locality (e.g., Tallahassee, FL; Montgomery, AL).

#### **Insurers, reinsurers, bankers and investors**

As risk takers and as businesses with a product/service to market, players in the financial sector stand to benefit from the adoption of mitigation programs. Property insurers, especially those doing business in windstorm-prone areas, have long encouraged the mitigation of buildings against windstorms. In fact, billions of insurance and reinsurance industry dollars have gone into the research and development of “best practice” home hardening designs, materials and techniques. Programs that improve the affordability of home hardening can reduce actual loss damages from windstorms, and thus reduce the cost of providing homeowners insurance.

Protecting homes against natural disasters decreases the risk of leveraging oneself financially to purchase a home. Thus, banks and other finance companies holding mortgages and home equity loans face a reduced risk of default. To the extent that insurers, banks, mortgage companies and other investors participate directly in providing the source of capital for these programs, they benefit from an increased demand for their capital and the resulting interest gains.

#### **Construction and disaster protection industries**

The encouragement of property mitigation efforts inherently creates increased demand for the products and services of companies working in the manufacturing, construction and disaster protection industries. Increased demand likely leads to increased jobs for those in these and related industries.

#### **Nonparticipating property owners and tenants**

Property owners and renters not participating directly in a mitigation financing program still are likely to benefit from such a program in multiple ways. First, a hardened property is not only less susceptible to direct damage from disasters, but also is less likely to produce damage to neighboring buildings (such as collateral damage resulting from windborne debris). Thus, the neighbors benefit via reduced collateral risk to their own properties and belongings. Second, whether simply a matter of education by observation or a sense of peer pressure, there is

evidence that individuals are more likely to engage in mitigation if their neighbors do. Research indicates that individuals react positively to efforts made by their neighbors (Peacock, 2003; Kunreuther et al, 2009, Carson et al, 2013).

## II. Three Speculative Case Studies

The mosaic of current strategies intended to reduce the vulnerability of the building stock to disaster is complex and dynamic, ranging from local, state and regional initiatives to a portfolio of federal policies and programs. Numerous policy innovations could be added to this mix, and many are being tried in natural “laboratories” across the U.S. and around the world. Governments at the state (and to a lesser extent, local) level in the U.S. have adopted an array of policies to promote catastrophe mitigation and other types of socially desirable outcomes by individual and commercial property owners. However, because of different regulatory environments, resource limitations, political interests and other factors, considerable variation exists among the states in their mitigation programs. In this section, we focus on three current state-level policies—California earthquake, Colorado wildfire and Florida windstorm—using markedly different approaches to reduce physical catastrophe risk.

### *Why These Perils and These States?*

The perils selected for evaluation here—earthquake, wildfire and high wind from tropical storms—each have a history of disastrous consequences in the U.S. and specifically within the states selected for this study. Other perils could be studied as well, but are more difficult to link directly to state-level policy directives or to property improvements (as opposed to life safety measures). Flood as a peril has a strong and long-lived mitigation program via the National Flood Insurance Program (NFIP) and the Federal Emergency Management Agency (FEMA). The flood hazard mitigation programs across the nation are directly linked to this federal policy and are part of a larger insurance program that has historically been filled with subsidies and since 2005, financial deficits, with outcomes difficult, if not impossible, to extract, from the broader federal policy. Tornado and other non-tropical storm high wind is another peril of interest but is not directly considered here, mostly because of the limited nature of state policies aimed at property improvement rather than life safety measures.

The states included in this study have been selected for three reasons: 1) pervasive scope of threat; 2) existence of mitigation policy to address the threat; and 3) sufficient program implementation history from which to draw pragmatic lessons. California, Colorado and Florida all face substantial catastrophe exposure, and each of these states has responded to at least one catastrophe threat to a degree that provides lessons for other jurisdictions. These three states have been at the

forefront of catastrophe mitigation and to a lesser extent, risk-based insurance pricing as well (Multi-hazard Mitigation Council, 2015).

Most of the state of California is susceptible to earthquake. A recent report provides information on the latest estimated likelihoods of an earthquake magnitude 6.7 or larger occurring in areas of the state during the next 30 years (Wang, 2016). Although probabilities vary widely by area, any single earthquake of significant magnitude could affect the entire state economically. California has over many years incorporated earthquake mitigation measures into its building codes statewide, as well as into its policy for voluntary property improvements in areas most at risk (Muir-Wood, 2016).

Wildfire is a threat to many regions and localities in the U.S. What makes Colorado particularly interesting for this study are both its exposure and its response. The state of Colorado holds the second largest number of properties and total exposed value categorized as “Very High” risk for wildfire among all U.S. states, with 50,000 properties so designated at approximately \$14 billion estimated value (Botts et al, 2015). As such, it is surpassed only by California—a much larger state—which is at lower risk proportionate to its property numbers and population (Botts, 2015). Colorado has responded to the wildfire risk with concerted efforts to promote property mitigation since the early 1990s.<sup>8</sup> It is the first state to implement direct financial incentives on a statewide basis to promote wildfire mitigation.

Florida is the state with the most vulnerability to the wind peril from tropical storms and hurricanes, given the combined loss frequency and severity it faces from such events. Florida’s modeled probable maximum loss is greater than that of all states combined from Texas to Maine. Four of the 10 costliest hurricane catastrophes in U.S. history made landfall in Florida (Hartwig, 2016). All of Florida is exposed to hurricane events and, not surprisingly, has the highest probable maximum loss (PML) estimates of any state, with \$54 billion aggregate gross PML for a 100-year return period, estimated in 2016 (State of Florida Financial Services Commission, 2016). Florida led the nation in the adoption of building codes to reflect acknowledgement of the importance of wind mitigation to risk reduction (Fronstin and Holtman, 1994; RMS, 2009; Florida Catastrophic Storm Risk Management Center, 2010). The state was the first to embark on windstorm mitigation affordability programs, having two such programs currently in place and one additional widespread program now ended.

Since most policy instruments summarized here are going concerns with limited data accessibility, we cannot fully evaluate the performance of the measure as evidence of their effectiveness in achieving social and economic goals. Instead, we use what we know from prior research, anecdotal evidence from past programs and the design of the programs highlighted to speculate as to their efficacy according to the framework asserted above.

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8. Colorado Springs passed its first wildfire-related ordinance in 1993, focusing on roofing materials and defensible buffer space.

*California Earthquake – Codes and Insurance***Building codes**

California Residential Building Codes have required new homes be constructed to an “earthquake standard” consistent with the International Building Codes since 1979 (Marshall, 2017). Older dwellings, depending on year of construction and building codes existing in the state in that year, are typically more vulnerable to damage from earthquake shaking (in extreme cases causing the house to slide off its foundation).

**Risk-based insurance**

The state of California years ago made the decision not to require property owners to carry earthquake insurance. This public policy choice can have either or both of two possible effects: 1) events result in true private costs held by the homeowner, which serve as financial incentive to mitigate; or 2) events result in outcries for disaster relief, which are then met with federal and state aid dollars on a post event basis, thus effectively making what would otherwise be private costs social costs instead. Research suggests the policy has had both results at various times (Marshall, 2017). For those residential property owners who do choose to carry earthquake insurance, pricing does adjust for mitigation measures—indirectly or directly—depending on when the dwelling was built. Dwellings built post 1979 are assumed to be “retrofitted,” and thus the base price reflects the reduced risk via consideration of year built. Homeowners of older dwellings can earn earthquake insurance premium discounts ranging up to a 20% reduction in premium.<sup>9</sup>

*California Earthquake – Direction Mitigation Incentives*

Today, throughout California, and most particularly Northern California, local governments have created financial incentives to encourage owners to voluntarily retrofit existing buildings to improve how well they will withstand earthquakes. At the state level, after battling about and ultimately letting die an earthquake tax credit bill introduced during the 2015 California legislative session, a grant program for a limited number of homeowners is being offered instead.

**State of California retrofit grants<sup>10</sup>**

One thousand (1,000) grants in amounts of up to \$3,000 have been made available by the state to fund voluntary improvements to wood frame structures by bolting them to their foundations using metal rods and plywood. According to the Insurance Institute for Business and Home Safety (IBHS), the cost of earthquake

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9. The maximum 20% discount applies to structures insured by the California Earthquake Authority that are “maximally” mitigated and were constructed prior to 1940 (Marshall, 2017).

10. For more details about this grant program, see Lin (2015).

damage to unbolted homes can be as high as \$400,000, while the cost of retrofit is typically \$2,000 to \$10,000, averaging \$5,000.

#### **Berkeley Transfer Tax Seismic Retrofit Refund Program<sup>11</sup>**

This program allows for up to one-third of the city of Berkeley property transfer tax to be refunded for voluntary eligible seismic upgrades to residential property. The program purportedly has resulted in Berkeley enjoying three times as many retrofitted buildings as adjacent cities.

#### **Other local government loan and grant strategies<sup>12</sup>**

Strategies undertaken by local California governments are numerous, and several are mentioned here without attempting an exhaustive list. Fremont, San Leandro, San Mateo, Santa Clara and Vacaville offer low-interest or special assessment district loans, at interest rates as low as 3% with terms as long as 25 years, for seismic improvements, redevelopment and/or engineering analysis. Localities providing small grants to assist with earthquake retrofits and/or assessments include: Brentwood, Colma, Dixon, Emeryville, Morgan Hill, Napa, Pinole, San Mateo, Sonoma, St. Helena, Windsor, San Francisco and Vallejo.

Clearly, California public policy efforts to promote earthquake mitigation for existing construction lie heavily at the local level. Localities choosing to do so may fund and administer strategies that make best sense for their communities and homeowners given the particular needs of the area, and must generally also find local ways to fund the programs. The necessity to find funding often results in creativity and innovation. Berkeley, in fact, was a pioneer in the advent of the well-known Property Assessed Clean Energy (PACE) programs, promoting energy efficiency improvements to homes and business properties (Medders, 2011).

#### *Colorado Wildfire – Codes and Insurance*

Colorado faces increased risk to wildfire losses due to economic (and real) development, disease that affects hundreds of thousands of forest acres and drought. Until recently, the state appeared to view wildfires and wildfire losses as inevitable. Today, a paradigm shift appears to be taking place within state and local governments to shift the responsibility to property owners.

Almost all Colorado jurisdictions considered by the IBHS to be either “High” or “Very High” risk for wildfire have adopted the 2015 International Fire Code as

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11. A property transfer tax of 1.5 % is imposed on all transfers by deeds, instruments, writings or any other document by which any lands, tenements or other interests in real property are sold, located in the city of Berkeley, which are, or is granted, assigned, transferred or otherwise conveyed to or vested in a purchaser, or purchasers thereof, or any other person or persons, by his/her or their direction. See Berkeley Municipal Code for details of the Berkeley Transfer Tax and Seismic Retrofit Refund.

12. Several local California strategies are highlighted by the Northern California Chapter of the Earthquake Engineering Research Institute, [www.eerinc.org](http://www.eerinc.org).

the minimum standard for new construction. Additionally, 65% of all code jurisdictions (including counties, fire protection districts and municipalities) have adopted this standard (International Code Council, 2017).

Colorado now ranks second in the nation for homeowners insurance catastrophe claims, primarily due to widespread hailstorms and some of the nation's most destructive wildfires (Multihazard Mitigation Council, 2015). In the highest-risk regions of the state, many insurers now require their insureds to meet wildfire mitigation standards to remain insured. In most areas of significant wildfire risk, premium credits typically are available for approved mitigation measures taken (Colorado Division of Insurance, 2016).

### *Colorado Wildfire – Direct Mitigation Incentives*

Two policy strategies of note are leading state efforts to reduce individual risks of property owners to fire loss. One is a statewide federal income tax deduction strategy, and the other is a local financial incentive strategy—both targeting primarily smaller (and easily effected) expenditures to “create and maintain a defensible space around structures” (Colorado Department of Revenue, 2013).

#### **Wildfire mitigation measures subtraction<sup>13</sup>**

This tax strategy provides eligible property owners—in the form of individuals, estates or trusts—a deduction from federal taxable income certain costs incurred while performing wildfire mitigation measures on their property. The maximum deduction is \$2,500 or the owner's federal taxable income, whichever is less. The deduction is available for tax years 2009–2024. The number of participants to date is unknown but estimated at approximately 20,000.

#### **Boulder Wildfire Partners program<sup>14</sup>**

This is a voluntary program, established in 2013, offering financial incentives to defray the upfront costs of basic wildfire mitigation. The localized strategy offers up to \$300 in rebates along with expert assessment and advice regarding the property's wildfire risk and value of improvements in reducing the risk. The program is funded through Boulder County and a Wildfire Risk Reduction Grant from the Colorado Department of Natural Resources (\$250,000 of which was specially earmarked for mitigation rebates). Although precise participation is unknown, the allocated annual funding for 2014, 2015 and 2016 was all spent. During 2016 and 2017, other high fire risk Colorado jurisdictions have begun similar programs.

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13. See the Colorado Department of Revenue (2013) for more details on mitigation measures and tax deductions.

14. See Wildfire Partners (2011, 2016) for additional information.

### *Florida Windstorm Codes and Insurance*

The state of Florida continues to be one of the leading examples of building code safety. The Miami-Dade area of South Florida upgraded its residential building codes for wind in 1993, following Hurricane Andrew. The rest of the state followed, and by 2005, building codes had been strengthened for hurricane wind on a statewide basis. The IBHS rated Florida first and second among Atlantic and coastal states for building code effectiveness in its 2012 and 2015 Rating the States reports, respectively. Since publication of the 2015 Rating the States report, Florida has adopted and is enforcing the 2012 edition of the IRC (IBHS, 2015).

Florida requires insurance companies to offer windstorm improvement insurance discounts, promulgated by the Office of Insurance Regulation (OIR), for individual property features demonstrated to reduce windstorm losses. These discounts apply only to the windstorm (including non-hurricane wind) portion of policies and can be high enough to virtually erase the windstorm premium. Full mitigation credits have been required for more than a decade. During the 2007–2012 period, however, state legislation and how it was implemented by the OIR combined to result in disproportionately high credits for many insurance policies for existing property features, thus providing little or no incentive for further risk reduction (Medders et al, 2014). Since 2012, insurers have been allowed to correct the mitigation credits to more accurately reflect the reduction in risk (Medders and Nicholson, 2017).

### *Florida Windstorm – Direct Mitigation Incentives*

Florida policymakers have struggled with how to manage the state’s inherent exposure to hurricanes and tropical storms. The state enjoyed a hurricane-free decade from hurricane season 2006 through 2015. Two hurricanes affected the state in late 2016—Hermine and Matthew—yet did not result in widespread catastrophic losses (Medders and Nicholson, 2017). Based on what Florida has learned from its own experiences as well as that of other states, the state’s most recently enacted policy instruments to reduce the underlying risk rely largely on three funding sources: FEMA grants, transfers from state-based insurance entities earmarked for mitigation and investments by the private sector.

### **Florida PACE legislation<sup>15</sup>**

The Florida Legislature in 2010 was the first state to enact a statute to authorize special financial districts for the purposes of financing disaster mitigation. Other states, including California and Colorado, had earlier enacted legislation to make such strategies possible for energy efficiency improvements, deemed PACE legislation, with high participation rates by property owners—

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<sup>15</sup> See Medders (2011) for program details. The Florida Catastrophic Storm Risk Management Center was awarded a grant from the Florida Division of Emergency Management’s Residential Construction Mitigation Program (RCMP).



residential and commercial—eligible for the energy improvement programs. The Florida legislation makes it possible for local communities to establish special financing districts wherein property owners can voluntarily participate in loans to finance energy and/ or windstorm improvements on a long-term basis and to be paid back through property tax assessments. The Florida programs primarily serve the commercial property market as some federal agencies have not supported the property lien necessary to reduce the risk of default on residential loans.

### **Florida Division of Emergency Management (DEM) retrofit programs<sup>16</sup>**

The Florida DEM presently operates at least three retrofit grant strategies to help prepare existing homes to better withstand hurricanes and other windstorms.: 1) mobile home tie-downs; 2) single-family residence retrofits for low-income homeowners; and 3) the Veterans Direct Grant for military veteran homeowners residing in the state with grant funding for up to \$15,000 per grant to help defray retrofit costs. The mobile home tie-down program has funded more than 30,000 tie-downs to date and the single-family residence retrofit programs approximately 1,000 partially-funded retrofits (usually at 75% subsidy level). The Veterans Direct Grant is new (begun in late 2014), but by 2015, it had at least 25 applicants.

Particularly interesting about the Florida programs are their sources of funding. The PACE funding ultimately comes from private individuals and entities willing to invest in mortgage-like securities (special-purpose bonds). The Florida DEM retrofit programs are funded largely through a virtually automatic annual transfer of \$10 million from the state's pseudo-reinsurance entity, the Florida Hurricane Catastrophe Fund.<sup>17</sup>

### *The Policy Strategies in Light of an Optimal Framework*

The three states highlighted here take differing approaches as a means to encourage voluntary mitigation by property owners against disaster losses. Here we address the extent to which the programs meet the elements of an optimal policy framework, as described in this study. Table I summarizes the discussion.

### **Affordability**

All three states attempt to effect affordability of property improvements to protect against natural disasters. The multiple programs in each state, with the exception of the Wildfire Partners program at only \$300 per rebate-grant, do substantially improve affordability for homeowners, although to varying degrees.

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<sup>16</sup> Operational details of Florida hurricane mitigation programs can be found at the Florida Division of Emergency Management ([www.floridadisaster.org](http://www.floridadisaster.org)) and the “Hurricane Loss Mitigation Program Review” presentation by the Florida DEM to the State Board of Administration, Oct. 14, 2014.

<sup>17</sup> It should be acknowledged that the programs have been aided by FEMA grants as well.

**Building codes**

Each of the three states generally has strong building codes, although Colorado may benefit from a statewide code for fire safety. As previously stated, California's post-1979 construction and Florida's post-2005 construction are thought by experts to meet reasonable safety standards against earthquake and windstorm, respectively.

**Risk-based insurance pricing**

All three states allow risk-based insurance rating to a degree. The California Earthquake Authority (CEA) uses an actuarial basis for its ratings, as do private earthquake insurers. In Colorado, most homeowners, even in high wildfire risk areas, can get private homeowners insurance. Insurers are allowed to price properties according to the risk. Florida private market residential insurers must get their rates approved but can generally get risk-based rates. Citizens Property Insurance Corporation (Citizens), the state's residual market insurer, is still incrementally moving toward actuarially sound rates. Homeowners covered by Citizens (largely in Southeast Florida) may not yet be paying for their insurance in an amount proportionate to their risk.

**Property owner financial stake**

The California, Colorado and Florida mitigation programs all leave participating property owners with significant "skin in the game," meaning the property owner still has adequate financial incentive to maintain the mitigation measures taken, as well as further protect the property from loss.

**Targeted improvements**

For the most part, experts agree that California's largest remaining risk lies with unreinforced frame buildings (Muir-Wood, 2016; Marshall, 2017), and the mitigation policies studied here do address those properties. Colorado's federal tax deduction program is aimed at property improvements known to be effective against wildfire loss (Quarles et al, 2014). Its localized grant program is effective in the sense that it targets mitigation efforts that are relevant but largely neglected by many homeowners—tree removal, removing dried leaves from gutters and installation of fire-resistant vegetation—yet lacks effectiveness in that these are small measures in the event of a major fire. Florida's windstorm mitigation programs help property owners afford property improvements that make good sense given their specific wind zone and construction design. Unfortunately, the state's insurance credit program and its list of features for which discounts are available drives the choices of mitigation measures outlined in the non-insurance mitigation strategies even though it has been shown that individual property improvements (e.g., roof-to-wall attachment) are disproportionately less effective than suites of improvements (e.g., roofing system).

**Targeted incentives**

Most of the programs studied do provide incentives for property owners who are on the financial margin of being able to afford proper mitigation measures and thus may “tip” the decision in favor of mitigation. In Florida, the funding amounts can be large enough to incentivize homeowners who otherwise could not afford the expenditures. The possible exception is the Colorado-Boulder Wildfire Partners (WP) program. At only \$300 each, the rebates-grants offered through WP may result in high participation rates, but we submit results in mitigation measures that make little difference in the event of a wildfire disaster and would have likely been done regardless of the rebate-grant availability.

**Economic sector involvement**

One major shortcoming of nearly all mitigation programs, including the ones evaluated here, is the lack of participation by the broader private sector (broader than insurance, that is). In some states, especially if immediately following a disaster, insurers may be required to participate in the costs of mitigation, namely through premium credits, and sometimes disproportionately so (Medders et al, 2014). The argument is the insurer can expect to benefit later via reduced losses in the event of a disaster. Do not other sectors benefit from reduced disaster losses as well (e.g., fewer foreclosures and abandoned properties post-disaster, which must be dealt with by banks), and thus using the same argument have reason to participate in the upfront costs of incentivizing property improvements? In the case of the Florida PACE programs, investors were found but have been dissuaded by lack of federal government enthusiasm for the programs.

**Education and peer pressure**

While each state—California, Colorado and Florida—is known to be a leader in risk and resiliency education (Multihazard Mitigation Council, 2015), none optimally educates its public. To be fair, it is not an easy challenge. Optimal education regarding risk and mitigation includes—to the extent practicable—information about: 1) how well the property fared in past loss events; 2) what the present (and future estimated) level of risk (and possible loss) is; 3) the costs and expected benefits of available options for protecting against the risks; and 4) how well protected the neighborhood/community is (e.g., participation rates in property improvement programs), at a minimum. While these points may seem straightforward, in practice often they are not. Take Florida for instance. Two strategies aimed at property owner education—a home rating system and a community high-flood marker program—were never fully implemented. The real estate community expressed concern that these policies would serve more to scare away home buyers than to educate them (Florida Catastrophic Storm Risk Management Center, 2010).

The discussion above is not an exhaustive treatment of the programs under consideration or their advantages and disadvantages. What it does attempt to accomplish is a survey evaluation of multiple resiliency strategies for multiple locales and perils that could be used to illustrate: 1) there exists no mitigation

strategy currently in use that works optimally to incentivize the improvement of existing structures; and 2) achievement of optimal mitigation strategies depends not only on plan design but also integration with at least the building code and insurance systems present within a state. The mitigation-insurance relationship is a complicated one and warrants further discussion.

### *The Complexities of the Mitigation-Insurance Relationship*

Much historical evidence is available regarding the actual relationship between the availability/pricing of insurance and personal investments in risk-reducing activities. The results are mixed because while insurance transfers risk of financial loss from the individual to the insurance company, it inherently creates an incentive for insurance companies to develop a pricing scheme that rewards policyholders who mitigate. In other words, higher premiums for greater risk exposure should translate to incentives for property owners to mitigate their risk if adequate and appropriate insurance premium incentives (i.e., mitigation credits or discounts) are present.

Although the perils and strategies differ, what these states have in common is the attempt to use policy instruments to promote mitigation under non-optimal insurance conditions. As stated previously, California property owners are not required to purchase earthquake insurance. The portion who do is estimated to be quite low at under 10%. Such low insurance penetration can have mixed effects. It does leave the property owner exposed and, thus, intuitively having the incentive to mitigate. But as also discussed earlier, expectations of disaster relief can have a counter effect on incentives to mitigate.

In both Colorado and Florida, residential property owners are provided wildfire and hurricane insurance, respectively, as part of the homeowners insurance policy. The vast majority of residential property owners in these states do carry highly valued homeowners insurance policies (i.e., high insurance-to-value ratios). In neither state have insurers been allowed consistently to price the insurance in line with the risk underwritten (Medders, Nyce and Karl, 2014). Such conditions can produce counter effects to mitigation strategies. Studies such as Ehrlich and Becker (1972), Kunreuther and Kleffner (1992) and Carson et al (2013) find that the incentive to voluntarily reduce losses via mitigation is reduced by the presence of full insurance, all else constant, and that the problem of using insurance as a substitute for risk-mitigating behavior is exacerbated when premiums are not risk-based (Kleffner and Kelly, 2001).<sup>18</sup>

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18. Separate from the relationship between property insurance and risk mitigating behavior, evidence also supports the idea that an expectation of disaster relief is likely incorporated into individual mitigation cost-benefit analyses in similar fashion. Kaplow (1991), Kelly and Kleffner (2003), and Kunreuther and Pauly (2006) each asserted that government relief distorts mitigation incentives because individuals no longer bear the full cost of their (in)actions.

**Table 1:  
Program Profiles Within the Framework Recommended**

	<b>California Earthquake</b>	<b>Colorado Wildfire</b>	<b>Florida Windstorm</b>
<b>Significantly improves affordability?</b>	Grants: YES Tax refunds: YES	Tax deduction: YES Grants: NO	PACE: YES Grants: YES
<b>Underscored by strong building codes?</b>	YES	YES in most jurisdictions and NO in others	YES
<b>Underscored by risk-based insurance rating?</b>	YES, to the extent properties are insured	YES in some jurisdictions and NO in others	YES in some jurisdictions and NO in others
<b>Property owner has financial stake?</b>	Grants: YES Tax refunds: YES	Tax deduction: YES Grants: YES	PACE: YES Grants: YES
<b>Targets “best fit” improvements?</b>	Grants: YES Tax refunds: YES	Tax deduction: YES Grants: MAYBE	PACE: MAYBE Grants: MAYBE
<b>Property owners likely incentivized?</b>	Those on the margin of affordability	Those on the margin of affordability	PACE: Those who can afford or are on margin of affordability Grants: Those who could not otherwise afford
<b>Includes participation from economic community?</b>	NO directly, although some vendors may choose to collaborate with local government on pricing	NO directly, although some vendors may choose to collaborate with local government on pricing	PACE: YES, does involve investors willing to take muni-bond risk Grants: NO
<b>Adequately educates?</b>	NO	NO	UNKNOWN
<b>Uses peer pressure?</b>	NO	NO	NO

Rational individuals are reasonably expected to be averse to loss of property and/or risk of injury and increasingly risk averse in light of potential catastrophic loss resulting from a potentially catastrophic peril. Theoretical analyses by Dionne and Eeckhoudt (1985) and Hiebert (1989) imply that increases in risk aversion

result in increased expenditures on mitigation, and Jullien, Salanie and Salanie (1999) found evidence of the same given the effectiveness of the mitigation technique is predictable. Ge et al's (2011) and Carson et al's (2013) empirical findings support these results, while Briys, Schlesinger and Schulenburg (1991) and Kelly and Kleffner (2003) find that when the mitigation measure is imperfect, risk-averse individuals may rationally decrease self-insurance and self-protection. Policymakers generally expect rational property owners to purchase adequate insurance and engage in property fortification in an effort to prevent or reduce losses. Nevertheless, homeowners may not, in fact, behave in the ways we expect or desire, for various rational—as well as irrational—reasons.

The likelihood of increases in future disaster losses, whether from continued development in disaster-prone regions, climate-related changes in risk or both makes an improved understanding of the mitigation-insurance relationship even more important for future disaster policy. If pricing is fully reflective of the risk, take-up rates could conceivably be near zero for demand-elastic homeowners (such as we already see in California earthquake insurance). While that would simplify the mitigation-insurance relationship, resiliency then may require more than the state of the art codes or retrofits available or even understood today. State insurance regulators, as well as policymakers, have an interest in ensuring both the simplicity and the effectiveness of strategies aimed at reduction of the risks that underlie the insurance promise.

### **III. Conclusions and Further Research Needed**

The protection of property from disasters contributes to reducing external dependence and vulnerabilities in the economic domain. In this paper, we discuss factors that influence mitigation decisions and appropriate policy approaches for their direct promotion. Although not all public policies seem justified, we argue specific policies for promoting catastrophe mitigation may be required, and preferably are based on economic instruments and/or the provision of information to consumers.

Mitigation investment decisions often are affected by insurance choices (as well as the insurance choice set) and expectations about disaster relief. Furthermore, we know mitigation decisions are associated with beliefs about consequences for and beyond the household and with receiving mitigation consulting and financial incentives, although the effectiveness of financial measures depends on how they are implemented.

We know from the prior literature that perceptions of risk knowledge are related to mitigating behavior. The emergence of risk perception research is motivated by the significant differences between expert assessments of risk and intuitive judgments of risk (i.e., risk perception) made by lay individuals. Studies of the relation of disaster risk perception to adoption of property protection

measures have surveyed a range of perils, such as nuclear power plants, floods, landslides and earthquake events, as well as looked at disasters generically.

Given the multiple, and at times conflicting, factors that contribute to the mitigation decision, a sensible framework for public policy aimed at promoting mitigation finds ways to leave property owners with a financial stake in the loss outcome and risk-based pricing, both of which yield economic reasons to consider mitigating. Furthermore, the sensible design is well researched on which specific mitigation efforts are most likely to provide greatest value on a net loss cost savings basis, and collaborates with the private sector to maximize these savings and/or minimize the costs required to achieve these savings. Lastly, the successful policy will thoughtfully offer the mitigation message to property owners in relatable ways and with an appreciable sense of the property owner's financial dilemma.

We briefly evaluate three states and their recent public policy approaches to three perils, respectively: 1) California's approach to earthquake risk reduction; 2) Colorado's strategy for wildfire mitigation; and 3) Florida's promotional efforts to harden the building stock against hurricanes and wind risk. These programs are discussed according to the policy framework we have asserted.

Further research is needed to link mitigation program effectiveness differences to specific policy failures. Research also is needed as to how effectiveness may be related to characteristics of the peril(s) of exposure. Additionally, research efforts that provide evidence for superior performance of particular public education and incentive approaches to reach property owners whose properties are non-optimally protected would be informative and important to policymakers, as well as insurers. Finally, innovative approaches to educate the private sector, as well as the public, are needed if true community resiliency is to be actualized.

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# A Comparison of the *Risk Management and Own Risk and Solvency Assessment Model Act* and Insurer Ratings

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## Abstract

The Own Risk and Solvency Assessment (ORSA) requires an increase in reporting for insurers. However, it is possible that many insurers already gather a significant amount of this information for other groups such as rating agencies. This study provides a comparison of the ORSA Summary Report requirements given in the *NAIC Own Risk and Solvency Assessment (ORSA) Guidance Manual* (ORSA Guidance Manual) and the information requested by ratings agencies such as A.M. Best as stated in the *Credit Rating Methodology: Global Life and Non-Life Insurance Edition* to assess the similarities in information needed for ORSA reporting and rating agencies. We find significant similarities between ORSA reporting and the materials needed for credit rating. Given the overlap, the total cost of ORSA compliance may be less, in terms of time and effort, in preparing the ORSA Summary Report compared to firms that have not gathered information for ratings agencies. We analyze the number of insurers subject to ORSA, as well as the percentages that are both subject to ORSA and are rated by A.M. Best. We find that 69% of insurers subject to the ORSA Model Act also are rated by A.M. Best. This is roughly 72% of the insurance market by premium.

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## Introduction

The financial crisis of 2008 once again highlighted the importance of solvency prediction for financial services firms. Although the insurance sector was largely on the periphery of the crisis, state insurance regulators were concerned that the failure of a large insurance company or group would pose systemic risk to the overall market (Harrington, 2009). These events led the National Association of Insurance Commissioners (NAIC) to examine the insurance solvency regulation framework through the Solvency Modernization Initiative (SMI) (NAIC, 2012). The SMI was a critical self-examination to update the U.S.' insurance solvency regulation framework. It included "a review of international developments regarding insurance supervision, banking supervision, and international accounting standards and their potential use in U.S. insurance regulation" (NAIC, 2012). The key component within the SMI roadmap was the establishment of the NAIC's Own Risk and Solvency Assessment (ORSA) Model Act, including adoption of the *Risk Management and Own Risk and Solvency Assessment Model Act* (#505) and the *Own Risk and Solvency Assessment (ORSA) Guidance Manual* (ORSA Guidance Manual) (NAIC, 2012).

The ORSA Model Act proposal requires certain insurers in the U.S. to perform a self-assessment of insurer risk and capital management. According to the NAIC, the implementation of the ORSA Model Act ultimately will require insurers to be more focused, purposeful and explicit in the identification and management of risk (NAIC, 2014). Some have described the Model Act as a complement to credit ratings. For example, A.M. Best describes the ORSA Summary Report as a way for insurers to link risk management to overall strategy (A.M. Best, 2015a). Specifically, the Model Act is meant to be part of an insurer's enterprise risk management (ERM) framework (NAIC, 2014). Those insurers that have previously invested in ERM may be at a significant advantage in terms of the preparation time necessary to complete the ORSA Summary Report (A.M. Best, 2014).<sup>1</sup> Further, given that ERM leads to greater value and reduced volatility (Eckles, Hoyt and Miller, 2014), some claim that the benefits derived from ORSA will outweigh any costs associated with the collection of the information needed for the ORSA Summary Report (A.M. Best, 2015a).

A major criticism of the Model Act is the cost and effort required of insurers in preparing the annual ORSA Summary Report (Willis Re, 2012). One-third of publicly traded insurers in the U.S. view ORSA "as a material risk factor in their annual reports," indicating that insurers are concerned with the cost and effort associated with the ORSA reporting requirements (Walker, Pooser and Walker, 2015). An ORSA Summary Report that does not sufficiently comply with

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1. There are a variety of ERM frameworks, including COSO ERM and ISO 31000. To the extent that an insurer bases ERM framework on either COSO ERM or ISO 31000, this would affect the scope of data needed for the explanation of ERM. However, since it is not mandated that insurers use one or the other, we did not include that discussion in this paper.

guidelines and standards also may increase the likelihood of regulatory scrutiny for an insurer (Pooser and Walker, 2015). However, there is potential that, to a certain extent, insurers currently collect some of the information needed to complete the ORSA Summary Report. For example, A.M. Best notes that most companies required to submit ORSA Summary Reports already have ERM processes in place. Additionally, much of the quantitative and qualitative information required for the ORSA Summary Report is likely also required for assessments by organizations such as rating agencies.

The purpose of this study is to explore the extent of overlap between the information that insurers currently report to ratings agencies and the information required to complete the ORSA Summary Report.<sup>2</sup> First, we start with a qualitative analysis of ORSA Summary Report requirements compared to the reporting requirements for A.M. Best.<sup>3</sup> Both require a combination of qualitative and quantitative information. While the level of detail required in the ORSA Summary Report may be broader than the reporting requirements for A.M. Best, in some cases, there may be a significant overlap between the reporting requirements of ORSA and that of ratings agencies, such as A.M. Best. If the information required by the ratings agencies is similar to the information requested in the ORSA Summary Report reporting standards, then we hypothesize that there is a reduced marginal cost in terms of the time and effort to collect the information reported in the ORSA Summary Report.<sup>4</sup> Second, we analyze the number of insurers that are affected by the Model Act. Of those that are impacted, we evaluate the number of insurers that are rated by A.M. Best. We find that 69% of insurers subject to the Model Act also are rated by A.M. Best. The overlap of insurers subject to the Model Act and those rated by the rating agencies provides initial evidence that these insurers may experience a potential reduced marginal cost in meeting the ORSA Summary Report requirements.

The remainder of this paper proceeds as follows. The next section provides a detailed background on the ORSA Model Act and ratings agencies, specifically A.M. Best. The third section describes a comparison of factors for the ORSA

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2. The question of the added value of the ORSA Summary Report or the effectiveness of this report is an important question. However, it is not the focus of the paper. We are focused on the overlap in information required for the ORSA Summary Report and rating agencies to determine whether there is reduced marginal cost for insurers that are rated by A.M. Best. Additionally, the scope of the ORSA Summary Report is broader than that of the A.M. Best analysis. Even so, we conjecture that if an insurer has collected information in more detail for A.M. Best, then it should incur lower compliance costs due to reduced time and effort associated with the collection of the information for the ORSA report given the overlap in data.

3. As discussed later, there are several major rating firms, each with different requirements. However, A.M. Best was selected as the focus of this study given the signification percentage of insurers rated by the agency, as well as the transparency of its rating guidelines.

4. "One consideration for insurers is that preparation of an ORSA Summary Report may provide a platform for the consistent reporting of risk data to other entities such as the SEC and ratings agencies" (Pooser and Walker, 2015). We recognize that the additional time may be spent compiling the ORSA Summary Report and not in the collection of the information needed for it.

Summary Report and the information collected by A.M. Best. The fourth section presents the results of our analysis. The final section offers concluding remarks.

## Background

### ORSA

The ORSA Model Act was adopted by the NAIC in 2012. The Model Act provides a framework for individual states to produce and enact ORSA regulatory reporting requirements. Individual states may make changes to the language contained in the Model Act. The effective date of the Model Act was Jan. 1, 2015 (NAIC, 2014). Insurers in states that adopted the Model Act were required to submit the first annual ORSA Summary Report by the end of 2015. The ORSA Summary Report is described as a confidential, annual internal assessment conducted by the insurer and is associated with the insurer's current business plan and sufficiency of capital resources to support firm risks (NAIC, 2014).

Currently, there are 40 states that adopted the Model Act. (See Table 1.)<sup>5</sup> The size threshold of insurers required to provide an ORSA Summary Report is insurers that write more than \$500 million in direct written and assumed premium or more than \$1 billion as a group.<sup>6</sup> The insurers that meet the financial threshold are required to submit an ORSA Summary Report to the state insurance commissioner in the lead state of domicile (NAIC, 2014).<sup>7</sup> The state insurance commissioner also may require an insurer to conduct an ORSA and file a Summary Report if the insurer "has triggered a Risk-Based Capital (RBC) company action level event, meets one or more of the standards of an insurer deemed to be in hazardous financial condition, or otherwise exhibits qualities of a troubled insurer, as determined by the commissioner" (NAIC, 2014). An insurer can apply for an exemption from reporting under the ORSA Model Act in certain circumstances.

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5. Two out of 40 states adopted portions of the Model Act. All others adopted it in its entirety. Those two states are Maine and New York.

6. Property/casualty insurers within a group could be included in one ORSA Summary Report or a combination of reports, if those group members operate under different ERM frameworks. If the insurer is a member of a group, the insurer submits the ORSA Summary Report to the lead state commissioner of the insurance group (NAIC, 2014).

7. Insurers are exempt from conducting an ORSA and filing an ORSA Summary Report if the individual insurer's annual direct written and unaffiliated assumed premium, including international direct and assumed premium but excluding premiums reinsured with the Federal Crop Insurance Corporation and the NFIP is less than 500 million, and if the insurer is a member of a group and the group's annual direct written and unaffiliated assumed premium, including international direct and assumed premium but excluding premiums reinsured with the Federal Crop Insurance Corporation and the NFIP is less than 1 billion.



**Table 1:**  
**NAIC Model Adoption by State**

State	Statute
Alabama	Ala. Code 27-29A-1 to 27-29A-10 (2016)
Alaska	Alaska Stat. 21.23.01 to 21.23.090 (2015)
Arizona	Ariz. Rev. Stat. Ann. 20-491 to 20-190.07 (2016)
Arkansas	Ark. Code Ann. 23-65-401 to 23-69-410 (2015)
California	Cal. Ins. Code 935-1 to 935.11 (2013)
Colorado	Colo. Rev. Stat. 10-3-1501 to 10-3-1511 (2016)
Connecticut	Conn. Acts No. 14-107 (2014)
Delaware	Del. Code Ann. Tit. 18 8401 to 8412 (2014)
Florida	Fla. Stat. 624.4212 (2016)
Georgia	GA. Code Ann. 33-13-30 to 33-13-41 (2015)
Hawaii	Haw. Rev. Stat. 431-101 to 431-110 (2016)
Illinois	215 Ill. Comp. Stat. 5/129.1 to 5/129.9 (2014)
Indiana	Ind. Code 27-1-23.5-1 to 27-1-23.5-14 (2014)
Iowa	Iowa Code 522.1 to 522.10 (2013)
Kansas	Kan. Stat. Ann 18-1 to 18-11 (2015)
Kentucky	Ky. Rev. Stat. Ann. 304.3-600 to 304.3-635; 304.99-055 (2014)
Louisiana	La. Rev. Stat. Ann. 691.31 to 691.39 (2015)
Maine	Me. Rev. Stat. Ann. Tit. 24-A, 222 (1969/2013) (portions of the model)
Michigan	Mich. Comp. Laws 500.1701 to 500.1715 (2015)
Minnesota	Minn. Stat. 60D.50 to 60D.58 (2014)
Missouri	Mo. Rev. Stat. 382.50 to 382.550 (2015)
Montana	Mont. Code Ann. 33-2-11XX to 33-2-11XX (2015)
Nebraska	LB 700 1-11 (2014)
Nevada	Nev. Rev. Stat. 692C.265 to 692C.289 (2015)
New Hampshire	N.H. Rev. Stat. Ann. 401-C:1 to 401-C:10 (2013)
New Jersey	N.J. Stat. Ann. 17:23-27 to 17:23-37 (2014) N.Y. Comp. Codes R. & Regs. Tit. 11, 82.1 to 82.5 (2014) (portions of the model)
New York	
North Dakota	N.D. Cent. Code 26.1-10.2-01 to 26.1-10.2-08 (2015)
Ohio	Ohio Rev. Code Ann. 3901.371 to 3901.378
Oklahoma	Okla. Stat. tit. 36, 3301 to 3310 (2015)
Oregon	Or. Rev. Stat. 547.2 to 547.20 (2015)
Pennsylvania	40 Pa. Cons. Stat. 991.2601 to 991.2610 (2013)
Rhode Island	R.I. Code R. 27-77-1 to 27-77-10 (2013)
Tennessee	Tenn. Code Ann. 56-11-201 to 56-11-210 (2014)
Texas	Texas Code Ann. 830.001 to 830.012 (2015)
Vermont	Vt Stat. Ann. Tit. 8, 3581 to 3589 (2013)
Virginia	Va. Code Ann. 38.2-1334.3 to 1334.10 (2014)
Washington	Wash. Rev. Code 48.05A.005 to 48.05A.901 (2015)
Wisconsin	Wis. Stat. 622.03 to 622.17 (2014)
Wyoming	Wyo. Stat. Ann. 26-51-101 to 26-51-110 (2014)

The ORSA Summary Report has three sections. The first is a description of the insurer's risk management framework. The second is the insurer's assessment of risk exposure. Finally, the insurer is to provide a group assessment of risk capital and prospective solvency framework. The overall ORSA Summary Report also includes such information as an identification of the basis of accounting for

the insurer, an organizational chart and a short summary of any changes to the report from the prior year (NAIC, 2014). There are no other specific guidelines given to insurers. Instead, a general set of rules is provided to guide insurers in writing the ORSA Summary Report (NAIC, 2014).

An ORSA Feedback Pilot Project was conducted in 2012 and in 2013. The Pilot Project requested insurers and/or groups to voluntarily provide an ORSA Summary Report for regulatory review.<sup>8</sup> In 2013, of the 22 reports submitted, the NAIC noted that the reports were more complete than the prior year. It also was noted that reports from first-time participants in 2013 overall were better than the 2012 reports, partially due to the expectations outlines in the ORSA Guidance Manual (NAIC, 2013). This suggests that over time, there is a decrease in the costs associated with the collection of the necessary information for the ORSA Summary Report. As expectations are better known, insurers can more effectively and efficiently produce quality reports.

### *Insurer Credit Ratings*

We originally considered five ratings agencies in the initial stages of our analysis: A.M. Best, Standard & Poor's (S&P), Fitch, Moody's and Demotech. Of the five main insurer ratings agencies, A.M. Best rates a majority of insurers and provides the most comprehensive and transparent guide to its ratings methodology.<sup>9</sup> Therefore, we chose to use A.M. Best as the credit rating agency for our comparison. In our sample, representative of property/casualty (P/C) insurers in 2015, A.M. Best rated 73% of individual insurers that were in operation in the U.S. A.M. Best's analytical process of an insurer's credit rating incorporates quantitative and qualitative measures that evaluate various sources of risk to an organization's financial health. The evaluated risks include underwriting risk, credit risk, interest rate risk, and country and market risks, as well as economic and regulatory factors (A.M. Best, 2015b). The analysis provided by A.M. Best as part of its ratings process includes a comparison with peers, industry standards, proprietary benchmarks, assessments of operating plans, philosophy, management, risk appetite, and implicit or explicit support of a parent or affiliate. Similar to the ORSA Summary Report, A.M. Best considers issues related to risk capital and solvency in its ratings process.

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8. The NAIC is training regulators on Enterprise Risk Management (ERM) frameworks. The Model Act has been key in the development of materials used to train regulators on ERM frameworks. Specifically, the Pilot Project helped guide the development of ERM educational materials for state insurance regulators (NAIC, 2016).

9. While we recognize that S&P has a more detailed ERM review than A.M. Best, S&P's guidelines are not as transparent. Therefore, we chose A.M. Best in our analysis. We do not consider Fitch or Moody's in our sample due to the small number of insurers that apply for ratings from these companies. Demotech provides insurers with provisional ratings by using only publicly available information, and insurers decide whether to make the rating public (Cole, He and McCullough, 2017). Because Demotech does not rely on quantitative information, we do not use Demotech in our sample.

The primary objective of A.M. Best's Credit Ratings is to provide an opinion of the rated insurer's ability to meet its financial obligations (A.M. Best, 2015b). A.M. Best employs credit analysts who facilitate communication with the management within the rated insurer. The data A.M. Best requests from P/C insurers includes, but is not limited to, the last five years of financial reports, organizational and management structure, business plans, strategies and projections, ERM strategies, and competitive advantages and disadvantages. A.M. Best cites the most important area to evaluate in determining the insurer's financial strength is an assessment of the balance sheet strength (A.M. Best, 2015b).

## **Comparison of Reporting Components**

We first offer a comparison of the similarities and differences between the components suggested for assessment in the ORSA Summary Report and the information requested by A.M. Best for the purposes of providing insurer ratings. This comparison allows us to assess the degree to which there is overlap in the information suggested for inclusion in the ORSA Summary Report and the documents requested by A.M. Best for thorough ratings. If there is an overlap between the two, we use that as evidence to support that rated insurers have a cost advantage in preparing the ORSA Summary Report as they already have collected some of the information. If there is no overlap, and if insurers are required to gather additional information to submit the ORSA Summary Report, then the overall cost of preparing the ORSA Summary Report is higher. To assess whether there is overlap in information, we examine two documents.

For information on the ORSA Summary Report requirements, we examine the ORSA Guidance Manual, July 2014. This manual is a 24-page document produced by the NAIC as a guideline for use by those insurers that are required to submit an ORSA Summary Report. Because the ORSA Summary Report is unique to each insurer, the ORSA Guidance Manual gives guidance to insurers with suggestions for information that may be important for inclusion in the ORSA Summary Report. The requirements outlined in the ORSA Guidance Manual are based on Model #505. The purpose of the ORSA Guidance Manual is to provide assistance to insurers in the reporting of their ORSA, specifically the confidential ORSA Summary Report, which is due yearly to the state insurance commissioner. The ORSA Guidance Manual contains five chapters: an introduction to the manual, including general guidance for insurers; a chapter for each of the three sections of the ORSA Summary Report; and an appendix. Included in Chapter 1, Part C of the ORSA Guidance Manual is an overview of general guidance given to insurers when compiling the ORSA Summary Report. From Chapter 1, Part C of the ORSA Guidance Manual and Chapter 2, Chapter 3 and Chapter 4, we draw information on the suggestions given to insurers in the preparation of the ORSA Summary Report.

The second document we examine is A.M. Best's *Credit Rating Methodology: Global Life and Non-Life Insurance Edition, July 2015*. This 20-page document, produced by A.M. Best, provides a comprehensive explanation of A.M. Best's Credit Ratings methodology. These ratings include A.M. Best's Financial Strength, Issuer Credit and Issue Ratings within the insurance industry. In this document, A.M. Best thoroughly describes its interactive credit rating process, including a section that reviews the information requirements requested by A.M. Best for the ratings process. An initial comparison of the two reports shows that the ORSA Summary Report should include an evaluation of the insurer's ERM framework, an assessment of risk exposures, and a group assessment of risk capital and prospective solvency. The three main components of A.M. Best's ratings process include: 1) assessments of an insurer's balance sheet strength; 2) operating performance; and 3) business profile. We compare and contrast those factors that are suggested for inclusion in the ORSA Summary Report with the information requested by A.M. Best in its ratings process to assess the extent to which the information overlaps. This allows us to evaluate whether those insurers that are rated by A.M. Best are currently collecting information that also may be included in the ORSA Summary Report. Table 2 summarizes this comparison.

### *Section 1 ORSA Summary Report*

The purpose of the ORSA is twofold. First, ORSA is implemented to foster an effective level of ERM for all insurers that meet the threshold requirements. Second, the ORSA provides a group-level perspective on risk and capital. The first section of the ORSA Summary Report is designed to focus on the overall risk philosophy and risk culture within the firm. An insurer is required to describe its risk management framework by including in the report: 1) a description of its risk culture and governance; 2) an identification and prioritization of risks; and 3) a formal statement of its risk appetite, tolerances and limits (NAIC, 2014). The insurer also is asked to provide information on risk reporting and communication.

This initial description of the insurer's risk management framework in Section 1 of the ORSA Summary Report is similar to A.M. Best's assessment of an insurer's business profile. Using qualitative and quantitative information provided by the insurer, including any relevant information on ERM strategies, A.M. Best provides an evaluation of the insurer's business profile (A.M. Best, 2015b). "Risk management fundamentals can be found in the strategic decision-making process used by a company to define its business profile, and in the various financial management practices and operating elements of an insurer that dictate the sustainability of its operating performance and, ultimately, its exposure to capital volatility. As such, if a company is practicing sound risk management and executing its strategy effectively, then it will preserve and build its balance sheet strength and perform successfully over the long term" (A.M. Best, 2015b).

**Table 2:**  
**Comparison of Reporting Components**

ORSA Summary Report	A.M. Best
<b>ORSA Section 1</b>	
<i>Description of the Insurer's ERM Framework</i>	<i>Business Profile Assessment</i>
High-level summary of ERM framework principles	Includes assessment of degree of risk inherent in the firm's operations
Risk culture and governance, risk management and controls	Key business profile tests such as management
Risk identification and prioritization, appetite, tolerances and limits	Spread of risk, revenue composition, competitive market position
<b>ORSA Section 2</b>	
<i>Insurer Assessment of Risk Exposures</i>	<i>Balance Sheet Strength Assessment</i>
Qualitative and/or quantitative assessments of risk exposure	Measures exposure of surplus to operating and financial practices
Suggested relevant risk categories include underwriting, credit and market risks	Information collected on underwriting, credit and market risks
Consideration of the impact of stresses on capital, risk capital requirements	Assessments of underwriting, operating and asset leverage, capitalization
Regulatory and economic rating agency views of capital requirements	Regulatory and macroeconomic conditions
Evaluate using stress tests or more complex stochastic analyses	Tests include BCAR, analyses of loss reserves, cash flow and liquidity
<b>ORSA Section 3</b>	
<i>Group Assessment of Risk Capital/Prospective Solvency Assessment</i>	<i>Operating Performance Assessment</i>
Determine financial resources necessary to support current and future business	Analysis of stability and sustainability of the firm's earnings

Key business profile tests performed by A.M. Best include analyses of the spread of risk, revenue composition, competitive market position, management, insurance market risk and event risk. We will describe each of these business profile tests in detail according to the methodology provided by A.M. Best. The analysis of the spread of risk entails an evaluation of the insurer's book of business by line and in terms of its geographic and product diversification (A.M. Best, 2015b).<sup>10</sup> When A.M. Best evaluates an insurer's revenue composition, it provides a by-line analysis of net premium volume to assess the changes, not only in the amount of business, but also the business type, geographic and product concentration, and volatility of business written by a firm. In the business profile test of competitive market position, A.M. Best provides an analysis of an insurer's operating strategy and competitive advantages by line. This allows for the assessment of an insurer's ability to respond to competitive market challenges, volatility in macroeconomic conditions and regulatory changes. Evaluations of management take into account the underlying principle of trust and fiscal responsibility inherent in the insurance business. A.M. Best gives an analysis of management's ability to incorporate defensible strategic business plans in its qualitative assessment of a firm's management. The analysis of insurance market

10. More detailed definitions are provided in the *Credit Rating Methodology: Global Life and Non-Life Insurance Edition, July 2015* (A.M. Best, 2015b).

risk reflects the potential financial volatility that is both introduced by and associated with the segments of the industry in which the insurer operates. This could be systemic risks such as financial services and health care reform. Finally, event risk analysis takes into account the possibility of exogenous shocks that may affect the firm.

Each of these business profile tests performed by A.M. Best relates back to key principles that are to be incorporated into Section 1 of the ORSA Summary Report. Those key principles are an assessment of the insurer's risk culture and governance, risk identification and prioritization, risk appetite, tolerances and limits, risk management and controls, and risk reporting and communication. The assessment of the insurer's risk culture and governance in the ORSA Summary Report bears similarities to the assessment of management in the A.M. Best Business profile. The description of the insurer's risk culture and governance within the ORSA Summary Report is meant to assess the governance structure of management, with clearly defined roles and responsibilities of management. The assessment of the insurer's risk management and controls within the ORSA Summary Report is meant to assess the ongoing ERM activity within the firm. Similarly, the management business profile test includes an analysis of the experience and operating objectives of the insurer's management team. Therefore, there is some overlap between the two reports.

In the risk identification and prioritization and the risk appetite, tolerances and limits assessments within Section 1 of the ORSA Summary Report, insurers are encouraged to provide a description of how the insurer identifies and prioritizes various risks and provide a formal risk appetite statement of the firm. These assessments are comparable to the A.M. Best analyses for spread of risk, revenue composition and competitive market position. When combined, all of these tests provide a way for A.M. Best to determine the firm's various risk exposures, geographic and line of business concentration, volatility of business, operating strategy, and competitive advantages, all of which could be incorporated into the risk appetite statement of Section 1 of the ORSA Summary Report.

While there is some overlap in the information reported in Section 1 of the ORSA Summary Report and the Business Profile assessment given as part of the rating by A.M. Best, we recognize that there could be significant differences in the depth or extent of reporting by insurers to A.M. Best, especially in the qualitative information that an insurer reports as part of its enterprise risk management strategies.

### *Section 2 ORSA Summary Report*

The section of the ORSA Summary Report that has the most information overlap with the A.M. Best reporting is Section 2, which requires the insurer to assess its risk exposure for each material risk category listed in Section 1 of the ORSA Summary Report. This risk exposure assessment can include both qualitative and quantitative assessments of risk exposure in both normal and stressed environments (NAIC, 2014). Relevant risk categories to be reported in the

ORSA Summary Report may include underwriting, credit, market and operational risks. Section 2 of the ORSA Summary Report should include detailed descriptions of the material and relevant risks as identified by the insurer. For the ORSA Summary Report, the insurer is encouraged to give details on assessment methods used, key assumptions made, relevant risk-mitigation activities and the possible outcomes of any adverse scenarios assessed (NAIC, 2014). The insurer's risk assessment should include a consideration of the impact of the stresses on capital.

Similar to the suggestions for Section 2 of the ORSA Summary Report, A.M. Best's ratings methodology shows that to assess an insurer's financial strength, A.M. Best collects information on risks such as underwriting, credit, market, interest rate and country risks (A.M. Best, 2015b). In assessing the balance sheet strength of an insurer, A.M. Best requests information such as audited financial statements and annual reports for the previous five years. A.M. Best uses this information to conduct analyses that include assessments of underwriting leverage, experience and results, operating performance, liquidity analyses, cash flow, and investment leverage analyses. An insurer's underwriting, financial and asset leverage are used to compare an insurer's adjusted surplus relative to the required capital necessary to support its operating and investment risks in the calculation of Best's Capital Adequacy Ratio (BCAR) (A.M. Best, 2015b).

A comparison of the suggested inclusions in the Section 2 of the ORSA Summary Report and the risk assessment provided by A.M. Best indicates that the information collected for one might be used for the other. The NAIC recommends that the risk assessment for the ORSA Summary Report include the impact of stressors on capital that may require consideration of risk capital requirements and available capital, as well as regulatory, economic rating agency and/or other views of capital requirements (NAIC, 2014). Similarly, A.M. Best includes consideration for underwriting leverage, capitalization, operating and asset leverage. A.M. Best also includes an assessment of regulatory and macroeconomic factors, such as interest rate fluctuations, inflationary levels and regulatory changes in their credit ratings.

### *Section 3 ORSA Summary Report*

Section 3 of the ORSA Summary Report entails two parts: 1) a group assessment of risk capital; and 2) a prospective solvency assessment. "This section is intended to assist the commissioner in understanding the insurer's capital adequacy in relation to its aggregate risk profiles" (NAIC, 2014). A.M. Best describes its approach for the assignment of credit ratings as an examination from "both the top down and the bottom up" (A.M. Best, 2015b). Similar to section 3 of the ORSA Summary Report, this "top-down" analysis includes analyzing the exposure of risk to the insurer made by the parent or holding company and the "potential strain on the operating entity from debt-servicing requirements related to the parent's borrowings" (A.M. Best, 2015b).

In the first part of Section 3 of the ORSA Summary Report, the group assessment of risk capital, the insurer provides a description of “how the insurer combines the qualitative elements of its risk management policy with the quantitative measures of risk exposure in determining the level of financial resources needed to manage its current business and over a long-term cycle” (NAIC, 2014). Aggregate available capital is compared against the various risks that may have an adverse effect on the firm. This assessment is intended to inform the state insurance commissioner of the insurer’s capital adequacy in relation to its risk profiles. Similar to the other sections of the ORSA Summary Report, there is no definitive methodology to this analysis. It can be done across varying time horizons using quantitative methods such as deterministic stress tests, stochastic modeling or factor-based analysis. In this section, aggregate available capital should be compared against the various risks that may affect the enterprise.

The second part of Section 3 of the ORSA Summary Report is the prospective solvency assessment where insurers undergo a forecasting process that considers any material and relevant changes to the insurer’s internal operations and external business environment. Through this part of the overall solvency assessment, the insurer should convey that it has the necessary capital and other financial resources to fulfill its projected operations plans with its stated risk appetite (NAIC, 2014).

Matching the two reports, we find that Section 3 of the ORSA Summary Report is best matched with A.M. Best’s analysis of an insurer’s operating performance. A.M. Best’s analysis of operating performance reflects the ongoing stability of the insurer’s earnings sources and the sustainability in relation to the insurer’s liabilities. Section 3 of the ORSA Summary Report requires insurers to assess together the qualitative elements of its risk management policies with the quantitative measures of risk exposure. This allows the insurer to determine the financial resources necessary to manage current and longer-term business. In its assessment of an insurer’s ability to meet its current and ongoing obligations, A.M. Best considers factors of financial strength and financial flexibility through the analysis of such documents as an insurer’s balance sheet and income statement. A.M. Best also takes into account operating performance and business profile as indicators of long-term financial stability (A.M. Best, 2015b). We conclude that there is overlap in the guidelines given for Section 3 of the ORSA Summary Report and the assessment of the firm’s operating performance offered by A.M. Best.

While we do find similarities between the two reports, there exist many differences as well. We acknowledge that although rated insurers may have a cost advantage in collecting information for the ORSA Summary Report, since these insurers collect some similar information for A.M. Best, there may remain materials and reports necessary for the ORSA Summary Report that require additional time and effort for the insurer. Therefore, preparation of the ORSA Summary Report may be a significant cost burden for insurers subject to the Model Act, regardless of whether or not the insurer is rated by A.M. Best.



## Analysis

The data for our analysis come from the NAIC. We analyze P/C insurers in 2015 to obtain the number of insurers affected by the ORSA Model Act, as well the percentage of those firms already rated by A.M. Best. We analyze individual insurer-level data, including firm characteristics such as the state in which an insurance company is domiciled, organizational form and group information, when applicable.<sup>11</sup> Because the ORSA financial threshold is set according to direct premiums written and total assumed premiums, we include insurer financial data such as individual and group direct premiums written, individual direct premiums written in personal lines of business and commercial lines of business, and total assumed premiums. Finally, we include RBC ratio information for each insurer since a firm also may be required to submit an ORSA Summary Report based on its RBC level. We screen the sample for insurers with negative or missing premiums for the year.

First, we assess the number of insurers subject to ORSA, as well as the percentage of premium that these insurers write in ORSA states. Based on the criteria outlined above, we categorize individual insurers that are subject to ORSA based on the state where the individual insurer is domiciled. Of the 2,454 insurers that wrote premiums in 2015, 2,150 individual P/C insurers were domiciled in states that have adopted the ORSA Model Act. Thus, the operating insurers that were domiciled in states that have adopted the ORSA Model Act comprises 88% of all insurers that wrote direct premiums and/or total assumed premium in the U.S. in 2015. If all states were to adopt the Model Act under the current guidelines, an additional 45 individual insurers would be subject to the Model Act, representing a total of 78% of all premiums written in the U.S. Insurers operating in states that adopted the ORSA Model Act wrote 72% of all premiums written in the U.S. in 2015.

For the remaining analysis, we drop from the sample any insurer not domiciled in one of the 40y states that have adopted the ORSA Model Act. We consider three different thresholds to determine whether a firm is subject to the Model Act.<sup>12</sup> Those three thresholds to determine whether a firm is subject to ORSA are: 1) the insurer writes more than \$500 million in direct premiums written or total assumed premium; 2) the insurer is part of a group that writes more than \$1 billion in direct premiums written or total assumed premium; or 3) the insurer is at Company Action Level RBC, where its RBC is at or below 200%.<sup>13</sup>

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11. While we do not evaluate insurers at the group level, we collect group premium data to analyze whether an individual insurer would be categorized as subject to ORSA based on group financials.

12. Insurers are required to file no less than annually to the lead state insurance commissioner if the insurer is a member of a group and, upon request, to the domiciliary state insurance regulator.

13. Company Action Level is triggered if the insurer's capitalization level falls between 150% and 200% of the computed minimum RBC amount. For our study, any insurer that falls at

**Table 3, Part 1:  
Individual Insurers Descriptive Statistics  
Alabama – Minnesota**

State	Subject to ORSA by:					Subject to ORSA <sup>19</sup>
	Domiciled <sup>15</sup>	\$500 million <sup>16</sup>	\$1 billion <sup>17</sup>	RBC <sup>18</sup>	Overall	
Alabama	16	1	1	0	2	13%
Alaska	5	0	0	0	0	0%
Arizona	47	3	0	2	4	9%
Arkansas	10	0	0	3	3	30%
California	94	18	5	9	30	32%
Colorado	11	1	0	1	2	18%
Connecticut	64	25	3	1	29	45%
Delaware	94	23	8	21	41	44%
Florida	121	10	1	17	27	22%
Georgia	32	1	0	3	4	13%
Hawaii	31	0	0	2	2	6%
Illinois	177	44	6	24	69	39%
Indiana	63	16	2	2	20	32%
Iowa	68	13	2	0	15	22%
Kansas	23	1	0	2	3	13%
Kentucky	10	1	0	1	2	20%
Louisiana	29	0	0	3	3	10%
Maine	9	0	0	0	0	0%
Michigan	69	16	3	3	21	30%
Minnesota	36	4	1	4	9	25%

In Table 3, we present descriptive statistics related to individual P/C insurers domiciled in states where insurers are subject to the Model Act. We find that of the 2,166 individual insurers domiciled in states that have adopted the Model Act, 616 are subject to the Model Act through any one of the three thresholds defined above. Three hundred forty-two individual insurers are subject to the Model Act by the individual insurer premium threshold, and 73 individual insurers are subject by the group premium threshold. Two hundred forty-four insurers are subject to the Model Act by the RBC threshold.

As seen in Table 3, there are six states where insurers are subject to the Model Act only by the RBC ratio threshold. These states are Arkansas, Hawaii, Louisiana, Montana, Nevada and Oklahoma.<sup>14</sup> This finding suggests that although

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or below 200% of the computed minimum RBC amount is considered subject to ORSA by the RBC trigger.

14. At the Company Action Level of RBC, the insurer is required to submit a comprehensive financial plan to the state insurance regulator containing proposals to correct the insurer's financial problems.

15. Number of operating insurers domiciled in each state subject to ORSA.

16. The insurer writes more than \$500 million in direct premiums written or total assumed premium.

the ORSA Model Act is targeted at larger firms, it is capturing smaller, riskier firms with the RBC threshold.

**Table 3, Part 2:**  
**Individual Insurers Descriptive Statistics**  
**Missouri – Wyoming**

State	Subject to ORSA by:					Subject to ORSA <sup>19</sup>
	Domiciled <sup>15</sup>	\$500 million <sup>15</sup>	\$1 billion <sup>17</sup>	RBC <sup>18</sup>	Overall	
Missouri	45	8	2	9	15	33%
Montana	16	0	0	7	7	44%
Nebraska	28	6	1	0	7	25%
Nevada	25	0	0	11	11	44%
New Hampshire	45	11	3	2	14	31%
New Jersey	63	7	2	6	14	22%
New York	148	17	8	26	45	30%
North Dakota	13	3	0	1	3	23%
Ohio	125	32	6	6	43	34%
Oklahoma	30	0	0	3	3	10%
Oregon	18	2	0	0	2	11%
Pennsylvania	167	26	6	23	50	30%
Rhode Island	15	6	3	0	9	60%
Tennessee	19	2	1	2	5	26%
Texas	166	22	5	16	42	25%
Vermont	97	1	0	30	31	32%
Virginia	19	1	0	2	2	11%
Washington	8	1	0	0	1	13%
Wisconsin	108	20	4	2	26	24%
Wyoming	2	0	0	0	0	0%
<b>Total</b>	<b>2166</b>	<b>342</b>	<b>73</b>	<b>244</b>	<b>616</b>	

As seen in Table 3, the percentage of insurers subject to the Model Act is relatively small. In all but one state, insurers subject to the Model Act comprise less than 50% of total insurers domiciled in that state. In 29 of the 40 states that have adopted the Model Act, insurers subject to the Model Act comprise less than 30% of total individual insurers domiciled in that state. However, given that many of the insurers subject to ORSA are very large, we conduct a further analysis to determine the percentage of premium written subject to ORSA.

17. The insurer is part of a group that writes more than \$1 billion in direct premiums written or total assumed premium.

18. The insurer is at Company Action Level RBC, where its RBC is at or below 200%.

19. Percentage of insurers subject to ORSA by any of the three thresholds to total number of operating insurers domiciled in that state.

**Table 4:**  
**Descriptive Statistics of Insurers Subject to ORSA**

State <sup>20</sup>	Domiciled	Subject to ORSA <sup>21</sup>	% Premium ORSA Firms <sup>22</sup>	% Personal DPW <sup>23</sup>	% Commercial DPW <sup>24</sup>
Alabama	16	2	60%	57%	3%
Arizona	47	4	39%	12%	27%
Arkansas	10	3	37%	10%	28%
California	94	30	86%	65%	21%
Colorado	11	2	71%	0%	71%
Connecticut	64	29	96%	29%	67%
Delaware	94	41	83%	5%	76%
Florida	121	27	49%	24%	24%
Georgia	32	4	30%	5%	25%
Hawaii	31	2	1%	0%	1%
Illinois	177	69	94%	73%	20%
Indiana	63	20	82%	28%	53%
Iowa	68	15	60%	27%	33%
Kansas	23	3	44%	43%	2%
Kentucky	10	2	39%	34%	5%
Louisiana	29	3	8%	7%	2%
Michigan	69	21	72%	43%	29%
Minnesota	36	9	68%	3%	56%
Missouri	45	15	70%	30%	39%
Montana	16	7	37%	0%	37%
Nebraska	28	7	91%	67%	24%
Nevada	25	11	12%	0%	11%
New Hampshire	45	14	82%	18%	64%
New Jersey	63	14	66%	29%	37%
New York	148	45	80%	4%	73%
North Dakota	13	3	67%	17%	50%
Ohio	125	43	88%	56%	32%
Oklahoma	30	3	2%	1%	1%
Oregon	18	2	29%	11%	18%
Pennsylvania	167	50	86%	19%	65%
Rhode Island	15	9	93%	53%	40%
Tennessee	19	5	86%	78%	8%
Texas	166	42	79%	58%	20%
Vermont	97	31	33%	0%	33%
Virginia	19	2	30%	0%	30%
Washington	8	1	27%	25%	2%
Wisconsin	108	26	85%	55%	29%
<b>Total</b>	<b>2150</b>	<b>616</b>			

20. Alaska, Maine and Wyoming dropped from the sample for this analysis. There are no firms subject to the Model Act in those states.

21. Number of operating insurers subject to the Model Act by any of the three thresholds.

22. Percentage of direct premiums written by operating insurers subject to ORSA to total premiums written by insurers operating in the state.

23. Percentage of direct premiums written in personal lines by operating insurers subject to ORSA.

24. Percentage of direct premiums written in commercial lines by operating insurers subject to ORSA.

Of the insurers that are subject to the Model Act by the financial threshold, we assess the percentage of direct premiums written or total assumed premium by these insurers in states that have adopted the Model Act. At this stage of the analysis, we drop from the sample the states where no insurers are subject to the Model Act based on the ORSA thresholds. Those states are Alaska, Maine and Wyoming. We posit that although the percentage of insurers subject to ORSA is small, those insurers will write the majority of the premiums in the state. In Table 4, we present the results from this analysis. Of the 37 states remaining in our sample, on average, 29% of insurers domiciled are subject to the Model Act. However, on average, individual insurers that are subject to the Model Act write 59% of all direct premiums written within their state of domicile. When we exclude from the sample those states that only have insurers subject to the Model Act through the RBC threshold, individual insurers subject to the Model Act write 69% of all direct premiums written in the state. Of the 31 states where insurers are subject to the Model Act by either of the financial thresholds, 22 of the states have insurers domiciled writing more than 50% of the direct premiums written, with 14 of those states having insurers that write more than 75% of the total direct premiums written in the state. Therefore, even though the percentage of insurers subject to the Model Act represent less than one-third total insurers domiciled in a state, those insurers subject to the Model Act write the majority of the premiums in a state.

Next, we assess the percentage of direct premiums written by insurers subject to the Model Act in personal and commercial lines. In this portion of the analysis, we observe substantial variation within states. Of the 31 states where insurers are subject to the Model Act based on either of the financial thresholds, 13 states have insurers subject to the Model Act that write less than 10% of the direct premiums written in personal lines. In contrast, of those 31 states, 12 states have insurers subject to the Model Act that write more than one-third of the direct premiums written in personal lines. We find similarly varying results in commercial lines. We observe a range where eight states have insurers that write less than 10% of the total state business written in commercial lines. However, in comparison, we find that in 15 states, insurers subject to the Model Act write more than 51% of the business written in commercial lines.

The key portion of our analysis is the assessment of the number of insurers that are both subject to the Model Act and rated by A.M. Best. We seek to examine the extent to which there is an overlap of the information already being reported to A.M. Best and the information needed to compile the ORSA Summary Report. In the comparison section of this paper, we examined the components of the ORSA Summary Report and offered a comparison to the components of the A.M. Best credit ratings methodology. We found that there is overlap in the information collected from and requested by A.M. Best, for A.M. Best's rating methodology and the information required to be reported in the ORSA Summary Report.

**Table 5:  
Firms Subject to ORSA and Rated by A.M. Best**

State <sup>25</sup>	Subject to ORSA and Rated	% Subject to ORSA and Rated <sup>26</sup>	% Premium Subject to ORSA and Rated <sup>27</sup>
Alabama	2	100%	60%
Arizona	3	75%	39%
Arkansas	1	33%	30%
California	23	77%	46%
Colorado	1	50%	71%
Connecticut	26	90%	59%
Delaware	29	71%	43%
Florida	11	41%	33%
Georgia	3	75%	30%
Illinois	56	81%	82%
Indiana	16	80%	49%
Iowa	15	100%	60%
Kansas	1	33%	42%
Kentucky	1	50%	37%
Michigan	19	90%	65%
Minnesota	5	56%	68%
Missouri	11	73%	70%
Nebraska	6	86%	9%
Nevada	1	9%	1%
New Hampshire	11	79%	38%
New Jersey	11	79%	65%
New York	26	58%	45%
North Dakota	3	100%	67%
Ohio	40	93%	61%
Oklahoma	1	33%	1%
Oregon	1	50%	11%
Pennsylvania	34	68%	50%
Rhode Island	8	89%	73%
Tennessee	3	60%	85%
Texas	24	57%	66%
Vermont	3	10%	5%
Virginia	1	50%	29%
Washington	1	100%	27%
Wisconsin	21	81%	60%
<b>Total</b>	<b>418</b>		

25. Hawaii, Louisiana and Montana have been dropped from this portion of the analysis because there are no insurers rated by A.M. Best and subject to ORSA in those states.

26. Percentage of number of insurers subject to ORSA and rated by A.M. Best to total insurers subject to ORSA.

27. Percentage of premiums written by insurers subject to ORSA and rated by A.M. Best to total premiums written in the state.

In Table 5, we present the number of individual insurers subject to ORSA in the state and the percentage of those insurers that are rated by A.M. Best. On average, 69% of insurers that are subject to the Model Act also were rated by A.M. Best in 2015. There are a total of 616 insurers that are subject to the Model Act through any one of the three thresholds. Of those, 418 are rated by A.M. Best. Those insurers that are subject to the Model Act and rated by A.M. Best wrote 46% of the premiums in those states that have adopted the Model Act. The Model Act appears to be capturing larger insurers that are rated by A.M. Best, and the overlap of information between the collection of information for credit ratings and the information needed for the ORSA Summary Report may be significant.

## Conclusion

A primary goal of state insurance regulators is to monitor insurer solvency. The NAIC's ORSA Model Act requires insurers in states subject to ORSA to perform a yearly self-evaluation of its risks and capital. Through the ORSA Summary Report, the insurer identifies and evaluates all risks and exposures and risk management framework in the insurer. This is done at the individual and group level of the insurer for all insurers in states that have adopted the Model Act. Ratings agencies have historically collected information on risks, exposures and capital management from insurers for the purposes of evaluating an insurer's rating. The purpose of our analysis is to provide a comparison of factors related to information collected by A.M. Best for credit ratings and the requirements of the ORSA Summary Report. We find that 63% of insurers subject to the ORSA Model Act also are rated by A.M. Best. The implication is that some of the information required of the ORSA Summary Report already is being collected by insurers that are rated by A.M. Best.

We recognize that although there is extensive overlap between the two, we cannot ignore the impact that ORSA will have on insurers in terms of the costs and time spent preparing the ORSA Summary Report. The challenges for insurers in preparing the ORSA Summary Report could be extensive depending on the complexity of the insurer's operations and the current operations of its existing ERM framework. Although we find overlap in information for rated insurance firms, there could remain substantial costs incurred by insurers in the preparation of the ORSA Summary Report, especially for smaller insurers already at risk based on RBC levels. Those costs likely will be calculated into premiums and ultimately borne by policyholders. The calculation of such costs is beyond the scope of this work, but we acknowledge that the introduction of ORSA reporting most likely represents a costly new reporting requirement for insurers.

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# Evolution or Revolution? How Solvency II Will Change the Balance Between Reinsurance and ILS

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## Abstract

The introduction of Solvency II has decreased regulatory frictions for insurance-linked securities (ILS) and thus redefined how insurance and reinsurance companies can use these instruments for coverage against natural catastrophe risk. We introduce a theoretical framework and run an empirical analysis to assess the potential impact of Solvency II on the market volume of ILS compared to traditional reinsurance. Our key model parameter captures all determinants of the relative attractiveness of these two risk mitigation instruments beyond market prices. It is estimated by means of ordinary least squares (OLS), decomposed into a trend and a cyclical component using the Hodrick-Prescott filter, and forecasted with an ARMA(3,3) model. We complement the resulting baseline prediction by a scenario analysis, the probabilities for which are based on a Gumbel distribution. Judging by our findings, we expect Solvency II to increase the volume of ILS to more than 24% of the global property-catastrophe reinsurance limit or approximately \$101 billion by the end of 2018.

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## 1. Introduction

In recent years, insurers have increasingly employed insurance-linked securities (ILS) to cede risks to the financial markets. Given its continuing rapid growth, the ILS market has the potential to disrupt the reinsurance industry. During the last four years alone, it exhibited an impressive average annual growth rate of more than 15%, and today ILS capital of almost \$80 billion is outstanding (see, e.g., AON Benfield, 2017). Alongside the rise of ILS, an important regulatory change took shape within the European Union (EU). Solvency II has come into force at the beginning of 2016, redefining capital requirements for the insurance industry. As many countries are seeking Solvency II equivalence, the impact of these new standards is not limited to the EU itself, but extends far further (see, e.g., Lloyd's, 2015).

According to Swiss Re (2009), the regulatory environment has an important influence on the extent to which insurance companies use alternative risk transfer instruments.<sup>1</sup> The new solvency standards will force the industry to rethink its strategies for the management of catastrophe risk. So far, regulation regarding ILS has been heterogeneous and ambiguous. For a long time, the U.S. probably offered the most favorable regulatory environment. The National Association of Insurance Commissioners (NAIC) generally considers properly structured ILS as reinsurance. In the EU, in contrast, the regulatory framework was less obvious. Under Solvency I, risk transfer instruments without an indemnity trigger were generally not treated as reinsurance and therefore disregarded for solvency capital measurement (see, e.g., Swiss Re, 2009).

Of course, existing rules and regulations did not prevent the strong growth of the ILS market in recent years. Nevertheless, there is untapped potential since “regulatory developments could lead to more adequate treatment of risk transfer and, thus, have a favorable impact on the use of ILS” (see Swiss Re, 2009). More specifically, the introduction of Solvency II should be an important catalyst, as it improves the instruments’ regulatory recognition and facilitates capital relief (see, e.g., Artemis, 2015c). The Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS) wrote that “under the new Solvency II framework, European insurance and reinsurance undertakings can use securitization in the same way as they use reinsurance to meet their capital requirements, which should have a positive effect on supply and facilitate the development of the insurance securitization market” (see CEIOPS, 2009). In particular, ILS are now incorporated into the calculation of the solvency ratio of insurance companies, thus decreasing the Solvency Capital Requirement in the same way as traditional reinsurance (see, e.g., Dittrich, 2010). Hence, according to both industry professionals and policymakers, the new regulatory framework

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1. Apart from the prevailing regulatory regime, insurance companies also need to consider accounting standards, as well as the treatment of ILS by rating agencies. Under International Financial Reporting Standards (IFRS) and U.S. generally accepted accounting principles (GAAP), most ILS are treated as reinsurance (see, e.g., Swiss Re, 2009).

could further fuel the expansion of the ILS market. A crucial question is, however, whether insurance companies are able to account for ILS through the Solvency II standard formula or whether a more complex internal model is required. In the latter case, the instrument would remain unattractive for smaller insurance companies. The fifth quantitative impact study conducted by CEIOPS (2010) mentioned that “[...] when a risk mitigation technique includes basis risk, the insurance risk mitigation instruments should only be allowed in the calculation of the SCR with the standard formula, if the undertaking can demonstrate that the basis risk is either not material compared to the mitigation effect, or if the risk is material that the basis risk can be appropriately reflected in the SCR.”

The literature on ILS and regulation is generally scarce. An early advance was made by Cummins (2008), who suggested that an explicit inclusion of the financial strength of reinsurance providers into regulatory capital requirements would modernize solvency regulation in general and provide a substantial upswing to ILS markets. Similarly, Cummins and Weiss (2009) identified both the regulatory and the accounting treatment of ILS as major impediments for further growth of the alternative capital. In their view, a major issue for many ILS structures is that regulators are not prepared to grant sponsors the advantages of reinsurance accounting and solvency capital relief. Hence, a resolution to these obstacles would clearly benefit the market for ILS. Furthermore, Eling and Pankoke (2016) evaluate the contribution of the insurance sector to systemic risk. Based on their analysis, they conclude that ILS products are a valuable backstop for sponsors, since they tap into the financial markets to allow for the diversification of large insurance risks such as natural catastrophes or pandemics on a global scale. Finally, Smack (2016) focuses on the regulation of catastrophe bonds, which have been one of the fastest growing ILS market segments in recent years. She argues that regulators should address existing problems with regard to documentation, collateralization, accounting and tax treatment to promote a wider adoption of these instruments.

Against this background, we study the potential impact of Solvency II on the volume of ILS relative to traditional reinsurance. In doing so, we rely on a two-step approach. First, we develop a theoretical framework to identify the main factors that play a role in an insurance company’s decision between these alternative forms of coverage. Second, we run an empirical analysis to provide a concrete forecast for the outstanding ILS capital as a percentage of the global reinsurance limit at the end of 2018. We will proceed as follows. In the next section, we lay the theoretical foundation by introducing our model economy, solving the insurer’s profit maximization problem and identifying the key drivers of the demand for ILS. The empirical analysis is then conducted in the third section, including a description of our data, the employed regression model, the estimation procedure for the key parameters and the forecast of the ILS market development following the introduction of Solvency II. The fourth section contains economic implications and recommendations for investors, insurance and reinsurance companies. Finally, we present our conclusion in section five.

## 2. Theoretical Analysis

### 2.1 The Model Economy

#### Profit Function

Our model economy is inspired by the work of Kojien and Yogo (2016).<sup>2</sup> It consists of a representative property/casualty (P/C) insurance company  $I$ , which sells a quantity  $Q_t$  of an insurance policy for a premium  $P_t$  in period  $t$  and may purchase reinsurance coverage of volume  $RE_t$  or transfer a risk amount  $ILS_t$  to the capital markets. Both instruments allow it to reduce its exposure and, thus, the need for costly reserve capital. The respective prices (per unit of risk) are the reinsurance premium,  $PR_t$ , and the risk spread on the ILS instrument,  $R_t$ . Hence, the insurer exhibits the following period- $t$  profit function  $\Pi_t$ :

$$\Pi_t = P_t \cdot Q_t - V_t \cdot Q_t - \gamma_t R_t \cdot ILS_t - PR_t \cdot RE_t + V_t \cdot ILS_t + V_t \cdot RE_t, \quad (1)$$

where  $V_t$  is the actuarially fair value of the insurance policy (expected value of the liabilities).<sup>3</sup> The insurance company can influence its profit through the decision variables  $P_t$ ,  $ILS_t$  and  $RE_t$ . However, it bases its decisions on a subjective ILS price  $\gamma_t R_t$  instead of the market price  $R_t$ . The coefficient  $\gamma_t \geq 1$  represents the insurer's individual assessment of risk mitigation through ILS relative to traditional reinsurance.<sup>4</sup> It captures the ILS experience of the firm, as well as the regulatory recognition of such coverage. At the same time, it indirectly allows potential advantages of traditional reinsurance such as underwriting assistance and advisory services to enter the model. For  $\gamma_t = 1$ , ILS and traditional reinsurance are perfect substitutes.<sup>5</sup> For  $\gamma_t > 1$ , in contrast, spending one dollar on ILS coverage is less attractive than spending one dollar on traditional reinsurance. As an example, consider an insurance company that aims to transfer some of its natural catastrophe risk to the capital markets or to a reinsurance company. Assume that the insurance company has little experience with ILS and is unsure about their regulatory treatment. In contrast, it has strong ties with its reinsurer and heavily relies on the advisory services of the latter. The insurance company thus subjectively perceives ILS to be more expensive than reinsurance, even if both instruments have the same objective price. It exhibits a  $\gamma_t > 1$ .<sup>6</sup>

2. An overview of the notations for our theoretical framework can be found in the Appendix.

3. For the sake of simplicity, we abstain from modelling operating costs of the insurance company.

4. In other words, traditional reinsurance acts as a numeraire good.

5. This implies that both instruments are equally well understood by the insurer and lead to exactly the same capital relief.

6. The provision of underwriting assistance and other technical services by reinsurance companies are often mentioned as additional benefits of a reinsurance contract. The price of the



### The Subjective ILS Price Coefficient $\gamma_t$

Data from Guy Carpenter (2008) regarding the number and volume of first-time and repeated sponsors covering the years 1997 to 2007 provides support for our assumption of a subjective ILS price. While in the early years up to 2004, the issuance volume by first-time issuers remained often well below \$800 million and the market was dominated by repeat issuers, this changed between 2005 and 2007. The strong growth in first-time issuance has additionally been fueled by Hurricane Katrina, which led to a sharp increase in U.S. property-catastrophe reinsurance rates (see, e.g., Hartwig, 2012). Due to this hard reinsurance market, the industry likely became more comfortable with the use of ILS as a substitute for traditional contracts. In 2007, the issuance volume of first-time issuers grew significantly and reached \$3.5 billion. This development indicates that, over time, more and more insurance companies became familiar with ILS, implying that the subjective price of the instrument decreased. In the empirical analysis, we will see that this period coincides with a sharp decline in our estimated  $\gamma_t$ . (See Figure 2.) Consequently, Guy Carpenter (2008) highlighted that ILS were becoming mainstream. For the sake of completeness, it should be noted that the learning process associated with ILS was not limited to the sponsor side. In the early days of the market, investors were also reluctant to engage in the ILS market. Their skepticism led to the emergence of a novelty premium in returns (see Bantwal and Kunreuther, 2000).<sup>7</sup>

### Convex Marginal Costs for Traditional Reinsurance

Under the current setup, either reinsurance coverage strictly dominates ILS ( $PR_t < \gamma_t R_t$ ) or vice versa ( $PR_t > \gamma_t R_t$ ). Hence, it can never be optimal to use both instruments at the same time. This is clearly not what we observe in reality. To allow for coexistence of reinsurance and ILS within a single insurance company, we thus assume that the marginal cost curve for traditional reinsurance is convex. In other words, the price ( $PR_t$ ) is a function of the quantity purchased ( $RE_t$ ), and the first-order derivative of the price function can be expressed as:

$$\frac{\delta PR_t(RE_t)}{\delta RE_t} = \begin{cases} \leq 0, & RE_t \leq RE_t^* \\ > 0, & RE_t > RE_t^* \end{cases} \quad (2)$$

The marginal costs are decreasing until quantity  $RE^*$  is reached. From this point on, they begin to increase. According to Froot and Stein (1998), a U-shaped marginal cost curve makes theoretical sense, as reinsurers face financing constraints that render larger coverages more expensive. Similarly, Froot and O'Connell (1999) argue that capital market imperfections "raise the marginal costs

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latter can, thus, be seen as the cost for the whole package, including, but not limited to, the transfer of risk (see, e.g., Gibson et al., 2014).

7. This is consistent with the results of Braun et al. (2013), who show that experience and expertise are key determinants of insurers' demand for cat bond investments.

at which reinsurers are able to offer successively greater exposure protection to insurers.” In contrast to individual reinsurance companies, risk transfer solutions that tap into the financial markets are associated with a lower cost of capital and are nowadays virtually unconstrained in terms of volume (see, e.g., Gibson et al., 2014). We, therefore, assume that the marginal costs of ILS are constant. In such a setting, insurance companies will have an incentive to cover lower loss layers through traditional reinsurance and higher layers (low- frequency, high-severity events) through ILS.

### Balance Sheet Dynamics

Since a major purpose of risk management instruments is capital relief, we are now going to model the effects of traditional reinsurance and ILS on the capital requirements of the insurance company under Solvency II. To this end, we first need to describe how the balance sheet of the insurance company evolves from one period to another. The change in the liabilities of the insurance company in period  $t$ ,  $\Delta L_t$ , can be described as follows:

$$\Delta L_t = V_t(Q_t - RE_t - ILS_t). \quad (3)$$

Therefore, the liabilities of the insurance company grow whenever the actuarially fair value of the written insurance business is larger than the actuarially fair value of the ceded insurance business. Selling policies generates revenue, while ceding risk to a reinsurance entity or to the financial markets generates costs. Both effects are reflected in the change of the insurer’s assets in period  $t$ ,  $\Delta A_t$ :

$$\Delta A_t = P_t \cdot Q_t - \gamma_t R_t \cdot ILS_t - PR_t \cdot RE_t. \quad (4)$$

While conducting its activities, the insurance company has to comply with the statutory capital requirements under Solvency II,  $K_t^*$ , imposed by the regulator. The latter are based on two measures: 1) the Solvency Capital Requirement (SCR); and 2) the Minimum Capital Requirement (MCR). For the purpose of simplicity, we focus on SCR, which is set above MCR (see, e.g., European Commission, 2015).<sup>8</sup> Given the dynamics for the assets and liabilities, the firm’s available regulatory capital in period  $t$ ,  $K_t$ , is defined as:

$$K_t = A_t - (1 + \rho)L_t. \quad (5)$$

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8. The European Commission (2015) defines SCR and MCR as follows: “The Solvency Capital Requirement is a level of financial resources that enables insurers to absorb significant losses and that gives reasonable assurance to policyholders and beneficiaries that payments will be made as they fall due. The Minimum Capital Requirement is a lower, minimum level of security below which the amount of insurers’ financial resources should not fall, otherwise supervisory authorities may withdraw authorisation.”

The risk charge  $\rho$  ( $> 0$ ) is the decision variable of the regulator and inflates the insurer's liabilities to create an additional capital buffer for the absorption of shocks. The higher it is, the tighter the regulation. Due to the low frequency of changes in regulatory standards, we are going to treat  $\rho$  as a constant. By decreasing the liabilities  $L_t$ , both reinsurance and ILS can have a positive impact on the available capital  $K_t$ .

### Cost of Regulatory Friction

If the insurance company's capital  $K_t$  falls below  $K_t^*$ , a costly intervention by the regulator is triggered. Costs are particularly high for very low levels of capital (e.g., close to MCR) as in this case the regulator may withdraw the insurer's authorization to operate (see European Commission, 2015). We model these regulatory costs in line with Kojien and Yogo (2016) through a function  $C_t$ , which depends on the capital level  $K_t$  held by the insurance company:

$$C_t = C(K_t). \quad (6)$$

$C_t$  exhibits the following first and second-order derivatives:

$$\frac{dC_t}{dK_t} < 0, \quad (7)$$

$$\frac{d^2C_t}{dK_t^2} > 0. \quad (8)$$

Hence, an increasing level of capital  $K_t$  reduces regulatory frictions, while low levels of capital are associated with costly regulatory intervention by the supervisory body.

## 2.2 Insurance Company's Maximization Problem

### Firm Value Function

Taking these costs into account leads to the following firm value function  $J_t$ :

$$J_t = \Pi_t - C_t + E_t[d_{t+1} \cdot J_{t+1}], \quad (9)$$

where  $d_{t+1}$  is the stochastic discount factor. In other words, firm value consists of current profits minus regulatory costs plus the present value of expected future profits. The latter are summarized in the firm value at time  $t + 1$ , which is also influenced by the level of capital held today. The insurance company maximizes  $J_t$  by deciding on the price  $P_t$ , the amount of traditional reinsurance  $RE_t$  and the amount of risk transferred to the capital markets  $ILS_t$ .

### Optimal Insurance Price

The first-order condition for the insurance price can be obtained by taking the first partial derivative with regard to  $P_t$  and applying the envelope theorem:

$$\frac{\delta J_t}{\delta P_t} = \frac{\delta \Pi_t}{\delta P_t} - \frac{\delta C_t}{\delta K_t} \cdot \frac{\delta K_t}{\delta P_t} + E_t \left[ d_{t+1} \cdot \frac{\delta J_{t+1}}{\delta K_t} \cdot \frac{\delta K_t}{\delta P_t} \right] = 0. \quad (10)$$

Subtracting  $\frac{\delta \Pi_t}{\delta P_t}$  and dividing both sides by  $\frac{\delta K_t}{\delta P_t}$  yields

$$-\frac{\delta \Pi_t}{\delta P_t} \cdot \left( \frac{\delta K_t}{\delta P_t} \right)^{-1} = \underbrace{-\frac{\delta C_t}{\delta K_t} + E_t \left[ d_{t+1} \cdot \frac{\delta J_{t+1}}{\delta K_t} \right]}_{c_t}, \quad (11)$$

with  $c_t$  being the marginal costs of regulatory friction. The latter measure the reduction in profit that the insurance company is willing to accept in order to raise its capital level by one dollar (see Kojien and Yogo, 2016). Inserting in (10), we obtain

$$\frac{\delta J_t}{\delta P_t} = \frac{\delta \Pi_t}{\delta P_t} + c_t \cdot \frac{\delta K_t}{\delta P_t} = 0, \quad (12)$$

which describes how changes in the insurance price influence the firm value  $J_t$ .

### Optimal Traditional Reinsurance

Employing the definition of  $c_t$ , we can write the first-order condition for traditional reinsurance as follows:

$$\frac{\delta J_t}{\delta RE_t} = \frac{\delta \Pi_t}{\delta RE_t} + c_t \cdot \frac{\delta K_t}{\delta RE_t} = 0. \quad (13)$$

When deriving (9) explicitly, we obtain

$$V_t - PR_t(RE_t) - PR_t'(RE_t) \cdot RE_t + c_t(-PR_t(RE_t) - PR_t'(RE_t) \cdot RE_t + (1 + \rho)V_t) = 0. \quad (14)$$

Rearranging yields the following expression for the reservation price of traditional reinsurance:

$$PR_t^r(RE_t) = \left( \frac{1 + c_t(1 + \rho)}{1 + c_t} \right) V_t - PR'_t(RE_t) \cdot RE_t, \quad (15)$$

where  $PR_t^r(RE_t)$  represents the insurer's reservation price for traditional coverage. The firm, therefore, purchases reinsurance as long as  $PR_t$  is smaller than or equal to  $PR_t^r(RE_t)$ . Equation (15) also shows how the reservation price behaves, given changes in its various components. More specifically, it increases in the marginal costs of regulatory friction ( $c_t$ ) and in the regulator's risk charge for the capital requirements ( $\rho$ ). In addition, marginal reinsurance costs have an impact. Whether the corresponding relationship is positive or negative depends on the quantity of coverage purchased. Due to the convex cost function  $PR_t(RE_t)$ , the reservation price for traditional reinsurance will drop below the reservation price for ILS once some non-negative quantity  $RE_t^*$  is exceeded.

### Optimal Reinsurance through ILS

In the same spirit, we can write the first-order condition for ILS coverage as follows:

$$\frac{\delta J_t}{\delta ILS_t} = \frac{\delta \Pi_t}{\delta ILS_t} + c_t \cdot \frac{\delta K_t}{\delta ILS_t} \stackrel{!}{=} 0. \quad (16)$$

Explicitly calculating the partial derivatives from (9), we obtain

$$V_t - \gamma_t R_t + c_t(-\gamma_t R_t + (1 + \rho)V_t) \stackrel{!}{=} 0. \quad (17)$$

Hence, the ILS reservation price,  $R_t^r$ , is given by:

$$R_t^r = \left( \frac{1 + c_t(1 + \rho)}{\gamma_t(1 + c_t)} \right) V_t. \quad (18)$$

It is now apparent that the willingness to pay for ILS depends on four factors: 1) the actuarially fair value of the insurance policy ( $V_t$ ); 2) the strictness of the regulatory capital requirements ( $\rho$ ); 3) the marginal costs of regulatory frictions ( $c_t$ ); and 4) the subjective ILS price coefficient ( $\gamma_t$ ).<sup>9</sup>

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9. Note that if the insurance company already has a sufficiently high amount of traditional reinsurance in place,  $c_t$  and hence the willingness to pay for ILS will be low. Therefore, the reservation price for ILS depends indirectly (through  $c_t$ ) on the amount of traditional reinsurance and vice versa.

### The Relationship Between Reinsurance and ILS

Finally, we compare the reservation prices for reinsurance and ILS:

$$\left(\frac{1 + c_t(1 + \rho)}{1 + c_t}\right)V_t - PR'_t(RE_t) \cdot RE_t \geq \left(\frac{1 + c_t(1 + \rho)}{\gamma_t(1 + c_t)}\right)V_t \quad (19)$$

Since  $\gamma_t$  plays a crucial role in Equation (19), it is a key driver of the relative demand for the two risk mitigation instruments. For  $\gamma_t = 1$ , reinsurance and ILS are perfect substitutes. Thus, the only decisive factor are the marginal reinsurance costs  $PR'_t(RE_t)$ . In contrast, if  $\gamma_t > 1$  (e.g., due to additional benefits provided by the reinsurer), ILS are perceived to be less attractive than reinsurance. Consequently, the marginal costs for the latter need to be high so that the insurer also purchases ILS coverage.

As discussed above, regulatory acceptance has the potential to improve the insurance company's perception of ILS compared to traditional reinsurance. We, therefore, expect a decline in  $\gamma_t$  associated with the recent introduction of Solvency II. According to our model framework, we should, in turn, witness an acceleration in the growth of ILS relative to traditional reinsurance. Based on this theory, we will now conduct an empirical analysis with the goal of forecasting the future balance of volumes ceded in the two markets.

## 3. Empirical Analysis

### 3.1 Regression Model

We begin by developing an econometric framework for the estimation of the key variables that have been identified based on our theoretical model. Since  $c_t$  and  $\rho$  are the same for both ILS and reinsurance, we ignore them in favor of parsimony. Hence, our empirical analysis is centered on the market prices per unit of risk,  $R_t$  and  $PR_t$ , as well as the subjective ILS price coefficient  $\gamma_t$ . More specifically, the ratio of alternative reinsurance capital to total reinsurance capital,  $ILS_t/(RE_t + ILS_t)$ , will be described by the following linear regression:<sup>10</sup>

$$\frac{ILS_t}{RE_t + ILS_t} = \alpha + \beta \left(\frac{R_t}{PR_t} - 1\right) + \epsilon_t, \quad (20)$$

10. By considering the sum of traditional and alternative capital, we accommodate the fact that Solvency II will improve the sponsors' ability to account for ILS as reinsurance, thus being able to treat the two risk transfer channels as real substitutes.

with intercept  $\alpha$ , regression coefficient  $\beta$ , and error term  $\epsilon_t$ .<sup>11</sup> Assuming a well-behaved empirical demand function, the volume ratio ( $ILS_t/(RE_t + ILS_t)$ ) must decrease in the price ratio ( $R_t/PR_t - 1$ ). Therefore, we expect the estimate for  $\beta$  to turn out negative. As the time-varying parameter  $\gamma_t$  in our theoretical model by definition summarizes all determinants of the relative attractiveness of the two instruments other than market prices, its mean will be captured by  $\alpha$  and its variation by  $\epsilon_t$ .<sup>12</sup> The relationship, however, is an inverse one: A reduction of  $\gamma_t$ , implying that the representative insurance company perceives ILS to be more appealing, must lead to an increase in the ILS volume relative traditional reinsurance. We, therefore, obtain our estimate  $\hat{\gamma}_t$  by halving the reciprocal of the sum of the estimate for the intercept  $\hat{\alpha}$  and the fitted residuals  $\hat{\epsilon}_t$ :

$$\hat{\gamma}_t = \frac{1}{2} \cdot \frac{1}{(\hat{\alpha} + \hat{\epsilon}_t)} = \frac{1}{2} \cdot \left( \frac{ILS_t}{RE_t + ILS_t} - \hat{\beta} \left( \frac{R_t}{PR_t} - 1 \right) \right)^{-1}. \quad (2)$$

Hence, the simple regression model in (1) is aligned with our theory from the previous section. In case both instruments exhibit exactly the same objective price ( $R_t = PR_t$ ), the dependent variable is solely determined by  $\alpha + \epsilon_t$ .<sup>13</sup> If additionally  $\gamma_t = 1$ , both instruments have the same volume ( $ILS_t = RE_t$ ).

### 3.2 Dataset

Our dataset has been compiled based on several sources and covers the period from 2002 to 2016. Whenever possible, we performed cross checks to ensure reliability. We measure the variable  $ILS_t/(RE_t + ILS_t)$  through the ratio of alternative capital in percent of the global catastrophe reinsurance limit, as published by Guy Carpenter (2016a).<sup>14</sup> Their reported alternative capacity is an aggregate measure, comprising the volumes of cat bonds, Industry Loss Warranties (ILWs), sidecars and collateralized reinsurance.<sup>15</sup>

11. The linear relationship between the two variables has been chosen based on a scatterplot. Although the  $R^2$  of the trendline can be further improved by resorting to higher-order polynomial functions, this is not advisable due to the limited degrees of freedom offered by our short data series.

12. As a corollary, we do not need to include any further control variables.

13. This is why, in the regression model, the actual price ratio  $R_t/PR_t$  has been corrected by minus 1.

14. All figures have been cross-checked with data from the annual reinsurance market report by AON Beneld (2017). Although the individual observations do not match perfectly, they are highly correlated.

15. AON Benfield additionally provides a breakdown across different types of ILS, showing that collateralized reinsurance has outgrown cat bonds to become the largest ILS segment in 2013.

**Table 1: Descriptive Statistics (2002–2016)**

T = 15	Mean	Min.	Max.
$ILS_t/(RE_t + ILS_t)$	0.11	0.05	0.18
$R_t$	3.65	2.35	5.42
$PR_t$	4.51	3.37	5.58
$R_t/PR_t - 1$	-0.19	-0.34	0.17

Table 1 contains the mean, minimum and maximum values of the annual time series between 2002 and 2016 of the following four variables: ratio of alternative capital in percent of the global catastrophe reinsurance limit ( $ILS_t/(RE_t + ILS_t)$ ), ILS spread multiple ( $R_t$ ), reinsurance price per unit of risk ( $PR_t$ ) and ratio of ILS to reinsurance prices per unit of risk ( $R_t/PR_t - 1$ ).

Furthermore, an operationalization of  $R_t/PR_t - 1$  has to rely on a measure for the reinsurance price per unit of risk ( $PR_t$ ) and the ILS price per unit of risk ( $R_t$ ). First, we construct  $PR_t$  based on the Rate on Line Index by Guy Carpenter (2016b), which captures the annual growth rates of the global property catastrophe reinsurance prices. As a starting point for the time series, we use the average U.S. catastrophe reinsurance premium per unit of ceded exposure for the year 1990 as published by Froot and O’Connell (1999).<sup>16</sup> We deem this to be a reasonable approximation because the U.S. is the largest property-catastrophe reinsurance market in the world (see, e.g., Standard & Poor’s, 2014).<sup>17</sup> Second,  $R_t$  is proxied by the ILS multiple, i.e., the ratio of ILS spread to expected loss. Time series of averages for both variables across all transactions in a given year are reported by Artemis (2016).<sup>18</sup>

Table 1 contains descriptive statistics for our data set. The mean of  $ILS_t/(RE_t + ILS_t)$  equals 0.11, indicating that alternative capital averaged 11 percent of overall reinsurance capital over the period under investigation. Traditional reinsurance capital, in turn, made up 89% of the total. Moreover, the mean of the ILS multiple ( $R_t$ ) is 3.65. Therefore, the coupon spread that ILS investors received on average equaled 3.65 times the expected loss that they assumed over the given time period. This compares to a mean reinsurance price per unit of risk ( $PR_t$ ) of 4.51. The latter implies that between 2002 and 2016, ceding one unit of catastrophe risk through traditional contracts was associated with an average annual premium of 4.51 times the actuarial expected loss. Since the average risk-adjusted ILS price was lower than the average risk-adjusted price for traditional reinsurance, the price ratio ( $R_t/PR_t - 1$ ) exhibits a negative mean. Figure 1 shows the time series of both the volume ratio ( $ILS_t/(RE_t + ILS_t)$ ) and the price ratio

16. It should be noted that this premium is “[...] based on the contract prices and exposures for four insurers that purchased reinsurance through Guy Carpenter in every year from 1975 to 1993.” In addition, Froot and O’Connell (1999) state that “the series are representative of the behavior of prices and quantities for the other insurers” in their database.

17. To ensure robustness, we performed a cross-check with a time series of global reinsurance premium volumes divided by insured losses that has been provided by Swiss Re (2015a). The figures of both approximations are largely consistent.

18. Artemis.bm is a well-known industry website specializing in ILS.



$(R_t/PR_t - 1)$ . The former increased quite steadily over the years, peaking at almost 18% in 2016. The only large drop can be observed between 2007 and 2008 and coincides with the bankruptcy of Lehman Brothers at the peak of the financial crisis.<sup>19</sup>

Figure 1: Volume Ratio and Price Ratio (2002–2016)

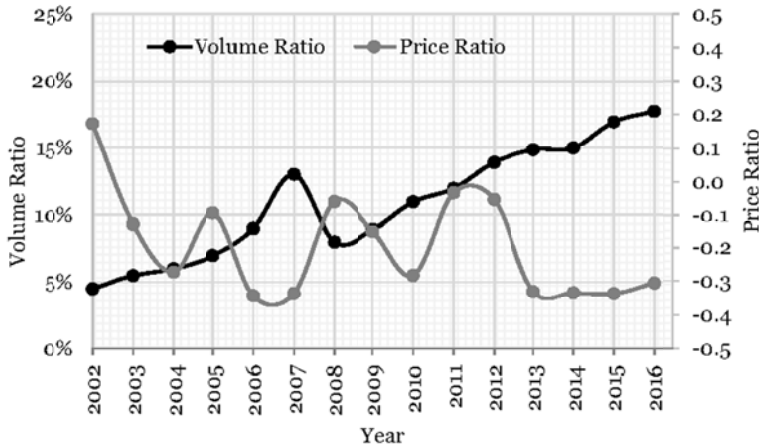


Figure 1 shows the time series of the ratio of alternative capital in percent of the global catastrophe reinsurance limit ( $ILS_t/(RE_t + ILS_t)$ ) and the ratio of ILS prices per unit of risk to reinsurance prices per unit of risk ( $R_t/PR_t - 1$ ). These two variables form the basis for our time series regression and the associated estimation of  $\gamma_t$ .

### 3.3 Estimation of $\beta$ and $\gamma_t$

We estimate the regression model (21) by means of OLS. Accordingly,  $\hat{\beta}$  represents the average effect of the price ratio on the volume ratio over time. Due to competitive pressures in the insurance market, it is fair to assume that the industry-level impact of relative prices on the decision between the two risk mitigation instruments is constant over time. In contrast,  $\hat{\gamma}_t$  needs to be time-varying since the ILS experience of the representative insurance firm, the regulatory recognition of ILS coverage and the perceived advantages of traditional reinsurance may change over the years. Therefore, we calculate the time series for  $\hat{\gamma}_t$  as (two times) the reciprocal of the sum of the intercept  $\hat{\alpha}$  and the fitted residuals  $\hat{\epsilon}_t$ . Based on the resulting historical evolution of  $\gamma_t$ , we will be able to predict the impact of Solvency II on the balance between reinsurance and ILS.

19. Lehman Brothers acted as a total return swap counterparty in four cat bond structures, which suffered losses after its default in September 2008. Due to this event, issuance volumes in the cat bond market slumped, causing the observed reduction of the alternative capital as a percentage of the overall reinsurance capital (see, e.g., Braun, 2016).

Table 2 contains the OLS results. A White-Test confirms that the variance of error terms is homoskedastic. As expected,  $\hat{\beta}$  turns out negative and statistically significant, implying that an increase in the price ratio ( $R_t/PR_t - 1$ ) leads to a decrease in the volume ratio ( $ILS_t/(RE_t + ILS_t)$ ). In other words, the ILS market tends to expand relative to the traditional reinsurance market whenever ILS coverage becomes cheaper. Furthermore, the corresponding time series for  $\hat{\gamma}_t$  has been plotted in Figure 2. Consistent with our theory,  $\hat{\gamma}_t$  exhibits a decreasing trend over time, which can be attributed to a learning process of the representative insurance company. The latter lowers its subjective costs of hedging via ILS instruments.

**Table 2: OLS Regression Results**

Regressors	$ILS_t/(RE_t + ILS_t)$
Intercept ( $\alpha$ )	0.0785*** (-2.5294)
Price Ratio ( $R_t/PR_t - 1$ )	-0.1586** (5.1529)
$T$	15
$R^2$	0.3298

Table 2 contains the OLS regression results. The dependent variable is the ratio of alternative capital in percent of the global catastrophe reinsurance limit ( $ILS_t/(RE_t + ILS_t)$ ) and the independent variable is the ratio of ILS prices per unit of risk to reinsurance prices per unit of risk ( $R_t/PR_t - 1$ ). Heteroskedasticity is ruled out by means of a non-significant White-Test: Chi-sq(2): 0.019, p-value: 0.99. The  $t$ -statistics are shown in parentheses. Significance levels are denoted as follows: \* ( $p < 0.1$ ), \*\* ( $p < 0.05$ ), \*\*\* ( $p < 0.01$ ).

Due to the occurrence of high-impact, low-probability events such as the tsunami in the Indian Ocean, the catastrophe year 2004 was exceptionally severe (see, e.g., Swiss Re, 2005). Consequently, the sharp drop of  $\hat{\gamma}_t$  following in 2005 might have been the result of an increased desire for coverage in the insurance industry. It is quite likely that in this challenging market environment, more resources were spent on acquiring the necessary knowledge to unlock the potential of ILS. A further indication for this assumption is given by Guy Carpenter (2008), which reports that between 2005 and 2007, first-time sponsors were responsible for a substantial part of the increased ILS issuance activity.

The first wipeout of a cat bond after Hurricane Katrina marked another important milestone in the evolution of  $\hat{\gamma}_t$ . According to Cummins and Weiss (2009), the wipeout of *KAMP RE* had rather positive implications as “the smooth settlement of the bond established an important precedent in the market, showing that cat bonds function as designed, with minimal confusion and controversy between the sponsor and investor.” Therefore, it is not surprising that  $\hat{\gamma}_t$  decreased substantially from 2004 to 2005, as the insurance industry received a positive signal regarding the reliability of ILS.

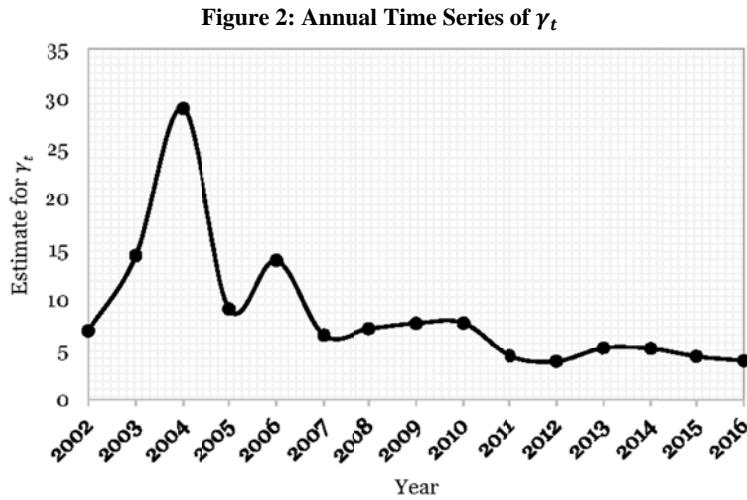


Figure 2 shows the estimated time series of the subjective price factor  $\hat{\gamma}_t$  between 2002 and 2016. It has been calculated as the reciprocal of (two times) the sum of the intercept  $\hat{\alpha}$  and the fitted residuals  $\hat{\epsilon}_t$ . The decreasing trend is in line with our expectation that the insurance industry has gone through a constant learning process with regard to the usage of ILS as a risk mitigation tool.

Finally, it is worth pointing out that the default of Lehman Brothers in 2008 only led to a slight upward movement in  $\hat{\gamma}_t$ , although it caused the technical default of four outstanding cat bonds (see, e.g., Cummins and Weiss, 2009). In fact, ILS emerged stronger from this setback, as the industry was able to quickly address the credit risk issues that surfaced during the financial crisis (see, e.g., AON Capital Markets, 2008). The resulting structural improvements of cat bonds are a likely reason for the further decrease of  $\hat{\gamma}_t$  in the following years.

### 3.4 Forecasting the Model

Having developed an understanding of the historical evolution of  $\hat{\gamma}_t$  between 2002 and 2016, we now aim to forecast its future development and, in turn, the market share of ILS relative to traditional reinsurance. To this end, we rely on the well-known Box-Jenkins method for time series analysis (see, e.g., Shumway and Stoffer, 2010). The negative trend of  $\hat{\gamma}_t$ , which can be observed in Figure 2, suggests non-stationarity. We confirm this conjecture by means of a Dickey-Fuller test. In addition, the up and down movements in the time series hint at the presence of a cyclical component. Based on these findings, we decide to employ the Hodrick-Prescott (HP) filter, which decomposes the time series into a trend and a cyclical component (see, e.g., Mathworks, 2015).<sup>20</sup>

20. The HP filter is often applied in the context of Business Cycle Analysis (see Hodrick and Prescott, 1997). In contrast to the method of differencing, it is well suited for shorter time

We apply the HP-Filter to the log-transformed  $\hat{y}_t$ -series, given a smoothing parameter  $\lambda$  of 100 as commonly applied in time-series econometrics (see, e.g., Mathworks, 2015). The resulting series for the cyclical component is stationary so that we can proceed by estimating different ARMA(p,q) models. The Bayesian information criterion (BIC) and the Akaike information criterion (AIC) suggest that an ARMA(3,3) representation (with constant) exhibits the best fit. The results for this model are presented in Table 3. We continue with an analysis of the corresponding residuals. Based on a Ljung-Box test, we ascertain that autocorrelation is not an issue. Moreover, unreported QQ-plots of the residuals indicate that they are almost normally distributed. Hence, there is no need for further model refinements.

**Table 3: Results for ARMA(3,3) Model with HP-Filter**

Parameters	Estimate	SE	t-stat.	p-value
Constant	-0.0072	0.0004	-16.4760	0
AR(1)	-0.2012	0.0001	-1860.3500	0
AR(2)	0.2785	0.0028	98.4396	0
AR(3)	-0.1552	0.0003	-614.6897	0
MA(1)	-1.2917	0.0768	-16.8105	0
MA(2)	-3.9073	0.0706	-55.3481	0
MA(3)	-6.4398	0.5105	-12.6148	0
$R^2$	0.9663		AIC	-6.4704
Adjusted $R^2$	0.8988		BIC	-6.1662
Standard Error	0.0476		HQC	-6.5329
F-Statistic	14.3284		Pr(F-stat.)	0.0260

Table 3 contains the results for the ARMA(3,3) model fitted to the cyclical component of the time series of  $\hat{y}_t$ , as generated by the HP filter. All coefficients, including the constant, turn out statistically significant. The  $R^2$ -figure indicates a high degree of explained variance. Both the Bayesian Information Criterion (BIC) and the Akaike Information Criterion (AIC) suggest a superior fit compared to alternative ARMA(p,q) specifications.

In a next step, we forecast values for  $\hat{y}_t$  two years into the future, distinguishing between the cyclical and the trend component. The forecast for the cyclical component relies on the ARMA(3,3) representation, while the trend component is assumed to pursue the same linear trajectory as in the previous periods. More specifically, the latter exhibited an average annual decrease of 0.09 between 2002 and 2016. This describes the learning process of the insurance industry and the steady advancement of ILS instruments. The resulting  $\hat{y}_t$ -values amount to 2.90 for 2017 and 2.61 for 2018 and represent our expectation without the impact of Solvency II. These results will serve as the baseline scenario for the analysis in the next section.<sup>21</sup>

series because it avoids the loss of observations.

21. Although Solvency II came into force in January 2016, some insurers may have adapted

### 3.5 Scenario Analysis for $\hat{\gamma}_t$

Building on the baseline scenario without Solvency II as introduced above, we will now consider potential positive and negative consequences of the new regulation for  $\hat{\gamma}_t$  and, in turn, the volume ratio. On the one hand, a positive impact could arise due to an improved regulatory treatment. On the other hand, a negative effect could be caused by relatively high practical hurdles for a full recognition of ILS. In both cases, we would expect to see a change in the trend of  $\hat{\gamma}_t$ . There are two ways to incorporate such a change into our model forecast. First, it could be treated as a shock, which instantly disrupts the historical path in the form of a jump. Second, one could assume that the transformational potential of Solvency II will unfold over some period of time, thus changing the slope of the trend. We opt for the second alternative, as we did not detect any signs of a jump since the introduction of the new framework in January 2016. In addition, we will assume that any structural breaks in the trend pattern will be a temporary phenomenon. By the end of 2018, the impact of the new regulation should have fully kicked in. Hence, in the absence of further groundbreaking events in this market, we deem it reasonable that within three years of Solvency II being in place, the trend component will return to its original trajectory—at least in the short term. (See Figure 3.)

In Table 4, we develop a range of scenarios for the change in the trend of  $\hat{\gamma}_t$ . As there are no precedents to Solvency II in the history of ILS, we need to rely on expert judgment. Instruments with an indemnity trigger will be fully recognized under the Solvency II standard formula (see Swiss Re, 2009). In addition, the 5th Quantitative Impact Study (QIS5) indicates that mitigation instruments without basis risk or those for which it can be shown to be immaterial may be used under the standard formula (see CEIOPS, 2010). This currently holds for the largest ILS market segment of collateralized reinsurance and for around 60% of the second largest segment of cat bonds, which are based on indemnity triggers (see Artemis, 2015b; AON Benfield, 2017). However, even for the remaining 40% of cat bonds, as well as other types of ILS with nonindemnity triggers, a deterioration of the regulatory treatment under the new rules is hardly conceivable.

We, therefore, deem it to be extremely unlikely that Solvency II will reverse the normal trend of  $\hat{\gamma}_t$  and adopt a slight slowdown as the worst-case scenario. More specifically, we assume that relatively high practical hurdles for a full regulatory recognition of ILS instruments, such as the necessity to run a complex internal model, could lead to an absolute annual change in the  $\hat{\gamma}_t$ -trend of merely 0.5 times the one that occurs in the baseline scenario (i.e., -0.045 instead of -0.09).

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their operations beforehand. This, however, refers to the models for economic capital and internal processes. The improved regulatory recognition of ILS, in contrast, could not be exploited before the actual launch of the new framework. In addition, even after the new rules have been put in place, some uncertainty about the actual interpretation of the ILS rules ILS in practice remains to date. Hence, the long time period from 2002 to 2016 allows for the derivation of a clean baseline scenario.

The corresponding  $\hat{\gamma}_t$ -values amount to 2.97 for 2017 and 2.74 for 2018. Furthermore, our mean scenario is centered on a 1.5 times faster annual reduction in the  $\hat{\gamma}_t$ -trend (i.e., -0.14 instead of -0.09). This leads to  $\hat{\gamma}_t$ -values of 2.76 for 2017 and 2.38 for 2018. In the most optimistic scenario, we let the trend component of  $\hat{\gamma}_t$  decline 2.25 times as quickly as in the baseline scenario. Therefore, we obtain  $\hat{\gamma}_t$ -values of 2.58 for 2017 and 2.07 for 2018.

**Figure 3: Forecast of Trend and Cyclical Component Under Solvency II**

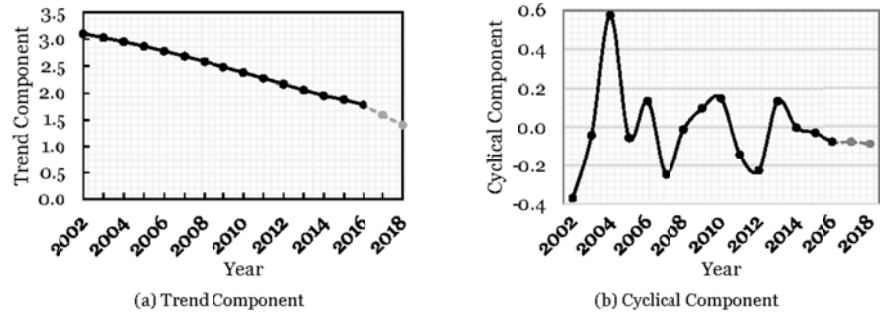


Figure 3 shows the trend component and the cyclical component of the subjective price factor  $\hat{\gamma}_t$ . The forecast values for 2017 and 2018 have been derived as follows. The trend component has been adjusted in line with the expected impact of Solvency II under the optimistic scenario (2x faster annual reduction than in the baseline scenario), and the cyclical component has been forecasted with the ARMA(3,3) model shown in Table 3.

In addition to these considerations, we vary the cyclical component by two equally-sized steps above and below its mean to generate five subscenarios for each value of the trend component. The resulting full range of outcomes for  $\hat{\gamma}_t$  in 2018 is displayed in Table 4 and lies between a minimum of 1.89 and a maximum of 3.14. Finally, we derive probabilities for the different  $\hat{\gamma}_t$ -scenarios based on a negatively-skewed Gumbel distribution with parameters  $\mu = 2.25$  and  $\sigma = 0.40$ .<sup>22</sup> In doing so, we ensure that outcomes for the subjective price factor  $\hat{\gamma}_t$  below the optimistic scenario and above the pessimistic scenario occur only in 10% of the cases. To put it differently, 80% of the probability mass is concentrated between these two scenarios. Based on this distribution, we are also able to make probabilistic statements about the future volume of ILS relative to traditional reinsurance.

22. To adequately represent our scenarios, we need a negatively skewed probability distribution with a mean well below the status quo value and 10% of the outcomes above the optimistic and below the pessimistic case, respectively. We found that the Gumbel distribution, which is commonly used in Extreme Value Theory, fulfills these requirements. However, any other distribution with similar characteristics could be employed as well.

**Table 4: Scenario Analysis for  $\hat{\gamma}_t$  in 2018**

Trend \ Cycle	1.69	<b>1.59</b>	1.50	1.36
0.00	3.14	2.86	2.60	2.26
-0.05	3.01	2.73	2.49	2.16
<b>-0.09</b>	2.87	<b>2.61</b>	2.38	2.07
-0.14	2.75	2.50	2.27	1.97
-0.18	2.63	2.39	2.17	1.89

Table 4 shows the range of outcomes for the subjective price factor  $\hat{\gamma}_t$  in 2018 based on the different scenarios for the trend and the cyclical component. For the trend component, the following four scenarios are considered: pessimistic (1.69), baseline (1.59), mean (1.50) and optimistic (1.41). For the cyclical component, we add two equally-sized steps above and below its mean (-0.09) to generate five subscenarios for each value of the trend component. The probabilities for all 20 outcomes are derived from a Gumbel distribution.

### 3.6 Probability Distribution for the Volume Ratio

We can now translate the values for  $\hat{\gamma}_t$  into volume ratios in 2017 and 2018. For this purpose, we employ the relationship shown in Equation (20) and assume that the price ratio stays on its historical average level.<sup>23</sup> Overall, the outcomes for 2018 lie between a minimum of 19% and a maximum of 28%. Figure 4 illustrates our four main scenarios. In the pessimistic scenario, we obtain volume ratios of approximately 19% in 2017 and 20% in 2018. Furthermore, the respective values in the baseline scenario are 20% in 2017 and 22% in 2018, and the mean scenario is associated with volume ratios of 21% in 2017 and 24% in 2018. Finally, the optimistic scenario leads to volume ratios of 22% in 2017 and 27% in 2018. Thus, we expect the volume ratio in 2018 to be approximately 10% higher than without Solvency II (compare mean and baseline scenario).<sup>24</sup>

Due to the shape of the Gumbel distribution for  $\hat{\gamma}_t$ , 80% of the potential outcomes for the volume ratio in 2018 are located between 20% and 27%. To translate the volume ratios into absolute figures, we will rely on approximations based on the overall market size (ILS plus reinsurance capital) of \$420 billion at year-end 2016 (see Guy Carpenter). Assuming that this figure will stay roughly constant, our most likely estimates for the ILS market range from \$85.93 billion to \$114.58 billion. The expected volume ratio of 24% in 2018 (mean scenario) corresponds to an ILS volume of around \$101.14 billion, which is \$8 billion higher than in the baseline scenario (without Solvency II) and corresponds to an increase of approximately \$27 billion compared to 2016.

23. Given the comments of industry experts, pricing for both reinsurance and ILS has reached a floor and could stay there for some time (see, e.g., Artemis, 2014, 2015a). Therefore, a constant price ratio does not seem to be a strong assumption.

24. The following calculation applies:  $24/22 = 1.10$ .

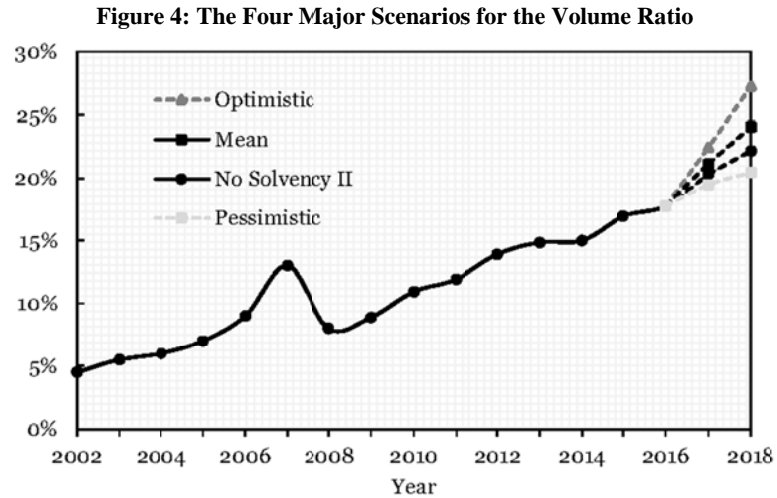


Figure 4 depicts the future evolution of the volume ratio (ILS as percentage of global reinsurance limit) in the four main scenarios. The baseline scenario is an extrapolation of the historical development without the impact of Solvency II. The optimistic scenario with only 10% of the probability mass above it describes a strong impact of Solvency II. The pessimistic scenario with 90% of the probability mass above it assumes a slightly negative impact of the new regulatory framework. Finally, the mean scenario depicts the expected development of the ILS market volume relative to traditional reinsurance under Solvency II.

## 4. Economic Implications

The expected increase in the volume of ILS relative to traditional reinsurance associated with Solvency II will have consequences for investors, insurers, reinsurers and regulators. In the following, we are going to provide some thoughts on how these groups might be affected. For investors, the range of available assets is likely to increase, leading to a gravitation of further capital towards the ILS market. Apart from that, we may expect a greater diversity of perils and geographies, allowing for an improved diversification of ILS portfolios. Consequently, dedicated ILS funds might become even more appealing to their clients (see, e.g., AON Benfield, 2015a). Finally, a broader investor base will probably also lead to a more liquid secondary market, thus increasing the attractiveness of tradable ILS such as cat bonds.

For insurance companies, it will be worth building up knowledge, as those who are adept at transferring risk via ILS might be able to outperform rivals without the same level of expertise. Furthermore, standardization, which might be triggered by the new regulatory requirements, could lead to lower costs and thus bring more first-time issuers into the market. Similarly, the expected growth of ILS may also enhance the bargaining power of insurers over reinsurers, implying that they can demand additional services or put pressure on the premiums. In general, ILS exhibit



a price advantage over traditional contracts because reinsurance companies exhibit a higher cost of capital (see, e.g., Cummins and Trainar, 2009). However, it is worth pointing out that prices for both instruments recently seem to have reached a lower bound (see, e.g., Artemis, 2014). This suggests that the ability of ILS to gain further market share through a reduction of the objective price will be limited in the next years.

Reinsurance companies will experience additional pressure on their market share. This is supported by a recent report of the rating agency Moody's, indicating that the number of traditional reinsurance contracts is in decline (see Moody's Investor Services, 2014). Also, AON Benfield (2015b) emphasizes that ILS have begun to progress into higher-margin lines, which represent the main profit pool for reinsurance companies. Given our forecast for the ILS market size, this tendency will probably increase. To cope with these developments, reinsurance companies will need to rethink their business models. AON Benfield (2015b) suggests that one solution is to offer better services and conditions to clients, implying an upward pressure on our subjective price factor  $\gamma_t$ . According to Moody's Investor Services (2014), it might be easier for large reinsurance companies to offer generous line sizes and a full product suite. Hence, some firms will pursue a growth strategy, while others will scale back their business or become acquisition targets. The consolidation of the reinsurance industry that we witnessed in the years 2014 and 2015 is, therefore, likely to continue (see, e.g., A. M. Best, 2015). The best solution for reinsurers to cope with the growing influence of alternative capital is not to fight it but to embrace it. AON Benfield (2015b), e.g., suggests that companies that are successful in incorporating ILS into their value proposition could be able to flourish in the new environment despite the increased competition. New activities could range from bridge covers between the issuance dates of cat bonds to ILS structuring advice (see Swiss Re, 2015b). All in all, if traditional reinsurance became more specialized and ILS more standardized, the two instruments could continue to be complements instead of substitutes.

Regulators need to be aware of the aforementioned consequences for both ILS and reinsurance markets. One explicit objective of Solvency II is to reward companies with appropriate risk-management techniques in place (see European Commission, 2007). Hence, the capital relief that will now be achievable for a wider range of instruments and the associated increase in the adoption of ILS coverage is certainly a desired outcome. In addition, the further dissemination of modern risk transfer techniques meets the regulatory goal of promoting financial stability. It is also in the interest of regulators to establish a level playing field between different providers of coverage. We expect this to be achieved, although certain ILS with non-negligible basis risk will only be admissible, if the sponsor runs a complex internal solvency model rather than the Solvency II standard formula. Finally, regulatory authorities need to consider potential negative consequences for both the insurance and reinsurance sector as well. Since Solvency II is likely going to strengthen ILS as a substitute and, therefore, as a competitor for traditional reinsurance contracts, the reinsurance industry might face a prolongation of the

currently prevailing soft market, as well as a further deterioration of their financials.

## Conclusion

We took a two-step approach to assess the potential impact of Solvency II on the volume of ILS as a percentage of the global property-catastrophe reinsurance limit. First, we introduced a normative model framework to determine how insurance companies should decide between traditional and alternative reinsurance coverage. Second, we complemented our theory by an empirical analysis to generate a concrete set of potential future outcomes. Our key model parameter, the subjective price factor, was estimated by means of an OLS regression based on data for the period from 2002 to 2016. We decomposed the resulting time series into a trend and a cyclical component using the Hodrick-Prescott Filter and forecasted it with an ARMA(3,3) model. Finally, we added a scenario analysis based on expert judgments and probabilities from a Gumbel distribution.

Our results suggest that Solvency II will have a positive effect on the ILS markets, thus further increasing their importance within the risk transfer industry. In particular, we expect that their size will grow to more than 24% of the global property-catastrophe reinsurance limit by late 2018. Based on the overall amount of available reinsurance capital at the end of 2016, this is equivalent to an ILS market volume of \$101.14 billion. These findings bear important economic implications for investors, insurers and reinsurance companies. Particularly the latter will need to rethink their business model to fully embrace ILS. Only then will it be possible to offer clients a comprehensive range of products and services tailored to their needs. Those who master this transition well are likely to gain a competitive edge and see their profitability rise.

A major limitation of our work is the lack of suitable data for a purely objective assessment of the relationship between Solvency II and the subjective ILS price coefficient. Hence, our results need to be treated with all due caution, and follow-up research throughout the upcoming months should focus on the accumulation of additional evidence to support our forecast.

## Appendix

**Table 5: Overview of Notations for the Theoretical Framework**

Variable	Description
$\gamma_t$	Subjective ILS price coefficient
$\Pi_t$	Profit function of the insurer
$P_t$	Premium of the insurance policy
$Q_t$	Quantity of the insurance policy
$V_t$	Actuarially fair value of the insurance policy
$R_t$	ILS spread per unit of risk ceded (spread multiple)
$PR_t$	Reinsurance premium per unit of risk ceded
$ILS_t$	Volume of alternative reinsurance capital (ILS)
$RE_t$	Volume of traditional reinsurance capital
$RE_t^*$	Inflection point of marginal reinsurance costs
$\Delta L_t$	Change in the liabilities of the insurance company
$\Delta A_t$	Change in the assets of the insurance company
$K_t^*$	Capital requirement imposed by the regulator
$K_t$	Available regulatory capital of the insurer
$\rho$	Regulatory capital (risk) charge
$C_t$	Regulatory cost function
$J_t$	Firm value function
$d_{t+1}$	Stochastic discount factor
$c_t$	Marginal cost of regulatory friction
$R_t^r$	Reservation price for ILS coverage
$PR_t^r$	Reservation price for reinsurance coverage

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# Emerging Issues Within the Assignment of Benefits Clause

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## Abstract

The Assignment of Benefits (AOB) clause under an insurance contract has been recognized for quite some time and until recently has been of little consequence to homeowner's insurance. Over the past decade, however, the clause in homeowner's coverage is coming under fire. Attorneys and water remediation contractors are using Florida's attorney fee-shifting statute in conjunction with an AOB under the Insurance Services Office (ISO) (1999) Homeowners 3 (HO3) – Special Form policy in filing claims for reimbursement of services rendered subsequent to the insured's executed AOB. As a result, insurer claims costs in Florida are escalating to a crisis point.

This paper discusses the challenges within the homeowner's assignment of benefits clause as applied to water mitigation claims in the state of Florida since 2005. We analyze legal and regulatory arguments used to curtail rising litigation in this area. We draw specific attention to Florida's Homestead Exemption as an insurer defense to deflect mounting litigation efforts to pay these increasingly significant claim costs.

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## Introduction

An Assignment of Benefits (AOB) is a legal procedure that gives another party permission to receive payments or benefits directly from the insurance carrier rather than receiving the benefits directly. This practice is most common in the health care arena, where health insurers are billed directly for medical services rendered, while the insured remains responsible for any copayment or deductible obligations. Similarly, in first-party auto physical damage claims, quite often auto repair shops obtain an AOB in order to expedite authorized repairs.

In recent years in the state of Florida, ambitious emergency repair companies have increasingly instituted the AOB to secure a contract for services requiring an emergency fix, such as water damage claims or, to a lesser extent, roof damage claims caused by wind or hail, and auto windshield damage claims.<sup>1</sup> The problem with this growing trend, however, is that when the property owner executes an AOB without the insurer's knowledge, repair costs may be grossly inflated, and property damage coverage may not fully exist in the insurance contract.

Without the insured's knowledge, remediation companies often take the insurance company directly to court. The remediation company becomes the "prevailing party" in the suit, and, thus, the litigating attorney recovers an additional amount from the insurance company under Florida's One-Way Fee Shifting Statute.<sup>2</sup> Lawmakers and defense attorneys are working diligently to limit costs associated with this cycle by introducing bills to curtail this practice. There is evidence that Florida's homestead exemption may be a successful argument as a defense for claim denial.

This paper examines the growing costs incurred through an AOB for these first-party claims, and analyzes legal and regulatory arguments employed to curtail rising claims and litigation costs. We draw specific attention to the homestead exemption as an insurer defense to deflect mounting litigation efforts for reimbursing inflated claims costs.

## Background

The practice of assigning benefits has long been held acceptable in instances where the insurer has a working relationship with the service provider and has a reasonable expectation of anticipated costs involved. This is particularly true in health care claims where the provider is typically "preapproved" and subject to a

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1. Assigned auto windshield damage claims represents the newest trend in AOB filings in Florida. See Carollo, Malena, May 25, 2017, "Tampa Bay is Ground-Zero for Assignment of Benefits Cases over Broken Auto Glass," *Tampa Bay Times*, May 25, 2015, Retrieved June 27, 2017, [www.tampabay.com/news/business/banking/tampa-bay-is-ground-zero-for-assignment-of-benefits-cases-over-broken-auto/2325132](http://www.tampabay.com/news/business/banking/tampa-bay-is-ground-zero-for-assignment-of-benefits-cases-over-broken-auto/2325132).

<sup>2</sup> FLA. STAT. §627.428.



negotiated payment scale for services rendered. Similarly, in auto physical damage claims, it is more efficient for the repair shop to estimate repair costs and receive approval from the insurer for such costs. In both instances, the insurer is part of the claim process.

Over the past decade, the extension of assigning benefits has become seriously magnified in the state of Florida with a plethora of claims involving homeowners assigning their right to recover costs associated with first-party emergency physical damage repairs. Jay Neal, Florida Association for Insurance Reform (FAIR) President and CEO, estimates that in the past decade, lawsuits filed by restoration contractors using an AOB provision have increased more than 1,000% (Neal, 2015). The past five years, however, represents the steepest increase in filed claims.

Citizens Property Insurance Corporation reports that the rising claims volume associated with non-weather-related water damage continues to aggravate company financial position, and without relief, significant premium increases are needed.<sup>3</sup> The company notes that between January and November 2016, 8,097 new water damage lawsuits were filed despite a 26.3% drop in policy count during the same period. Citizens is an “insurer of last resort” for Florida homeowners. As the competitive Florida insurance market strengthens, a structured depopulation in policy count is the insurer’s goal. As further evidence of the increasingly costly ramifications of AOB abuse, Barry Gilway, President, and CEO of Citizens notes, “While less than 15% of water-related claims resulted in litigation in 2011, nearly 50% did so in 2016. ... The situation is really out of control.”

AOB agreements are most prevalent in water damage claims where time is of the essence in initiating cleanup. It also has been used in wind or hail damage claims, primarily for roofs, where again, the homeowner feels pressured to repair the damage or preserve the property from further loss or damage. The standard Insurance Services Office (ISO) (1999) Homeowners 3 (HO3) – Special Form provides coverage for reasonable repairs initiated to protect the property from further loss or damage:

*Additional Coverages; E.2. Reasonable Repairs:*

- a. We will pay the reasonable cost incurred by you for the necessary measures taken solely to protect covered property that is damaged by a Peril Insured Against from further damage (p. 5 of 22).<sup>4</sup>

Further, the HO3 form specifically outlines the insured’s charge to protect the property from further damage as outlined as part of their duties after loss:

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3. Citizens Property Insurance Company Press Release, “Litigated Water Claims, AOB to Top Citizens 2017 Challenges,” Dec. 7, 2016, Retrieved March 15, 2017, [https://www.citizensfla.com/-/20161207\\_bog-press-release](https://www.citizensfla.com/-/20161207_bog-press-release).

4. Insurance Services Office, Inc., 1999, HO 00 03 10 00.

*Section I Conditions; B. Duties After Loss:*

4. Protect the property from further damage. If repairs to the property are required, you must:
  - a. Make reasonable and necessary repairs to protect the property; and
  - b. Keep an accurate record of repair expenses (p.13 of 22).<sup>5</sup>

Post-loss homeowners are typically in a vulnerable emotional state and feel the need to expedite cleanup and repair. They are subject to exploitation by dishonest and disreputable service providers. A typical case develops as follows:

- Joe Homeowner suffers a serious plumbing loss, which floods the property. Joe calls a plumber to fix the leak, who then refers Joe to ABC Water Mitigation Company for immediate cleanup services.
- ABC arrives with air blowers, dehumidifiers and other equipment, and dries out the property. Somewhere in this process, ABC presents the homeowner with a general cost estimate and other documents, including an AOB. The AOB, in effect, has Joe Homeowner assign all of his rights to recover insurance proceeds to ABC Water Mitigation Company.
- Since Joe Homeowner assigned his rights to ABC, the mitigation company now has direct access to the insurer for bill payment. Of particular concern is that many times this bill for services is often inflated, includes large referral fees paid to the plumber for access to Joe Homeowner and reflects costs for services excluded under the policy.

If the insurer objects to the billed amount, declines coverage under the policy or fails to negotiate an acceptable settlement, ABC Mitigation Company turns the matter to its attorney and directly files suit for breach of contract, thus circumventing the homeowners policy provision limiting lawsuits against the insurer.<sup>6</sup>

Contractors using AOB as a vehicle to obtain payment are not unique to Florida, but several factors contribute to Florida's hostile AOB environment and significant increase in claims volume. First, there is growth in the numbers of lawyers and public adjusters who were very dependent on income from first-party litigation during the height of hurricane and sinkhole claims several years ago (Lewis & Engelbrecht, n.d.). As these claims have settled and cases decreased, displaced personnel seek a new revenue stream.

A second component working to create the perfect storm reflects the free assignment of post-loss insurance proceeds and Florida's fee shifting statute. In

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5. Ibid.

6. In a rising number of cases, mitigation companies and their attorneys move directly to filing suit against the insurer without first filing a claim for damages. In these instances, the legal action is the first notice of loss received by the insurer.

most states, each party bears the responsibility for their attorney fees. However, a few states, including Florida, offer a two-way fee-shifting statute with certain contract situations. Pursuant to FLA. STAT. §627.428, Florida provides a unique fee shifting statute that applies to first-party claims by allowing the insured to collect attorney fees if their claim prevails against a first-party insurer. This law also applies to assignees and allows an assignee to recover attorney fees as part of the litigation against the insurer. Ironically, public policy support for such a statute is to make the prevailing party whole and to level the playing field between insureds and economic giants such as insurance companies (Delegel & Kalifeh, 2015). Thus, the legal profession also benefits handsomely from AOB transactions facing scrutiny by insurers.

## Historical Cost Escalation

Use and abuse of AOB rights to post claims mitigation costs directly to insurers without their prior consent and/or knowledge continues to rise in Florida, and some argue that those costs are now a critical factor in impending rate hike arguments. Florida insurance executives warn that the abuse of AOB and increase in claim counts is a \$1 billion rate increase issue for Florida consumers (O'Connor, 2016). Claim history in the tri-county area of Miami-Dade, Broward and Palm Beach is particularly alarming, where the state insurer of last resort, Citizens Property Insurance Company, asserts that an “actuarially sound” rate increase should be as high as 189% in order to cover these water damage/AOB claims. It is currently estimated that 50% of all new claims filed in the tri-county area are water damage claims (Citizens, 2015).

In order to assess the impact of AOB on property claims experience, on Oct. 23, 2015, the Florida Office of Insurance Regulation (OIR) issued a data call ordering Florida’s 25 largest property insurers to provide detailed information on water damage claims, with all insurers invited to participate. Collected information includes water loss claims, mitigation services costs, litigation and AOB status for claims having closed between Jan. 1, 2010, and Sept. 30, 2015. Thus, data reported by year reflects the closed claim date. The deadline to submit responses was Dec. 7, 2015, and the last re-submission of data received was Jan. 4, 2016. As a result, the OIR *Review of the 2015 Assignment of Benefits Data Call* was issued Feb. 8, 2016. A listing of participating companies is noted in Appendix A.<sup>7</sup> The OIR received detailed information associated with 561,763 water or roof damage claims. A total of 152,187 Citizens Property Insurance Corporation claims were deleted from the analysis, as Citizens had previously publicly reported its own claims investigation. An additional 149,864 claims were deleted as either roof

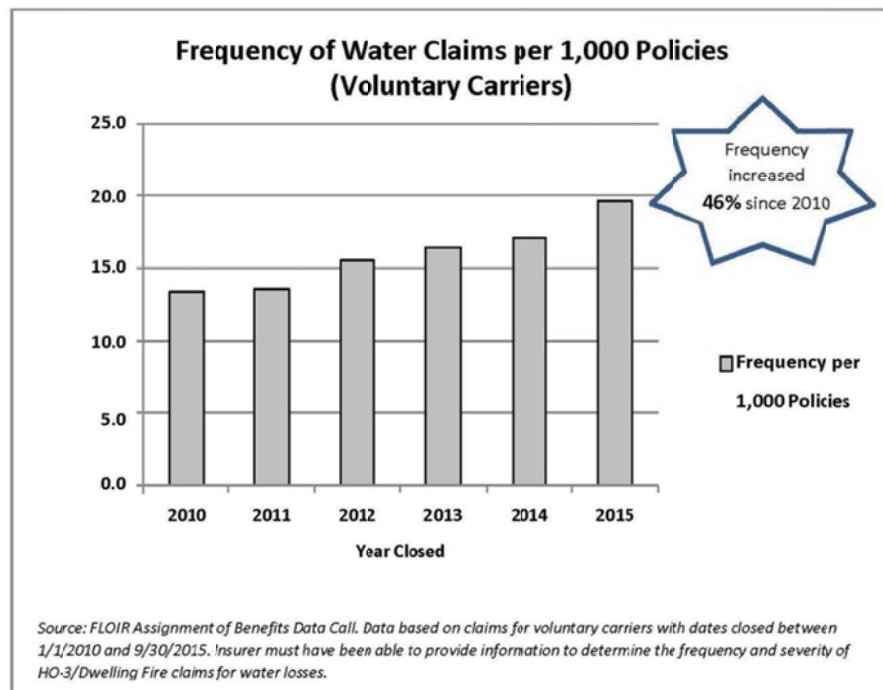
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7. See Florida Office of Insurance Regulation, 2016, *Report on Review of the 2015 Assignment of Benefits Data Call*, Feb. 8, 2016, Retrieved Dec. 15, 2016, [www.floir.com/siteDocuments/AssignmentBenefitsDataCallReport02082016.pdf](http://www.floir.com/siteDocuments/AssignmentBenefitsDataCallReport02082016.pdf).

damage claims or claims not fitting the required data constraints. The remaining 259,742 claims were used in the analysis.

With regard to first-party claims for water damage, the Florida OIR reports that statewide, both the frequency and severity of losses have increased annually since 2010. Claims frequency has increased by 46%, which annualizes to an average frequency increase of 8.3%. Likewise, claims severity has increased 28% since 2010, representing an annual increase of 5.4%. Year by year, water damage claim expenditures in terms of frequency and severity are outlined in Figure 1 and Figure 2.

**Figure 1**

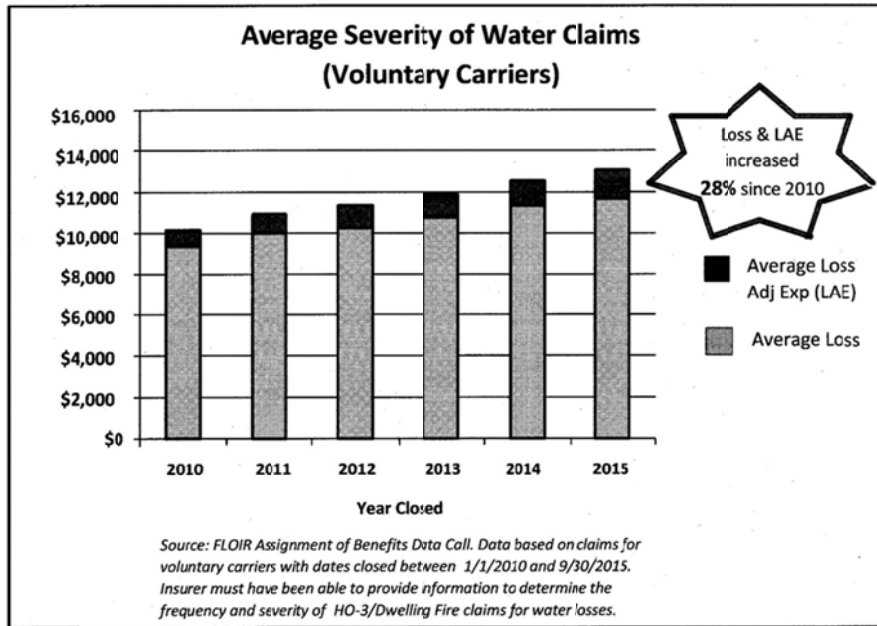


More importantly, during the same period, claims associated with an AOB reflect a 10% increase in severity than for claims handled directly between the insurer and insured. Figure 3 highlights the dramatic cost difference in average severity of water claims with and without an AOB.

As noted, OIR data reflects leading Florida insurers, with the exception of the state's "carrier of last resort," Citizens Property Insurance Company. Citizens has been an early adopter of the concern that AOBs in relation to non-weather-related water damage claims are rising dramatically and out of control. The company places particular onus on the claims loss history in the three South Florida counties of Miami-Dade, Broward and Palm Beach. Citizens completed an initial study of

the impact of water damage claims frequency and severity trends, and reported its Water Summit summary (Citizens Property Insurance Corp, 2015).

Figure 2



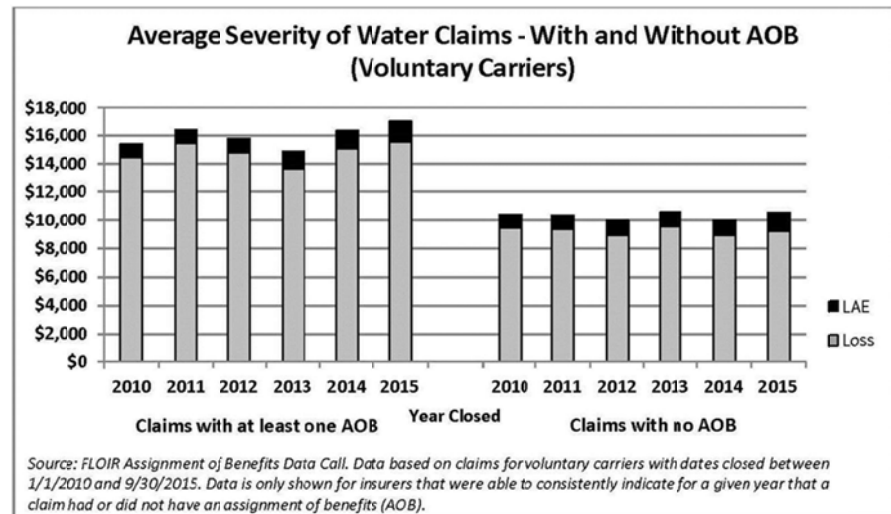
In terms of claims frequency, 2014 non-weather-related water damage claims are on average 9% more frequent in the Tri-County area v. statewide. Further, in the Tri-County area, 98% of 2014 water claims are filed with representation in hand. Possibly most alarmingly, Citizens reports that 2014 statewide non-weather-related water damage claims are identified with a First Notice of Loss (FNOL) filed by an attorney in a staggering 38% of filed claims. This is in sharp contrast to reliance upon attorneys in each of the other causes of loss categories, as shown in Figure 4.

As the “insurer of last resort” in Florida, Citizens is in a particularly challenging situation because the company is statutorily limited to increasing policy rates to 10% in a given year. Even with Florida having a multiyear reprieve from active hurricane losses, water damage claims alone are projected to reflect a much higher cost than could be recovered through a limited rate increase. Citizens said “actuarially sound” rate increases for the Tri-County should be in the area of 189%.<sup>8</sup> Citizens received approval for a 2017 rate increase of 6.4% effective

8. See O’Connor, A., May 3, 2016. “Special Report: Execs Warn of Impending Florida Market Crisis Over Water Loss Claims,” *Insurance Journal*, retrieved: Jan. 10, 2017, [www.insurancejournal.com/news/southeast/2016/05/03/407257.htm](http://www.insurancejournal.com/news/southeast/2016/05/03/407257.htm).

Feb. 1, 2017, mostly due to rising costs from AOB/water claims (Florida Office of Insurance Regulation, 2016). While this rate increase will certainly help, it may be a little late as Citizens posted a net loss of \$27 million for 2016, representing its first loss since 2005 and in a year with minimal hurricane damage from Hurricane Matthew. Citizens' Gilway notes that "the bottom line is the impact of AOB losses is starting to show up in our numbers." This is particularly true given increased costs stemming from South Florida litigation over non-weather-related water losses (Hurtibise, 2017).

Figure 3

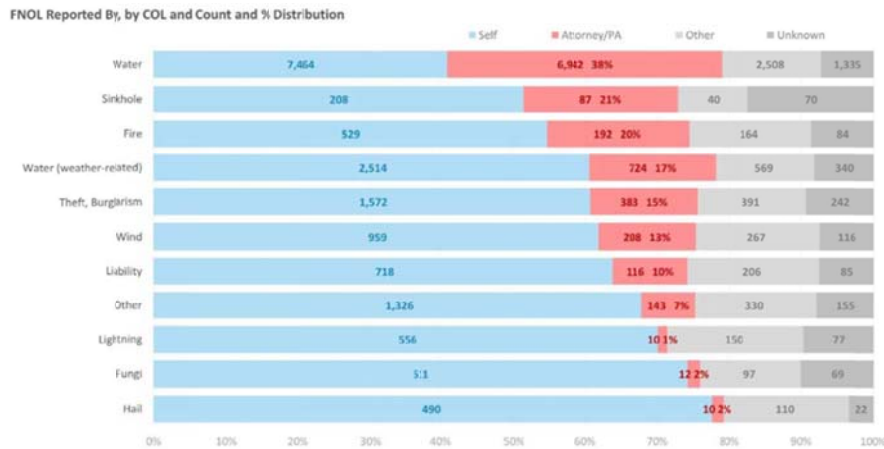


Conditions continue to deteriorate, as Citizens projects a 2018 underwriting loss of \$85 million.<sup>9</sup> To combat rapidly declining results, on June 20, 2017, Citizens' Board of Governors unanimously approved a projected 5.3% average statewide rate increase for 2018. The proposed rate increase may be as high as 10.5% for homeowners in Miami-Dade, Broward and Palm Beach counties. The Board also approved recommended policy changes aimed at reducing non-weather loss costs.<sup>10</sup>

9. Bestwire, June 16, 2017. "BestWeek: Citizens Projects \$85 Million Loss in 2018 on Florida Assignment of Benefits Fraud, *Bestwire*, June 16, 2017, [www3.ambest.com/ambv/bestnews/newscontent.aspx?refnum=200719&altsrc=9](http://www3.ambest.com/ambv/bestnews/newscontent.aspx?refnum=200719&altsrc=9).

10. Citizens Property Insurance Corporation Press Release, "Citizens' Board OKs 2018 Rates, Policy Changes," June 20, 2017, Retrieved June 27, 2017, <https://www.citizensfla.com/-/20170620-citizens-board-oks-2018-rates-policy-changes>.

Figure 4



## Litigation Efforts

In response to rising concerns of AOB abuse, insurers have called upon the courts to analyze the application of insurance contractual provisions and prohibit the assigning of benefits in these types of claims. Since 1917, Florida courts have held anti-assignment provisions in insurance contracts do not apply to post-loss assignment.<sup>11</sup> Courts continue to rely on the distinction within non-assignment clauses, which prohibits the assignment of the policy without the insurers' permission versus claims arising from the policy.<sup>12</sup>

With little success, insurers have turned to other contractual arguments to invalidate questionable AOB claims. In one of the first cases to challenge the use of the fee-shifting statute in a post-loss assignment case, the insured assigned rights to directly bill the insurance company for a loss that involved cleanup from a decomposed body.<sup>13</sup> When the mitigation company submitted the invoice, the insurer refused to pay the entire amount. The trial court found in favor of the insurance company as the mitigation company did not have an insurable interest at the time of the loss and, therefore, was unable to sue the insurer. However, the 5<sup>th</sup> District Court of Appeals (DCA) held that a post-loss assignee is not required to

11. *W. Fla. Grocery Co. v. Teutonia Fire Ins. Co.*, 77 So. 209, 210-211 (1917).

12. *Bioscience West Inc., a/a/o Elaine Gattus v. Gulfstream Property & Casualty Co.*, 185 So. 3d 638, 640 (Fla. 2nd DCA, 2016), *reh'g denied* (Mar. 9, 2016); *Citizens Prop. Ins. Corp. v. Ifergane*, 114 So.3d 190 (Fla. 3rd DCA, 2012) ("Post loss insurance claims are freely assignable without insurers consent"); 3d Couch on Insurance §35.7 (3d ed. 1999) ("An assignment before a loss involves a transfer of a contractual relationship, whereas an assignment after a loss is the transfer of a right to a money claim.").

13. *Accident Cleaners v. Universal Ins. Co.*, 186 So. 3d 1 (Fla. 5th DCA, April 10th, 2015).

have an insurable interest at the time of loss.<sup>14</sup> The court reasoned because the statute did not explicitly preclude the common law right to freely assign the policy, the insurer could “not overcome the presumption that the Legislature did not intend to alter common law”.<sup>15</sup> Three months later, an insurer denied coverage for a water loss and argued that the “duty to satisfy or contest the conditions of coverage” rested exclusively with the insured, not the mitigation company.<sup>16</sup> The 1<sup>st</sup> DCA in reviewing that case held that an assignee could sue an insurer to seek recovery, as well as a coverage determination.<sup>17</sup> Most surprising, the 3<sup>rd</sup> DCA ordered payment of attorney’s fees even though the jury at the trial level found the insureds made false statements to the insurer as they purportedly worked with the plumbing company to stage a significant water loss.<sup>18</sup> Many insurers also attempted to argue that mitigation vendors filing claims under AOB are attempting to adjust claims as unlicensed public adjusters. The 2<sup>nd</sup> DCA disagreed with these claims, stating that the statute allows contractors to “discuss or explain a bid for construction or repair of covered property with the ... owner who has suffered loss covered by a property insurance policy.”<sup>19</sup>

In *One Call Property Services Inc. a/a/o William Hughes v. Security First Ins. Co.*, the insureds contacted a water mitigation company for emergency mitigation services after a water loss at their home. When the insurer received the invoice, it refused to pay the entire amount, and the mitigation company sued it.<sup>20</sup> Security First argued that there was nothing to assign at the time the AOB was executed because no benefits were due to the insured. The lower court agreed with the insurer that rights that had not yet accrued could not be assigned. The insurance industry was hopeful because if an insured failed to contact their carrier and obtain a coverage denial or offer for settlement, there were no rights to be assigned, which would help dismantle the AOB abuse. However, when the case went before the appellate court, the 4<sup>th</sup> DCA reversed the lower court’s decision, resulting in what the media referred to as “Black Tuesday” as the court refused put an end to the crisis and, in some regards, strengthened the argument in favor of the AOB right. *Hughes* laid out two strong yet competing policy arguments:

“Turning to the practical implications of this case, we note that this issue boils down to two competing public policy considerations ... the insurance industry argues that assignments of benefits allow contractors to unilaterally set the value of a claim and demand payment for fraudulent or inflated invoices ... contractors argue that assignments of benefits allow

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14. *Id.* at 3.

15. *Id.* at 2.

16. *United Water Restoration Group, Inc., a/a/o Oran Walker, v. State Farm Florida Ins. Co.*, 173 So. 3d 1025 (Fla. 1st DCA, July 8, 2015).

17. *Id.*

18. *Citizens Property Ins. Corp. v. Bascuas*, 178 So. 3d 902 (Fla. 3rd DCA, Oct. 14, 2015).

19. *Bioscience*, 185 So. 3d at 642.

20. 165 So. 3d 749 (Fla. 4th DCA, May 20, 2015).



homeowners to hire contractors for emergency repairs immediately after a loss, particularly in situations where the homeowners cannot afford to pay the contractors upfront.”<sup>21</sup>

Since *Hughes*, insurance companies have aggressively lobbied for alternative methods to bar the application of assignment of benefits in these questionable water mitigation claims. Security First Insurance Company, which has retained its share of these claims, sought to include policy language to prohibit post-loss assignments without consent. The Florida OIR denied its request, and the issue went before the 1<sup>st</sup> DCA. Despite the allegations of continued fraud and abuse, the court held that an insurer cannot include language in the insurance policy to prohibit post-loss assignments and, like the 4<sup>th</sup> DCA, declared this to be an issue best resolved by the legislature.<sup>22</sup>

## Legislative Efforts

Courts clearly articulate that AOB concerns require legislative attention for long-term resolution and go beyond the scope of judiciary authority.<sup>23</sup> However, the legislature has had a difficult time agreeing on the best legislative strategy to resolve the assignment of benefits crisis. In early 2016, Sen. Dorothy Hukill (FL) and Rep. Matt Caldwell (FL) filed legislation aimed to prevent vendors such as remediation companies and their lawyers from gaining an insureds policy rights (Stander, 2016). The proposed bill effectively removed the right for an assignee to sue for breach of contract in an insurance policy. This raised Access to Courts concerns under the state constitution. Supporters of the bill argued it did not impair access but rather restricted the assignment and for public policy reasons would meet the standard set forth in constitutional case law.<sup>24</sup> S.B. 596 along with H.R. 1097 died as a result of the Judiciary Committee inaction led by Sen. Miguel Díaz de La Portilla (FL).

Sen. Díaz de la Portilla subsequently sponsored S.B. 1248, which proposed placing limitations on referral fees, kickbacks and other case payments for remediation work.<sup>25</sup> This bill intended to act as a compromise to previously proposed S.B. 596 and H.B. 1097, but this too failed to gain necessary legislative support to move forward. Opponents thought that this bill did little to “address the cost drivers behind AOB abuse and cemented abuse by preventing further reform (Stander, 2016).”

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21. *Hughes*, 165 So. 3d at 755.

22. *Security First Ins. Co v. Office of Ins. Regulation*, 177 So. 3d 627 (Fla. 1st DCA 2015).

23. See *Security First Ins. Co., vs. Office of Ins. Regulation*, 177 So.3d at 629; *Bioscience West Inc., a/a/o Elaine Gattus*, 185 So. 3d at 643; *One Call Property Services Inc. a/a/o William Hughes v. Security First Ins. Co* 165 So. 3d at 755.

24. S.B. 596 Impact Statement, pg. 9, Jan. 25, 2016).

25. See also H.R., 671, Reg. Sess. (Fla. 2016).

H.B. 669 and S.B. 1064 represented the last efforts by both the House of Representatives and Senate before the close of the 2016 legislative session. S.B. 1064 left some hope for the insurance industry, as it passed through two committees. This bill would have limited vendors' right to recovery under the AOB to only their right of payment (versus the entire claim). Ultimately, the bill failed in the before reaching the floor.

The failures of 2016 did not prevent Florida's largest homeowner's insurer, Citizens Property Insurance Corporation, from drafting a legislative wish list for 2017, which it published as a one-page executive summary (Citizens' Board of Governors, 2016). Desired improvements include:

- Prohibit vendors working under an assignment of benefits (or any variation) from seeking fees under the one-way attorney fee statute when litigation occurs.
- Require that the assignment agreement contain a written, itemized, per unit cost estimate of the work to be performed by the assignee.
- Require that an assignment agreement be provided to the insurer no later than three (3) business days after an assignment of benefits is executed by the policyholder.
- Limit assignments to only the work being performed (not the entire claim).
- Create statutory provisions requiring assignees to comply with responsibilities that are parallel to those required of the policyholder in the insurance policy.
- Provide consumer protections, including the ability to rescind the assignment and notice in writing as to what insureds are signing and what rights they are giving up.
- Prohibit an assignment from containing cancellation fees, check processing fees, or overhead and profit charges in estimates.
- Prohibit lien of a property for work that is completed under an assignment and is paid for with insurance proceeds.

While the list includes several action items previously attempted, it also supports a shift from changing the rights under AOB to more consumer friendly demands for legislative action (Citizens Board of Governors, 2016).

In February 2017, Sen. Hukill, with the support of Citizen's Property Insurance Corp. and other stakeholders, introduced S.B. 1038 (O'Connor, 2017). This bill focused on clarifying the intent of the assignment by the policyholder, limiting the scope of benefits provided and precluding attorney's fees in certain property insurance suits.<sup>26</sup> A related bill, H.B. 1421 filed by Rep. James Grant and supported by insurance and consumer advocates, made significant progress through the house but ultimately failed to make it to the floor by the end of the

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26. S. 1038, Reg. Sess. (Fla. 2017).

2017 session (O'Connor, 2017). A significant part of the bill would have addressed attorney fees and awarded these fees under a formula based on judgment. It also would have allowed the insurer to recover similar fees or none or one depending on the judgement (O'Connor, 2017). While this marks the fifth year of legislative failure, lawmakers and advocates plan to continue to crusade for legislative action concerning AOB in the 2018 session.

## Homestead Exemption Defense

To combat the use of AOB, some insurer attorneys are turning to legal arguments constructed under the Florida Homestead Exemption Act as a means of eliminating these claims for damages. Florida has a well-established homestead protection that keeps residents' primary dwellings from creditors absent a few well-defined exceptions. Courts have held that the constitutional protection extends beyond the actual home to include insurance proceeds. This leads to questions on whether the homestead exemption can be applied to the AOB in insurance contracts and subsequently to the attorney fees collected when the mitigation company prevails.

For many years, Florida has provided constitutional protection to citizens' residential property.<sup>27</sup> The purpose of the homestead exemption is to encourage stability in the midst of financial misfortune by enabling homeowners to retain their primary residence.<sup>28</sup> There are only three well-defined ways in which homestead protection may be waived: 1) mortgage (secured agreement); 2) sale; or 3) gift.<sup>29</sup> Courts thus far are reluctant to move beyond these exceptions.

Florida courts have long held that the homestead protection applies to insurance proceeds. In *Kohn et. al. v. Coats*, the insureds suffered a loss, and Kohn attempted to garnish his insurance proceeds.<sup>30</sup> The court reasoned to allow creditors to seize insurance proceeds undermines the purpose of the law by depriving the insured of the means to restore the property.<sup>31</sup> Subsequently, courts have made similar rulings in attempts to execute a charging lien for attorney's fees against insurance proceeds.<sup>32</sup>

In *Chames vs. DeMayo*,<sup>33</sup> Henry DeMayo hired Deborah Chames to help him with child support and alimony issues. Chames withdrew her representation, and

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27. FLA. CONST. art. X, §4.

28. *Public Health Trust v. Lopez*, 531 So. 2d, 946, 948 (Fla. 1988) *aff'g* 509 So. 2d 1286 (Fla. 3d DCA, 1987).

29. A secured agreement is a document that provides a lender a secured interest in property that is pledged as collateral. Should the borrower default, the lender can seize the property.

30. 138 So. 760 (Fla. 1931).

31. *Id.* at 761.

32. A charging lien is an attorney's lien on a claim that the attorney has helped the client perfect, as through a judgment or settlement or a lien on specified property in the debtor's possession. *Charging Lien*, *Black's Law Dictionary*. (8th ed. 2004).

33. 972 So. 2d 850 at 853 (Fla 2007).

executed a charging lien and judgement against DeMayo for more than \$33,000 she was owed in fees. Then, the lien was applied to DeMayo's home. The case went before the Florida Supreme Court to decide whether a charging lien could be applied to DeMayo's home in light of the homestead protection. Chames argued that waiving the homestead exemption was a personal constitutional right. The court disagreed, emphasizing that you cannot waive a right designed to protect both an individual and the public.<sup>34</sup> Additionally, waiver of a constitutional right is only effective if it is knowing, voluntary and intelligent.<sup>35</sup> Ultimately, the court held that "waiver of the homestead exemption in an unsecured agreement is unenforceable."<sup>36</sup>

In *Quiroga v. Citizens Property Insurance Co.*,<sup>37</sup> the insured, Jesse Quiroga, hired an attorney to help him collect unpaid insurance proceeds after two hurricanes caused damage to his home. The attorney agreed to be paid on a contingency basis, but when the insurance company agreed to pay out on the claim, Quiroga fired the attorney and refused to pay him. The law firm filed a charging lien against the insurance proceeds. The court held the proceeds were subject to the homestead exemption and based on *Chames*, could not be divested through an unsecured agreement.<sup>38</sup> If insurance proceeds cannot be divested through an unsecured agreement, this raises the question as to whether the homestead exemption invalidates the AOB as an unsecured agreement.<sup>39</sup>

In *One Call Prop. Servs., Inc. a/a/o Schlanger v. St. Johns Ins. Co.*,<sup>40</sup> the insured contacted the water mitigation company, which then executed an AOB signed by only Mr. Schlanger. The claim was subsequently denied for coverage, and the mitigation company sued the insurer by way of its AOB rights. Using *Chames* and *Quiroga*, the trial court granted summary judgement in favor of the insurer as the Florida homestead exemption invalidates the AOB as an unsecured agreement. Additionally, the court cited two other reasons for its decision: 1) the AOB resulted in an unauthorized public adjuster agreement; and 2) the assignment was not signed by all named insureds.

On appeal, the 4<sup>th</sup> DCA issued a *per curiam* opinion in favor of the insurer holding a contractor's AOB to be invalid.<sup>41</sup> While seemingly a victory for the insurance industry, the *per curiam* ruling means the DCA issued its decision without an opinion, and, therefore, lacks binding authority. Consequently, the basis of law used to affirm the court's ruling remains unclear. Notwithstanding the

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34. *Chames*, 972 So. 2d at 861 (citing *Coastal Caisson Drill Co. v. Am. Cas. Co. of Reading Pa.*, 523 So.2d 791 (Fla. 2nd DCA, 1988)).

35. *Id.* (citing *State v. Upton*, 658 So.2d 86, 87 (Fla. 1995)).

36. *Chames*, 972 So. 2d. at 855.

37. 34 So. 3d 101 (Fla. 3d DCA 2010).

38. An unsecured agreement is a loan not supported with property as collateral.

39. *Id.* at 102.

40. No. 2013CA000868, 2014 WL 7496474 (Fla. 19th Cir. Ct. Nov. 20, 2014), Affirmed Jan. 28, 2016.

41. *One Call Property Services, Inc. a/a/o Schlanger v. St. Johns Ins. Co., Inc.*, No. 4D14-4585, 2016 WL 363885 (Fla. 4th DCA, January 28, 2016).

4<sup>th</sup> DCA's *per curiam* opinion, this argument may in fact be the successful litigation strategy to combat AOBs, where a court order for an insured to pay AOB costs plus attorney's fees may be a direct violation of the Homeowners Exemption and, thus, invalidate the AOB as an unsecured agreement.

## **Conclusion**

AOB under the current legal framework is weakening an already unstable insurance market in Florida. Courts have collectively made it clear that public policy arguments are not going to unravel decades of insurance case law. Florida's homestead exemption provides some hope to invalidate AOB as the assignment constitutes an unsecured agreement. Nonetheless, the homestead exemption will merely provide a temporary bandage until the legislature can provide a statutory solution to regulate the abuse. The legislature is challenged with not only putting forth a bill that will address the root of the AOB abuse, but one that will pass the scrutiny of the plaintiff's bar and consumer advocates. In the meantime, insurance companies will have to continue to rely on more creative ways of limiting the rising costs associated with AOB abuse by educating agents and consumers about the claims process and rights under the contract. Ultimately, insureds will pay an additional amount in homeowner's premium increases as a direct result of the escalation and trending abuse of these types of claims.

## Appendix A

### Listing of Insurers Included in the Florida Office of Insurance Regulation 2015 Data Call

Count	Company
1	AIG Property Casualty Company
2	American Home Assurance Company
3	American Integrity Insurance Company of Florida
4	American Strategic Insurance Corporation
5	American Traditions Insurance Company
6	Ark Royal Insurance Company
7	ASI Assurance Corporation
8	ASI Preferred Insurance Corporation
9	Castle Key Insurance Company
10	Citizens Property Insurance Corporation*
11	Federated National Insurance Company
12	First Protective Insurance Company
13	Florida Family Insurance Company
14	Florida Peninsula Insurance Company
15	Heritage Property & Casualty Insurance Company
16	Homeowners Choice Property & Casualty Insurance Company, Inc.
17	Lakeview Insurance Company
18	Modern USA Insurance Company
19	Olympus Insurance Company
20	Omega Insurance Company
21	People's Trust Insurance Company
22	SafePoint Insurance Company
23	Security First Insurance Company
24	Southern Fidelity Insurance Company
25	St. Johns Insurance Company, Inc.
26	State Farm Florida Insurance Company
27	Tower Hill Preferred Insurance Company
28	Tower Hill Prime Insurance Company
29	Tower Hill Select Insurance Company
30	Tower Hill Signature Insurance Company
31	United Property & Casualty Insurance Company
32	United Services Automobile Association
33	Universal Property & Casualty Insurance Company
34	USAA Casualty Company
35	USAA General Indemnity Company

\* Citizens Property Insurance Corporation data was submitted and reviewed, but was not ultimately used in the report since Citizens released its own analysis.

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# The Growth of Subrogation and the Future of Personal Injury Litigation

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Stephen J. Spurr\*

## Abstract

This paper examines how personal injury litigation has been, and will continue to be, transformed by the growth of subrogation. While the use of subrogation has increased gradually over the last four decades, the recoveries of personal injury victims are now fully subject to subrogation claims by Medicare, Medicaid and private health insurance companies when they have previously paid for the victim's health care expenses. These developments raise the question of how the recovery should be divided between the plaintiff and the insurer, and how the rule on its apportionment affects the incentives of plaintiffs and plaintiffs' lawyers, and the decision whether to sue in the first place. We examine these issues in the order in which the law has been thoroughly developed, i.e., first for Medicare, then Medicaid and finally for private health insurers. We find that the Medicare statutes are carefully designed to preserve the incentives of plaintiffs' lawyers to pursue personal injury actions. However some state statutes providing for subrogation of health care expenses by Medicaid and private health insurers could sharply reduce the incentives of plaintiff's lawyers to pursue personal injury actions. State statutes abrogating the collateral source rule may also reduce settlement payments and the filing of lawsuits by tort victims and thus the deterrence of tortious behavior.

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## Introduction

Victims of torts who bring lawsuits have often obtained compensation or services from sources other than the defendant, such as from their own health insurance. However, the victim's first-party insurer can now often recover the health care expenses it has paid its insured via the doctrine of subrogation, which enables it to intervene in the lawsuit and obtain reimbursement of its expenditure from the amount that would otherwise be paid by the defendant to the plaintiff. The use of subrogation by insurance companies has increased tremendously over the last four decades. This paper examines how personal injury litigation has been transformed by the growth of subrogation. The recoveries of tort victims are now fully subject to subrogation claims by Medicare and Medicaid, and often by private health insurance companies when they have previously paid for the victim's health care expenses.

The increasing role of subrogation in personal injury litigation raises a number of questions:

- Should subrogation be allowed? That is, do the social benefits of subrogation exceed its social costs?
- If a substantial portion of the victim's recovery will be taken by the victim's own insurer, how will this affect the incentives of victims to sue?
- Will an insurer be able to claim a portion of the plaintiff's recovery without paying for any part of the plaintiff's legal expenses that made the recovery possible?
- Will the insurer be able to sue the tortfeasor directly, or share in the recovery only if its insured party sues?
- How will the insurer learn of the personal injury claim being pursued by its insured? (If it does not learn about the litigation, it will be unable to exercise its right of subrogation.)

We examine these and other issues in the order of the subrogation claimants for which the applicable law has been developed, i.e., first for Medicare, then Medicaid and finally for private health insurers. We find that the Medicare statutes have been carefully designed to preserve the incentives of plaintiffs' lawyers to pursue personal injury actions. However, some state statutes providing for subrogation of health care expenses by Medicaid and private health insurers could sharply reduce the incentives of plaintiff's lawyers. State statutes abrogating the collateral source rule of the common law may also reduce settlement payments and the filing of lawsuits by tort victims and their lawyers and, thus, the deterrence of tortious behavior. We also analyze the conflict between subrogation and state statutes that modify or abolish the collateral source rule of the common law. We conclude that the question whether the collateral source rule should be preserved or abolished depends on which kind of moral hazard is more serious: that of the tortfeasor, who may take less precautions to avoid injuring others, or that of the

victim, who may take less precautions to avoid being injured. This is an issue that should be settled by empirical research.

## What is Subrogation?

Until recently, most individual personal injury claims involved a single plaintiff and one or more defendants.<sup>1</sup> Tort victims often obtain compensation or services from sources other than the defendant, such as from health insurance, disability insurance or workers' compensation insurance.<sup>2</sup> Under the collateral source rule of the common law, the defendant was liable for all damages caused to the plaintiff, even if the plaintiff had received payment or services from a third party. However, an insurer can now often recover the health care expenses it has paid via "subrogation."<sup>3</sup> Subrogation is "an equitable doctrine under which one who has paid a debt for which he is secondarily responsible takes over the creditor's rights and remedies against the party primarily responsible for that debt."<sup>4</sup> Suppose that an insured person, Joseph Smith, has been injured by a negligent driver, Bill Jones. Smith's medical expenses in the amount of \$300,000 were paid by his own health insurer, X Co. Smith sues Jones and obtains a judgment in the amount of \$500,000, representing \$300,000 in medical bills and \$200,000 in pain and suffering. X Co., which paid Smith's medical bills although it was only secondarily liable for them, can step into his shoes and obtain subrogation of its outlay of \$300,000 from Jones, the injurer who was primarily responsible, leaving Smith with only \$200,000 in damages. (The question whether a party is primarily or secondarily liable is determined by common law or statute.) The defendant Jones would still be liable for full damages of \$500,000, but X Co. has recovered the \$300,000, either directly from Jones or from Smith, who has already collected this amount from Jones. In many jurisdictions X Co. can recover the \$300,000 as reimbursement from Smith by filing a lien in the negligence case.<sup>5</sup>

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1. Smith et al. (1995)

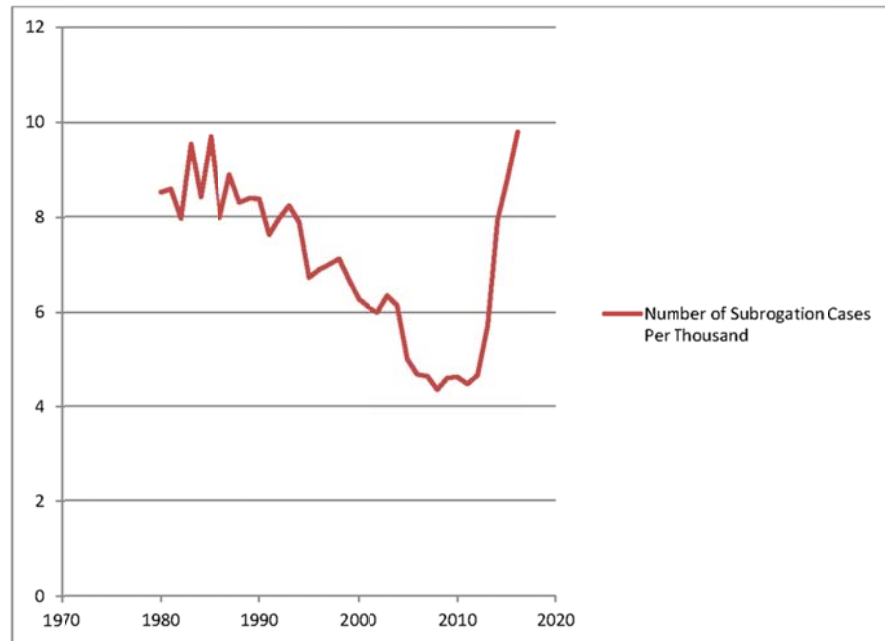
2. Baron (1992) at 583. See also Kimball and Davis (1962), at 842: "Increasing use of insurance has led to duplicated coverage with respect to medical and hospital expenses."

3. Greenblatt (1997), Baron (1992) and Baron (1996).

4. Greenblatt (1997), at 1338, citing Horn (1964), pp. 13–14.

5. For our purposes, it does not matter whether the insurer proceeds against the tortfeasor or against an insured who has already collected from the tortfeasor. See Greenblatt (1997), 1338 at n. 9, and *Automobile Insurance Co. of Hartford v. Conlon*, 153 Conn. 415, 216 A. 2d 828, 829 (1966): "The proposition is well established that an insurer's right to subrogation .... includes a claim against any judgment secured by the insured against any party at fault for the amount paid by the insurer in satisfaction of the insured's damage claim ..."

**Figure 1:  
Growth of Appellate Cases Involving Subrogation**



Rights of subrogation may arise under common law, principles of equity or by statute. They may also be available by contract, provided that subrogation clauses do not violate statutes or common law.<sup>6</sup> Rights of subrogation generally apply only to “economic damages,” such as medical expenses, lost earnings and the lost value of household services. They do not apply to “noneconomic damages,” a term that is applied to “nonpecuniary damages,” i.e., pain and suffering, loss of consortium and punitive damages.<sup>7</sup> The reason subrogation rights do not apply to noneconomic damages is that these kinds of damages are virtually never insured,<sup>8</sup> even though studies find that noneconomic damages constitute one-half to two-thirds of the average tort recovery in personal injury cases.<sup>9</sup> Although subrogation was not generally available under the common law for health and medical insurance policies, in most states it is now available when such policies include subrogation clauses.<sup>10</sup>

6. Keeton and Widiss (1988), Sec. 3.10 (a)(1).

7. Reinker and Rosenberg (1997), at S263.

8. *Ibid.*, S265 at n. 6, American Law Institute 1991, Croley and Hanson (1995).

9. Reinker and Rosenberg (1997), at S263, citing Viscusi (1991) and Vidmar (2005).

10. Baron (1992) and Baron (1996).

Although subrogation has a long history, with its origin attributed variously to Roman civil law or Talmudic Law,<sup>11</sup> its application to personal injury litigation has increased dramatically in the last four decades. Figure 1 shows the trend of cases that involve issues of subrogation in the U.S. in either state appellate courts or any federal courts.<sup>12</sup> The graph shows the change over time in the share of subrogation cases of all cases.<sup>13</sup> This share declined from 1980 to 2008, then leveled off, but began to climb abruptly in 2011.

**Figure 2:**  
**Comparison of Growth of Subrogation Cases with All Cases**

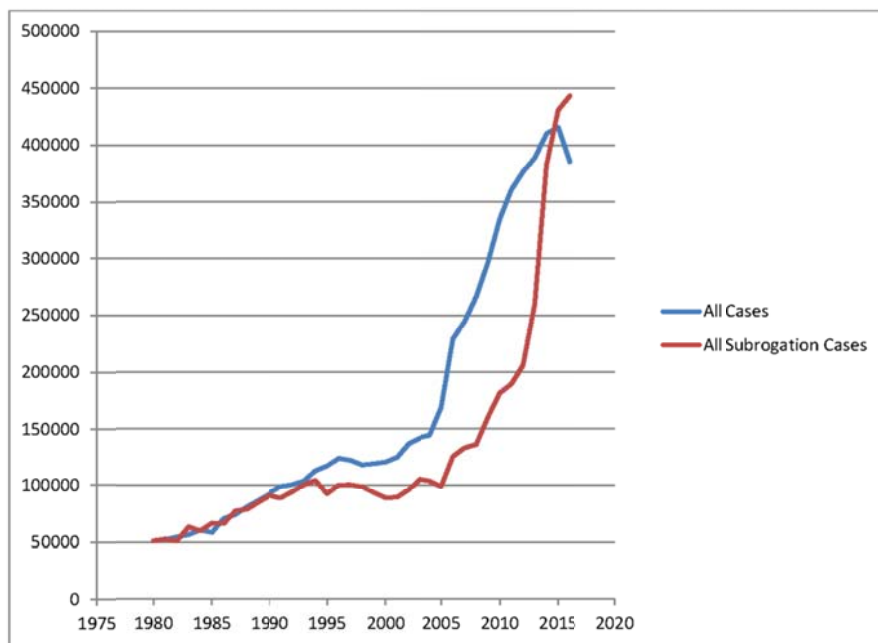


Figure 2 compares the growth in absolute numbers of subrogation cases with the growth of all cases. (The number of subrogation cases is rescaled<sup>14</sup> so that both curves start at the same origin in 1980.) Figure 2 shows that the reason for the earlier decline in Figure 1 was not that fewer subrogation cases were filed, but rather that there was more growth of litigation of cases of all kinds. In any case,

11. Greenblatt (1997), 1339 at n. 10.

12. The data was obtained from Lexis-Nexis Academic Universe by doing a search of all reported and unreported cases that used the keyword “subrogation.” The annual number of such cases was then divided by all reported and unreported cases in the U.S. in either state or territorial appellate courts or any federal courts.

13. Figure 1 shows the number of subrogation cases per 1000 cases.

14. In Figure 2, the number of subrogation cases is multiplied by 117.5.

the basic point of Figure 1 and Figure 2 is that litigation of subrogation cases essentially exploded around 2011. It is likely that part of the explanation for the jump was a federal statute, which became effective in 2011, that imposed data collection and reporting requirements on insurance companies, to give the federal Centers for Medicare & Medicaid Services (CMS) more tools to enforce Medicare's right to subrogation. (See the discussion below.)

The general increase in subrogation activity has increased the demand for specialists. A trade association, the National Association of Subrogation Professionals (NASP), was founded in the U.S. in 1998, and its membership has grown from 80 to approximately 3,000.

## The Economics Literature on Subrogation

The economics literature on subrogation provides some basic insights on what kind of subrogation arrangements are optimal, in the sense of maximizing the expected utility of the insured. Sykes (2001) argues that if there is an accident and the tortfeasor cannot pay the full amount of damages, it is efficient for the insurer to take priority over the insured every time. The basic idea is that if a purchaser of insurance had a choice between two policies, one giving him priority and the other giving the insurer priority, and a clear understanding of the economic consequences, i.e., the reduction in premiums he or she would enjoy through giving priority to the insurer, he would choose that option. Sykes's argument runs as follows: Suppose Mr. Jones is in an accident for which an injurer is liable. In this case, Jones will be able to collect not only the amount  $C$  from his insurance company, but also damages from the injurer. The injurer is liable for damages of  $D$ , and Jones can decide in advance how much he will retain ( $D_1$ ) and how much to assign to his insurer via subrogation ( $D_2 = D - D_1$ ). (He can make this decision by choosing among different insurance policies.) If insurance companies are perfectly competitive, whatever amount  $D_2$  he assigns to his insurer via subrogation will increase his income by reducing his premiums over a period of multiple years.<sup>15</sup>

Now since Jones can decide the amounts of  $D_1$  and  $D_2$ , and because he has diminishing marginal utility,<sup>16</sup> the question is whether, for example, he should

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15. It should, however, be noted that some courts and commentators contend that insurers' recoveries through subrogation will not be passed through to customers in the form of lower premiums. See the references in Reinker and Rosenberg (2007), S270 at n. 13. These conclusions are typically based on the observation that historically, insurers have not taken subrogation recoveries into account when setting insurance premiums. However, this practice is bound to change, if it has not done so already, in view of the increasing importance of subrogation.

16. Income has diminishing marginal utility for a person who is risk-averse, i.e., the more income he has, the less he gains from an additional dollar. People buy insurance because they are risk-averse. In the theory of finance, everyone is assumed to be risk-averse.



have a much larger income in one year than all the others, by the amount  $D$  in the year of the accident, or instead a slightly larger income over many years:

$$n, \frac{D}{n}.$$

Because Jones has diminishing marginal utility, he will choose the latter, which means that he wants  $D_1 = 0$  and  $D_2 = D$ . It is optimal for A to assign all the damages he could recover to his insurance company in return for lower premiums over many years.

Sykes's model, while elegant, does not consider how a strict rule of insurer priority might affect the incentives of Jones to file a lawsuit in the first place. One can imagine a different model that finds that the optimal subrogation contract would give Jones a share of the recovery, to ensure that the lawsuit will be filed, so that the insurer gets the remaining share of a recovery and there is deterrence to tortfeasors. One way to do this would be to adopt Sykes's suggestion of giving the insurer priority, but make it subject to a minimum recovery by the plaintiff, for example 25% of the total recovery net of procurement expenses.

Reinker and Rosenberg (2007) take the idea of assigning the recovery of damages further, by proposing that victims of medical malpractice assign their entire claims to first-party insurers *ex ante* in exchange for lower premiums, an approach that they call "unlimited insurance subrogation." They define first-party insurers very broadly, but we can think of them as health insurance companies. Reinker and Rosenberg argue in particular that "replacing the current amalgam of parties that make up the plaintiff's side with the first-party insurer will eliminate the potential for conflicts that could disrupt or derail prosecution of meritorious malpractice claims." Here again, however, there is a potential problem with incentives since the patients, the victims of medical malpractice, would not have the direct financial stake they now have in litigation outcomes. This could cause difficulties at both the extensive margin (learning whether malpractice has occurred) and the intensive margin (obtaining the patient's full cooperation in pursuing the lawsuit).<sup>17</sup> It is also possible that there are diseconomies of scope arising from combining the provision of first-party insurance with plaintiff's litigation of medical malpractice claims (Panzar and Willig (1977), (1981)).<sup>18</sup> Polinsky and Shavell (2017) consider a related idea: that the insureds could sell their claims *ex post*, after accidents occurred, to their insurers or others. They note, however, that this would not be optimal because the insured would not avoid litigation risk: The prices received by insureds would vary depending on the expected value of their claim.

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17. Reinker and Rosenberg recognize these problems but argue, for example, that insurers can induce malpractice victims to cooperate by compensating them for their time and expenses related to the litigation.

18. Another alternative would be to adopt a suggestion made by Becker and Stigler (1974), to assign ownership of the entire claim to the plaintiff's lawyer.

Polinsky and Shavell evaluate different possible subrogation arrangements on the basis of which variation maximizes the expected utility of a risk-averse consumer of insurance. They find, as did Sykes, that if one assumes insurance companies have no costs, the entire award from tort litigation should be retained by insurers; the insured benefits through uniformly lower premiums and by avoiding the risk of litigation. If, however, one takes into account that insurers have administrative costs, they find (unlike Sykes) that it is optimal for the insurer to pay some fraction of the award to the insured. They also consider a case in which there is subrogation, insurers have zero costs, and the insurer recovers a court award that includes a “monetary component,” such as lost earnings or medical expenses, and a “nonmonetary component,” such as pain and suffering or loss of consortium. Here they find that the optimal amount of insurance coverage is for the monetary loss alone and that the insured should not share in the court award. The conclusion that the policy should not cover non-monetary losses is based on their assumption that a non-monetary loss does not affect the insured’s marginal utility of wealth, which they argue is “more realistic” than an assumption that it does. This is certainly debatable. One might think, for example, that if severe emotional trauma reduces the insured’s total utility, it might also affect the marginal utility of his or her wealth, although the direction of the change is unclear. See Sykes (2001) at 387, 390. Polinsky and Shavell also recognize that since the cooperation of the insured will often be important to a successful lawsuit, it might be a good idea for him to receive a share of the recovery to induce him to cooperate.

## **How Subrogation Evolved Under Medicare and Medicaid, and in the Private Sector**

The economic issues involved in application of the right of subrogation in tort litigation apply to Medicare, Medicaid and private health insurance companies. However, analysis of these issues has been most highly developed and coherently explained in situations involving Medicare. Therefore, we begin with Medicare, then address these questions with Medicaid and finally describe the evolution of the use of subrogation by private automobile and health insurance companies. The rules applicable to private insurers are not yet well defined, but they are likely to be strongly influenced by those established for Medicare and Medicaid.

## The Federal Government's Right to Subrogation Under Medicare

The Medicare program was enacted by the U.S. Congress in 1965 under Title XVIII of the federal Social Security Act to provide health insurance to people age 65 and older, regardless of their income or medical history. Under Medicare, the federal government provides health care to persons who are at least 65, disabled or afflicted by end-stage kidney disease. As of August 2017, the number of Americans covered by Medicare was estimated to be 56,838,848.<sup>19</sup>

The Medicare program was initially the ultimate or “primary” payer for medical services provided to its beneficiaries, whether or not the beneficiary had other insurance available, with the exception of those who were covered by workers’ compensation. In that case, Medicare was a secondary payer, so the workers’ compensation carrier was obliged to reimburse Medicare for expenses paid by Medicare for the care of injured workers. In 1980, Congress, concerned about the rapidly increasing costs of Medicare, took action to provide some revenue by enacting the federal Medicare Secondary Payer Act,<sup>20</sup> (MSP Act), which essentially made Medicare a secondary payer in virtually any situation where the beneficiary had some other type of insurance. In other words, if Medicare had paid for someone’s health care but another insurer was also obligated to pay, Medicare had the right to be reimbursed by that insurer. In 1984, the MSP Act was amended to give Medicare a right of subrogation against the insurer, as well as a direct right of action.<sup>21</sup> Suppose, for example, a 65-year-old man, Ed Smith, is injured in an auto accident by negligence of Dave Thompson. Smith is hospitalized and Medicare, unaware that he has health insurance with X Co., pays \$100,000 for his health care. Smith sues Thompson and recovers damages of \$200,000: \$100,000 for health care expenses and \$100,000 for other damages. Medicare now has a right to be reimbursed for its expenses by Smith via subrogation. If Smith has spent all the money without reimbursing Medicare, Medicare can obtain reimbursement from X Co.

There were, however, serious problems with enforcement of the MSP Act in tort cases, because Medicare had no systematic way to learn when its beneficiaries were plaintiffs in tort litigation. To deal with this problem, the MSP Act was amended in 2007 by a statute<sup>22</sup> that imposed data collection and reporting

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19. This represents the total in the “Eligible” column of the “Monthly Enrollment by State” data posted on <https://www.cms.gov> in August 2017.

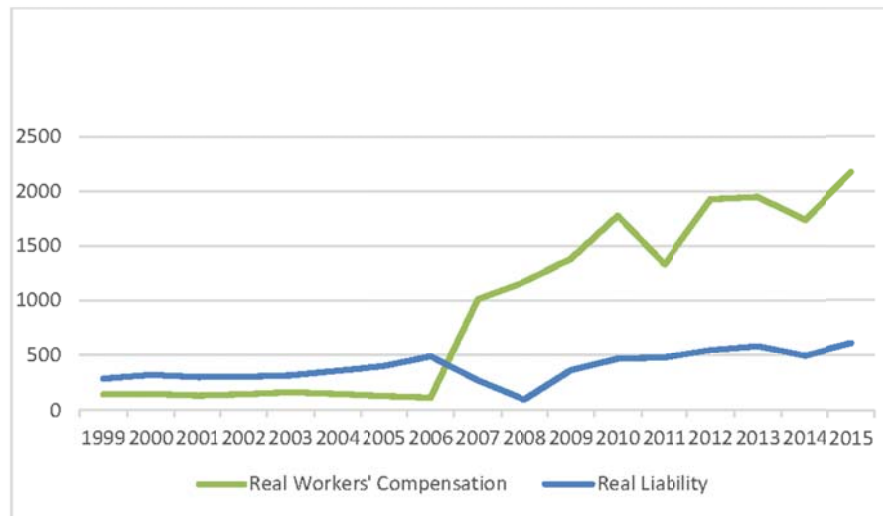
20. Omnibus Reconciliation Act of 1980, Pub. L. No. 96-499, 94 Stat. 2599, 42 U.S.C. § 1395y(b)(2)(A) (1980).

21. See 42 C.F.R. 411.26(a), and *Denekas v. Shalala*, 943 F. Supp. 1073, 1079 (S.D. Iowa 1996).

22. The Medicare, Medicaid and SCHIP Extension Act of 2007, Pub. L. No. 110-173, 121 Stat. 2492 (2007), codified in 42 U.S.C. Sec. 1395y(b)(7-8).

requirements on insurance companies to give the CMS more tools to enforce Medicare's right to subrogation. The new reporting requirements became effective on Jan. 1, 2011, for settlements entered into on or after Oct. 1, 2010. The penalties for noncompliance are severe.<sup>23</sup> Figure 3 shows the effect on Medicare revenues from liability and workers' compensation insurers of the reporting requirements and sanctions for noncompliance.<sup>24</sup>

**Figure 3:**  
**Reimbursement of Medicare from Tort Liability Insurers**  
**(\$ Millions in 2016)**



Although the rate of growth of liability reimbursements is not smooth, they have increased by 114% in real terms from 1999 to 2015. Workers' compensation revenues, on the other hand, were basically flat until 2007, when there was a seven- or eight-fold increase owing to the inclusion in this category of Medicare Set-Aside arrangements by workers' compensation insurers, which ensured that not only past, but also future, payments to workers would be made by these

23. If the CMS must resort to litigation to obtain reimbursement for its payments, the statute allows it double damages plus interest. If primary payers fail to report settlements and judgments, they are liable for a fine of \$1000 per day, per claim. 42 U.S.C. Sec. 1395y(b)(2)(B)(iii), 1395y(b)(3)(A), 1395y(b)(7)(B)(i), and 1395y(b)(8)(E)(i); 42 C.F.R. 411.24(c)(2).

24. Source: CMS Statistics Reference Booklet, various years, Table III.9, "Medicare Savings Attributable to Secondary Payer Provisions by Type of Provision." Amounts have been converted to 2016 dollars. The amount of liability reported for 2008 was obtained from Daniel Aibel, of the Office of General Counsel, Centers for Medicare and Medicaid Services.

Note: Medicare reports that "liability savings of the global settlements recovered by CMS" are reported beginning in fiscal year 2011. Workers' compensation includes "set-asides" for future payments beginning in fiscal year 2007. These are discussed in the text below.

insurers rather than by Medicare. Thus, these additional “revenues” are really reductions in future costs, i.e., future payments to be made by Medicare. We explain this matter more fully below.

## Potential Recovery of Future Health Care Expenses Under Medicare

Suppose a tort victim recovers damages of \$500,000, \$300,000 of which is for health care, which was entirely paid for by Medicare. As we have seen, Medicare is entitled to reimbursement of the \$300,000 via subrogation. Since the tort victim received \$300,000 from Medicare and \$200,000 from the tortfeasor, he or she has not been overcompensated. Since the tortfeasor has paid total damages of \$500,000, equal to the social cost of his actions, there is no problem of underdeterrence, and all is well. In the real world, however, a problem arises: Often a substantial portion of health care damages is for future expenses, but a party claiming reimbursement via subrogation normally has the right to be compensated only for amounts that are already paid.<sup>25</sup> Thus, if \$100,000 of the health care damages are for past expenses and \$200,000 are for future expected expenses, Medicare would be entitled only to payment of \$100,000.<sup>26</sup> Medicare has, therefore, proposed<sup>27</sup> that the parties set aside the portion of the recovery attributable to future health care expenses in a fund, to be used thereafter to pay those expenses as they arise.

This procedure, known as a Medicare Set-Aside (MSA) arrangement, has long been used in workers’ compensation matters, and is designed to ensure that Medicare will not have to resume paying the plaintiff’s health care expenses until after the fund has been exhausted. Figure 3 shows the remarkable and explosive growth of Medicare “reimbursements,” or more precisely the future payments avoided by Medicare, resulting from MSA arrangements by workers’ compensation insurers beginning in 2007. This gives one an idea of the potential savings for Medicare if tort liability insurers were to make similar MSA

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25. In Ontario, Canada, health insurance is provided by the Ontario Health Insurance Plan. Through subrogation, the Ministry of Health and Long-Term Care recovers its costs for health care, including the costs for future insured health care services that an injured person may need. Health Insurance Act, Section 30-36 and Regulation 552, Section 39, and Long Term Care Act, Section 59 (ss1-13).

26. Since Congress has granted Medicare a direct action for reimbursement as well as a right of subrogation, Medicare could in theory sue the tort victim repeatedly for reimbursement as it made additional expenditures after the case was settled. This apparently does not happen in practice.

27 In 2012, Medicare issued an advance notice of proposed rulemaking that would have required Medicare beneficiaries to set aside money from settlements to pay for future medical care related to the settlement. However, in October 2012, CMS withdrew its notice of proposed rulemaking without public comment. Rooney (May 2016), at 18.

arrangements. However, the exact procedures to be used in personal injury cases outside of workers' compensation have not yet been specified.

## **Incentive Issues Arising from Subrogation**

Suppose the share of a plaintiff's damages attributable to medical expenses is \$200,000, all of which have been paid by his health insurer. The plaintiff would have no incentive to sue for this component of damages, since there are costs of doing so but no benefit, if all those damages must simply be handed over to the insurer. Thus, there is room for disagreement and manipulation if the health insurer is not represented by a lawyer in the tort action. The plaintiff's lawyer is normally on a contingent fee, and his compensation will depend on the net amount he or she recovers for the plaintiff insured. Therefore, the plaintiff's lawyer has an incentive to minimize the portion of the recovery that is subject to a right of subrogation (medical expenses in this example).<sup>28</sup> He could do so, for example, by convincing the defendant's lawyer to agree that the recovery is for damages other than medical expenses, or that the victim's medical expenses were not attributable to the tortious conduct. Because of this problem, some health insurers have gone so far as contacting the plaintiff's lawyer to inform them that they will make some payment to him or her to the extent he or she obtains a recovery for medical expenses.

## **How Medicare Deals with Incentive Issues**

### *A. Preventing Manipulation of the Terms of Settlement*

Congress has adopted two measures to alleviate this incentive problem for Medicare. First, it has provided by regulation that one cannot avoid reimbursement to Medicare by classifying a recovery in settlement documents as something other than for medical benefits, such as pain and suffering or loss of consortium, or by stating in settlement documents that none of the recovery is for medical expenses.<sup>29</sup> The only way Medicare will recognize allocation of any portion of a recovery to non-medical losses is when a court or other adjudicator of the merits

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28. Posner (1986), at 537, explains a related problem that arises in a class action, when the plaintiff's and defendant's lawyers can collude to reduce the size of the plaintiff's recovery but increase the plaintiff lawyer's legal fee. Spurr (2010), at 166, describes how, in a state that takes a share of punitive damages awarded to the plaintiff, the plaintiff's and defendant's lawyers can agree among themselves to reduce the amount of punitive damages in return for an increase in compensatory damages.

29. United States, Health Care Finance Administration, *Medicare Intermediary Manual* Sec. 3418.7.

(i.e., a jury or arbitrator) designates amounts for pain and suffering or other non-medical losses.<sup>30</sup>

This rule eliminates the possibility of manipulation that would disadvantage Medicare.<sup>31</sup>

It has been argued that this rule both: 1) encourages socially wasteful litigation rather than settlement; and 2) given the additional costs and uncertainty of litigation, may well deter some tort victims from pursuing their right to compensation, resulting in inadequate deterrence and depriving Medicare of reimbursement of its expenses.

Suppose Mr. Adams was injured in an auto accident by Ms. Brown, and Medicare has paid \$100,000 of his medical expenses. Assume first that Adams claims damages of \$200,000, but settles for \$100,000. Since there has been no court determination, Medicare assumes the entire settlement payment is made for medical expenses<sup>32</sup> and demands the entire \$100,000, less procurement expenses.<sup>33</sup> Now assume that the case went to trial, and the court awarded Adams \$100,000 that was apportioned \$50,000 to medical expenses and \$50,000 to pain and suffering. In this case, Medicare would receive \$50,000 less procurement costs. The obvious effect of this rule is to encourage litigation. On the other hand, it has been argued that one could avoid the necessity of going to court by obtaining the government's advance agreement to an allocation.<sup>34</sup> One would have to resort to court only if the federal government's allocation was unreasonable. (There have been objections in the practice-oriented law journals that the federal government does not respond to parties requesting approval of an allocation in a timely

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30. 42 U.S.C. Sec. 1395y(b)(2)(B)(ii)-(iii); 42 C.F.R. Sec. 411.24(c); Centers for Medicare and Medicaid Services, *Medicare Secondary Payer (MSP) Manual*, CMS Publication 100-05, Ch. 7, Sec. 50.4.4

31. This was recognized by the Court in *Zinman v. Shalala*, 67 F. 3rd 841, 845 (9th Cir. 1995): "Apportionment of Medicare's recovery in tort cases would require either a fact-finding process to determine actual damages or would place Medicare at the mercy of a victim's or personal injury attorney's estimate of damages."

32. Centers for Medicare and Medicaid Services, *Medicare Secondary Payer (MSP) Manual*, CMS Publication 100-05, Ch. 7, Sec. 50.4.4. This rule was upheld in *Zinman v. Shalala*, 67 F. 3rd 841, 845 (9th Cir. 1995).

33. Medicare can, however, waive its right to subrogation if CMS determines that enforcement of its right would cause undue hardship. 42 U.S.C. 1395y(b)(2)(B)(iv) provides that there can be a waiver "if the Secretary determines that the waiver is in the best interests of the program established under this title [42 USCS §§ 1395 et seq.]." See also 42 U.S.C. 1395gg(c) and 42 C.F.R. 411.28. Anecdotal accounts by lawyers indicate that such waivers are not unusual.

34. In *Arkansas Department of Health and Human Services v. Ahlborn*, 547 U.S. 268 (2006), the U.S. Supreme Court noted that "... the risk that parties to a tort suit will allocate away the state's interest can be avoided either by obtaining the state's advance agreement to an allocation or, if necessary, by submitting the matter to a court for decision." Although this case involved reimbursement to a state from a tort recovery under Medicaid, the logic applies equally to reimbursement of the federal government under Medicare.

manner; Congress has responded with legislation requiring Medicare to do electronic claims processing in an efficient manner.<sup>35</sup>)

### *B. Providing Incentives to Plaintiffs' Lawyers to Pursue the Case*

Second, Congress has dealt with the incentive problem of lawyers by effectively making the government a co-plaintiff that is fully responsible for its share of attorney fees. Assuming the Medicare claim is less than the total recovery, it is reduced by a proportionate share of the attorney's fees and expenses.<sup>36</sup> Thus, the plaintiff's attorney is in essentially the same position as if there were no subrogation, and has an incentive to pursue the portion of the plaintiff's claim for medical expenses vigorously.<sup>37</sup>

## **A State's Right to Subrogation Under Medicaid**

The Medicaid program was enacted by Congress in 1965 to provide medical care to individuals who are unable to pay their own medical costs.<sup>38</sup> It is funded jointly by the federal government and the state; the federal government pays between 50% and 83% of the costs incurred by the state for patient care.<sup>39</sup> Although states are not required to participate in Medicaid, all of them do. In April 2016, the total number of Americans covered by Medicaid and a closely related program, the state Children's Health Insurance Program (CHIP), was estimated to be 72,394,275.<sup>40</sup>

The Medicaid program is regulated by both federal and state law, but the federal law establishes parameters for the state statutes. The basic scheme of the federal Medicaid program is to put the state in exactly the same position that the federal government is in under Medicare.<sup>41</sup> Accordingly, under Medicaid, the state

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35. The Strengthening Medicare and Repaying Taxpayers (SMART) Act of 2012, Public Law No. 112-242, 126 Stat. 2374 (2013).

36. 42 C.F.R. 411.37(c) (1995); *Estate of Washington*, 53 F. 3rd 1173, 1175 (10th Cir. 1995).

37. Normally, the real filter that would determine whether a lawsuit is pursued will be the plaintiff's lawyer, not the plaintiff. This is easy to see by comparing the respective cost-benefit problems faced by the tort victim and the lawyer, if one makes the (admittedly strong) assumption that it is strictly a financial decision for each of them. See the Appendix for an empirical estimate.

38. 79 Stat. 343, 42 U.S.C. Sec. 1396 et seq.

39. The percentage of the federal contribution is determined by a formula based on each state's per capita income. 42 U.S.C. Sec. 1396d(b).

40. Source: The Henry J. Kaiser Family Foundation.

41. For example, federal statutes require the state: 1) to learn whether third parties are liable for a Medicaid recipient's medical care—for example, because of a tort; 2) to enact a state law



has a right to reimbursement for its paid benefits from the beneficiary's recovery of damages in a personal injury action.

Some of the implementing statutes adopted by the states are less sophisticated than those of Medicare in dealing with incentive issues, which has resulted in litigation. For example, in one case,<sup>42</sup> an Arkansas statute gave the state the right to reimbursement for all its expenditures on Medicaid, with no deduction for attorney's fees and other costs of procurement of the recovery. The Arkansas statute violated a provision of the federal Medicaid law that prohibited a state from imposing liens for the amount of Medicaid payments it made.<sup>43</sup> Imposing a lien for health care expenses, without reducing it by a proportionate share of the plaintiff's attorney fees and expenses, could drastically reduce the incentive to bring lawsuits that would provide optimal deterrence of tortfeasors and recoveries by the state for its Medicaid payments.

Other states have adopted schemes that seem to deal more effectively with incentive issues. For example, in California and South Dakota, a state agency allows attorneys 25% of any amount that is recovered for Medicaid.<sup>44</sup>

## How Subrogation Evolved in the Private Sector

When we turn our attention from subrogation by Medicare and Medicaid to the evolution of subrogation in the private sector, the dates of major changes become less exact, since we are now dealing not with a pre-emptive federal statute but instead with the different laws of 50 states; nonetheless, it is possible to make some generalizations. The doctrine of subrogation has long been employed without controversy in the area of property/casualty (P/C) insurance.<sup>45</sup> It was, however, not generally available to automobile and health insurance companies, because of the common law prohibitions against the assignment of personal injury claims and the splitting of causes of action based on personal injuries.<sup>46</sup> Beginning roughly in the 1960s, automobile and health insurers began to insert rights of subrogation against tortfeasors in their policies and to press for the right of

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that gives the state a right of subrogation against the third party in such a case; and 3) to collect from third parties amounts for which it has a right to reimbursement. See 42 U.S.C. Sec. 1396a(a)(25)(A); 1396a(a)(25)(B); 1396a(a)(25)(H); 1396k(a); and 1396k(b).

42. *Arkansas Department of Health and Human Services v. Ahlborn*, 547 U.S. 268 (2006).

43. Sec. 1396p(a)(1).

44. California Code Sec. 14124.72(d); *Branson v. Sharp Healthcare, Inc.*, 193 Cal. App. 4th 1467, 123 Cal. Rptr. 3rd 462, 466 (2011); South Dakota Administrative Rule 67:48:04:03. In South Dakota, the attorney is allowed a larger share of the recovery in certain cases, e.g., a one-third share if the amount of the award is determined through mediation, an administrative hearing or by a trial court, and 40% if the amount is determined by an appellate court.

45. Baron (1992), at 582; Trefz (2013), at 65.

46. Baron (1992), at 583.

subrogation in state courts and legislatures.<sup>47</sup> An argument often cited was that if the insurers had no right of subrogation, claimants would be unjustly enriched by a double recovery, from both the insurer and the tortfeasor. Those who opposed a right of subrogation frequently contended that giving insurance companies a right of subrogation, and thereby increasing their revenues, would yield policyholders no benefit in the form of lower premiums.<sup>48</sup> This argument is, however, universally rejected by economists, as seen from the discussion above.

In any case, the use of subrogation of tort recoveries by health and motor vehicle insurers has expanded greatly in the last 50 years. A study by Ward using data from 1992–1996 on subrogation by auto insurers examined the percentage of total annual paid losses that could be recovered through subrogation. He found that “high-performing” insurers recovered 23.7% of losses, while the figure for the average insurer was 11.6%.<sup>49</sup> Subsequent studies by the NASP have found that approximately 15% of annual loss totals can now be recovered through subrogation and that this fraction has increased significantly since the 1990s.<sup>50</sup> In addition, Figure 1 in this paper strongly suggests that the use of subrogation has increased dramatically since about 2011. Insurers with limited staffs have the option of farming out subrogation to third parties, who take over the risks of litigation and assume all costs involving the exercise of subrogation rights.<sup>51</sup> Technical change and the increasing availability of data, which reduce the costs of subrogation, have led health and automobile insurers to increase their efforts at subrogation substantially.

The exact same issues that arose with subrogation by Medicare and Medicaid have emerged with the increasing use of subrogation by private health or automobile insurers. One issue is whether the insurer can claim most or all of the insured plaintiff’s recovery in order to be fully reimbursed for the expenditure it made for the insured. Some states have enacted statutes limiting the amount of the insurer’s lien to either a fixed percentage of the plaintiff’s recovery or a fixed dollar amount.<sup>52</sup>

Another issue is whether an insurer can satisfy its claim out of the plaintiff’s recovery without paying for any of the plaintiff’s legal expenses that made the recovery possible. Some state courts have decided that for reasons of fairness, or to preserve the incentives of plaintiffs to sue for their tortious injuries, the

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47. Kimball and Davis (1962), pp. 842–843; Baron (1992). Kimball and Davis also suggest that in the early 1960s, there was increasing interest in subrogation recoveries for fire insurance. Kimball and Davis (1962), at 844 n. 12.

48. See, e.g., Baron (1992) at 582: “The prospect of a successful subrogation collection is not a factor in the insurer’s rate determination.”

49. Ward (1998).

50. Tzankova et al. (2015).

51. *Ibid.*

52. See, e.g., 770 Illinois Comp. Stat. Sec. 23/10 (the total amount of all such liens cannot exceed 40% of the award); North Carolina General Stat. Sec. 44-50 (lien cannot exceed 50% of damages); and Tennessee Code Ann. Sec. 29.22-101(b) (a hospital lien cannot exceed one-third of the damages).

insurer's subrogation claim must be reduced by a proportionate amount of the plaintiff's legal fees.<sup>53</sup>

Finally, the early history of subrogation efforts made by Medicare and Medicaid strongly suggests that private health insurers will often lack the information they would need to recover amounts from defendants via subrogation. As we have seen, Medicare solved this problem by imposing data collection and reporting requirements on insurance companies, but private insurance companies do not have the ability (at least directly) to enact laws forcing others to provide them information. Some states have dealt with this issue by enacting legislation requiring plaintiffs to notify any parties entitled to subrogation of their lawsuit, to give them an opportunity to intervene in the litigation.<sup>54</sup>

## Subrogation, the Collateral Source Rule and Moral Hazard

To understand the issues arising from the growth of subrogation, one must know the relationship between subrogation, the collateral source rule and the recent waves of state statutes abrogating the collateral source rule. The collateral source rule barred from the trial evidence of any compensation received by the plaintiff from "collateral" sources such as health, disability or workers' compensation insurance.

Some commentators have expressed concern that the collateral source rule would lead to overpayment of damages. Suppose again that Mr. Evans has been injured by a negligent driver, but assume now there is no subrogation. Evans' medical expenses in the amount of \$300,000 were paid by his own health insurance. Evans sues and obtains a judgment against the negligent driver in the amount of \$500,000, representing \$300,000 in medical bills and \$200,000 in pain and suffering. This raises the possibility that Evans would obtain total compensation of \$800,000 (\$500,000 from the tortfeasor and \$300,000 from his health insurer) when he has incurred only \$500,000 in damages. The concern is that the scheme of compensation being considered would lead to moral hazard, viz., substantially reducing one's level of care, or in the extreme, intentionally

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53. See, e.g., *Martinez v. St. Joseph Healthcare System*, 871 P. 2nd 1363, 1364 (New Mexico 1994), and Schulte (2013).

54. As of 2016, seven states had enacted legislation requiring a plaintiff to send notice either of its claim, or of a verdict in its favor, to "all persons entitled by contract or by law to either subrogation or a lien against the proceeds of the plaintiff's recovery." In Florida, Hawaii, Kentucky, Minnesota and Utah, the notice must be sent when or before the plaintiff's action is filed, whereas in Maine and Michigan, notice of the verdict must be sent "after the verdict." Feeley, Horan and Schap (forthcoming); see also Schap and Feeley (2008) for the applicable rules in 2005. See, e.g., Michigan Compiled Laws Sec. 600.6303 (3): "Within 10 days after a verdict for the plaintiff, plaintiff's attorney shall send notice of the verdict by registered mail to all persons entitled by contract to a lien against the proceeds of plaintiff's recovery."

becoming an accident victim. That is, does the insurance, when combined with a potential recovery in tort, induce him to use less than an efficient level of care to avoid an accident? Some state statutes seem to be based on the assumption that the relevant measure of potential gain from the insurance is the present value of the insurer's total payments in the event of an accident, minus the present value of the premiums historically paid.<sup>55</sup> This is not correct because once the policy is in effect, the insured would consider the premiums that were paid a sunk cost (and the insurer's prior payments for health care a sunk benefit). The measure of gain would, roughly speaking,<sup>56</sup> be the insurer's expected payments in the event of an accident.

In theory, this could induce a potential victim to use less than an efficient level of care, resulting in an excessive level of accidents or other tortious activity. However, to the extent that this is a problem, it can be avoided by the remedy of subrogation. If in the previous case there were subrogation, Evans' health insurer, which paid his medical bills although it was only secondarily liable for them, could step into his shoes and obtain reimbursement of its \$300,000 from the injurer who was primarily responsible, leaving Evans to recover \$200,000 in damages. The defendant would still be liable for full damages of \$500,000, but Evans' health insurer has recovered the \$300,000 from the defendant in a subrogation action. Thus, the collateral source rule, combined with the right of subrogation for health insurers, avoids overpayment to the tort victim but ensures that the tortfeasor is fully liable for the damages he has caused. Researchers have

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55. Thus, for example, some state statutes that modify the collateral benefits rule reduce the deduction for the insurer's payment by the total amount of premiums paid. See, e.g., Indiana Code 34-44-1-2(2) (West 2007), and Michigan Compiled Law Statutes Sec. 600.6303(2). For the post-verdict reduction of the recovery in a personal injury action, the Michigan statute provides that: "The court shall determine the amount of the plaintiff's expense or loss which has been paid or is payable by a collateral source. Except for premiums on insurance which is required by law, that amount shall then be reduced by a sum equal to the premiums, or that portion of the premiums paid for the particular benefit by the plaintiff or the plaintiff's family or incurred by the plaintiff's employer on behalf of the plaintiff in securing the benefits received or receivable from the collateral source." Note, however, none of the state statutes we have seen allow for accumulation of interest on the premium payments, and most do not consider the possible increase in premiums resulting from the accident. (An exception is the New York statute cited below.)

Two state statutes that allow introduction of collateral benefits into evidence at trial in medical malpractice cases allow the plaintiff to respond by introducing evidence of insurance premiums "paid or contributed" by him. Arizona Revised Statute 12-565; California Civil Code Sec. 3333.1.

A New York statute provides that a post-trial reduction of a personal injury award by the amount of collateral benefits should be offset by "an amount equal to the premiums paid by the plaintiff for such benefits" over the last two years, plus "an amount equal to the projected future cost to the plaintiff of maintaining such benefits." New York Civil Practice Law and Rules 4545(a). Maine has a similar statute. Maine Rev. Stat. Ann. 24 Sec. 2906 (2000).

56. There should also be an adjustment for the expected increase in premiums resulting from the accident.

generally approved of the right of subrogation of insurers in tort cases on the ground that it prevents overpayment to the tort victim and, thus, moral hazard.<sup>57</sup>

## Moral Hazard Arising from Abolition of the Collateral Source Rule

There is another connection between the collateral source rule, subrogation and moral hazard: When the collateral source rule has been abolished, there may be moral hazard, but this time on the part of the tortfeasor rather than the victim. In the last four decades, under the rubric of tort reform, the collateral source rule has been abrogated by statute in many states. These statutes were generally justified on the grounds that they would prevent overpayment to tort victims and moral hazard. Articles in law journals and economics journals that commend statutes abolishing the collateral source rule either do not consider the possibility of subrogation, or contend that insurers generally do not exercise the right of subrogation.<sup>58</sup> This objection is undercut by the recent rapid increase in the use of subrogation shown in Figure 1 and Figure 2.

Two types of statutes have modified the collateral source rule. In four jurisdictions, evidence of the collateral sources is admissible during the trial itself so that the verdict may well reflect a reduction of collateral source amounts.<sup>59</sup> In many other jurisdictions, evidence of collateral benefits is barred during the trial, but they are, or may be, subtracted in a post-verdict proceeding.<sup>60</sup> Some of these jurisdictions do not allow the plaintiff to receive a cumulative recovery even if the insurer fails to, or is unable to, exercise its right of subrogation against the defendant.<sup>61</sup> Some courts have interpreted statutes ruling that collateral benefits must be subtracted from the plaintiff's recovery to mean that health insurers, who

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57. Kimball and Davis (1962), at 869; Reinker and Rosenberg (2007); and Polinsky and Shavell (2017).

58. See Jacobsen (1991), who does not mention the possibility of subrogation. Wershbale (2008) states that "the main reasons subrogation rights are unenforced include difficulty in establishing that a damage award encompasses the particular collateral benefits paid out by the insurer, high administrative costs associated with seeking subrogation, and potential damage to the insurer's reputation resulting from subrogation actions." [Citing Congressional Budget Office (2004).]

59. Alabama Code § 12-21-45(c) (1975). In Alabama, the insurer is able to exercise its right of subrogation by suing the defendant directly. *Melvin v. Loats*, 23 So. 3rd 666 (Alabama Civ. App. 2009). In Alabama, evidence of collateral benefits is admissible at trial in all personal injury actions. In Arizona and California, evidence of collateral benefits is admissible only in medical malpractice actions, and in South Dakota, only in health care malpractice actions Arizona Revised Statute 12-565; California Civil Code Sec. 3333.1; South Dakota Codified Laws Sec. 21-3-12.

60. Todd (2012), at 993, and cases cited in n. 207.

61. *Id.*

stand in the shoes of the plaintiffs, cannot recover from the defendant the amounts they paid the plaintiff for medical expenses.<sup>62</sup> Thus, with either type of abrogation of the collateral source rule, there is potential for the defendant to avoid paying the full measure of damages.

Suppose again that an insured person has been injured by a negligent driver and obtains a judgment against the negligent driver in the amount of \$500,000, representing \$300,000 in medical bills and \$200,000 in pain and suffering. A first-party insurer has paid the insured's medical bills in the amount of \$300,000. If the judge reduces the defendant's liability by \$300,000, and the insurer cannot or does not recover that amount through a direct action or by subrogation, there is a serious problem of moral hazard in that the defendant has not paid the full social cost of his or her actions. The abolition of the collateral source rule transfers liability from the defendant to the plaintiff's health insurer (and thereby to the plaintiff in the form of higher health insurance premiums), thereby creating a problem of moral hazard and inadequate deterrence to tortfeasors.<sup>63</sup> A number of empirical studies have found that tort liability has been reduced by statutes modifying or abolishing the collateral source rule.<sup>64</sup>

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62. See, e.g., *Humbach v. Goldstein*, 229 A.D. 2d 64, 653 N.Y.S. 2d 950, 952 (2d Dept. 1997): "However, since Oxford paid the plaintiff's medical costs, CPLR 4545 [the statute abrogating the collateral benefits rule] would be applicable to any verdict in the instant action. Oxford could not recover, by verdict after trial, the cost of the plaintiff's medical care which was reimbursed by Oxford, without running afoul of the rule that Oxford's rights of recovery under subrogation cannot be any more than the plaintiff's rights of recovery, or without running afoul of CPLR 4545. The purpose of CPLR 4545 is not only to prevent double recovery by plaintiffs, but also to keep down the liability insurance costs of policyholders."

63. Reinker and Rosenberg (2007), 264 at n. 4.

64. One line of research involves motor vehicle accidents. Browne and Puelz (1999), analyzing closed automobile bodily injury insurance claims from 1992, found that reform of the collateral source rule was associated with a decrease in value of non-economic claims of 14.4%, in economic claims of 15.3% and overall claim value of 13.7%. They concluded, "These results suggest that courts do adjust awards to plaintiffs to account for evidence that they have received compensation for their injuries from other sources." Rubin and Shepherd (2005) found that weakened versions of the collateral source rule were associated with more vehicle accident deaths, as drivers exercise less care when they face less than the full costs of accidents they cause.

Other researchers have investigated the effect of collateral source rule modification on medical malpractice. Danzon (1986) found that collateral source offset reduced the frequency of medical malpractice claims by 14%. Klick and Stratmann (2005) found increased infant mortality (concentrated in the black population) as physicians exercised less care when accountability for the full costs of malpractice was reduced. In another study of medical malpractice, Iizuka (2013), analyzing data from 1994 to 2007, found that collateral source rule reform significantly increased preventable medical errors associated with four specific ob-gyn procedures.

## Conclusion: Policy Implications

The thrust of the economic analysis summarized above is that clauses in insurance contracts providing for subrogation should not be prohibited. The gain to insurers from subrogation will be reflected in lower premiums, and risk-averse consumers will be better off. There is an unmistakable trend toward increasing use of subrogation by health and disability insurers, including private firms, Medicare and Medicaid. As previously noted, some states have helped the process along by requiring plaintiffs to send notice of their action to all parties who may be entitled to subrogation. This means that the recovery of personal injury claims is increasingly divided among multiple parties, rather than a single victim. When part of the plaintiff's recovery will be taken by someone who has a right of subrogation, the plaintiff has no incentive to sue for this component of damages, and in some cases not enough incentive to sue at all.

We found that the Medicare statutes are carefully designed to preserve the incentives of plaintiffs' lawyers to pursue personal injury actions. However in some states, the expanding use of subrogation by Medicaid and private health insurers without measures taken to bolster the incentives of plaintiffs may substantially erode the real return to suing in tort. These trends are likely to reduce settlement payments and the filing of lawsuits by tort victims, and thus the deterrence of tortious behavior, unless subrogation arrangements adapt to preserve plaintiffs' incentives. Some states require (by judicial decision or statute) that insurers pay a proportionate amount of the plaintiff's legal expenses that make the personal injury award possible, while others do not. We believe that insurers should be required to pay an appropriate share of the legal expenses to prevent insurers from free-riding on the legal expenditures of the insured plaintiff and to preserve the incentives of the plaintiff and the plaintiff's lawyer to pursue valid tort claims.

Another problem arises in many states that have abolished the collateral source rule, if there is no subrogation by the insurer. If there is no subrogation, either because the insurer has not included the right in its insurance policy or because the insurer does not exercise that right, then there is a tradeoff: Either the insured obtains a recovery beyond his or her damages, or the tortfeasor pays less than the social cost of his actions. Suppose that an insured person, Smith, has been injured by negligent driver Jones. Smith's medical expenses in the amount of \$300,000 were paid by his own health insurer, X Co. Smith sues Jones and obtains a judgment in the amount of \$500,000, representing \$300,000 in medical bills and \$200,000 in pain and suffering. X Co., which paid Smith's medical bills, could obtain subrogation of its outlay of \$300,000 from Jones, the injurer who was primarily responsible, leaving Smith with only \$200,000 in damages. But suppose X Co. does not have, or does not enforce, its right of subrogation. Then, if the state has repealed the collateral benefits rule, the Court might have to decide whether: 1) Jones must pay Smith only \$200,000, so that Jones pays less than the social cost of his actions; or 2) Smith collects full damages, resulting in an

overcompensation of \$300,000. The answer should turn on which kind of moral hazard is more serious: that of the tortfeasor, who may take less precautions to avoid injuring others, or that of the victim, who may take less precautions to avoid being injured. This is a question that must be settled by empirical research. If, for example, the moral hazard of the tortfeasor is determined to be a more serious problem than the moral hazard of the victim, then the collateral benefits rule should be preserved.



## Appendix: A Comparison of the Incentives of the Tort Victim and His Lawyer

We would expect that victims of tortious injuries who are not otherwise opposed to filing a lawsuit will be willing to do so if they can expect at least a small recovery. Normally, the real filter that would determine whether a lawsuit is pursued will be the plaintiff's lawyer, not the plaintiff. This is easy to see by comparing the respective cost-benefit problems faced by the tort victim and the lawyer, assuming that it is strictly a financial decision for each of them (admittedly a strong assumption). The lawyer will normally be on a contingent fee, typically for one-third of the recovery. A major empirical study of civil litigation<sup>65</sup> found that for lawyers on a contingent fee in 1978, the average predicted number of hours spent by the lawyer on a case was 50.7 hours, and that the average estimated recovery was \$14,390 in 1978 dollars, or about \$52,971 in 2016 dollars.<sup>66</sup> The median hourly wage of a U.S. lawyer in 2016 is estimated to be \$56.81.<sup>67</sup> Assuming the average time spent on a case has not changed from 1978 to 2016, this suggests that the average case would involve a time cost for the lawyer in 2016 of \$2,880.27. The lawyer's expected fee, one-third of the expected recovery, would be \$17,657. Of course there would be additional expenses for taxes, rent, utilities, nonlegal staff, photocopying, court fees, expert witnesses and the like.

With regard to the cost-benefit calculation of the potential plaintiff, the median wage of U.S. workers in 2016 was \$17.81 per hour,<sup>68</sup> but plaintiffs in personal injury cases often have lower-than-average income. Kritzer et al.<sup>69</sup> estimated that about 16% of the lawyer's time was spent conferring with the client and 16.7% in discovery, part of which often involves depositions of his or her client or the client's family. If we assume the client spends on average 32.7% of the time spent by the lawyer, and that the client's wage is \$17.81, we obtain a time cost for the client in 2016 of \$295.27. If the client obtained two-thirds of the recovery, he or she would have \$35,314. Clearly, there is a much wider margin of profit for the client than the lawyer, and if the tort victim is willing to consider a lawsuit, the marginal decision of the lawyer will almost always determine whether the case is filed.

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65. The Civil Litigation Research Project. See Kritzer et al. (1985).

66. *Id.* at 266, 258.

67. May 2016 National Occupational Employment and Wage Estimates, Bureau of Labor Statistics.

68. *Id.*

69. Trubek et al. (1983), at 91.

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# Time to Dust Off the Anti-Rebate Laws

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## Abstract

Anti-rebate laws were introduced more than 100 years ago, after agents' use of rebates threatened the solvency of life insurance companies and raised questions around unfair discriminatory practices. Supporters of the initial law claimed that they provided market stability, prevented unfair discrimination and kept the focus on the quality of the insurance product versus the size of a rebate. On the other hand, opponents suggest the law infringes upon their rights to competition and stifles innovation. Today, most states have enacted anti-rebate statutes and many have enacted the NAIC model *Unfair Trade Practices Act* (#880). Over time, several of these states have carved exceptions to the anti-rebating law. While many states have the same categories of exceptions and similar statutory language, the application of the language varies.

This paper evaluates the recent call for change or repeal of the current anti-rebate laws by reviewing the evolution of the anti-rebating statutes, evaluating the current application and exceptions to the laws and discussing the options in favor of and against repeal. The paper concludes with recommendations for those states considering change to current laws.

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## 1. Introduction

*“It’s time to dust off the anti-rebate laws...and see if they really serve the purpose they were intended to serve when they were put on the books in a totally different age.”<sup>1</sup>*

Rebating occurs when an agent or broker discounts or shares their commission with an insured. Historically, rebates were used in the life insurance industry as an agent’s way to induce a customer to purchase a life insurance policy. The first set of laws to regulate this practice were introduced more than 100 years ago, after rebating began to threaten the solvency of life insurance companies and raised questions around unfair discriminatory practices. Rebating is no longer an issue exclusive to life insurance. In fact, agents who sell most insurance products are impacted by anti-rebating laws. Supporters of anti-rebate laws claim it provides market stability by leveling the playing field, preventing unfair discrimination and keeping the focus on the quality of the insurance product versus the size of the rebate. However, opponents argue that current laws are outdated, thereby leaving little room for innovation in marketing and sales. Because of the limitations imposed by the dated laws, they infringe upon a business’ right to competition.

Rebating in the marketing of consumer goods is a well-known and widely utilized competitive strategy, both with manufacturers and retailers.<sup>2</sup> Based on game theory, product rebating is one solution, albeit an inferior one, to a competitive dilemma.<sup>3</sup>

The competitive dilemma can be illustrated simply. Assume a market has two competitors and both enjoy equal market share and prices, allowing for comfortable profit margins. Should either lower the price to gain market share? The possible payoffs are:

- Both cooperate and keep prices high, and each continues to earn the same profits.
- Both compete and lower prices, and each earns a reduced profit.
- One competitor lowers prices and the other does not, and the first earns more profit than the latter.

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1. Jaffe, “Points & Viewpoints,” *National Underwriter, Property & Casualty Ed.*, Oct. 2, 1981, at 52.

2. Edwards (2007) estimates total rebate offer volume ranges from \$4 billion to \$10 billion per year, involving more than 80% of consumers and more than 5 billion rebates.

3. This competitive dilemma is based on the classic prisoner’s dilemma, first introduced by Merrill Flood and Melvin Dresher at RAND in 1950 and later formalized by Albert Tucker at Stanford University in 1952 for psychology research (Dresher, 1961). The illustration has since become widely utilized in teaching and research to describe a host of social and economic problems.

In every scenario, an individual competitor is made better off by lowering price, but if both competitors lower the price, the profit for each is reduced. Cooperation, without either lowering price, is the optimal outcome, maximizing profits for each. Realistically, however, the two competitors who do better when they cooperate have incentives not to cooperate (or are not allowed to cooperate).

Rebating, if inserted into this dilemma, is simply a form of price reduction. In product rebating, however, the price reduction (and thus the dilemma) is more straightforward than it is for insurance rebating.

Why are the behavioral economics of insurance pricing more complicated than for consumer products? Unlike in the consumer products market, rebates in the insurance market are historically offered by intermediaries, not by the manufacturer (insurer) itself. Also unlike the consumer products market, the insurance price is set before the cost of goods sold is known, and partially for this reason, insurance pricing (rating) is regulated. The first complication of using a rebate strategy in insurance, then, is the possibility it leads to tightened price (rate) regulation. Rates for admitted carriers are filed with regulators based on the insurer building agent commissions into the expense portion. If agents can afford to “share” commissions, regulators may decide the expense rate in the filing is higher than needed, or, at a minimum, that insurers need to file rates transparently, with expected agent rebates as an added cost.

Second, rebating as used in insurance is not easily observable among competitors. In the competitive dilemma illustrated above, it was implicitly assumed the competitors could observe one another’s price movements (rebates) and respond immediately with their own. Within insurance markets, traditional forms of rebating are not easily observable and could thus be interpreted by other insurers as a signal they have potentially overpriced the underlying risk itself (or that the insurer whose agent offer hidden rebates has underpriced the risk).

Last, if little or no transparency exists in the rebating process (as is the case today), insurance rebating provides a means for agents to collude with insurers (as their principals in the marketing relationship) in an effort to unfairly price-discriminate across insureds. Although price discrimination based on differentials in the cost of the underlying risk is paramount to sound insurance pricing, price discrimination where there is no such risk differential is in conflict with the regulatory goals of price regulation and is, therefore, illegal.

Due to the complexities and potential negative externalities created by insurance rebating, it is understandable that anti-rebating laws are the norm in most states. The overarching question posed by the current research is whether insurance innovations, and the related threat of market disruption, call for repeal or rewrite of these laws to allow for insurers to respond adequately and competitively to market disruptors and insurance substitutes that are not subject to the same regulatory restrictions.

The primary objective of this paper is to evaluate the recent call for change or repeal of the current anti-rebate laws. This paper is organized into three parts: 1) a review of the evolution of the anti-rebate statutes; 2) an evaluation of the current application and exceptions to the laws, including a state-by-state analysis of trends

and similarities; and 3) a discussion weighing the options in favor of and against repeal, followed by recommendations for legislatures considering a change to their current laws.

## 2. History of Anti-Rebate Statutes

Massachusetts was the first state to enact an anti-rebating statute in 1887.<sup>4</sup> Two years later, New York followed suit with an “anti-discrimination” law, which prohibited discrimination between individuals from the same actuarial class (Conniff, 1986). Within three years, 10 states enacted similar laws and, by the early 1900s, most states enacted some form of an anti-rebate law. These laws were created in response to the then common life insurance practices where agents paid rebates to encourage sales (Sherman and Wen, 2009). This practice often led to agents demanding a higher commission to make up for the rebate they gave the customer, which, in turn, raised a concern for the solvency of the insurer. Additionally, it raised the question of whether this practice resulted in unfair discrimination, as the rebates were not offered consistently to all clients.

While a majority of states embraced the idea with little hesitation, the laws proved to be ineffective. In 1895, 30 insurance companies entered into an anti-rebate agreement where they agreed to terminate any agent found guilty of rebating and render the agent unemployable for one year (Conniff, 1986). These efforts seemed to bring more attention to the issue; nonetheless, rebating continued.

After the passage of the federal McCarran-Ferguson Act in 1945, the NAIC developed the model *Unfair Trade Practices Act* (#880), which included provisions that prohibited rebating and certain transactions considered rebating (Conniff, 1986). Most states have enacted language similar to NAIC Model #880, and many of those states have expanded the language to apply to all forms of insurance.

In the 1980s, some courts started questioning the validity and purpose of such a law. In *Dade County Consumer Advocate's Office v. Department of Insurance*, James Blumenthal, a Florida insurance agent sued the Florida Department of Insurance claiming the statute prevented him from competing for insurance sales.<sup>5</sup> The lower court found in favor of the insurance department, and Blumenthal died during the appeal. The case was picked up again in May 1983 and made its way to Florida's First District Court of Appeal, which stated it was “unable to find any legitimate state interest justifying the continued existence of the anti-rebate statutes.”<sup>6</sup> Additionally, the court cited violations of the Florida Constitution's due process clause by constituting “an unjustified exercise of the police power”

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4. Alaska Attorney General Opinion 661-96-0488 (April 22, 1996).

5. 457 So. 2d 495 (1st DCA, 1984), aff'd, 492 So. 2d 1032 (Fla. 1986).

6. *Id.* at 497.



(Conniff, 1986). In 1990, Florida recodified the law confirming rebating is illegal but provided specific categories of exceptions (Florida Association of Insurance Agents, 2011).

Michigan courts viewed the law differently and upheld the constitutionality of the state's anti-rebate statute. In *Katt v. Commissioner of Insurance*,<sup>7</sup> the court held the plaintiff failed to show that the anti-rebate laws were “utterly without rational foundation” (Harnett, 2011).

In 1988, California voted to repeal the anti-rebating law amongst a host of other regulations under Proposition 103 (Florida Association of Insurance Agents, 2011). While California effectively lifted the lid on rebating, most major insurance companies issued directives stating if agents rebated, their contract would be cancelled.

Most states have enacted some form of NAIC Model #880. As a general rule under the model, agents and brokers are not allowed to offer a discount or other inducement to an insured or prospective insured unless it is specified in the policy, contract or insurer's filings. Courts and state insurance regulators have played a part in further dissecting the application of the rebate law in their jurisdiction. To the surprise of some, one court went so far as to construe a dispute resolution as a rebate.

In Idaho, an agent met with insureds who were planning to prepay for their policies for a certain number of years.<sup>8</sup> The agent called the insurer and received a quote, which he then relayed to the insureds, who executed a check for the balance. Later, the insurer informed the agent that he needed to collect an additional amount of \$1,248.33. Unsurprisingly, the insureds became upset and wanted to sue the insurer and agent personally. The agent entered into a compromise with the insureds to cover half of the amount and the insureds paid the other half. Still unhappy, the husband complained to the insurance department, which put the insurance department on notice to the transaction that took place. In turn, the insurance department brought an action against the agent for rebating the premium. The appellate court reversed the decision. It was difficult to say that the payment was an inducement for the insured to buy insurance because the policy was already in place. The court viewed the payment by the agent as a settlement of the disputed claim to prevent personal liability and not an unfair trade practice prohibited by the statute (Harnett, 2011). Common law is not the only venue for exceptions to this statute. In recent years, several states have provided additional exceptions through regulatory directives.

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7. Case no 87-60123-CZe (Circuit Court, Ingham County, Michigan, decided July 19, 1990), aff'd, 505 N.W.2d 37 (1993).

8. *Cox v. Department of Ins.* 823 P.2d 177 (1991).

### 3. Exceptions to the Anti-Rebating Statutes

Although many states have enacted NAIC Model #880, the interpretation of the law varies from state to state. Some states have carved exceptions to the statute through case law, while others have enacted revisions to their statute that list out the exceptions. The remaining states have created exceptions to the anti-rebate statutes through insurance bulletins or advisory opinions. Even though many states have the same categories of exceptions and similar statutory language, they vary in application. There is a particularly significant variation in interpretation of promotional item limits.

Refer to Appendix A for a more detailed look at the state exceptions.

#### 3.1 Promotional Items

Even though many states use similar statutory language, they have different ways of applying anti-rebate laws related to an agent's use of promotional items. NAIC Model #880 states:

*“Except as otherwise expressly provided by law, knowingly permitting or offering to make or making [any insurance] or agreement as to such contract other than...expressed in the policy...paying or allowing...as inducement to such policy...any valuable consideration or inducement whatever not specified in the policy; or giving, or selling, or purchasing or offering to give, sell, or purchase as an inducement to such policy”<sup>9</sup>*

Most states allow agents and brokers to give promotional items as an incentive so long as the item is not attached to the sale of an insurance product and not unfairly discriminatory. This exception is accomplished in one of two ways: 1) by a set dollar amount incorporated into the statutory language; or 2) by reference in an insurance bulletin or advisory opinion. Some bulletins provide a verbal “reasonable amount” threshold, while many others list out an acceptable dollar amount.

For example, an agent who advertises on Instagram that he will give a free solar flashlight to anyone who comes into his office for a quote on auto insurance would be within the parameters of the rule, as long as the cost of the flashlight does not exceed the state's threshold. However, an agent who offers to give \$50 cash to existing customers to cover the cost of the renewal increase if they renew with him would likely be outside of the scope an approved incentive, regardless of the state's threshold.

States have differing opinions of what the appropriate threshold for a “valued amount” looks like. Most states rate an acceptable promotional value as \$20 to

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9. NAIC Model #880, § 4H(1).

\$25, while some allow for as little as \$10. Additionally, some states limit promotional items within the statute, while others incorporate by reference in the insurance department bulletins. In 2013, Montana raised its promotional value from \$5 to \$25 after finding the average for surrounding states to be \$50.<sup>10</sup> In September 2016, Montana increased this amount once again to \$50.<sup>11</sup> Until 2013, Montana carried the lowest stated promotional value limit. Currently, Idaho allows for the largest monetary value of \$200 per calendar year.

In 2015, Washington introduced drastic revisions to its promotional item limitation. Senate Bill 5743 proposed to increase the “valued amount” from a \$25 limit to a \$100 limit.<sup>12</sup> Supporters of higher limit—including agents and trade associations—argued that under the \$25 limit, it was nearly impossible for an agent to engage in simple gestures such as sending flowers to a sick client. Opponents argued that a \$75 increase was too much because the previous update in 1990 was a \$20 increase. Ultimately, the legislature supported the increase. Agents and trade associations viewed this as a substantial victory in working together with the legislature to gain a reasonable increase under the statute.

Gift cards seem to be most popular among personal insurance agents, especially around the financial crisis of 2008 when gas prices were reaching an all-time high. Many states categorize a gift card as a promotional item subject to the state’s threshold, with little additional guidance. Previously, Maine distinguished merchant gift cards from “cash equivalents,” which could be used similarly to a credit card. If a card was merchant-specific, then it was an acceptable incentive in Maine, as long as it was within the monetary limit.<sup>13</sup> Maine removed this distinction in the modernization of its statute in 2017.<sup>14</sup>

### 3.2 Referrals

There are few laws to address sharing commissions between agents. However, anti-rebating statutes often raise a question around the legality of giving an unlicensed person or entity a fee for referring service to the agent. States such as Illinois and Indiana have a specific statutory language to address referral fees for non-agents. Most of those statutes are silent as to an appropriate monetary limit. The remainder of states subscribe to a uniform interpretation. As long as the “referral fee” is not contingent upon a sale, most states view the fee within the parameters of the statute. Often, in justifying the fee, regulators compare the referral to an agent purchasing a lead.

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10. At the time, rates for surrounding states were: South Dakota and Washington, \$25; North Dakota, \$50; and Idaho, \$100. *See* Montana Advisory Memorandum (May 14, 2013).

11. Montana Advisory Memorandum (September 26, 2016).

12. S. 5743, 64th Reg. Sess. (WA. 2015).

13. Maine Bulletin No. 384 (November 21, 2012).

14. Maine Bulletin No. 426 (October 25, 2017).

### 3.3 Raffles

Some states allow an agent or broker to conduct a raffle as long as the entry is not connected to the sale of an insurance product and is within a specific dollar range, which varies by state. However, several states have not offered guidance in this area.

### 3.4 Charity Donations

A number of states allow producers to donate their commission to charity as long as the client, or prospective client, has no influence over the choice of charity. Additionally, most of these states prohibit the producer from naming the client, or prospective client, so s/he becomes eligible for the tax benefit. The 2008 New Jersey amendment that stated "... the consumer cannot receive the contribution 'and has no direct or indirect interest in the receipt of the contribution'" raised a question about how far removed the client must be from the charity (NJ Insurance Department of Banking and Insurance Office of Consumer Protection, 2009). A client could have an "indirect interest" in a charity if the charity knows that the client's agent donated to the charity, even if the client does not receive the "direct benefit" of the tax write-off. Ultimately, the New Jersey Department of Insurance decided that the "indirect interest" must still be of pecuniary benefit to the client to violate the statute. For example, if the agent donates to the school fundraiser event, as long as it is not linked to the sale of insurance or at least marketed as such, the school is receiving an acceptable "indirect benefit."

### 3.5 Value-Added Services

"Value-added" services arise when an agent or broker provides a service using certain tools or risk management expertise without requesting an additional fee. This issue is perhaps most common in the commercial context and is of more concern given the evolution of tools available to increase customer service.<sup>15</sup> Generally, services are not prohibited if they are directly related to the insurance product sold, are intended to reduce claims, and are provided in a fair and nondiscriminatory manner.<sup>16</sup> These services include activities or products such as risk assessment, risk control tools, claims assistance, legislative updates or administration consulting. Traditionally, these "value-added" services have been distinguished from providing administration for federal Consolidated Budget Reconciliation Act (COBRA) and mini-COBRA coverage, preparing employee handbooks, and performing drug tests or background checks, just to name a few.

The implementation of the federal Patient Protection and Affordable Care Act (ACA) in 2010 led to increased calls for agents and brokers to assist in compliance

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15. Maine Bulletin No. 384 (November 21, 2012).

16. Missouri Insurance Bulletin 10-07 (November 5, 2010).

and tax documentation. This increase in demand for value-added services further prompted discussion on the impact of anti-rebating statutes

Several states have enacted a litmus test, which is highly favored among various industry stakeholders, as it sets direct criteria for services allowed as an exception to the rebate law without naming them one by one. New Hampshire and New York provide for some limited exceptions related to “value-added” services. New Hampshire’s statutory exception follows a two-part test:

(d) Value added service, activity, or product offered or provided without a fee, or at a reduced fee, that is related to the coverage provided by the insurance contract, if the provision of such value added service, activity, or product does not violate any other applicable statute or rule, and is:

- (1) Clearly identified and included within the insurance policy, annuity contract, or brokerage agreement; or
- (2) Directly related to the firm’s servicing of the insurance policy, annuity contract, or brokerage agreement, or offered or undertaken to provide risk control for the benefit of the client.<sup>17</sup>

New York enacted a similar litmus test, with guidance and clarification provided in Circular Letter No. 9 (2009):

... an insurer or insurance producer may provide a service not specified in the insurance policy ... if:

1. the service directly relates to the sale or servicing of the policy or provides general information about insurance or risk reduction; and
2. the insurer or insurance producer provides the service in a fair and nondiscriminatory manner for like insureds or potential insureds.

The New York test is still fairly limited in its application of “services directly related to the servicing of the policy,” as the letter cautions certain services—such as payroll services, management of employee benefit programs and other types of human resources (HR) services—“... could, in the Department’s estimation, run afoul of the rebating and inducement provisions set forth in the Insurance Law.” Thus, the New York directive did little to address concerns arising from the ACA or internet platforms such as Zenefits.

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17. NH § 402:41(1)(d)(1)-(2).

## 4. The Cost to Disruptive Technology

Less than two years after the passage of Senate Bill 5743, Washington agents and trade associations found themselves on the other side of the table arguing against removing caps for promotional items and “value-added” services that would allow businesses such as Zenefits to offer its platform free of charge. Zenefits was founded in California in 2013 by Parker Conrad, who thought of the idea after experiencing firsthand what it was like to run the HR functions for a small business. The company is a software-as-a-service (SaaS) and licensed broker, which serves more than 20,000 small to midsize businesses.

While Zenefits has several competitors such as Namely and Gusto, it was the first to offer portions of the software for free while being available to serve as an insurance broker for those clients who choose to use the company for insurance.<sup>18</sup> The technology enables small businesses that do not have the resources for HR support to house a number of components in one location. Under the original model, Zenefits gave customers free access to the basic HR platform that included services such as paid time off (PTO) tracking, on-boarding and off-boarding, and information technology (IT) provisioning. Zenefits then sold the more robust HR tools for a fee.

Today, Zenefits operates like many online services and apps in the market, where the access to the software is provided as a freemium,<sup>19</sup> with certain features available for purchase in a tiered-based pricing model. Under this model, customers are not charged for all services. Some services—such as employee management and benefit administration—are free to all clients who create an account (Zenefits, 2017). However, other services offered through the same platform are available to customers at an additional fee from Zenefits or the contracted vendor. All users in the state of Washington pay for the traditionally free level due to the OIC’s current interpretation of the anti-rebate law (Zenefits Blog, 2017).

There are two arguments supporting Zenefits’ violation of the anti-rebating laws: 1) hosting all of these services on a single integrated platform “induces” consumers to purchase the insurance through Zenefits versus another broker; and 2) these “free services” have a value that likely exceeds the value allotted by statute and prevents a level playing field.

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18. It is important to note that while Zenefits is the leading technology of debate in this paper, there are other startup technology companies penetrating the market in a similar way. Roc-connect is integrating personal line insurance into the Internet of Things market by providing insurance related benefits such as lower premiums to customers who equip their home with certain risk control smart technology devices such as smart fire detectors that connect to the internet.

19. Freemium is a “combination of the words ‘free’ and ‘premium’ used to describe a business model that offers both free and premium services. The freemium business model works by offering simple and basic services for free for the user to try and more advanced or additional features at a premium” (Investopedia, 2017).

In 2014, The Utah Department of Insurance imposed regulation on Zenefits, stating it had to start charging more for its services or face daily fines (Montgomery, 2015). Zenefits saw this as an opportunity to be a trailblazer for technology and its place in the insurance industry. In a 17-page letter to the insurance department, Zenefits' attorney criticized Utah's interpretation of the statute, stating:

*Banks routinely offer 'free' checking accounts to customers ... .Retailers, of course, provide free and discounted services every day. None of these businesses could offer any such discounts or free services to customers under the Department's rule because they also broker insurance—even for the vast majority of their customers who do not buy insurance from them (Welsh, 2014, pg. 6).*

Utah lawmakers saw this as an opportunity to lead in technology regulation and passed a bill, House Bill 141, to accommodate these types of value-added services (Adams, 2014). The Utah law is distinguishable from the challenge of other states because Utah does not adhere to NAIC Model #880.

Regulatory leaders in the state of Washington, however, disagree with the comparison of Zenefits to online travel companies and banks, claiming insurance services are a “sideline” to their primary business.<sup>20</sup> In November 2016, Washington OIC entered into a consent order, which prohibited Zenefits from offering their platform free of charge. Furthermore, Utah has unique framework for its anti-rebating statute, which allowed the legislature to construct a different exception than what was proposed in Washington, which has enacted NAIC Model #880.

In February 2017, Washington state Sen. Joe Fain (R-WA) and Sen. Mark Mullet (D-WA) introduced Senate Bill 5242, which would remove the cap on promotional items and, in turn, lift the limitations for value-added services. Supporters of this bill, such as Chris Massey, Zenefits vice president of government relations and partnerships, argued:

*“... to date the principal argument in opposition [is] small brokers cannot afford to offer these sorts of free services and we need to protect them from competition. From our perspective, it's just not fair to impose higher cost on other...small business...in order to protect small brokers from innovations that are disrupting the insurance market.”<sup>21</sup>*

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20. *Committee on Financial Institutions and Insurance: Public Hearing on Senate Bill 5242*, Washington Senate, 65th Legislature (Jan. 26, 2017).

21. *Id.* (Testimony of Chris Massey).

Opponents of Senate Bill 5242 argue that the language of the bill precludes a level playing field for agents. Therefore, larger agencies with higher budgets can entice consumers by incentives including innovative technology. If the larger players control the marketplace, it will eliminate competition and as a result have negative consequences on the consumer if the larger entities are able to control pricing. Supporters of the bill contend the anti-rebating laws are supposed to protect consumer, not level the playing field for agents

Opponents also note that while the cost of the value-added services is not directly imposed on the customer, there is a cost associated with offering such a service even in the development and maintenance of the software. Zenefits willingness to absorb the cost and not directly pass on to the insured, can be considered an inducement under NAIC Model #880.

Additionally, services that are not provided by language in the insurance policy are not subject to the regulation of insurance regulators. Therefore, if a consumer does not believe the company is upholding their end of the service contract, their only recourse is through a court system, which can be costly and unrealistic for a small business.

As of October 2017, Senate Bill 5242 has not yet reached the floor in the Senate nor been introduced in the House. In November 2017, an administrative ruling upheld Washington State's order for Zenefits to cease the free distribution of their platform as a violation of the state's rebating laws (Washington OIC Public Affairs, 2017).

#### *4.1 A Call for Change: Are the Lines Drawn in the Right Place?*

Both sides seem to agree a question exists as to whether the lines as drawn currently by anti-rebating statutes appropriately balance consumer protection with consumer innovation. While there would be a loss of opportunity to enhance consumer experience if innovation is stifled, there is reasonable concern that "lifting the lid" on the statutes could lend itself to borderline unethical practices. Providing a good or service that falls within the four corners of the policy is quite different from providing a client with unrelated benefits such as tickets to a professional football game.

California's anti-rebating statutes were repealed as a part of the large regulatory sweep brought on by Proposition 103. However, this repeal had seemingly little consequence as insurance companies refused to do business with agents who were offering rebates. Many companies integrated anti-rebate clauses in the contracts almost immediately after the passage of the law. While the rebating was revived with the elimination of the statute, it was removed again through contracts, which seems to support an industry desire for some regulation in this area.

Griffin and Levin (2009) suggest that states should provide a commercial exemption to allow producers to provide a broad menu of services, which will in turn will lower the cost and provide more efficient health and welfare benefits.



However, there is no indication that this technology will be limited to the commercial setting and needs to be addressed in both the personal and commercial setting.

There is a developing rule among states that support an update to the statute. States like Connecticut, North Carolina, and Louisiana have provided guidance through advisory opinions and legal memorandum that present two questions:

1. Is the service offered on equal terms to the public?
2. Is it offered without the requirement to buy insurance?

If the answer is in the affirmative to both, then the states that apply this two-part test seem to be in agreement that rebating is not taking place. However, this is not a test that can be applied to all value-added service issues.

Recently, Maine passed a bill to repeal and replace its anti-rebating statute exceptions. This bill stands out as a potential model bill for other states to follow, as it appears to address some of the concerns from opponents of change by setting boundaries to “level the playing field” in some sections of exceptions but also creating opportunity for innovation in the field. The statute is organized to address three categories of exceptions.

The first part addresses promotional items, raffles and drawing. The amendment increases the limit of promotional items to \$100 per year per person and sets a limit for raffles at \$500. The second part addresses permissible value-added services through a two-part test:

An insurer...or a producer may offer to provide a valued-added service or activity...without fee or at a reduced fee, that is related to the coverage provided by an insurance contract...[if it] is:

- A. Clearly identified and included within the insurance contract; or
- B. Directly related to the servicing of the insurance contract or offered or undertaken to provide risk control for the benefit of a client.<sup>22</sup>

The third part of the statute follows the emerging two-part litmus test for models such as Zenefits that are offered for free or for less than fair market value. Such services are allowed, “... as long as the receipt of the services is not contingent upon the purchase of insurance and the services are offered on the same terms to all potential insurance customers.”<sup>22</sup>

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22. 24-A MRSA § 2163-A (3).

## 5. Conclusion

Legal conflict frequently is at the core of innovation (Wroldsen, pg. 760, 2016). We have seen this conflict in law and insurance play out in shared economy models such as Uber, Airbnb and, now, Zenefits. Brokers are valuable to most insurance transactions and it is hard to commoditize quality customer service.

Legislatures should be open to carving out an exception that ultimately allows services to go beyond the four corners of the policy, as long as they are related to the functioning of the policy. It is difficult to imagine the industry would not be in support of exceptions which offer services that directly enhance the consumer benefit because these laws were initially put in place to protect consumers. The challenge remains how best to ensure the innovative products being developed to benefit consumers can coexist with the public policy rationale set forth in the anti-rebating laws.

Ideally, an NAIC working group would develop model language to provide guidance to the states and establish a uniform approach. However, interpretation of these exceptions would be left up to the states, which could do little to solve the uniformity concerns, as states with similar anti-rebating statutes interpret the language differently.

## Appendix A

The following tables provide a summary of state laws and regulations regarding anti-rebating issues. “NG” refers to areas where no additional guidance was located in the statute, bulletin, or advisory opinion on the topic. “L/H” refers to life/health specific statutory references. “P/C” refers to property/casualty specific statutory references. “SF” references statutory or administrative guidance that offers flexibility for innovation platforms such as Zenefits and/or activities related to the servicing of the insurance product.

### Additional Guidance: Alabama–District of Columbia

State	Statutory Reference for Anti-Rebating	Promotional Items	Client by Client Referral Fee	Raffles	Value-Added Services	Notes
Alabama	Ala. Code 27-12-12 (L/H) Ala. Code 27-12-14 (P/C) Ala. Admin. Code 482-1-040-03	Permitted; \$15 limit Ala. Admin. Code 482-1-088-4 Ala. Admin. Code 482-1-088-5	NG	NG	NG	
Alaska	AS 21.36.100 (L/H) AS 21.36.120 (P/C)	NG	NG	NG	NG	
Arizona	Ariz. Rev. Stat. Ann. § 20-449 (L/H) Ariz. Rev. Stat. Ann. § 20-451 (P/C)	Permitted; \$25 limit Ariz. Rev. Stat. Ann. § 20-452	NG	NG	SF (Ellingson, 2015)	
Arkansas	Ark. Code Ann. § 23-66-206(10) Ark. Code Ann. § 23-66-308	Permitted; \$25 limit Ark. Bulletin 5-98				
California	CA. Ins. Code § 790.02 (footnote 1988 prop 103 repealed anti-rebating language)	NA	NA	NA	NA	Insurers are permitted to refuse business with agent if s/he rebates
Colorado	Colo. Rev. Stat. Ann. § 10-3-11041(g)	NG	NG	NG	NG	
Connecticut	Conn Gen. Stat. Ann. § 38a-825	NG	NG	NG	SF (Miner, 2015)	
Delaware	Del. Code Ann. tit. 18 § 2304(14) (L/H) Del. Code Ann. tit. 18 § 2304(15) (P/C)	NG	Permitted verbal threshold “nominal fee” Delaware DOI FAQ	NG	NG	
District of Columbia	D.C. Code Ann § 31-2231.12 (L/H) D.C. Code Ann § 31-2231.13 (P/C)	Permitted; \$10 limit D.C. Code Ann § 31-2231.12(f) (L/H) D.C. Code Ann § 31-2231.13(h)(1) (P/C)	NG	NG	NG	

**Additional Guidance: Florida–Kentucky**

State	Statutory Reference for Anti-Rebating	Promotional Items	Client by Client Referral Fee	Raffles	Value-Added Services	Notes
Florida	Fla. Stat. Ann. § 626.95(1)(h) Fla. Stat. Ann. § 626.572	Permitted; \$25 limit Fla. Stat. Ann. § 626.9541(1)(m)	NG	NG	NG	
Georgia	Ga. Code Ann § 33-6-4(b)(8)(B)	Permitted; \$100/calendar year Ga. Code Ann § 33-6-4(b)(8)(c)(v)	NG	NG	NG	
Hawaii	Haw. Rev. Stat. Ann. § 431:13-103 (a)(8)		NG	NG	NG	
Idaho	Idaho Code § 41-1314	Permitted; \$200/year Idaho Code § 41-1314(3)	NG	NG	NG	Exception applies to goods only Id. Bulletin 11-03
Illinois	215 ILCS 5/424 215 ILCS 5/151	Permitted; verbal threshold, "minimal value" IL Bulletin 2012-11	Permitted; no dollar limit 215 ILCS 5/500-80	Permitted; As long as benefit is open to public and not contingent upon sale of policy. IL Bulletin 2012-11	SF IL Bulletin 2012-11	* Insurers are permitted not to do business with agent if s/he rebates
Indiana	Ind. Code Ann. § 27-1-20-3) Ind. Code Ann. § 27-1-22-13 Ind. Code Ann. § 27-4-1-40)(8)	Permitted; \$25 limit IN Bulletin 177	Permitted; no dollar limit Ind. Code Ann. § 27-1-15.6-13	Permitted; \$25 limit IN Bulletin 177	SF IN Bulletin 177	
Iowa	Iowa Code Ann. § 507B.4(3)(1)	Permitted; No cap IA Bulletin 08-15	NG	NG	SF IA Bulletin 08-15	
Kansas	Kan. Stat. Ann. § 40-2404(8)	NG	NG	NG	NG	
Kentucky	Key. Rev. Stat. Ann. § 304.11-090 Key. Rev. Stat. Ann. § 304.11-100 (Exceptions) Key. Rev. Stat. Ann. § 304.11-110	Permitted; \$25 limit Key. Rev. Stat. Ann. § 304.12-110(4)	NG	NG	Key. Rev. Stat. Ann. § 304.12-100(3)	NG

**Additional Guidance: Louisiana–Missouri**

State	Statutory Reference for Anti-Rebating	Promotional Items	Client by Client Referral Fee	Raffles	Value-Added Services	Notes
Louisiana	La. Rev. Stat Ann. § 22:196(8)	If considered "marketing" materials, no limit LA Advisory Ltr. 2015-01 (revised)	NG	NG	SF LA Bulletin 2015-01 (revised)	
Maine	Me. Rev Stat. Ann. Tit. 24-a § 22160 (L/H) Me. Rev Stat. Ann. Tit. 24-a § 2162 (P/C)	Permitted; \$100 limit Me. Rev Stat. Ann. Tit. 24-a § 2163-A(1) (revised)		Permitted; \$500 limit Me. Rev Stat. Ann. Tit. 24-a § 2163-A (1)	SF M.R.S.A Tit.24-A § 2163-A (2) & (3)	Gift card limited to merchant only Maine Bulletin 384
Maryland	Md. Code Ann. Insurance § 27-209 (L/H) Md. Code Ann. Insurance § 27-212 (P/C)	Permitted; \$25 limit Md. Code Ann. Insurance § 27-209(4); § 27-212(d)	NG	Permitted; \$25 limit Md. Code Ann. Insurance § 27-209(4) [Incorporated by reference MD Bulletin 14-08]	SF (August 2015)	
Massachusetts	Mass. Gen. Laws Ann. Ch. 176D § 3(9)	NG	NG	NG	NG	
Michigan	Mich. Comp. Laws Ann. § 500.2024	Permitted; no limit to listen Limit for application: \$5 (L/H) Mich. Comp. Laws Ann. § 500.2024(a) \$10 (P/C) Mich. Comp. Laws Ann. § 500.2024(b) Michigan DOL FAQ accessed 12/15/16		\$5 limit (life); \$10 limit (P/C)		Different approach than other states w/ different standards for applicants vs. "listen to the pitch"
Minnesota	Minn. Stat. Ann. § 72A.20 subd. 10(a); Minn Stat. Ann. 72A-08 Minn. Stat. Ann. § 72A.12, subd. 4(a)(8)(b) (L/H)	Permitted; \$25 limit Minn. Stat. Ann. § 72A.20 subd. 10(b)	NG	NG	NG	Statute provides for penalty if in violation \$60-\$200
Mississippi	Miss. Code Ann. § 83-7-3	NG	NG	NG	NG	
Missouri	Mo. Ann. Stat. § 375.936(9) Mo. Ann Stat. § 376.500 (L-4)	Permitted; no limit MO Bulletin 10-07	NG	NG	MO Bulletin 10-07	

**Additional Guidance: Montana–North Carolina**

State	Statutory Reference for Anti-Rebating	Promotional Items	Client by Client Referral Fee	Raffles	Value-Added Services	Notes
Montana	Mont Code Ann § 33-18-208 (L/H) Mont Code Ann § 33-18-210 (P/C)	Permitted; two-part test: 1) Nominal (\$50 threshold) 2) Available to all MT. Advisory Ltr (2016)	NG	Permitted; if exceeds \$50, then apply two-part test: 1) Available to all 2) Not connected with sale of insurance	NG	
Nebraska	Neb. Rev. Stat. Ann § 44-1525(B) (L/H) Neb. Rev. Stat. Ann § 44-361	NG	NG	NG	NG	
Nevada	Nev. Rev. Stat. Ann. § 686A.490(2)	Permitted; \$100 in aggregate per calendar year NRS 686A.110; NRS 686A.130	NG	Permitted; \$100 in aggregate per calendar year NRS § 686A.110; NRS § 686A.130	NG	
New Hampshire	N.H. Rev. Stat. Ann § 402:39; § 4174 IX (a)	Permitted; \$25 limit N.H. Rev. Stat. Ann § 402:41		Permitted; no cap; two-part test applies N.H. Rev. Stat. Ann § 402:41, I(f)	Limited application RSA § 402:41	Formerly, raffles limited to \$1,000/calendar year; limit per N.H. Rev. Stat. Ann § 402:41, I(f); HB 171 removed cap, but left additional requirements alone
New Jersey	N.J. Rev. Stat. Ann § 17:29B-4(8); § 17B30-13; N.J. Admin. Code § 11:17A-2.3 & 2.4	NG	NG	NG	NG	
New Mexico	N.M. Stat. Ann § 59A-16-17(A)	Not allowed NM Bulletin 2010-04	NG	NG	NG	MOST STRICT APPLICATION
New York	N.Y. Ins. § 2119; § 2324	Permitted; \$25 limit N.Y. Ins. § 2324 (a)				
North Carolina	N.C. Gen Stat § 58-63-15 (8); N.C. Gen Stat § 58-33-85	Permitted; no dollar amount specified, but reference to "inexpensive" items and food. (NC Commissioners Column, 2006)	NG	NG	SF N.C. Gen Stat § 150B-4 N.C.A.C. 01.0301-01.0303 (Piquant, 2015)	

**Additional Guidance: North Dakota–Texas**

State	Statutory Reference for Anti-Rebating	Promotional Items	Client by Client Referral Fee	Raffles	Value-Added Services	Notes
North Dakota	N.D. Cent. Code § 26.1-04-03 (8)	Permitted; \$50 limit N.D. Cent. Code § 26.1-04-03 (8)(c)	NG	NG	NG	
Ohio	Ohio Rev. Code Ann. § 3901.21(G) Ohio Rev. Code Ann. § 3911.20 (addresses consumers) Ohio Rev. Code Ann. § 3999.05 (L/H)	Permitted; \$50 limit OH Bulletin 2009-13	NG	NG	NG	
Oklahoma	36 Okla. Stat. Ann. § 1204 (8)	Permitted; \$100 limit 36 Okla. Stat. Ann. § 1204 (10)(f)	NG	NG	NG	
Oregon	Or. Rev. Stat § 746.045	Permitted; No Cap OR DOI website	NG	NG	NG	
Pennsylvania	40 Pa Cons. Stat. Ann. § 1171.5 (a)(8); § 471; § 310.45 & § 310.46	NG	NG	NG	NG	
Puerto Rico	PR SI T. 26 s 2710	NG	NG	NG	NG	Maximum \$10,000 fine
Rhode Island	R.I. Gen. Laws § 27-29-4 (8); R.I. Gen. Laws § 27-4-6 (L/H)	Permitted; verbal threshold RI Bulletin 2009-9	NG	NG	NG	
South Carolina	S.C. Code Ann. § 38-57-130; S.C. Code Ann. § 38-57-150	Permitted; \$25 merchandise limit & \$10/person refreshment limit S.C. Code Ann. § 38-57-160	NG	NG	NG	
South Dakota	S.D. Codified Laws § 58-33-14 (L/H) S.D. Codified Laws § 58-33-24 (P/C)	Permitted; \$25 limit S.D. Codified Laws § 58-33-14	Permitted no dollar limit S.D. Codified Laws § 58-30-174	NG	NG	
Tennessee	Tenn Code Ann. § 56-8-104 (8)	Permitted [no cap] as long as not tied to sale or purchase (Peak, 2015)	NG	NG	SF, as long as not tied to sale or purchase (Peak, 2015)	
Texas	Tex. Ins. Code Ann. § 541.056; § 543.003; § 1701.061; 28 Tex. Admin. Code § 21.48.03 & § 4807 & § 4705	NG	NG	NG	Limited Tex. Ins. Code Ann. § 1701.061	

## Additional Guidance: Utah–Wyoming

State	Statutory Reference for Anti-Rebating	Promotional Items	Client by Client Referral Fee	Raffles	Value-Added Services	Notes
Utah	Utah Code Ann. § 31A-23a-402(2)(a); Utah Admin Code R590-154 subsec. 10	Permitted; \$100 limit UT Bulletin 2015-8	NG	NG	SF UT Code Ann. § 31A-23a-4(2.5) UT Bulletin 2015-8	
Vermont	Vt. Stat. Ann. Tit. 8 § 4724 (B) Vt. Stat. Ann. Tit. 8 § 3702 (L)(H)	NG	NG	NG	NG	
Virginia	Code of Va 38.2-509	Permitted; no cap "as long as not contingent upon purchase of insurance"	NG	NG	NG	
Washington	Wash. Rev. Code Ann. § 48.30.150(1)	Permitted; \$100 limit Wash. Rev. Code Ann. § 48.30.140(4) Wash. Rev. Code Ann. § 48.30.150	Permitted; \$25 per year WAC 284-17-820	Permitted; \$25 limit WAC 284-17-830	Very limited	Charitable contribution language WAC 284-17-800
West Virginia	W. Va. Code § 33-11-4 W. Va. Code St. R. 114-70-3/11CSR70	Permitted; \$25 limit W. Va. Interpretive Ruling 11CSR70	Permitted; \$25 limit W. Va. Interpretive Ruling 11CSR70	NG	NG	
Wisconsin	Wis. Stat. Ann. § 628.34 (2)	NG	NG	NG	NG	
Wyoming	Wyo. Stat. Ann. § 26-13-11f	NG	NG	NG	NG	No reference to P/C

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# The (Mis)alignment of Health Insurers' Efficiency Measures from Different Perspectives and Their (Un)linkage with Financial Ratios and Asset Allocation

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## Abstract

This research uses Data Envelopment Analysis (DEA) models to examine the alignment of health insurers' efficiency measures from different perspectives. It also analyzes the linkage between efficiency measures and asset allocation, as well as traditional financial ratios including medical loss ratio (MLR). The DEA results indicate that the operating efficiency and the medical services efficiency are positively (but not highly) correlated with each other, and financial ratios are not effective indicators of the efficiency of health insurers. The composite efficiency is much higher than the operating or medical services efficiency. The correlation between the composite efficiency and the operating efficiency or the medical services efficiency is moderate. Neither the operating efficiency nor the medical services efficiency is an appropriate measure of the overall efficiency of health insurers. Therefore, innovative regulatory measures, such as a combination of efficiency measures and financial ratios, should be adopted to satisfy all the stakeholders. This research provides significant insights to policymakers, regulators, the health insurance industry and consumers.

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## Introduction

Economic efficiency refers to maximizing the output value and minimizing the input cost. An optimal health care system should take into consideration all the three important components: 1) universal coverage; 2) cost containment; and 3) quality of services. Rising health care costs and affordability are among the biggest challenges in the U.S., so efficiency should be measured, monitored and improved without the sacrifice of availability or quality of health care services. Efficiency can be evaluated from different perspectives of stakeholders, such as customers, stockholders or policyholders, regulators, the company itself, or the society as a whole. An important provision of the federal Affordable Care Act (ACA) is the requirement of the minimum medical loss ratio (MLR) to encourage health insurers to provide quality services to enrollees. This research aims to discuss whether financial ratios are effective indicators of the overall efficiency of health insurers and what measures are appropriate for more effective regulation. To achieve this objective, this research examines the operating efficiency of both underwriting and investments from the perspective of the insurer and its alignment with the medical services efficiency of providing health care services from the perspective of the society. It also analyzes the composite efficiency to accommodate the interest of different parties and the linkage between efficiency measures and asset allocation, as well as traditional financial ratios including MLR. To our knowledge, this research is some of the first and should provide significant insights to policymakers, regulators and the health insurance industry regarding the operation of health insurers, cost and regulatory efficiency, and health care reform.

In the recent literature related to the composite efficiency analysis of this current research, Brockett et al. (2005) present a framework of the insurer as a financial intermediary that acknowledges that interests potentially conflict and the strategic decision makers must balance one concern versus another when managing the insurance company. Within this financial intermediary approach, solvency can be a primary concern for regulators of insurance companies, claims-paying ability can be a primary concern for policyholders, and return on investment can be a primary concern for investors. Accordingly, they investigate the efficiency of insurance companies using Data Envelopment Analysis (DEA) having the combination of solvency, claims-paying ability and return on investment as outputs. As to profitability, Greene and Segal (2004) explore the relationship between cost inefficiency and profitability in the U.S. life insurance industry. Their results suggest that cost inefficiency in the life insurance industry is substantial relative to earnings and that inefficiency is negatively associated with profitability measures such as the return on equity. Regarding financial ratios and asset allocation, Zou et al. (2012) examine the interrelation between underwriting and investment risks of property-liability insurers, where the underwriting risk is measured by the combined ratio while the investment risk is measured by the proportion of investment in common stocks, preferred stocks and

long-term low-grade bonds. Their results suggest no significant relationship between the underwriting and investment risks.

On the efficiency of health insurance, related to efficiency perspectives of this current research, Brockett et al. (2004) apply the game-theoretic DEA model to evaluate the relative overall efficiency of two principle health maintenance organization (HMO) categories from two perspectives: 1) that of consumers; and 2) that of the society. Yang (2014) uses the DEA approach to examine the medical services efficiency of the U.S. health insurers in providing health care services. With regard to the MLR regulation, Harrington (2013) analyzes its potential unintended consequences and incentive effects and discusses modifications and alternatives to the MLR regulation to help achieve its stated goals with less potential for adverse effects; McCue, Hall and Liu (2013) gauge this rule's effect on insurers' financial performance; and Abraham, Karaca-Mandic and Simon (2014) investigate early responses of individual and small-group insurers' MLR-related outcomes to ACA provisions. However, none of these studies have analyzed the topics covered in this current research.

Specifically, this current research investigates the relationship between the operating efficiency and the medical services efficiency and examines the difference of this relationship by the organization type, the number of states the insurers serves and the size of the insurer. MLR is the percent of premium an insurer spends on claims and expenses that improve health care quality. Under the ACA, health insurers have to pay rebates to policyholders if they do not meet an MLR standard of at least 80% (for individuals and small groups) or 85% (for large groups). To show whether the different performance measures of health insurers are consistent, the relationship between financial ratios (MLR, loss ratio, combined ratio, operating ratio, investment income ratio and expense ratio) and the operating efficiency, as well as the medical services efficiency, is examined. In addition, the relationship between asset allocation (in bonds, mortgage-backed securities [MBS], stocks, real estate investments, and cash and cash equivalents) and the operating efficiency, as well as the medical services efficiency, is also explored. Furthermore, this current research analyzes the composite efficiency, which combines both the operating efficiency and the medical services efficiency, and its relationship with other efficiency measures, including the average efficiency (the average of the operating efficiency and the medical services efficiency).

## **Data and Research Design**

DEA, one prominent non-parametric frontier efficiency approach, has been used in a lot of studies for efficiency measures (Cummins and Weiss 2011). This

current research adopts the Envelopment Model<sup>1</sup> to evaluate the efficiency of health insurers. The Envelopment Model pools together all the decision making units (DMUs, insurers in this current research), and the relative efficiency of a DMU is measured by comparing this DMU to “best practice” efficient frontiers formed by the most efficient DMUs. The efficiency score is obtained as the optimal ratio of the weighted sum of outputs over the weighted sum of inputs.<sup>2</sup>

Briefly, the Envelopment Model is presented as follows. Given  $n$  DMUs, each with  $m$  inputs and  $s$  outputs, the relative efficiency score of a test DMU<sub>0</sub> is determined by solving the following program (Brockett et al. 2004):

$$\begin{aligned} & \underset{u,v}{\text{Max}} \frac{y_0^T v}{x_0^T u} \\ & \text{s.t. } \frac{y_j^T v}{x_j^T u} \leq 1, j = 1, 2, \dots, n \\ & u, v \geq 0 \end{aligned} \quad (1)$$

where the subscript “0” denotes any one of the  $n$  DMUs whose efficiency is being evaluated.  $y^T$  and  $x^T$  denote the vector of the outputs and inputs of DMU  $j$ , respectively (T denotes the transpose of a vector); and  $u$  and  $v$  are the input and output weights.

Different parties to an efficiency analysis have different perspectives of what constitutes the best performance. To examine whether efficiency measures from different perspectives are consistent with each other, this current article examines three efficiency measures of health insurers: 1) the operating efficiency from the perspective of the insurer to generate profits; 2) the medical services efficiency from the perspective of the society to provide health care services; and 3) the composite efficiency to accommodate the two perspectives as above. The medical services efficiency model evaluates the insurer’s performance in “providing policyholders with medical services which are received from health providers.” Accordingly, the outputs are the measures of health coverage and medical services, and the inputs are the costs incurred by the insurer and health providers (Brockett et al. 2004 and Yang 2014). Specifically, for the medical services efficiency model, the outputs are enrollment (persons covered) and the utilization of medical services (ambulatory encounters and hospital patient days), whereas the

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1. The dual Multiplier Model generates the same efficiency scores as the Envelopment Model (Zhu 2009).

2. Insurers operate in different states and different environments, and regulations and market conditions may significantly differ between states. However, the DEA efficiency score (the optimal ratio of weighted outputs over weighted inputs) should be comparable among different insurers. Differential regulations and market conditions are actually among the sources of the (in)efficiency of insurers.

inputs are hospital and medical expenses (paid to health providers), and claim adjustment and general administrative expenses (paid to administrative and claim adjustment staff). The operating efficiency model evaluates the insurer's performance in generating profits relative to input costs. Obviously, the outputs are the operating profits/losses (the underwriting gain/loss and the investment gain/loss). The inputs are the human and capital costs of the insurance company: hospital and medical expenses, claim adjustment and administrative expenses (including investment expenses), and capital and surplus. The inputs (outputs) of the composite efficiency analysis are the combination of the inputs (outputs) of the above two models. The inputs and outputs for the three analyses are presented in Table 1.

**Table 1:  
Inputs and Outputs of the DEA Models**

DEA efficiency models	Inputs	Outputs
Operating efficiency	Total hospital and medical expenses	Net underwriting gains/losses
	Claim adjustment expenses	Net investment gains/losses
	General administrative and investment expenses	
	Capital and surplus	
Medical services efficiency	Total hospital and medical expenses	Total member months
	Claim adjustment expenses	Ambulatory encounters
	General administrative expenses	Hospital patient days
Composite efficiency	Total hospital and medical expenses	Net underwriting gains/losses
	Claim adjustment expenses	Net investment gains/losses
	General administrative and investment expenses	Total member months
	Capital and surplus	Ambulatory encounters
		Hospital patient days

The operating efficiency model and the medical services efficiency model share some common inputs: 1) total hospital and medical expenses; 2) claim adjustment expenses; and 3) general administrative expenses. Reducing these costs should result in both higher operating efficiency and medical services efficiency, *ceteris paribus*. However, lower costs may lead to restricting the utilization of medical services (the output of the medical services efficiency model), lower premiums and profits (the output of the operating efficiency model), thus lower operating and medical services efficiency. Even though the two efficiency measures are related to completely different aspects of health insurers, they are not necessarily conflicting objectives. Therefore, it is expected that the operating efficiency and the medical services efficiency might be positively correlated, but it is uncertain whether they are closely aligned, as motivates the empirical analysis of this current research. The composite efficiency integrates the operating efficiency and the medical services efficiency and should be positively correlated with both of them.

This current research uses the health insurers' data of 2013, obtained from their annual financial statements filed with the National Association of Insurance Commissioners (NAIC).<sup>3</sup> The insurers with missing and/or inappropriate values are excluded, as well as very small insurers with fewer than 10,000 total member months. The insurers with extreme values in every input and output variable are also excluded. The sample includes 417 insurers, and some descriptive statistics are presented in Table 2. Investment expenses are very small relative to general administrative expenses and make no significant difference on the efficiency measures. On average, total hospital and medical expenses account for 87% of all the expenses, and net underwriting and investment gains/losses are around 2% of all the expenses.

**Table 2:**  
**Descriptive Statistics of Input and Output Variables of DEA Models**

Input and output variables	Mean	StDev
Total member months	2721863	6281237
Total hospital and medical expenses (\$)	4697	3434
Claim adjustment expenses (\$)	182	142
General administrative expenses (\$)	499	428
Investment expenses (\$)	2.9	9.6
Capital and surplus (\$)	1178	2049
Net underwriting gain/loss (\$)	41	492
Net investment gains/losses (\$)	37	67
Ambulatory encounters	12.4	9.3
Hospital patient days	0.7	0.9

Note: All the variables are on a per member per year basis except "total member months."

In the medical services efficiency analysis, for efficiency measures to be comparable among different insurers, the input variables are adjusted for regional cost differences. In other words, we divide the inputs by state average weekly

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3. The 2013 data was the most recent at the start of this research. Similar results are obtained using other years of data so they are not included in this article. For example, for the comparison purpose and robustness checks, the data of 2006 and 2008 (two years before ACA, one with an economic downturn and the other with an economic upturn) are analyzed. Overall, the correlation coefficients between operating efficiency and medical services efficiency are 0.32 and 0.30 for 2006 and 2008, respectively (0.27 for 2013). Additionally, the 2014 data are also examined (after the completion of this research), and the correlation is 0.31. Another reason of using one-year data is to reduce the potential noise from, for example, regulatory changes, especially during a time period of high regulation volatility.



wages, which are obtained from the Bureau of Labor Statistics (BLS) ([www.bls.gov](http://www.bls.gov)) (Yang 2014). Unlike the medical services efficiency, there is no need to adjust the inputs or outputs for the operating efficiency, which is a comparable measure among insurers. Now that the inputs of the medical services efficiency model should be adjusted for regional cost differences but not necessarily for the operating efficiency model, the variables of these two models may not simply be pooled together for the composite efficiency model. Interestingly, the medical services efficiency scores are highly correlated by using adjusted and unadjusted inputs, respectively (with a correlation coefficient of 0.98). Therefore, in the composite efficiency model, inputs do not have to be and are not adjusted for regional cost differences.

In the operating and composite efficiency model, some insurers have non-positive outputs (net underwriting gains/losses and net investment gains/losses). However, DEA models only apply to positive inputs and outputs. To make outputs all positive, a sufficient positive number is added to the two output variables of all the insurers, respectively. For DEA models, the model orientation refers to whether a DEA model is input-oriented or output-oriented, and the frontier type refers to the returns to scale type of the DEA efficient frontier. The input-oriented BCC model (Banker, Charnes, and Cooper 1984) with variable returns to scale (VRS) is translation invariant to outputs, the output-oriented VRS BCC model is translation invariant to inputs, but the CCR models (Charnes, Cooper, and Rhodes 1978) with constant returns to scale (CRS) are not translation invariant (Lovell and Pastor 1995).<sup>4</sup> Therefore, the input-oriented VRS BCC models are adopted for the operating efficiency analysis so that the results are translation invariant. To be consistent, the input-oriented VRS BCC models are also adopted for the medical services and composite efficiency analysis. The DEA optimization problems are solved using the DEA software developed by Joe Zhu ([www.deafrontier.net/software.html](http://www.deafrontier.net/software.html)).

As indicated, this article aims to discuss whether financial ratios are effective measures of the overall efficiency of health insurers and what measures are appropriate for more effective regulation. To achieve this goal, this research examines whether financial ratios (such as MLR) are consistent with efficiency measures of health insurers. After efficiency scores of the insurers are obtained, this research conducts a series of correlation analyses that work very effectively for the regulatory purpose by presenting clearly the (mis)alignment of different efficiency measures and their (un)linkage with financial ratios and asset allocation. For example, a low correlation between MLR and medical services efficiency indicates high MLR does not necessarily lead to high medical services efficiency. Thus, the MLR regulation might not be effective from the efficiency perspective.<sup>5</sup>

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4. In the literature, Hu, Yu and Wang (2012) apply the translation invariant BCC model to handle negative output values in measuring the operational environment-adjusted efficiency of 60 mutual funds in Taiwan from 2006 to 2010.

5. This research discusses the (mis)alignment of different efficiency measures and their (un)linkage with financial ratios for the regulatory purpose. It does not examine specifically the determinants of financial ratios or efficiency measures. Second-stage regression models, with the

## The Relationship Between Operating Efficiency and Medical Services Efficiency

As discussed, efficiency can be measured from different perspectives. It should be very interesting and important for all the stakeholders to understand if different efficiency measures are aligned with each other. This section explores the correlation between operating efficiency and medical services efficiency. (See Table 3.) The correlation is interpreted according to Table 4 (Hinkle, Wiersma and Jurs 2003).

**Table 3:**  
**Pearson Correlation Between Medical Services Efficiency (ME)**  
**and Operating Efficiency (OE)**

Insurers	Correlation between OE and ME
All 417 insurers	0.27
Top 50% OE	0.38
Bottom 50% OE	-0.09
Top 50% ME	0.27
Bottom 50% ME	-0.05
Single-state	0.25
Multistate	0.35
Single-state (stock only)	0.23
Multistate (stock only)	0.29
Stock insurers	0.24
Non-stock insurers	0.37
Stock insurers (single-state)	0.23
Non-stock insurers (single-state)	0.32
Small insurers	0.46
Medium insurers	0.09
Big insurers	0.20
Small insurers (stock and single-state)	0.51
Medium insurers (stock and single-state)	0.02
Big insurers (stock and single-state)	0.08

“efficiency measure” or the “ratio of the efficiency measures” as the dependent variable, are not suitable for this research in delineating the relationship between financial ratios and efficiency measures and among efficiency measures themselves—for example, the correlation between the operating efficiency and the medical services efficiency.

Overall, for all the 417 insurers, the correlation is very low (0.27), so is that for the top 50% in operating efficiency or medical services efficiency (0.38 and 0.27), but higher than the bottom 50%, which have little correlation (-0.09 and -0.05). The correlation between medical services efficiency and operating efficiency is presented for single-state and multistate insurers, respectively, for the whole sample of 417 insurers and the sub-sample of 314 stock insurers. The correlation is very low for both single-state and multistate insurers, consistent with the overall correlation for all the 417 insurers (0.27), and there is not much difference between single-state and multistate insurers (0.25 vs. 0.35, and 0.23 vs. 0.29).

**Table 4:  
Strength of Correlation**

Size of the correlation coefficient	Interpretation
0.90 to 1.00	Very high correlation
0.70 to 0.89	High correlation
0.50 to 0.69	Moderate correlation
0.30 to 0.49	Low correlation
0.00 to 0.29	Little if any correlation

Stock insurers and non-stock insurers are compared for the whole sample of the 417 insurers and the sub-sample of the 328 single-state insurers. The results show that both stock and non-stock insurers have a low correlation between operating efficiency and medical services efficiency (0.24 vs. 0.37, and 0.23 vs. 0.32). The correlation between operating efficiency and medical services efficiency is also compared by the size of the insurers based on total invested assets. In this research, the big, medium and small insurers are the top 30%, the middle 30% and the bottom 30% by enrollment, respectively. It shows that there is a low correlation between operating efficiency and medical services efficiency for small insurers (0.46 and 0.51), while there is very little correlation for big and medium insurers.

Overall, the correlation is very low for all the 417 insurers, stock, single-state, big or medium insurers (below 0.30), higher but still low for non-stock, multistate or small insurers (around 0.30-0.50). Therefore, operating efficiency and medical services efficiency are not consistent with each other. The insurer that is operating efficient may not be medical services efficient, and vice versa.

## Operating and Medical Services Efficiency: Relationship with Financial Ratios

Financial ratios are important traditional tools for regulators, investors, customers and the management to evaluate insurers. This research analyzes the relationship between efficiency measures and financial ratios, which include MLR, loss ratio, combined ratio, operating ratio, investment income ratio and expense ratio.<sup>6</sup> MLR is the ratio of (hospital & medical expenses + changes in contract reserves) to earned premium, while the loss ratio is the ratio of (hospital & medical expenses + changes in contract reserves + claim adjustment expenses) to earned premium. The investment income ratio is very low compared to other ratios: the average is only 0.8% and the median is only 0.5%. Interestingly, the correlation of the operating ratio and the combined ratio is very high (0.99), and so is that between the MLR and the loss ratio (0.94). The correlation is around 0.90 (0.78) between the loss ratio (MLR) and the combined (operating) ratio. The correlation of the investment income ratio with other financial ratios is very low. (The absolute values of the correlation coefficients are no bigger than 0.16.)

The relationship of the operating efficiency with all the financial ratios is presented in Table 5. To reduce the potential effect of extreme values of the variables, 5% of the insurers are truncated at both ends of the financial ratios.<sup>7</sup> The results show that, overall, there is a moderate negative correlation between the operating efficiency and the operating/combined ratio (around -0.60), a low correlation with the MLR and the loss ratio, and very little correlation with the investment income ratio and the expense ratio.

The relationship of the operating efficiency with financial ratios is also examined by the efficiency score, the number of states the insurer serves, the organization type and the size of the insurer based on total invested assets. Generally, the correlation between the operating efficiency and the operating ratio is low for the insurers of the top 50% or bottom 50% in operating efficiency, but the bottom 50% insurers score a higher correlation. Interestingly, there is a relatively high correlation between the operating efficiency and the operating ratio (around -0.77) for multistate insurers, and a moderate correlation for single-state

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6. This research focuses on MLR and other related insurance-specific financial ratios, including loss ratio, combined ratio, operating ratio, investment income ratio and expense ratio. Financial ratios such as return on assets (ROA) and return on equity (ROE) are also important measures of firm performance. The correlation coefficients between ROA (ROE) and the three efficiency measures (operating efficiency, medical services efficiency and composite efficiency) are 0.51, -0.09 and 0.26 (0.51, -0.07 and 0.29), respectively—consistent with those for combined ratio and operating ratio but in opposite signs. Detailed analyses of ROA and ROE are not included in this research because they provide no more regulatory information than the insurance-specific ratios.

7. For the comparison purpose, the correlation of efficiency measures with financial ratios and asset allocation is also presented for all the 417 insurers without truncation throughout the article.

insurers and stock insurers (around -0.60), but low or little correlation for non-stock insurers.

As to the relationship of the operating efficiency with financial ratios by the size of insurers based on total invested assets, there is a relatively high correlation with the operating ratio for big insurers (around -0.80), a moderate correlation for medium insurers (around -0.65) and a low correlation for small insurers (around -0.45).

**Table 5:  
Pearson Correlation of Operating Efficiency (OE) with Financial Ratios**

Insurers	Correlation of OE and					
	MLR	Loss ratio	Combined ratio	Operating ratio	Investment income ratio	Expense ratio
All 417 insurers	-0.30	-0.31	-0.31	-0.35	0.32	-0.11
All insurers with 5% truncated at both ends of the financial ratio	-0.33	-0.38	-0.54	-0.62	0.15	-0.13
Top 50% OE	-0.05	-0.11	-0.26	-0.34	-0.09	-0.07
Bottom 50% OE	-0.35	-0.29	-0.39	-0.48	0.51	-0.01
Single-state	-0.30	-0.36	-0.50	-0.58	0.16	-0.10
Multistate	-0.42	-0.42	-0.69	-0.76	0.12	-0.29
Single-state (stock only)	-0.34	-0.43	-0.61	-0.65	0.26	-0.16
Multistate (stock only)	-0.43	-0.45	-0.71	-0.78	0.27	-0.34
Stock insurers	-0.36	-0.44	-0.64	-0.68	0.26	-0.19
Non-stock insurers	-0.22	-0.22	-0.23	-0.43	-0.02	0.04
Stock insurers (single-state)	-0.34	-0.43	-0.61	-0.65	0.26	-0.16
Non-stock insurers (single-state)	-0.21	-0.21	-0.17	-0.40	-0.02	0.08
Small insurers	-0.32	-0.30	-0.42	-0.44	0.19	-0.10
Medium insurers	-0.34	-0.45	-0.61	-0.69	0.15	-0.05
Big insurers	-0.37	-0.41	-0.61	-0.78	0.14	-0.26
Small insurers (stock and single-state)	-0.25	-0.35	-0.49	-0.45	0.23	-0.10
Medium insurers (stock and single-state)	-0.29	-0.40	-0.54	-0.64	0.06	-0.21
Big insurers (stock and single-state)	-0.47	-0.56	-0.83	-0.87	0.41	-0.23

Next, same analyses are conducted on the relationship of the medical services efficiency and financial ratios, based on the sample with 5% of the insurers truncated at both ends of the financial ratios. The relationship of the medical services efficiency with financial ratios is also compared by the efficiency score, the number of states the insurer serves, the organization type and the size of the insurer (based on total invested assets). Surprisingly, there is generally no or very little correlation between the medical services efficiency and the MLR, the loss ratio or any other financial ratio. (See Table 6.)

Overall, the financial ratios are not effective indicators of the operating or medical services efficiency of health insurers.

**Table 6:**  
**Pearson Correlation of Medical Services Efficiency (ME)**  
**with Financial Ratios**

Insurers	Correlation of ME with					
	MLR	Loss ratio	Combined ratio	Operating ratio	Investment income ratio	Expense ratio
All 417 insurers	0.03	0.01	-0.04	-0.05	0.02	-0.13
All insurers with 5% truncated at both ends of the financial ratio	0.18	0.17	0.07	0.05	-0.07	-0.16
Top 50% ME	0.05	0.04	0.07	0.09	-0.08	0.08
Bottom 50% ME	-0.04	-0.07	-0.12	-0.11	-0.07	-0.04
Single-state	0.23	0.21	0.11	0.11	-0.10	-0.12
Multistate	-0.03	-0.05	-0.12	-0.17	0.06	-0.26
Single-state (stock only)	0.23	0.24	0.07	0.07	-0.13	-0.15
Multistate (stock only)	-0.05	-0.11	-0.06	-0.15	0.20	-0.18
Stock insurers	0.17	0.17	0.04	0.03	-0.06	-0.15
Nor-stock insurers	0.12	0.03	0.02	0.07	-0.22	-0.12
Stock insurers (single-state)	0.23	0.24	0.07	0.07	-0.13	-0.15
Nor-stock insurers (single-state)	0.14	0.03	0.10	0.14	-0.18	-0.04
Small insurers	0.16	0.12	0.07	0.08	-0.08	-0.10
Medium insurers	0.19	0.18	0.08	0.08	-0.16	-0.17
Big insurers	0.18	0.20	0.02	-0.04	0.04	-0.24
Small insurers (stock and single-state)	0.21	0.17	0.01	0.01	-0.08	-0.18
Medium insurers (stock and single-state)	0.16	0.29	0.08	0.09	-0.15	-0.17
Big insurers (stock and single-state)	0.36	0.23	0.03	0.00	-0.12	-0.20

## Operating and Medical Services Efficiency: Relationship with Asset Allocation

Underwriting and investments are two major business activities of insurers. Zou et al. (2012) examine the interrelation between underwriting and investment risks of property-liability insurers. This section examines the relationship between efficiency and asset allocation (the holding in each asset). The total invested assets are distributed among bonds (including MBS), stocks, mortgage loans, real estate investments, cash, cash equivalents and short-term investments (cash), contract loans, and derivatives. Each asset allocation is measured as the proportion (in percentage) of the asset in total invested assets—that is, the asset divided by total invested assets. The distribution of the insurers with regard to asset allocation is presented in Table 7.

There are very little investments in mortgage loans, contract loans or derivatives, so they are deleted. The analysis focuses on bonds, stocks, real estate investments, cash (including cash equivalents and short-term investments) and MBS. The investment in real estate is small—1% of total invested assets on average. The share of stocks is around 10% of total invested assets, similar to that of MBS. Bonds account for about 50%, while cash, cash equivalents and

short-term investments around 30%. There is a relatively high negative correlation between the holdings of bonds and cash, cash equivalents and short-term investments (-0.69), and a low negative correlation between stocks and cash (-0.52).

**Table 7:**  
**The Distribution of the Insurers by Assets (% of Total Invested Assets)**

% of total invested assets	# of insurers							
	Bonds	Stocks	Mortgage loans	Real estate investments	Cash, cash equivalents and short-term investments	Contract loans	Derivatives	Mortgage-backed securities
>=90%	57	1	0	0	55	0	0	0
(80%, 90%)	55	2	0	0	11	0	0	1
(70%, 80%)	46	3	0	1	15	0	0	0
(60%, 70%)	40	4	0	0	22	0	0	0
(50%, 60%)	36	8	0	0	15	0	0	4
(40%, 50%)	38	17	0	0	23	0	0	9
(30%, 40%)	28	20	0	0	35	0	0	15
(20%, 30%)	22	36	0	2	45	0	0	35
(10%, 20%)	16	31	0	4	55	0	0	89
(5%, 10%)	6	21	0	21	60	0	0	68
(0%, 5%)	27	33	2	46	48	0	1	43
0%	46	241	415	343	1	417	416	153
<0%	0	0	0	0	29	0	0	0
Total	417	417	417	417	417	417	417	417

Similar analyses are conducted on the relationship of asset allocation and the operating efficiency, as well as the medical services efficiency for the whole sample, by the efficiency score, the number of states the insurer serves, the organization type and the size of the insurer. (See Table 8 and Table 9.) In all the analyses, 5% of the insurers are truncated at both ends of each asset, respectively, to reduce the impact of extreme values. The results show that there is generally little correlation between the efficiency and any of the assets. Furthermore, the correlation is examined for the insurers with positive investments in stocks and MBS. Still, little correlation is documented between the efficiency and the holding in stocks/MBS. This is as expected because the investment income ratio is very low. (The average is 0.8%, and the median is 0.5%.)

## Composite Efficiency vs. Operating and Medical Services Efficiency

It is shown that the operating efficiency and the medical services efficiency are not highly correlated. Therefore, neither of them is a good measure of the overall efficiency of health insurers. This section analyzes the composite efficiency, which is computed with all the input and output variables from both the

medical services and operating efficiency models. As stated, the medical services efficiency scores are highly correlated by using adjusted inputs based on regional cost differences as indicated in Section 2 and unadjusted inputs, respectively. Therefore, in the composite efficiency model, inputs do not have to be and are not adjusted for regional cost differences.

**Table 8:**  
**Pearson Correlation of Operating Efficiency (OE) with Assets**  
**(% of Total Invested Assets)**

Insurers	Correlation of OE with				
	Bonds	Stocks	Real estate investments	Cash	MBS
All 417 insurers	0.09	-0.01	0.06	-0.08	0.01
All insurers with 5% truncated at both ends of the asset	0.08	-0.01	0.03	-0.05	0.03
Top 50% OE	-0.06	-0.07	0.01	-0.07	0.02
Bottom 50% OE	0.13	0.21	0.18	0.00	-0.01
Single-state	0.09	0.00	0.04	-0.11	0.07
Multistate	0.02	-0.01	0.01	0.22	-0.14
Single-state (stock only)	0.09	0.02	0.14	-0.12	0.11
Multistate (stock only)	0.06	0.07	0.10	0.18	-0.09
Stock insurers	0.09	0.02	0.13	-0.06	0.07
Non-stock insurers	0.07	0.02	-0.06	-0.02	-0.09
Stock insurers (single-state)	0.09	0.02	0.14	-0.12	0.11
Non-stock insurers (single-state)	0.12	0.00	-0.09	-0.07	-0.04
Small insurers	-0.02	-0.16	0.00	0.05	-0.10
Medium insurers	0.13	0.04	0.05	-0.20	-0.04
Big insurers	0.28	0.08	-0.02	-0.07	0.25
Small insurers (stock and single-state)	-0.06	-0.15	0.04	0.03	-0.11
Medium insurers (stock and single-state)	0.15	-0.01	0.18	-0.14	0.03
Big insurers (stock and single-state)	0.22	0.15	0.15	-0.31	0.34

The distribution of the insurers by the efficiency score is presented in Table 10. DEA models with more inputs and outputs specified usually lead to higher efficiency scores. More insurers are efficient based on the composite efficiency. On average, the composite efficiency score is much higher than the operating or medical services efficiency score (0.61 vs. 0.38/0.36). In addition, there are more insurers that are composite efficient (16%) than those that are operating efficient (8%) or medical services efficient (6%), respectively. Also, 61% of the insurers have an efficiency score of 0.50 or higher based on the composite efficiency, but only 27% and 17% based on the operating and medical services efficiency.



**Table 9:**  
**Pearson Correlation of Medical Services Efficiency (ME) with Assets**  
**(% of Total Invested Assets)**

Insurers	Correlation of ME with				
	Bonds	Stocks	Real estate investments	Cash	MBSs
All 417 insurers	-0.24	-0.01	0.03	0.21	-0.18
All insurers with 5% truncated at both ends of the asset	-0.24	0.01	-0.06	0.22	-0.18
Top 50% ME	-0.26	-0.01	-0.11	0.24	-0.21
Bottom 50% ME	-0.18	0.06	0.01	0.15	-0.20
Single-state	-0.29	0.03	-0.06	0.24	-0.19
Multistate	-0.02	-0.03	-0.06	0.13	-0.12
Single-state (stock only)	-0.28	-0.09	-0.06	0.26	-0.15
Multistate (stock only)	0.00	0.10	0.09	0.10	0.07
Stock insurers	-0.22	-0.05	-0.03	0.23	-0.13
Non-stock insurers	-0.28	-0.07	-0.23	0.35	-0.35
Stock insurers (single-state)	-0.28	-0.09	-0.06	0.26	-0.15
Non-stock insurers (single-state)	-0.28	-0.00	-0.20	0.32	-0.32
Small insurers	-0.17	-0.06	-0.09	0.22	-0.22
Medium insurers	-0.25	0.09	-0.08	0.25	-0.11
Big insurers	-0.06	0.07	0.01	0.06	-0.14
Small insurers (stock and single-state)	-0.34	-0.23	-0.07	0.30	-0.22
Medium insurers (stock and single-state)	-0.18	-0.03	-0.09	0.18	-0.10
Big insurers (stock and single-state)	-0.14	0.06	0.05	0.16	0.07

**Table 10:**  
**The Distribution of Insurers by Composite Efficiency (CE), Operating**  
**Efficiency (OE) and Medical Services Efficiency (ME-Unadj)**

Efficiency score	CE		ME-unadj		OE	
	# of insurers	%	# of insurers	%	# of insurers	%
(0, 0.20)	3	1%	71	17%	122	29%
(0.20, 0.40)	95	23%	237	57%	140	34%
(0.40, 0.60)	132	32%	48	12%	72	17%
(0.60, 0.80)	88	21%	19	5%	31	7%
(0.80, 1)	33	8%	9	2%	18	4%
1	66	16%	23	6%	34	8%
Total	417	100%	417	100%	417	100%

Table 11 presents the relationship between the composite efficiency and financial ratios for the sample with 5% of the insurers truncated at both ends of the ratio. It shows that, overall, there is a low correlation between the composite efficiency and the combined or operating ratio (-0.35 and -0.37, respectively), but little correlation with the MLR and the loss ratio. In addition, the results indicate that there is little correlation between the composite efficiency and the MLR, the loss ratio, the combined ratio or the operating ratio for the insurers of the top 50% or the bottom 50% in efficiency.

**Table 11:**  
**Pearson Correlation Between Composite Efficiency (CE)**  
**and Financial Ratios**

Insurers	Correlation of CE with					
	MLR	Loss ratio	Combined ratio	Operating ratio	Investment income ratio	Expense ratio
All 417 insurers	-0.20	-0.22	-0.25	-0.26	0.14	-0.15
All insurers with 5% truncated at both ends of the financial ratio	-0.14	-0.21	-0.35	-0.37	-0.09	-0.17
Top 50% CE	0.07	0.00	-0.07	-0.12	-0.06	-0.12
Bottom 50% CE	-0.05	-0.09	-0.15	-0.23	0.14	-0.17
Single-state	-0.07	-0.15	-0.29	-0.30	-0.09	-0.15
Multistate	-0.41	-0.44	-0.58	-0.62	-0.06	-0.23
Single-state (stock only)	-0.11	-0.20	-0.38	-0.36	-0.04	-0.22
Multistate (stock only)	-0.41	-0.45	-0.57	-0.62	0.08	-0.31
Stock insurers	-0.18	-0.25	-0.42	-0.42	-0.01	-0.24
Non-stock insurers	-0.01	-0.07	-0.10	-0.20	-0.20	0.00
Stock insurers (single-state)	-0.11	-0.20	-0.38	-0.36	-0.04	-0.22
Non-stock insurers (single-state)	0.02	-0.05	-0.03	-0.16	-0.19	0.03
Small insurers	-0.10	-0.13	-0.24	-0.24	0.03	-0.20
Medium insurers	-0.10	-0.22	-0.34	-0.35	-0.21	-0.08
Big insurers	-0.27	-0.31	-0.49	-0.57	-0.08	-0.25
Small insurers (stock and single-state)	-0.07	-0.14	-0.24	-0.21	0.08	-0.20
Medium insurers (stock and single-state)	0.01	-0.11	-0.29	-0.31	-0.31	-0.13
Big insurers (stock and single-state)	-0.24	-0.37	-0.58	-0.56	0.05	-0.34

Furthermore, there is a moderate correlation between the composite efficiency and the combined or the operating ratio for multistate insurers (around -0.60), a low correlation for single-state insurers (around -0.30), a low correlation with the MLR and the loss ratio for multistate insurers (around -0.40), and little correlation for single-state insurers. There is a low correlation with the combined or operating ratio (around -0.40), little correlation with the MLR and the loss ratio for stock insurers, and little correlation with the MLR, the loss ratio, combined ratio or the operating ratio for non-stock insurers. For big insurers, the correlation is moderate with the combined or the operating ratio (around -0.55), but low or little correlation with the MLR, the loss ratio, the combined ratio and the operating ratio

for small and medium insurers. These results indicate that financial ratios are not effective indicators of health insurers' overall efficiency either.

Table 12 presents the relationship between the composite efficiency and asset allocation. Generally, there is little correlation between the composite efficiency and the holding in each asset. (The absolute value of the correlation coefficient is generally below 0.30.)

**Table 12:  
Pearson Correlation Between Composite Efficiency (CE) and Asset Allocation**

Insurers	Correlation of CE with				
	Bonds	Stocks	Real estate investments	Cash	MBS
All 417 insurers	-0.14	-0.06	-0.01	0.18	-0.14
All insurers with 5% truncated at both ends of the financial ratio	-0.15	-0.07	-0.05	0.25	-0.13
Top 50% CE	-0.15	-0.01	0.08	0.19	-0.16
Bottom 50% CE	-0.04	0.18	-0.04	0.06	-0.04
Single-state	-0.17	-0.05	-0.04	0.21	-0.11
Multistate	-0.02	-0.13	-0.08	0.37	-0.17
Single-state (stock only)	-0.16	-0.08	0.09	0.16	-0.04
Multistate (stock only)	0.00	-0.03	0.05	0.31	-0.08
Stock insurers	-0.12	-0.07	0.08	0.19	-0.05
Non-stock insurers	-0.26	0.00	-0.20	0.41	-0.36
Stock insurers (single-state)	-0.16	-0.08	0.09	0.16	-0.04
Non-stock insurers (single-state)	-0.22	0.01	-0.22	0.37	-0.31
Small insurers	-0.24	-0.08	0.09	0.24	-0.15
Medium insurers	-0.27	0.02	-0.02	0.27	-0.22
Big insurers	0.21	-0.21	-0.13	0.31	0.00
Small insurers (stock and single-state)	-0.26	-0.23	0.19	0.24	-0.11
Medium insurers (stock and single-state)	-0.22	-0.09	0.06	0.22	-0.20
Big insurers (stock and single-state)	-0.07	-0.02	0.04	0.20	0.10

Table 13 presents the correlation between the composite efficiency, the medical services efficiency (unadjusted), the operating efficiency and the average efficiency (which is the average of the operating efficiency and the medical services efficiency). Interestingly, there is a relatively high correlation between the composite efficiency and the average efficiency (around 0.80). Therefore, the average efficiency should be a decent (even though not perfect) alternative to the composite efficiency measure. The correlation between the composite efficiency and the operating efficiency or the medical services efficiency is generally moderate (0.70 and 0.62, respectively, for all the 417 insurers). Now that the correlation between the operating efficiency and the medical services efficiency is

very low, both of them should be included or the composite efficiency be incorporated for the efficiency evaluation of health insurers.

**Table 13:**  
**Pearson Correlation Between Composite Efficiency (CE), Average Efficiency (AE), Medical Services Efficiency (ME) and Operating Efficiency (OE)**

Insurers	CE & AE	CE & ME-unadj	CE & OE	AE & ME-unadj	AE & OE	ME-unadj & CE
All 417 insurers	0.83	0.62	0.70	0.74	0.85	0.27
Top 50% ME-unadj	0.79	0.61	0.65	0.72	0.86	0.27
Bottom 50% ME-unadj	0.83	0.13	0.81	0.14	0.98	-0.07
Top 50% OE	0.82	0.55	0.82	0.83	0.83	0.38
Bottom 50% OE	0.72	0.78	-0.07	0.92	0.30	-0.10
Top 50% CE	0.70	0.49	0.52	0.66	0.77	0.02
Bottom 50% CE	0.67	0.47	0.46	0.58	0.78	-0.05
Single-state	0.82	0.62	0.68	0.73	0.84	0.25
Multistate	0.86	0.60	0.79	0.77	0.87	0.35
Single-state (stock only)	0.82	0.57	0.70	0.71	0.85	0.23
Multistate (stock only)	0.86	0.60	0.76	0.72	0.87	0.29
Stock insurers	0.82	0.58	0.71	0.71	0.85	0.24
Non-stock insurers	0.86	0.78	0.66	0.80	0.89	0.38
Stock insurers (single-state)	0.82	0.57	0.70	0.71	0.85	0.23
Non-stock insurers (single-state)	0.86	0.78	0.63	0.78	0.85	0.33
Small insurers	0.86	0.73	0.73	0.82	0.87	0.43
Medium insurers	0.79	0.59	0.59	0.66	0.80	0.09
Big insurers	0.85	0.53	0.79	0.70	0.87	0.26
Small insurers (stock and single-state)	0.86	0.71	0.77	0.84	0.88	0.47
Medium insurers (stock and single-state)	0.79	0.57	0.58	0.62	0.81	0.03
Big insurers (stock and single-state)	0.81	0.44	0.74	0.59	0.89	0.15

## Conclusions

Rising health care costs and affordability are among the biggest challenges in the U.S. Therefore, an effective regulation should be able to improve cost efficiency of health insurers besides other objectives. An important provision of the ACA is the requirement of the minimum MLR to encourage health insurers to provide quality services to enrollees. This research aims to provide evidences on whether financial ratios are effective measures of the overall efficiency of health insurers and what measures are appropriate for more effective regulation.

To accomplish this purpose, this research analyzes the alignment of different efficiency measures and their linkage with traditional financial ratios. The result shows that generally the financial ratios including the MLR are not effective

indicators of the operating efficiency, the medical services efficiency or the composite efficiency of health insurers. The result also indicates that neither the operating efficiency nor the medical services efficiency is an appropriate measure of the overall efficiency of health insurers. Therefore, innovative regulatory measures, such as a combination of efficiency measures and financial ratios, should be adopted to satisfy all the stakeholders.

Specifically, there is a moderate negative correlation between the operating efficiency and the operating/combined ratio, and a low correlation with the MLR or the loss ratio, for the whole sample. A relatively high correlation is documented between the operating efficiency and the combined or operating ratio for multistate insurers or big insurers. Surprisingly, there is generally very little correlation between the medical services efficiency and any of the financial ratios including MLR. The composite efficiency combines both the operating efficiency and the medical services efficiency. It shows that for the whole sample, there is a low correlation between the composite efficiency and the combined or operating ratio, but little correlation with the MLR or the loss ratio. However, there is a moderate correlation between the composite efficiency and the combined or the operating ratio for multistate insurers or big insurers.

The correlation between the medical services efficiency and the operating efficiency is generally very low. Therefore, the operating efficiency and the medical services efficiency are not consistent with each other. Therefore, an insurer that is operating efficient may not be medical services efficient, and vice versa. Comparing the different efficient measures, the composite efficiency is much higher than the operating or medical services efficiency, and there are more insurers that are composite efficient than those that are operating or medical services efficient, respectively. The correlation between the composite efficiency and the operating efficiency or the medical services efficiency is generally moderate.

This research also examines the impact of asset allocation on the efficiency of health insurers. Generally, there is little correlation between the holding in any asset and the composite efficiency, the medical services efficiency or the operating efficiency. This is as expected because the investment income ratio is very low. (The average is only 0.8%, and the median is only 0.5%.)

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# State-Based Retirement Plans: Why or Why Not?

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## Abstract

Many Americans are financially unprepared for retirement. To address this issue, some states have proposed and/or passed legislation to implement state-based, automatic individual retirement account (IRA) plans. With only five states passing legislation, we discuss some of the program design considerations, with a focus on how decisions regarding these considerations impact participation and cost and, ultimately, the feasibility of state-based retirement plans. Next, we analyze the characteristics of the states that have proposed legislation related to state-based retirement programs and those that have not to determine if there are any systematic differences. We also conduct similar comparisons of those states that have successfully passed legislation and those that have proposed but not yet passed state-based retirement plan legislation.

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## Introduction

The income adequacy of retirees has been a topic prevalent in the popular press, as well as both industry and academic studies. There is growing concern given that individuals are living longer and savings needs have increased to meet retirement goals. In addition, recent evidence suggests that there has been a decline in the percentage of private sector workers with access to employer-sponsored retirement plans, and the changing demographics of the population has led to a decrease in participation in these plans. Also, almost 45% of working age households do not currently have any assets in a retirement account (considering employer-sponsored savings and individual accounts) and average median retirement account balances for near-retirees is \$12,000. Finally, there are also significant differences in account ownership and account balances by income levels and age (Rhee, 2013).

Over the years, there have been efforts to address this potential retirement crisis at the federal level. Recently, this has included proposals for a federal automatic individual retirement account (IRA) and initiatives such as myRA. Early in his first term, President Barack Obama introduced the automatic IRA, which would require employers to establish a savings plan to which all workers would contribute a set percentage of salary through payroll deduction. While President Obama was not successful in passing legislation to create this federal automatic IRA, in 2014, he was able to pass legislation that created the myRA. The myRA is a voluntary Roth IRA designed for individuals who do not have access to retirement plans through their employers. More than 30,000 individuals opened accounts since the program's inception in 2015; however, contributions have only been made to about 20,000 and the median balance is approximately \$500. With assets of just \$34 million and ongoing costs of \$10 million, the U.S. Department of the Treasury announced in July 2017 that it was ending the program (Bernard, 2017).

With the lack of progress at the federal level and so many workers lacking the availability of a retirement mechanism through their employer, a handful of states have passed legislation creating state-based retirement plans, similar in design to the proposed federal automatic IRA. This leads to a natural question: Why have more states not implemented state-sponsored retirement plans? In order to answer this question, we review some of the major decisions the states must make as it relates to the design and structure of state-based retirement plans. Within this discussion, we examine the impact of the decisions on the long-term feasibility of the plans by considering the decisions' effect on both participation and cost. Next, we explore the characteristics of the states and conduct some comparisons. Specifically, we analyze the characteristics of the states that have proposed legislation related to state-based retirement programs and those that have not to determine if there are any systematic differences. We also conduct similar comparisons of those states that have successfully passed legislation establishing a

state-based retirement plan and those that have proposed but not yet passed legislation.

Given the current lack of personal savings, the diminishing access to employer-based retirement plans and the increase in life expectancy, the potential inadequacy of retirement savings should be an issue of concern to the states and the federal government. Those who are not adequately prepared for retirement may remain in the workforce for longer periods of time, thereby limiting the job availability for future generations. Those unable to work may become largely dependent on government programs, which could lead to increased costs borne by the states and the federal government. This study provides a close examination of one option currently being explored by some states to deal with this issue and provides insight into which states may benefit more from this type of program.

The next section of this paper provides a brief overview of the options available for state-sponsored retirement plans. This is followed by a section that discusses factors that may have influenced the states' decisions to propose state-based retirement plan legislation, along with the state comparisons of these factors. Finally, concluding remarks are provided.

## Plan Type

There are a number of decisions that must be made when designing a state-sponsored retirement plan. The first is the type of plan to provide. State-sponsored retirement plans can be either defined contribution plans or defined benefit plans; however, only bills proposing defined contribution plans, specifically IRAs, have been passed by the state legislatures (John and Gale, 2015). This is not surprising for several reasons. Defined contribution plans are more portable and employees know the value of their account at all times. In addition, there is a transfer of retirement risk from the sponsor to the employee. In other words, the employee bears the financial risk associated with the retirement plan, not the sponsor (Boulier et al., 2001). Finally, defined contribution plans are less costly and generally simpler to administer. As such, we focus our discussion on the options for defined contribution plans.

The states have mainly investigated two types of defined contribution plans: 1) automatic IRAs; and 2) multiple employer plans (MEPs) (John and Gale, 2015).<sup>1</sup> With an automatic IRA, employers automatically enroll workers into the

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1. One of the options explored by some states is the use of a marketplace as a means for eligible small employers and self-employed to find retirement plans (Pew, 2016). The implementation of a marketplace does not necessarily entail implementing a mandatory retirement plan. However, the states may require specific criteria be met in order for firms to participate in the marketplace. For instance, the New Jersey Small Business Retirement Marketplace Act requires firms wanting to list their products on the marketplace to offer a minimum of two product options, including a target date type fund and a balanced fund. The marketplace will offer three plan options to employers: a Savings Incentive Match Plan for

plan with a pre-set contribution being made to the IRA via payroll deduction (Iwry and John, 2009). This type of plan has several advantages. It creates little cost for the employer and its simple structure makes it easy to explain to workers. In addition, similar to what was observed with 401(k) plans, the use of automatic enrollment can keep participation rates relatively high (Madrian and Shea, 2001). The automatic IRA is also suitable for a state-sponsored plan because the investment options would be selected by the state, resulting in minimal regulatory burdens for the employers (John and Gale, 2015).

With the automatic IRA, the states must decide between the traditional and the Roth. Two primary considerations with this choice are taxes and income levels. Traditional retirement accounts can have exempted contributions up to some maximum level and accruals are taxed when withdrawn, making this a tax-deferred product. On the other hand, contributions to Roth IRAs are made with after-tax income and accruals are never taxed. If tax rates remain the same (during contribution and withdrawal periods), the tax treatment of the traditional and the Roth IRAs are economically identical (Moore, 2016).<sup>2</sup> If this is not the case, one may be more beneficial than the other for some individuals. One other consideration relates to the income of individuals expected to participate in the plan. There are income restrictions related to the ability to contribute to Roth IRAs. In 2017, those with modified adjusted gross income of \$133,000 or more if single/head of household (or \$196,000 or more if married filing jointly) cannot contribute. If the expectation is that lower income individuals will be participating in the state-based retirement plan, then a Roth IRA may be more feasible.

The second option is to utilize state-run MEPs, which would allow several small employers to join together to share expenses by providing centralized administration, thereby reducing fiduciary responsibilities (Cole, 2017). MEPs are plans regulated under the federal Employee Retirement Income Security Act (ERISA) that allow for employer contributions. The U.S. Department of Labor currently requires that employers participating in a MEP have a common purpose (i.e., in the same industry); however, a legislative change could make this rule less restrictive (John and Gale, 2015).<sup>3</sup>

MEPs can vary in design, providing more flexibility than the automatic IRA. One of the major advantages of the use of the MEP is that, unlike with the automatic IRA, employers could contribute. While this would be beneficial to plan

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Employees (SIMPLE) IRA, a payroll-deduction IRA and a MyRA (American, 2016). For a discussion of some of the other options explored by the states, see John and Gale (2015).

2. The likelihood that tax rates would remain constant is minute. Therefore, the states must consider the tax implications to the employee. For employees that may be in their peak earning years—and, therefore, subject to higher tax rates during their working years—the traditional IRA is more favorable. On the other hand, employees in the early stages of their career or at lower incomes may be subject to a lower tax rate during their working years. These employees would benefit from the Roth IRA (Moore, 2016). In addition, because contributions to a Roth account can be withdrawn without taxation, the Roth IRA is more suitable for lower-income individuals who may need access to the funds (John and Gale, 2015).

3. For a historical perspective of MEPs, see Weinstein and Wiatrowski (1999).

participants and could lead to greater wealth accumulation, it creates additional responsibilities and costs for employers.

## Major Requirements and Provisions

In this section, we discuss some of the major decisions the states must make in terms of plan design. This includes participation requirements and plan features such as automatic enrollment, contribution rates and automatic escalation, investment options and rate-of-return guarantees. All of these requirements can impact participation and/or cost of the plans and, therefore, the long-term viability of the program.

### *Number of Employees*

Statistics obtained from the Quarterly Census of Employment and Wages indicate that small businesses make up a significant portion of U.S. employers. Approximately 60% of businesses have less than five employees, about 17% have five to nine employees, and slightly more than 11% have 10 to 19 employees. In addition, there is evidence that employees of small firms are much less likely to have access to retirement plans through their employer than those employed by larger firms (Kobe, 2010; and U.S. Bureau of Labor Statistics (BLS), 2017). As such, mandating that all employers offer coverage under a state plan (unless an employer-sponsored plan is provided) would increase the number of workers with retirement plans, primarily increasing access to retirement plans for employees of small companies. In addition, greater levels of participation can generate several internal benefits, including lower cost per participant and less pressure to provide employer-sponsored retirement plans. This can also generate broader economic benefits, with more assets being invested in the market and, potentially, an increase in the demand for financial services (John and Gale, 2015).

Each state must determine the guidelines that would make employers subject to participation in the state-based retirement plan. Although not a requirement, a state can establish a threshold number of employees, thereby exempting small employers from participation. While, in theory, these plans are designed to limit costs and administrative management by the employers, as noted in a report to the Oregon Legislature, "... there will be 'start-up' and ongoing costs that cannot be reduced or eliminated without a financial incentive" (Oregon State Treasury, 2016). As such, not requiring smaller employers to participate would exempt companies that would be most challenged in meeting the requirements. At the same time, because availability of employer-based retirement plans is directly proportional to the size of the company, exempting small employers can have a significant impact on the overall number of employees that will not be covered by the state-based retirement plan. As noted above, this can have an impact on the cost per plan participant and, subsequently, the viability of the plan.

### *Automatic Enrollment*

One reason employees do not enroll in 401(k) or IRA plans is that the employee must take action to participate (Gale, 2011). In addition, these plans can be confusing to some (i.e., selecting investment options or other features and understanding tax implications). These issues can result in lower participation rates, which can lead to lower levels of savings at retirement. The implementation of automatic enrollment 401(k) plans helped address these issues (Gale, 2011). For large plans, the use of automatic 401(k) plans dramatically increased enrollment (Beshears et al., 2008). In addition, automatic enrollment has improved participation rates among eligible employees of all ages, genders, racial or ethnic groups, and income levels (Madrian and Shea, 2001).

Given the positive impact on participation observed with 401(k) plans, the use of automatic enrollment can be an important component of state-based retirement plans. With an automatic IRA, employers automatically enroll workers into the state-based plan at some predetermined minimum contribution rate. If employees elect not to participate, they would be able to opt out. However, when employees are automatically enrolled in a 401(k) plan, very few opt out (Thaler and Sunstein, 2003). Similar behavior is expected with automatic IRAs. As noted in an Oregon report to the legislature, it is expected that 70 to 80% of employees automatically enrolled in the plan will stay in the plan (Oregon State Treasury, 2016).

While there is strong evidence of a positive impact of automatic enrollment on participation, there is also evidence that automatic enrollment is negatively related to contribution rates and the impact is greater for low-income earners (Butrica and Karamcheva, 2015). To combat this negative impact, employees can be allowed to increase contribution rates up to some maximum level. The states can also use automatic escalation of contributions. Both of these options are discussed in the next section.

### *Contribution Rates and Escalation*

The states considering a state-sponsored retirement plan have to determine a maximum contribution rate, as well as a default contribution rate for automatic enrollment. Establishing the default contribution is a critical factor to the success of the program and wealth accumulation. The Connecticut feasibility study finds that a contribution rate "...of 6% compared to 3% improves the income replacement ratio by more than 20%" (State of Connecticut Retirement Security Board, 2016).

While investigating the difference in employee behavior before and after automatic 401(k) enrollment, Madrian and Shea (2001) find evidence of "default" behavior. This behavior has automatic enrollment participants maintaining the default contribution rate (3%), whereas more of the employees that enrolled prior to the automatic enrollment selected higher contribution levels (over 6%). Other studies find that the participation rate with automatic enrollment is not affected by

the default contribution rate (Chandler and Mottola, 2014; and Oregon State Treasury, 2016). This evidence suggests that a higher default contribution rate may be more beneficial. However, default contribution rates of plans are often set at levels below the maximum allowable contribution rate. In these cases, the states may choose to implement an automatic escalation provision in order to address the “default” behavior previously discussed. Increasing the contribution rate over the course of time will substantially increase accumulated wealth, especially when wage growth occurs simultaneously (Cole, 2017). Unfortunately, it can be a challenge to identify employees’ optimal stopping points, making it difficult to determine how best to structure this provision (VanDerhei, 2010). In a recent study, Belbase and Sanzenbacher (2017) find that participation rates in state-sponsored automatic IRAs are consistent with 401(k) plans at contribution rates up to 6%. However, when contribution rates are automatically increased above this level, the rate that employees opt-out increases.

### *Investment Options and Rate-of-Return Guarantees*

Investment choice is an important consideration of the design of state-sponsored retirement plans. Most state plans will have a default investment option with a limited number of alternative investments from which employees may choose (John and Gale, 2015). As previously discussed, one of the reasons that employees do not participate in a 401(k) plan or contribute to an IRA is because they find it difficult to select investment options (Gale, 2011). In fact, Iyengar, Jiang and Huberman (2004) find that the probability that an employee participates in a retirement plan decreases when the number of investment options increases. As part of its feasibility study, California conducted some focus groups and identified this as one of the major challenges it would face. Specifically, the focus group expressed a lack of comfort with basic financial concepts and investments (Overture Financial, 2016). Limiting options for the state programs may help in increasing participation.<sup>4</sup>

Finally, the states can include a minimum rate-of-return guarantee on invested funds. Since the financial crisis of 2007–2008, the demand for state-based guarantees for retirement savings has increased; however, one concern with a government-provided guarantee is who would bear the costs (Gale, John, and Kim, 2016). Because investors are considered risk-averse (Fama and MacBeth, 1973), it is believed that participation will increase when minimum returns are guaranteed.

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4. In lieu of multiple options, the states can use a target fund. These funds contain a mixture of investments that are automatically adjusted based on the participant’s age (John and Gale, 2015). There are two main advantages of utilizing target funds. First, these funds are meant to be the only investment held by the participant. Second, they require little to no ongoing decision-making or portfolio rebalancing from the account owner, as required when multiple investment options with different risk-return profiles are available.

## State Comparisons

In this section, we summarize the data and analysis employed. The analysis provides some comparisons of the states based on whether the states proposed legislation related to state-based retirement plans during the sample period. A similar analysis is provided for the states that successfully passed legislation to create a state-based retirement plan, in comparison to the states that proposed but did not pass such legislation.

### *Data and Analysis*

This study focuses on legislative activity between 2012 and 2016 due to the number of states proposing legislation during this time period. We utilize state-level data from a variety of resources in the state comparisons. The control variables are lagged one year such that we are comparing the environment in the states in the prior year. A full list of the variables, along with brief descriptions and sources, is provided in Table 1. Summary statistics for the variables of interest are reported in Table 2. The analysis uses means comparisons of the variables of interest to test whether the means are statistically different for the groups.<sup>5</sup>

### *Variable Descriptions and Results*

As shown in Table 3A and Table 3B, numerous states have proposed bills related to state-based retirement programs in the past few years. The majority of these bills simply propose researching the viability of creating a state-based retirement plan, while others propose creating a MEP or an automatic IRA. However, as of year-end 2016, five states have been successful in passing

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5. In addition to the means comparisons, we also conduct a probit analysis in which the dependent variable is equal to one if the state proposed a bill (or proposed a bill to create a state-based retirement plan) in that year and zero otherwise. However, due to the high correlations among several of the variables included in the analysis, only a handful of the independent variables could be included. We do find consistency in the results for most of the variables included. Specifically, the states with more employers with five to nine employees and fewer employers with 10 to 19 employees were more likely to propose bills. Also, the states with a more highly educated population and a higher gross state product were more likely to propose bills. Finally, the states with a lower minority population, and more of its population in the 18 to 24 and 35 to 44 age groups, were more likely to propose bills. The notable differences are that the unionization variable is only significant in the model in which the states proposed state-based retirement plan bills. The Democratic governor variable is never significant. Results are available from the authors upon request.



legislation creating a state-based retirement plan.<sup>6</sup> These five states are California, Connecticut, Illinois, Maryland and Oregon.<sup>7</sup>

**Table 1:**  
**Variable List and Description**

Variable	Description	Source
Percent Establishments (< 5)	Percent of companies with less than five employees	U.S. Bureau of Labor Statistics
Percent Establishments (5 to 9)	Percent of companies with five to nine employees	U.S. Bureau of Labor Statistics
Percent Establishments (10 to 19)	Percent of companies with 10 to 19 employees	U.S. Bureau of Labor Statistics
LN of Median Income	Natural logarithm of median household income	U.S. Census Bureau
Percent Living in Poverty	Percentage of the population living below the poverty level	U.S. Census Bureau
Gross State Product	The gross market value of the goods and services attributable to labor and property located in a state	U.S. Census Bureau
Percent 18 to 24	Percentage of the population age 18 to 24	U.S. Census Bureau
Percent 25 to 34	Percentage of the population age 25 to 34	U.S. Census Bureau
Percent 35 to 44	Percentage of the population age 35 to 44	U.S. Census Bureau
Percent 45 to 54	Percentage of the population age 45 to 54	U.S. Census Bureau
Percent 55 to 64	Percentage of the population age 55 to 64	U.S. Census Bureau
Educational Attainment	The percent of persons age 25 or older with at least a bachelor's degree	U.S. Census Bureau
Percent Minority	Percentage of non-white population	U.S. Census Bureau
Age-Adjusted Death Rate	Age-adjusted death rate	Centers for Disease Control and Prevention
Percent Unionized	Percent of the workforce covered by a union	www.unionstats.com*
Percent Democratic	Percent of the population that voted for the Democratic candidate	U.S. House of Representatives**
Democratic Governor	Indicator variable equal to 1 if the governor is a democrat and 0 otherwise	National Governors Association

\* For more specific information on the union data, see Barry T. Hirsch, David A. Macpherson, and Wayne G. Vroman, "Estimates of Union Density by State," *Monthly Labor Review*, Vol. 124, No. 7, July 2001, pp. 51–55.

\*\* Data on presidential election results was obtained from the Statistics of the Presidential and Congressional Election issued by History, Art & Archives of the U.S. House of Representatives.

Social and economic factors can affect a state's willingness to consider new ideas, especially in legislation that will affect its citizens. The various factors will vary depending on the purpose of the legislation. For example, Gray (1973) finds that the states with a wealthy population are more receptive to innovative legislation, while other studies find that the level of a state's unionization can impact the legal climate (Kau and Rubin, 1979; Kau and Rubin, 1981).<sup>8</sup> Research also indicates that hostility and prejudice against immigrants increases as the size

6. New Jersey and Washington passed legislation to create a marketplace that would promote participation in low-cost, low-burden retirement programs offered by the industry. Neither program mandates employers participate in a state-based retirement program.

7. A brief summary of the structure of the plans created by the five states that passed legislation is provided in the appendix. For a more detailed review of the state-based plans, see Cole (2017).

8. Kau and Rubin (1979) find that the level of union membership in the state has a significant effect on almost all issues. As an ideological measure, Kau and Rubin (1981) utilize a measure of electoral margin of the congressman in the last election and the percentage voting for Nixon in the 1972 presidential election. The authors find that ideological variables are important in explaining voting.

of the immigrant population increases (Alba, Rumbaut and Marotz, 2005). Also, when there is a well-established, high percentage population of minority within a state, legislation more inclusive of immigrants is likely to pass (Chavez and Provine, 2009).

**Table 2:**  
**Summary Statistics**

Variable	Obs	Mean	Std. Dev.	Min	Max
Percent Establishments (< 5)	258	0.6009	0.0499	0.1700	0.8775
Percent Establishments (5 to 9)	258	0.1666	0.0169	0.1079	0.2039
Percent Establishments (10 to 19)	258	0.1134	0.0116	0.0767	0.1333
LN of Median Income	258	10.8759	0.1711	10.5165	11.4240
Percent Living in Poverty	258	0.1482	0.0321	0.0820	0.2420
Gross State Product	258	12.1913	1.0142	10.2243	14.7305
Percent 18 to 24	258	0.09935	0.006465	0.08354	0.12713
Percent 25 to 34	258	0.1330	0.0093	0.1105	0.1600
Percent 35 to 44	258	0.1247	0.0065	0.1099	0.1411
Percent 45 to 54	258	0.1383	0.0100	0.1034	0.1693
Percent 55 to 64	258	0.1286	0.0102	0.0903	0.1567
Educational Attainment	258	28.2868	4.8920	17.6000	40.5000
Percent Minority	258	0.1982	0.1215	0.0452	0.7436
Age-Adjusted Death Rate	258	7.5200	0.8589	5.8490	9.6370
Percent Unionized	258	10.5729	5.2291	2.0000	24.7000
Percent Democratic	50	0.4810	0.1018	0.2473	0.7015
Democratic Governor	258	0.3953	0.4899	0.0000	1.0000

In identifying characteristics that might impact a state's decision to explore the feasibility of or implement a state-based retirement plan, we draw upon relevant existing academic literature and studies, as well as factors that may impact the ability to save and/or relate to longevity risk. These characteristics include the size of employers, financial wealth, the age distribution of the population, educational attainment, the size of the minority population, life expectancy, the extent of union membership and the political environment. Results for the comparison of the states that proposed some bill to those that did not propose any bill related to state-based retirement programs is provided in Table 4.<sup>9</sup>

9. Because creating state-based retirement plans is a much larger endeavor than simply studying the issue or creating a marketplace, we re-run the analysis comparing the states that proposed creating a state-based retirement plan to other states. Though the size of the differences varies, the results of the comparisons are statistically similar to those reported here, with one exception; i.e., the percentage of the population 35 to 44 is not significant.

Table 5 provides the comparison of states that did not pass a state-based retirement plan bill to those that passed a state-based retirement plan bill.

**Table 3A:  
Detailed Bill Activity**

Year	State	Bill	Passed	Bill Purpose			
				Research Issue	Create MEP	Create State Plan	Create Market-place
2012	Massachusetts <sup>^</sup>	HR 3754	*			*	
2013	Maine	LD 1473				*	
2013	Nebraska	LR 344		*			
2013	Ohio	SB 199				*	
2013	Oregon	HB 3436	*	*			
2014	Arizona	HB 2063				*	
2014	Connecticut	SB 249				*	
2014	Illinois	SB 2758	*			*	
2014	Louisiana	SB 283				*	
2014	Minnesota	HF 2419	*	*			
2014	Minnesota	HF 2536	*	*			
2014	Vermont	S 193	*	*			
2014	Vermont	H 885	*	*			
2015	Colorado	HB 1235		*			
2015	Indiana	HB 1279				*	
2015	Indiana	SB 555				*	
2015	Kentucky	HR 261				*	
2015	Maine	LD 768				*	
2015	Massachusetts	H. 939				*	
2015	Massachusetts	H. 924			*	*	
2015	New Hampshire	HB 239		*			

<sup>^</sup> This law applies to not-for-profit organizations only. As such, Massachusetts is not considered to have passed a bill establishing a state-based plan in the analysis.

As noted earlier, the larger the employer (measured in number of employees), the more likely the employer is to offer retirement savings plans. The U.S. Bureau of Labor Statistics (2017) notes that 50% of employers with one to 49 employees offer retirement savings plans, while 85% of employers with 100 or more employees offer retirement savings plans. The states that have passed state-based retirement plan legislation require employers to participate in the state plan unless they offer an employer-sponsored plan. As such, this legislation will predominately impact smaller employers. For this reason, we anticipate the states that propose and/or pass state-based retirement plan legislation will have a greater percentage of businesses with a small number of employees relative to other states. Because the states generally set the requirement for compliance at a fairly low

level, we examine the percentage of establishments in the states with less than five, five to nine, and 10 to 19 employees.

**Table 3B:**  
**Detailed Bill Activity**

Year	State	Bill	Passed	Bill Purpose	Year	State	Bill
2015	New Jersey	S 2831				*	
2015	New Jersey	A 4275				*	
2015	New Jersey	S 3261	*				*
2015	New York	INT 0692-2015		*			
2015	North Carolina	HB 515		*			
2015	North Dakota	HB 1200				*	
2015	Oregon	HB 2960	*			*	
2015	Oregon	SB 615	*			*	
2015	Rhode Island	HB 6080				*	
2015	Utah	SJR 9	*	*			
2015	Virginia	HB 1998	*	*			
2015	Washington	SB 5826	*				*
2015	West Virginia	SCR 58		*			
2015	Wisconsin	SB 45				*	
2015	Wisconsin	AB 70		*			
2012/2016	California <sup>^</sup>	SB 1234	*	*		*	
2016	Connecticut	HB 5591	*			*	
2016	Iowa	SSB 3164				*	
2016	Iowa	HF 2417				*	
2016	Maryland	HB 1378	*			*	

<sup>^</sup> As noted in the appendix, while SB 1234 was passed in 2012, the creation of the state-based plan through the enactment of the California Secure Choice Retirement Savings Trust Act did not occur until 2016, following the review of studies on the issue.

As shown in Table 4, when we examine these variables in comparing the states that proposed some bill to states that did not propose any bill, there is evidence of significant differences. The states that proposed bills had more employers with fewer than five employees, but a smaller percentage of employers in the five to nine and 10 to 19 group. As reported in Table 5, when we consider the comparison of states that simply proposed a state-based retirement plan bill to those that were successful in passing a state-based retirement plan bill, we find similar results. The states that passed a bill have a significantly larger percentage of employers with less than five employees and a smaller percentage within the other two categories. This finding suggests that the states that exempt companies with fewer than five employees, such as California and Connecticut, could still have a significant percentage of workers not covered by a plan. In addition, it is likely that the states with a mandatory requirement for all companies, such as

Oregon and Maryland, could have a larger impact in terms of the number of workers with access to a retirement plan of some type.

**Table 4:**  
**Comparison of States That Proposed a State-Based Retirement Plan**  
**Bill to Those That Did Not Propose a Bill**

	No Bill States		Bill Proposed States		Comparison	
	Mean	SD	Mean	SD	Diff.	Sign.
Percent Establishments (< 5)	0.5916	0.0516	0.6084	0.0473	-0.0169	**
Percent Establishments (5 to 9)	0.1706	0.0147	0.1633	0.0180	0.0073	***
Percent Establishments (10 to 19)	0.1151	0.0091	0.1121	0.0131	0.0031	*
LN of Median Income	10.8255	0.1668	10.9164	0.1641	-0.0909	***
Percent Living in Poverty	0.1581	0.0333	0.1402	0.0287	0.0179	***
Gross State Product	11.9838	0.9806	12.3582	1.0132	-0.3745	**
Percent 18 to 24	0.0988	0.0040	0.0998	0.0079	-0.0011	
Percent 25 to 34	0.1331	0.0080	0.1330	0.0102	0.0001	
Percent 35 to 44	0.1236	0.0065	0.1255	0.0064	-0.0020	*
Percent 45 to 54	0.1362	0.0078	0.1399	0.0113	-0.0038	**
Percent 55 to 64	0.1278	0.0078	0.1292	0.0117	-0.0014	
Educational Attainment	26.2487	3.5281	29.9259	5.2201	-3.6772	***
Percent Minority	0.2373	0.1393	0.1668	0.0944	0.0705	***
Age-Adjusted Death Rate	7.7814	0.8817	7.3098	0.7817	0.4716	***
Percent Unincized	9.4148	5.4727	11.5042	4.8461	-2.0894	**
Percent Democratic	0.4504	0.0983	0.5071	0.0992	-0.0568	*
Democratic Governor	0.2609	0.4410	0.5035	0.5017	-0.2426	***
Observations	115		143		258	

National studies have consistently shown that individuals who do not have access to an employer-sponsored plan tend to be lower paid and younger workers (Moore 2016; Pew, 2016). The U.S. Bureau of Labor Statistics (2017) reports that of employees in the lowest 25% of average wages, only 45% have access to retirement savings plans at work. And, when considering the lowest 10% of wage earners, only 34% have access to employer-sponsored plans. Clearly, lower wage employees would benefit more from state-sponsored retirement plans. In addition, financial literacy among young adults is low. People with low financial literacy are less likely to plan for retirement (Lusardi and Mitchell, 2007). Lusardi, Mitchell and Curto (2010) find that less than one-third of young adults have basic knowledge of inflation, interest rates and risk diversification. For these reasons, we anticipate that the states with a higher percentage of their population living in poverty, with lower median incomes and lower gross state products will be more likely to propose state-sponsored retirement legislation and will be more likely to implement a state-sponsored retirement plan. We also expect the states with a greater percentage of younger residents will be more likely to pursue state-sponsored retirement programs. To capture potential differences in the age distribution of the population of states, we examine the percentage of the population in five age categories: 18 to 24; 25 to 34; 35 to 44; 45 to 54; and 55 to

64. Because the focus is on funding for retirement, we focus on these age groups and omit those younger than 18, as they are unlikely to be full-time employees, and those 65 and older, as these individuals are retirement age.

**Table 5:**  
**Comparison of States that did Not Pass a State-Based Retirement Plan Bill to Those That Passed a State-Based Retirement Plan Bill**

	No State Plan Bill Passed States		State Plan Bill Passed States		Comparison	
	Mean	SD	Mean	SD	Diff.	Sign.
Percent Establishments (< 5)	0.6033	0.0536	0.6400	0.0433	-0.0367	**
Percent Establishments (5 to 9)	0.1645	0.0157	0.1493	0.0220	0.0153	**
Percent Establishments (10 to 19)	0.1135	0.0133	0.1019	0.0138	0.0116	***
LN of Median Income	10.8977	0.1725	11.0260	0.1503	-0.1283	***
Percent Living in Poverty	0.1430	0.0297	0.1378	0.0289	0.0052	
Gross State Product	12.2889	0.8255	13.0638	0.8945	-0.7750	***
Percent 18 to 24	0.1002	0.0096	0.0968	0.0041	0.0033	*
Percent 25 to 34	0.1319	0.0083	0.1361	0.0081	-0.0042	*
Percent 35 to 44	0.1235	0.0059	0.1300	0.0038	-0.0065	***
Percent 45 to 54	0.1403	0.0094	0.1418	0.0096	-0.0016	
Percent 55 to 64	0.1297	0.0079	0.1273	0.0080	0.0024	
Educational Attainment	28.7671	5.4424	32.9808	3.1398	-4.2136	***
Percent Minority	0.1606	0.0779	0.2330	0.0959	-0.0724	**
Age-Adjusted Death Rate	7.4193	0.8503	6.8675	0.4090	0.5518	***
Percent Unionized	11.7200	4.0989	14.9731	2.0782	-3.2531	***
Percent Democratic	0.5029	0.0840	0.5843	0.0292	-0.0813	**
Democratic Governor	0.3286	0.4731	0.9231	0.2717	-0.5945	***
Observations	70		26		96	

Table 4 shows that the states that proposed some type of state retirement bill had higher median incomes and gross state products and lower poverty rates than other states that did not propose some type of state retirement bill. In addition, they also have a larger percentage of the population in the 35 to 54 age group. While similar results are observed in Table 5 as it relates to the financial measures (with the exception of the poverty variable), we find that the states that passed a state-based retirement plan bill have a larger percentage of the population in the 25 to 44 age group and a lower percentage of the population in the 18 to 24 age group, in comparison to the states that were not successful in passing such legislation. Collectively, these results are somewhat contrary to expectations.

The level of education attainment directly impacts financial literacy. Lusardi and Mitchell (2007) find that as the education level of an individual increases, so does financial literacy. The education level of a state's occupants may impact the need for a state-sponsored retirement plan. Higher-educated individuals are more likely to have access to an employer-sponsored plan. If this is the case, then the states that propose or pass legislation related to state-based retirement plans will have a less educated population. However, highly educated individuals understand the value of retirement programs and are more likely to understand the benefits of

such a program for lower-income residents. Therefore, they may be more likely to support state-sponsored plan legislation, even if it is highly unlikely they would directly benefit. Our measure of educational attainment is the percentage of the population age 25 or older with at least a bachelor's degree. The results in both Table 4 and Table 5 support the latter argument. It appears the states that have proposed state retirement plan legislation or passed a bill to create a state-based plan have more highly educated populations. Because more educated individuals tend to have higher incomes, the education results may also explain the findings on the financial variables discussed in the preceding paragraph.

On the "Fast Facts on Retirement Insecurity" provided on the California plan's website, it notes that minorities make up a significant percentage of its population and that "(a)lmost half (47%) of workers in California likely to be eligible for Secure Choice are Latino" (Office of the State Treasurer, 2017). However, the results of empirical studies on the relation between race and participation rates in retirement plans are mixed (Springstead and Wilson, 2000; Shuey, 2004). This suggests that while some states that propose and/or pass state-based retirement plan legislation would have larger minority populations than other states, this may not be true for all states. The results of Table 4 indicate that the states that have proposed bills of some type have a lower minority population. However, we find that the states that passed a state-based retirement plan bill do indeed have a significantly larger minority population (approximately 23% compared to 16%).

The life expectancy of the population can greatly impact the amount of retirement income needed such that individuals do not outlive savings. Over time, life expectancy has increased (U.S. Census Bureau, 2017). Because individuals with a longer life expectancy may have a greater need for retirement income, we would expect that the states that have proposed or passed legislation would have lower age-adjusted death rates than other states. This is, in fact, what we find. As shown in Table 4, residents of the states that proposed state retirement plan legislation live longer than residents of the states that have not proposed any such legislation. We find similar results in the Table 5 comparison.

The U.S. Bureau of Labor Statistics (2017) reported that in March of 2017, while 66% of non-union workers have a retirement plan provided by their employer, 94% of union workers do. The positive relation between unions and employer benefits has been documented in the academic literature (Belman and Heywood, 1991; Budd, 2004). Given this information, we expect the states that propose and/or pass legislation related to state-based retirement plans will have a lower percentage of union membership, as the residents of these states may be less likely to have access to employer-sponsored plans. Alternatively, there is empirical evidence that the states with larger union memberships are associated with greater voter turnout and "electoral alternatives that are farther to the left" (Radcliff and Davis, 2000). This suggests that the states with a stronger union presence will be associated with behaviors that favor social equality. In this case, we would expect the states that propose and/or pass legislation will have a larger percentage of workers participating in unions. We find the latter to be the case in

both comparisons. As reported in Table 4 and Table 5, both the states that proposed some type of bill and the states that passed a state-based retirement plan bill have larger percentages of union membership when compared to other states. We also find that the difference is greater when comparing the states that passed a state-sponsored plan bill compared to those that proposed but did not successfully pass such a bill.

Government structure and political parties can impact the type of legislation proposed and passed by states (Owens, 2003; Carey, 2007). As such, it is possible that if one political party strongly supports state-based retirement plans and the leadership in the state is a member of that party and/or if the population (evidenced by voting data) strongly favors that party, then we may see more legislative activity in that state. Based on the comments of legislators, it appears that more Democrats supported state-based retirement programs while Republicans were generally against them (Lobosco, 2017, Weiland, 2017). As such, if we see differences along party lines, we would expect the states that proposed or passed state-based retirement plan legislation to have a Democratic governor and/or a larger percentage of the population supporting Democratic candidates. The results presented in Table 4 and Table 5 provide evidence that the states that have proposed some legislation or successfully passed a bill to create a state-based retirement plan have a larger Democratic presence than other states. This difference is substantial in the states that passed bills to create state-based retirement plans, with 92% of these states having a Democratic governor.

## Conclusion

Currently, more than 55 million Americans are without a workplace retirement account and there is growing concern that a majority of working Americans are not adequately saving for retirement (Weiland, 2017). To address this concern, some states have proposed legislation to create state-based retirement programs. Although the concern regarding retirement savings is widespread, only a few states have been successful in passing legislation to create these retirement programs. The purpose of this research is to consider some of the decisions the states must make when establishing a state-based retirement program and provide some discussion as to how these decisions may impact participation rates and cost. This discussion is important given that if expected participation rates are too low and/or costs too high, these programs will not be viable. We also investigate the characteristics associated with the states that proposed and/or implemented state-based retirement plans versus those that have not.

We find that for the same reasons employer-sponsored plans are trending toward more defined contribution plans, the states have focused their efforts on evaluating the viability of these types of plans. We also find that there are a number of important factors the states must consider when evaluating the decision to create a state-based retirement plan. Decisions related to plan provisions, such



as contribution rates and investment options, can significantly impact the feasibility of these programs.

Our comparisons suggest that there are systematic differences between the states that proposed state-based retirement accounts and those that did not. For instance, residents of the states that proposed legislation tended to have higher average income and education level, as well as a longer life expectancy. These states also have a larger percentage of unionized workers, a stronger Democratic presence, a lower poverty level and a lower percentage of minorities. We further find that differences exist between the states that implemented proposed legislation and those that have not yet passed their bills. Similar to the prior comparisons, we find differences in financial wealth, educational attainment, life expectancy, unionization and political ideology. We also find that the states that enacted the legislation had a larger percentage of employers with five or fewer employees.

Based on these comparisons, the states that tend to favor equity, such as those with a stronger union presence and a stronger Democratic presence, are those that have pursued and/or passed state-based retirement plan legislation. It also appears that the states with a larger percentage of smaller employers and longer life expectancies have pursued and/or passed legislation related to state-based retirement plans. These are states that are likely to have more citizens with inadequate retirement savings, as smaller employers are less likely to provide retirement benefits and more citizens are subject to more longevity risk.

The future of state-based retirement plans is still unknown. Political turmoil between Democrats and Republicans continues to affect various government programs, including the automatic IRA. Although President Donald Trump signed a measure on May 17, 2017, that may slow the adoption and implementation of state-based retirement plans (Iacurci, 2017), this has not stopped some states from continuing to pursue this type of legislation. In June 2017, the governor of Vermont signed into law Senate Bill 135, which establishes a voluntary MEP for employers with 50 or fewer employees. Opponents of state-based plans “fear that giving states freedom to set up programs would impose conflicting and burdensome mandates on private-sector businesses of all sizes and eliminate long-standing federal retirement protections for workers provided under ERISA” (Bradford, 2017). On the other hand, those in favor of these plans simply point to the 55 million Americans that do not have access to workplace retirement plans as a reason to continue moving forward.

For the states that have already passed legislation to create state-based retirement programs—California, Connecticut, Illinois, Maryland and Oregon—the plan is to continue to move forward with implementation (Iacurci, 2017). Oregon State Treasurer Tobias Read stated that “(t)he need to address the oncoming retirement crisis is too great” to not move forward (Thornton, 2017). In a joint statement with Read, California state Sen. Kevin de León (D-Los Angeles) stated that “the California Secure Choice program stands on firm legal and statutory ground and will proceed without delay” (O’Brien, 2017).

Another 30 states are contemplating state-based retirement plans (Thornton, 2017). While the analysis in this study provides some information on the states that may be more likely to pursue state-based retirement legislation, as noted in earlier discussions, there are a number of decisions that need to be made that will impact the viability of such plans. With the recent termination of the myRA program, the success of the early adopting states may affect the decision of other states to move forward.

## Appendix

In September 2012, California became the first state to pass legislation to enact an automatic IRA program (Moore, 2016; Cole, 2017).<sup>10</sup> The act created the California Secure Choice Retirement Savings Investment Board, which was responsible for the design and management of the new plan, called the California Secure Choice Retirement Savings Program. The plan applies to all employers with five or more employees that do not offer another retirement savings option for their employees (Pension, 2016).<sup>11</sup> Employees will automatically be enrolled in the program; however, they can opt out. For each employee enrolled, an IRA will be established and the default contribution rate will be 3%. The board has the authority to change the default contribution from 2% of salary to 5% (Pension, 2016). Employees also have the option to adjust their contribution rates (Pew, 2016). Automatic escalation of the contribution rate is permitted up to a maximum of 8% (Cole, 2017). Assets would be invested in managed accounts or other low-risk investment options, with other investment options available in the future. No minimum rate of return is guaranteed and employees will be charged management fees. Finally, although the plan implementation date was originally Jan. 1, 2017, this has been revised to 2019.<sup>12</sup>

Illinois and Oregon became the next states to pass legislation for the purpose of creating a state-based retirement plan in 2015. The Illinois Secure Choice Savings Board was charged with implementing the program and hiring an external investment advisor. The participation requirement for employers in Illinois is at least 25 employees. This is greater than any other state, subjecting substantially fewer small businesses to this law. Enrollees in the plan will be placed in a Roth IRA with a target date investment option, with other investment options available (Cole, 2017). The accounts will be subject to low fees (Pension, 2016). Like California, the default contribution rate is 3%; however, the employees can elect alternative contribution levels and employees have the ability to opt out. No minimum rate of return is guaranteed. Similar to California, the implementation date has been pushed back and is expected to begin with a pilot program in 2018.<sup>13</sup>

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10. While SB 1234 was passed in 2012, the creation of the state-based plan through the enactment of the California Secure Choice Retirement Savings Trust Act did not occur until 2016, following the review of studies on the issue.

11. The requirement to participate in the state plan will be phased in over a three-year period. The phase-in will depend on the employer's size. Within 12 months after the plan starts, employers of 100 or more employees must have an arrangement to allow employees to participate in the plan. Beginning 24 months after the start of the program, employers of 50 or more employees must participate. Beginning 36 months after enrollment, the size of employer covered by the mandate drops to those with five or more employees.

12. Refer to the California State Treasurer's Office website, [www.treasurer.ca.gov/scib](http://www.treasurer.ca.gov/scib), to learn more about the implementation of the California Secure Choice Retirement Savings Program.

13. Refer to the Illinois State Treasurer website, [http://illinoistreasurer.gov/Individuals/Secure\\_Choice](http://illinoistreasurer.gov/Individuals/Secure_Choice), to learn more about the program.

### State Retirement Plan Summary of Key Characteristics

	California	Illinois	Oregon	Connecticut	Maryland
Bill	SB 1234	SB 2758	HB 2960	Public Act 16-29	HB 1378
Passed	2012/2016	2015	2015	2016	2016
Oversight	Secure Choice Board	Secure Choice Savings Board	Oregon Retirement Savings Board	Connecticut Retirement Security Authority	Maryland Small Business Retirement Savings Board
Effective	2019	2018	2017	Unknown	Unknown
Mandatory	Yes	Yes	Yes	Yes	Yes
Employee Requirement	5	25	None	5	None
Products	IRA	Roth IRA	Roth IRA	Traditional or Roth IRA	IRA
Opt-Out	Yes	Yes	Yes	Yes	Yes
Automatic Enrollment	Yes	Yes	Yes	Yes	Yes
Default Contribution Rate	3%	3%	5%	6%	Not defined
Escalation	Yes	No	Yes	No	No

The Oregon Retirement Savings Plan (called “Oregon Saves”) is similar to the other two state plans, with two major differences: 1) the default contribution rate is 5%; and 2) it applies to all employers. The plan also includes an auto-escalation provision up to 10%. The default investment option is an age-based fund (i.e., target date) and a 1% fee covers the operating expenses of the investment funds. There is no minimum guarantee for performance. This program appears to be the furthest along in the implementation process. A pilot program became effective in July 2017 and the remainder of the program will be phased in based on the number of employees, with full implementation occurring by 2019 or 2020.<sup>14</sup>

Finally, in 2016, Connecticut and Maryland passed comparable state-based retirement plan bills. The Connecticut plan is most similar to the California plan. It applies to all employers with five or more employees who do not offer another retirement savings option for their employees and the default contribution rate is 3% (Pension, 2016). However, there is no escalation provision for the contribution rate and no minimum rate of return is guaranteed. The automatic enrollment plan will allow either a traditional or Roth IRA.<sup>15</sup> In Maryland, the Maryland Small Business Retirement Savings Board was established to manage its state-sponsored retirement plan. This state has the largest board, at 11 members (Cole, 2017).<sup>16</sup> The original bill established a minimum requirement of 10 employees for participation; however, in the final version of the bill, similar to Oregon, all employers that do not maintain an employer-sponsored retirement plan must participate and expenses must be limited to 0.5% of funds under management (Pension, 2016 and Cole, 2017). The board has been charged with establishing

14. Information was obtained on the program website: [www.oregonsaves.com](http://www.oregonsaves.com).

15. Information obtained from the State of Connecticut Retirement Security Board’s website at [www.osc.ct.gov/retirementsecurity/index.html](http://www.osc.ct.gov/retirementsecurity/index.html).

16. The Maryland Board is made up of three members appointed by the governor, three appointed by the Senate president and three appointed by the House speaker. Two members serve ex officio. Refer to <http://msa.maryland.gov/msa/mdmanual/25ind/html/66smallbusret.html> to learn more about the board and the act.

default contribution rates and investment options, but no information appears to be available on these provisions.

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# Denied and Resisted Life Insurance Claims: Recommended Changes to Schedule F

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## Abstract

Life insurance is generally purchased to protect against the economic consequences associated with premature death. Consumers and producers may assume that all life companies settle death claims in one way—full payment of the life insurance proceeds. This is not always the case. Life insurers may deny or resist paying life insurance claims, and these claims are reported on the Schedule F of the statutory financial statement. This paper analyzes the claims that have been denied and resisted by life insurers and makes recommendations to modify the current Schedule F so that it is more informative to consumers, producers and state insurance regulators.

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## Introduction

The basic purpose of life insurance is to protect against the economic risk of death (ACLI Factbook, 2013). Those who purchase life insurance must determine which insurer to select to meet this need. In making this determination, there are four major factors that should be considered in the purchase decision: 1) the financial stability (solvency) of the insurer; 2) whether the insurer (agent/representative) offers the kinds and amounts of insurance coverage (services) that the individual needs; 3) the reputation of the insurer as a fair and equitable insurer, specifically as it applies to claims handling; and 4) the price of the insurance product and coverage desired (Weisbart, 1976).

This paper looks at the claims handling practices of life insurers, specifically as they apply to denied or resisted claims.<sup>1</sup> When individuals purchase life insurance, they may assume that all insurance companies handle claims in the same manner (Weisbart, 1976). Producers may hold this same belief and omit the consideration of denied and resisted claims when recommending insurance carriers or products to their clients. There can be significant subjectivity involved in the settlement of property/casualty (P/C) claims (i.e., liability settlements or the valuation of property). Consumers may believe that there is less flexibility in life insurance and that the only possible outcome for the settlement of life insurance claims when the insured passes away is the full

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1. Denied claims are considered those claims where the insurer refuses to make any payment towards the proceeds of the life insurance policy. Resisted claims are those where the insurer makes a partial payment of the face value of the policy and denies the balance. Also included in resisted claims are those claims where the insurer is still disputing the payment of the claim and retains an amount as still outstanding on the financial records of the company (Bisco, McCullough, and Nyce, *forthcoming*). The Schedule F of the statutory annual statement lists both denied and resisted claims. (See Table 1 for an example.) According to the NAIC, a claim is considered resisted when it is in dispute and not resolved on the financial statement date. A denied claim is one where the insurer has determined the claim will not be paid (NAIC, 2010). In addition, claims that are denied or resisted and close within the same year must still be reported as denied and resisted on Schedule F (Bisco, McCullough, and Nyce, *forthcoming*). Denied and resisted claims do not include life insurance claims that are being reviewed (not disputed) and those claims where the company is holding payment for sufficient evidence or where a beneficiary has made a claim and then withdraws it. These claims are considered as “in the course of settlement” (Fleming, 2013).

payment of death proceeds (Bisco, McCullough and Nyce, *forthcoming*). However, this is not the case. There are three possible outcomes for the life insurance claim. The insurer: 1) pays the claim in full; 2) denies the claim in its entirety; or 3) negotiates an amount less than the full amount of the policy (Weisbart, 1976). In other words, it is possible that an insurer may not pay out the full proceeds of a life insurance policy at the death of the insured.

According to Weisbart (1976), there are six reasons that insurers either deny the entire claim or pay an amount less than the full face value of the policy: 1) the contract never went into effect; 2) there was a material misrepresentation or some other form of fraud; 3) the policy was not in force when the death occurred; 4) the claim made is for a benefit that the policy does not provide (i.e., the insured's death is the result of suicide during the first two years in force); 5) misstatement of age;<sup>2</sup> and 6) the beneficiary designation is imprecise or contested by other potential beneficiaries. These claims are referred to as either a denied (no benefit is paid) or resisted (something less than face value is paid) claim (Bisco, McCullough, and Nyce, *forthcoming*).

Once a policy is issued, material misrepresentation, as a reason to deny and resist claims, is generally limited by the incontestability clause.<sup>3</sup> From the date of policy issuance, insurers have the opportunity to dispute or contest the insurance in force for a period set forth in this clause, which is generally two years (McDowell, 1984).<sup>4</sup> The incontestability clause is used to balance the interest of the insured, who in good faith relied on the coverage that was applied for, and the interest of the insurer to avoid coverage they did not intend to undertake (Schuman, 1995). It is unlikely and rare that a consumer would purchase a life insurance policy expecting to die within the incontestability period. However, it may occur. There is

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2. Insurance contracts include a misstatement of age clause that states that if the insured's age is misstated, the amount payable under the claim is the amount that the premiums paid would have purchased if the correct age had been used (Rejda and McNamara, 2013). Therefore, in the case of resisted claims where age was indicated as the reason, the insured's actual age would have been greater than the age depicted on the contract, leading to a lower death benefit paid.

3. The incontestability clause was first used in the U.S. in 1861 and is now required in all states.

4. The incontestability period is generally two years. However, some policies may contain a period of one year or less (Bisco, McCullough, and Nyce, *forthcoming*).

significant literature that considers the use and legal aspects of the incontestability clause within life insurance policies (e.g., Goodman, 1968; Salzman, 1969; McDowell, 1984; and Schuman, 1995).

There are exceptions whereby an insurer can deny and resist claims past the period provided by the incontestability clause. Specifically, there are three instances where the insurer can deny or resist coverage after the period set forth in the incontestability clause. These include: 1) the beneficiary takes out a policy with the intent of murdering the insured; 2) the applicant for insurance has someone else take a required medical examination; and 3) an insurable interest does not exist at the inception of the policy<sup>5</sup> (Rejda, 2013). With the exception of these reasons, policies that have exceeded the time frame set forth in the incontestability clause should not be contested or denied by the insurer (Bisco, McCullough, and Nyce, *forthcoming*).<sup>6</sup>

Unlike P/C insurers who are not required to report submitted claims that are closed without payment, life insurers are required to report denied and resisted claims on the Schedule F of the statutory annual statement. Schedule F provides limited information regarding the claim that is under dispute or that is being denied.<sup>7</sup> This information, although helpful, lacks some specific details that would allow consumers, producers and state insurance regulators a better understanding of the reason for and the time frame involved with denied and resisted claims.

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5. The principle of insurable interest states that a person must be in a position to lose financially if a loss occurs (Rejda 2013). In life insurance, Insurable interest must apply when the policy is issued.

6. Insurance is regulated at the state level and, therefore, states may establish differing rules and regulations regarding the incontestability period. For instance, Article 1 Section 27-15-4 of the Alabama Insurance Code states that after the period of two years, life insurance policies can only be contested for nonpayment of premium. (Exception is granted for disability benefits or additional benefits in the event of death by accident or accidental means.) Other forms of fraud may also allow for the denial of claims following the incontestability period. These include an insurer faking his/her death in an attempt to collect the proceeds of a life insurance policy or someone other than insured taking control of a life policy and changing the beneficiary (Sheridan, 2013). In addition, the courts may interpret the incontestability period more leniently providing additional reasons for insurers to deny claims.

7. Schedule F of the life insurers' statutory annual statement currently includes the following information: 1) the insurance contract number; 2) the claim number assigned by the insurer; 3) the state of residence of the claimant; 4) the year of claim for death or disability; 5) the amount claimed; 6) the amount paid during the year; 7) the amount resisted as of Dec. 31 of the current year; and 8) a description of why the claim is compromised or resisted.

Consumers or producers interested in obtaining information on the claims handling practices of insurers would need to search out consumer complaints, or for life insurers, review the Schedule F of the statutory annual statement. With limited information, the Schedule F may not provide the information necessary for producers and consumers to obtain a picture of the claims handling process or practices of any given insurer. For example, it is not possible to determine how long a claim has been resisted (i.e., whether one year or five years) or whether the claim is within the incontestability period when the insured passes away. Without this information, the usefulness of the Schedule F is limited—for consumers and producers.

State insurance regulators currently use the Schedule F information as part of the Market Conduct Annual Statement (MCAS) (NAIC, 2014).<sup>8</sup> The MCAS was developed by the NAIC in conjunction with state insurance regulators and is currently used by at least 46 states (NAIC, 2014). As part of this analysis, denied and resisted life insurance claims are reviewed for companies where the total number of claims with payment—plus the claims denied, resisted or compromised—exceeds 100. Once meeting this qualification, the ratio of denied, resisted or compromised claims to policies in force is analyzed against the industry (NAIC, 2014). Due to the limited information on the Schedule F, state insurance regulators are limited in their ability to further analyze the denied and resisted claims. The additional information proposed would assist state insurance regulators in their analysis of the claims handling practice of life insurers. This is important because consumers depend on state insurance regulators to ensure that insurers are meeting their contractual obligations.

In this paper, I review the level of denied and resisted claims and discuss the utilization of this practice by life insurers. In addition, I discuss the current structure of the Schedule F of the life insurers' statutory annual statement and make recommendations to expand the

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8. The Market Conduct Annual Statement (MCAS) was developed as a uniform “analysis tool for certain key market data elements” that allows for a comparison of performance among companies. If a company’s performance appears unusual compared to other companies, the state insurance regulator will review this company more closely (NAIC, 2014).

information provided to consumers, producers and state insurance regulators. Modifying the Schedule F would provide more information about the insurer's claims handling practices and allow producers to make proper recommendations and consumers to make a more informed purchasing decision.

The remainder of this paper is arranged as follows: The next section describes the existing literature. This is followed by a section that explains the data and level of denied and resisted claims. Recommendations for changes to the statutory annual statement are in the next section. The conclusion is shown in the final section.

## Literature Review

The research associated with denied and resisted claims has been extremely limited. There are currently three papers that specifically look at the characteristics of such claims and the insurers that deny and resist claims.

Weisbart (1976) analyzes the demographic qualities of insurers that deny or resist life insurance claims to determine if intercompany differences in claims handling practices exist. Due to data limitations at the time, his research is limited to life insurers doing business in the state of Georgia and only those policies written in the state of Georgia. His sample includes 121 insurers that sold ordinary life insurance<sup>9</sup> continuously from 1962 to 1972.<sup>10</sup> Of these insurers, 45.5% denied or resisted at least one claim during the 10-year period, with approximately 10% of insurers in the study contesting more than 3% of their incurred claims (Weisbart, 1976).

Under ideal circumstances, any research regarding denied and resisted claims should differentiate between legitimate and illegitimate claims. However, simply reviewing the information on

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9. The Statutory Annual Statement provides the following line of business categories for life and health insurers: industrial life, ordinary life, individual annuities, credit life, group annuities, group accident and health, credit accident and health, individual accident and health, and other. Ordinary life insurance refers to term insurance and all forms of permanent insurance (e.g., universal, variable, variable universal, whole) sold to individuals (Fleming, 2013).

10. For 1972, the 121 insurers included in the sample held 80% of the ordinary life insurance in force in Georgia (Weisbart, 1976).



the Schedule F of the statutory financial statement does not make this possible (Weisbart, 1976). Although Weisbart's empirical results are statistically insignificant, he indicates that underwriting standards are most likely the cause of the different levels of denied and resisted claims.

Colquitt and Hoyt (1997) look at denied and resisted claims documented in the 1994 annual statements of insurers licensed to do business in the state of Georgia. Specifically, this research looks to investigate the level of fraud in ordinary life and accidental death insurance. Unlike Weisbart (1976), Colquitt and Hoyt (1997) do attempt to identify those claims that are legitimate. During their research, only 43 of the 7,596 denied and resisted claims were specifically identified as fraudulent. They did identify numerous others that "can be viewed as representing claiming behavior that is fraudulent" (Colquitt and Hoyt, 1997). It is possible that insurers would deny or resist legitimate claims. However, the incentive of fair dealing, the fear of reputational harm or the costs of litigation would keep such events low (Colquitt and Hoyt, 1997).

Bisco, McCullough, and Nyce (*forthcoming*) use a more robust data set to investigate whether insurers that deny or resist claims are implementing a process of post-claim underwriting. Post-claim underwriting occurs when an insurer does not assess an insured's eligibility for insurance based on the risks he/she poses until after a claim has been made (Cady and Gates, 1999). To investigate this underwriting process, the authors look at all denied and resisted ordinary life claims for U.S. insurers from 2003 to 2010. They propose that if an insurer is operating under a post-claim underwriting process, those insurers with denied and resisted claims should have lower initial underwriting expenses (a measure of initial underwriting) and higher investigative expenses (a measure of post-claim underwriting)<sup>11</sup> (Bisco, McCullough, and Nyce, *forthcoming*).

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11. Expenses associated with post-claim underwriting are recorded according to *Statement of Statutory Accounting Principles (SSAP) No. 55—Unpaid Claims, Losses and Loss Adjustment Expenses*, paragraph 6d. According to this provision, claim adjustment expenses include legal and investigative costs expected to be incurred in connection with the adjustment and recording of life claims. Therefore, if a life insurer revisits any underwriting practices during the claims handling process, the expenses associated with such a practice would be recorded under investigation and claim settlement expense (Bisco, McCullough, and Nyce, 2016).

When using this measure of post-claim underwriting, they find that post-claim underwriting does exist.

Not all insurers deny and resist claims and those that do, do so at different levels. For instance, more financially stable insurers are less likely to deny and resist claims (Bisco, McCullough, and Nyce, *forthcoming*). It is possible that the concern for reputational harm may affect whether insurers choose to deny and resist claims. In addition, smaller insurers and those that have been in business for fewer years deny and resist claims to a greater extent (Bisco, McCullough, and Nyce, *forthcoming*).<sup>12</sup>

It is clear that understanding the issues related to denied and resisted claims would be of importance to consumers interested in purchasing life insurance, the producers who often make the recommendation to purchase specific products to consumers and the state insurance regulators that oversee the life insurance industry. In order to understand the implications, it is important to understand the limitations of the data provided on the Schedule F of the statutory annual statement, the main source of information regarding denied and resisted claims.

## Data and Analysis

To investigate the claims that are listed as denied and resisted and the information reported, I collected the denied and resisted claims from the Schedule F of the statutory annual statement for all U.S. domiciled life insurers for the period 2001 to 2014. To understand the limitations of the information provided by the Schedule F, it is important to understand the types of claims that are denied and resisted and for what reasons this might occur.

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12. Bisco, McCullough, and Nyce (2016) also propose a theoretical model whereby an opportunistic individual is likely to misrepresent in order to obtain life insurance. It is not possible to identify these individuals, *a priori*. Therefore, post-claim investigation is necessary. Therefore, it is possible that demographic characteristics of the insureds (i.e., occupation, level of wealth or age) not measured by Bisco, McCullough, and Nyce (2016) may also affect the level of denied and resisted claims.

Table 1 provides two examples of Schedule F from the 2014 annual statements of two separate life insurers.<sup>13</sup> In the top panel, Company A shows several claims that have been denied, and in the bottom panel, Company B shows several resisted claims. From the excerpt, you can see that the Schedule F includes the contract number, the claim number, the state of residence of the claimant, the year of the claim, the amount claimed, the amount paid during the year, the amount resisted through Dec. 31 of the year, and the reason for the denial or the resistance of the claim. The contract number is the life insurance policy number of the insured that passed away. For life insurance, the year of the claim is the year of the death of the insured (Caswell, 2015).

**Table 1: Example of Schedule F**

ANNUAL STATEMENT FOR THE YEAR 2014 OF COMPANY A<sup>15</sup>

1	2	3	4	5	6	7	8
Contract Numbers	Claim Numbers	State of Residence of Claimant	Year of Claim for Death or Disability	Amount Claimed	Amount Paid During the Year	Amount Resisted Dec. 31 of Current Year	Why Compromised or Resisted
20054066	4067653332	VA	2014	500,000		2,372	SUICIDE
20394243	4088094126	MI	2014	170,386	170,386		SUICIDE
20222946	4067980677	PA	2014	700,000		3,244	SUICIDE
17018956	4062390116	ME	2005	250,000		554	SUICIDE
18659421	4065099161	VA	2011	99,024		4,685	MISREPRESENTATION

ANNUAL STATEMENT FOR THE YEAR 2014 OF COMPANY B

1	2	3	4	5	6	7	8
Contract Numbers	Claim Numbers	State of Residence of Claimant	Year of Claim for Death or Disability	Amount Claimed	Amount Paid During the Year	Amount Resisted Dec. 31 of Current Year	Why Compromised or Resisted
00730007U		CO	2008	43,653		43,653	Plaintiff claims the incorrect beneficiary was paid.
001342429		KS	2011	250,000		250,000	Misrepresentation by the policy holder on the application and reinstatement application.
001456636		WI	2012	250,000		250,000	This claim was rescinded due to material misrepresentation in the application.
001435350		OK	2014	150,000		150,000	Contestable policy that was rescinded for nondisclosure of tobacco use.
001492631		WY	2014	150,000		150,000	Applicant died before policy was issued, claim under Temporary Insurance Agreement, claim denied due to material misrepresentation in application.

Schedule F shows all claims for death losses and all other contract claims resisted or compromised during the year, and all claims for death losses and all other contract claims resisted Dec. 31 of the current year. The above are excerpts from Schedule F for 2014.

As previously stated, not all life insurance companies record denied and resisted claims. For each year between 2001 and 2014 of the sample, approximately 22.8% of life insurers in the U.S. listed at least one denied or resisted claim on their statutory annual statement.

13. For the purpose of this research, the names of the life insurance companies are withheld. The companies will be referred to as Company A and Company B.

The number of claims denied or resisted per year also varies widely among the insurers. For insurers that deny and resist claims, some insurers only have one recorded denied or resisted claim in a given year, whereas others have 400 or more. For these same insurers, the average number of claims denied or resisted is 21.42 per 1,000 claims submitted.<sup>14</sup> Although the number of claims denied and resisted is small in comparison to the total number of life insurance claims submitted, the impact to the beneficiaries affected by the postponement of the payment or the denial of coverage in its entirety is significant and, depending on the life insurance policy affected, may affect the financial stability of the family.<sup>15</sup>

For the period 2001 to 2014, there were a total of 140,106 denied and resisted life insurance claim observations.<sup>16</sup> Of these, 100,282 (71.58%) were denied claims and 39,824 (28.42%) were resisted claims. Table 2 provides a breakdown of the denied and resisted claims by year and by life insurance category (i.e., ordinary life, group life, credit life or industrial life). Of the life insurance claims included on Schedule F, 98,613 (70.38%) were ordinary life insurance claims; 15,156 (10.82%) were credit life; 25,561 (18.24%) were group life; and 776 (0.55%) were industrial life. While the number of ordinary life and group life denied and resisted claims has remained fairly steady throughout the period under review, the

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14. For insurers that deny and resist life insurance claims, the annual average of the number of claims affected from 2001 to 2014 ranges from a low of 16.74 per 1,000 claims (2009) submitted to a high of 25.17 per 1,000 claims (2004).

15. It is possible that beneficiaries can recover life insurance proceeds through legal action against the insured. In addition, if state insurance regulators identify inappropriate actions by an insurer, they may take action against the insurer. For instance, on Dec. 21, 2016, the New York State Insurance regulator ordered Columbian Mutual Life Insurance Company to pay death benefits of 257 deceased policyholders and to pay a fine of \$257,000. The state insurance regulator stated that during the period of 2006 to 2015, the insurer wrongfully denied coverage and unilaterally rescinded policies when policyholders died within the two-year contestability period (New York, 20017). Whether the insurer files legal action against the insurer or the department of insurance brings action, the payments to the beneficiaries will be significantly delayed.

16. A denied and resisted claim could be listed on the Schedule F of the statutory annual statement for multiple years. Therefore, consistent with Bisco, McCullough and Nyce (forthcoming), a denied or resisted claim is evaluated and measured for each year that it remains on the Schedule F. In other words, a claim that is being disputed over the course of five years and appears on the Schedule F for each of these years will be counted as five observations, one for each year it remains disputed. The amount under dispute will be adjusted each year to account for any amount paid to the beneficiaries during the year.

number of credit life and industrial life claims has declined significantly. As the majority of the denied and resisted claims are ordinary life insurance, I will evaluate this category going forward.

**Table 2: Breakdown of Denied and Resisted Claims  
(Reporting Year and Category of Life Policy)**

Year	Ordinary Life		Credit Life		Group Life		Industrial Life	
	Denied	Resisted	Denied	Resisted	Denied	Resisted	Denied	Resisted
2001	4314	2133	1438	652	1278	603	17	193
2002	4687	2251	1402	649	1361	670	20	151
2003	5202	2244	1297	428	1245	750	40	126
2004	5589	2026	699	245	1175	815	23	84
2005	5560	2054	955	263	1325	742	12	26
2006	5041	2153	824	333	1505	523	9	30
2007	5139	2180	801	380	1250	597	2	8
2008	5484	1991	910	168	1404	495	5	9
2009	5071	1947	666	194	1292	553	1	0
2010	4617	2123	646	133	1375	322	0	6
2011	4416	1809	507	122	1499	331	6	1
2012	5016	1663	357	128	1327	337	0	0
2013	4975	1669	373	95	1304	242	0	1
2014	5382	1877	390	101	1049	192	0	6
<b>Total</b>	<b>70,493</b>	<b>28,120</b>	<b>11,265</b>	<b>3,891</b>	<b>18,389</b>	<b>7,172</b>	<b>135</b>	<b>641</b>

A denied and resisted claim could be listed on the Schedule F of the statutory annual statement for multiple years. Therefore, consistent with Bisco, McCullough and Nyce (forthcoming), a denied or resisted claim is evaluated and measured for each year that it remains on the Schedule F. In other words, a claim that is being disputed over the course of five years and appears on the Schedule F for each of these years will be counted as five observations—one for each year it remains disputed. The amount under dispute will be adjusted each year to account for any amount paid to the beneficiaries during the year.

The reason that life insurance claims are denied and resisted would be of significant interest to consumers, producers and state insurance regulators. Schedule F provides a free-form entry of the reason for denied and resisted claims. In other words, there is no consistent entry for insurers to indicate the reason for denying or resisting a claim.<sup>17</sup> In order to understand why insurers deny and resist claims, I manually code the reason entered by the insurer. Not

17. For instance, material misrepresentation in the “Why Compromised or Resisted” field may be indicated as: material misrepresentation, misrepresentation, material information withheld, mat mis, MM, or numerous other notations or explanations.

all claims include a reason.<sup>18</sup> For ordinary life only, Table 3 provides a breakdown of the top seven reasons identified. Of the total records included in the initial list of ordinary life, denied and resisted claims, 59,628 (60.47%) were denied or resisted for one of seven reasons: 1) material misrepresentation, 55,250 (56.03%); 2) suicide, 3,091 (3.13%); 3) age, 957 (0.97%)<sup>19</sup>; 4) alcohol, 146 (0.15%); 5) disappearance, 87 (0.09%); 6) murder, 65 (0.07%); and aviation (0.03%). The remaining 38,985 claims had various reasons why they were denied or resisted including a statement of the outcome of the review (e.g., “claim settled,” “rescinded policy”) or various other reasons (e.g., “health history,” “questionable”) that may or may not be the same as one of the six reasons detailed in the top seven. With 55,250 denied and resisted claims, material misrepresentation was the leading reason for insurers not to pay the full amount of the death proceeds.

Given the current information provided by the Schedule F, it is not possible to confirm that the claims denied or resisted for material misrepresentation are within the incontestability period of the policy.<sup>20</sup> As previously indicated, a two-year incontestability period is standard. However, insurers may have a shorter period if defined within the contract (Bisco, McCullough, and Nyce, *forthcoming*).

Unlike the annual statements for P/C, life insurers are required to report denied and resisted life insurance claims.<sup>21</sup> The Schedule F of the statutory annual statement, where these claims can be found for life insurers, provides some valuable information for consumers and state insurance regulators. Unfortunately, the information is limited and does not allow for a thorough review and interpretation of the claims included. For this reason, changes are recommended to the Schedule F.

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18. From the full sample, 288 ordinary life, 394 group life and 109 credit life observations did not include a description of why the claim was denied or resisted. There were no observations for industrial life that lacked an explanation of why the claim was denied or resisted.

19. Refer to footnote 2.

20. Appendix A provides more detailed information regarding the claims reported on the Schedule F of the statutory annual statements and the issues with determining how long the claims have been resisted.

21. Property/casualty (P/C) insurers are not required to report denied claims or claims where the insurer and the insured dispute the amount being paid. For feedback on claims handling practices of P/C insurers, consumers may want to investigate complaints to the state’s insurance regulatory body. Consumer complaint counts for insurers are often made public.

**Table 3: Breakdown of Reason for Denied and Resisted Claims (Ordinary Life Only)**

Year	Material							Other/ None
	Misrep.	Suicide	Age	Alcohol	Disappear	Murder	Aviation	
2001	3820	265	38	2	16	8	1	2297
2002	3689	262	25	0	12	9	2	2939
2003	3729	236	27	3	10	5	0	3436
2004	4173	212	35	10	10	4	2	3169
2005	4302	238	25	6	9	5	3	3026
2006	3627	217	71	8	5	6	4	3256
2007	4066	219	43	1	3	4	4	2979
2008	4437	247	107	0	5	4	2	2673
2009	4049	215	133	0	4	4	2	2611
2010	3903	265	117	42	4	3	2	2404
2011	3445	198	98	40	1	4	2	2437
2012	3861	197	80	30	4	5	4	2498
2013	3973	164	73	2	4	3	4	2421
2014	4176	156	85	2	0	1	0	2839
TOTAL	55250	3091	957	146	87	65	32	38985
Percentage	56.03%	3.13%	0.97%	0.15%	0.09%	0.07%	0.03%	39.53%

## Recommended Changes to Schedule F

Schedule F of the life insurers’ statutory annual statement currently includes the following information: 1) the insurance contract number; 2) the claim number assigned by the insurer; 3) the state of residence of the claimant; 4) the year of claim for death or disability; 5) the amount claimed, 6) the amount paid during the year; 7) the amount resisted as of Dec. 31 of the current year; and 8) a description of why the claim is compromised or resisted.<sup>22</sup> Although useful, this information lacks some crucial details that would allow consumers and state insurance regulators to more fully interpret the data.

Given the current data, it is not possible to tell whether a claim, with certainty, is within the incontestability period as indicated within the contract for the policy. One could assume that claims with a reason for “Why Compromised or Resisted” listed as material misrepresentation are within the incontestability period because it is

22. Refer to Table 1 for an example of Schedule F.

only during this period when such claims can be denied or resisted. However, this would not be the case for many of the other reasons listed by insurers. To address this, a check box or indicator could be added to the Schedule F to indicate which policies are being denied and resisted during the incontestability period. Insurers could be instructed to select the indicator whenever a claim that is being denied or resisted is within the incontestability period. With varying incontestability periods among policy types and insurers, the indicator would allow for a quick interpretation of the level of denied and resisted claims falling in this period.<sup>23</sup>

In addition to the indicator and to provide even more detailed information, Schedule F should be modified to include the date of policy issuance, including month, day and year, and then expand the date of claim (the insured's date of death) to include month and day. This would allow consumers and state insurance regulators to see the length of time the policy was in-force when the insured passed away. This would allow for answers to important questions: What is the average length denied and resisted claims are in-force? Do insurers deny and resist claims more in the first six months or first year after policy issuance?

When analyzing the Schedule F of the statutory annual statement for any given year, claims may be listed where the insured passed away more than 30 years before.<sup>24</sup> It is unclear whether the beneficiaries or parties to the estate of the deceased just found the policy or were just made aware of the policy and the claim was made many years after the death of the insured or whether the insurer has been resisting the claim for decades. This would certainly be of interest to consumers, producers, and regulators. Understanding the length of time the insurers resist claims – sometimes before a partial or full payment is made – would help producers recommend insurers that limit denied and resisted claims and would help consumers, when not utilizing a producer, in selecting an insurer to purchase life insurance from. State insurance regulators should also want this information in order to determine if insurers are acting in the best interest of their policyholders and the beneficiaries of the policies.

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23. Refer to footnote 4.

24. Refer to Appendix A.



For this reason, the date the claim is submitted, including month, day and year, should be added to the Schedule F of the statutory annual statement.

Finally, guidance should be provided for the “Why Compromised or Resisted” field. Currently, insurers can enter anything in this field and while flexibility in defining the specific reason for the action might be convenient, the variability in the answers allows for limited interpretation of why insurers are denying and resisting claims. While reviewing the reasons for why insurers deny and resist claims, as indicated in Table 3, claims denied or resisted for a reason of material misrepresentation were listed in many different ways including, but not limited to, material misrepresentation, misrepresentation, material information withheld, mat mis and MM. Providing uniformity in reporting structure, at least for the top seven reasons indicated in Table 3 (material misrepresentation, suicide, age, alcohol, disappearance, murder, and aviation) would provide for easier interpretation of why insurers deny and resist claims.

The analysis of the Schedule F and the recommended changes would not be complete without at least a cursory discussion of the costs associated with the recommended changes. The information requested is already within the data management systems of the life insurers. For the life insurers, the costs associated with the recommended changes would be limited to programming changes to generate the reports used to build the statutory annual statement. The actual cost of the changes would vary depending on the complexity of the system used by the insurer.

The changes indicated here would provide consumers, producers and state insurance regulators a better understanding of the reasons for, and the use of, denied and resisted claims by insurers. Knowing why insurers deny and resist claims and for how long would provide invaluable information to all interested parties.

## Conclusion

Selecting a life insurance company can be a daunting task for consumers and their advisors, who are told to do so carefully. Many factors can affect this decision, including the financial stability (solvency) of the insurer; whether the insurer (agent/representative) offers the kinds and amounts of insurance coverage (services) that the individual needs; the reputation of the insurer as a fair and equitable insurer, specifically as it applies to claims handling; and the price of the insurance product and coverage desired (Weisbart, 1976).

The Schedule F of the statutory annual statement could be a useful tool in understanding the claim handling practices of U.S. life insurers. However, the information currently reported on this schedule only provides a partial understanding of why insurers may deny or resist claims. In order to provide more information such as how long claims are denied and resisted and whether such claims are within the incontestability period would require some modifications to the current structure of the Schedule F. To accommodate this, changes would include an indicator to show whether the claim is within the incontestability period, a field to indicate the date the policy was issued, an enhancement to the claim date (date of death for the insured) including the month and day of death, and some guidance on the entry of the reason that claims may be denied and resisted, leading to better uniformity.

Insurance producers, who sometimes educate consumers and recommend insurers and insurance products when appropriate, would likely benefit from the recommended changes to the Schedule F. Producers should understand the claims handling practices of the insurer and be able to explain this to insureds when recommending a specific insurance company.

Not only would this information provide added details for producers and consumers, but also it would provide additional information for state insurance regulators whose job it is to ensure that insurers meet their contractual obligations. Understanding why insurers deny and resist claims and for how long would allow state insurance regulators to more closely monitor insurers who might

abuse the ability to deny or delay payments on life insurance policies.

## Appendix A

### Denied and Resisted Claims (Ordinary Life Only) – By Claim Year (1970–2014)

Statement Year	CLAIM YEAR									
	2010–2014	2005–2009	2000–2004	1995–1999	1990–1994	1985–1989	1980–1984	1975–1979	1970–1974	Before 1970
2001	-	-	5003	1189	163	40	22	1	3	0
2002	-	-	5949	803	128	32	11	1	2	0
2003	-	-	6789	502	84	22	9	2	2	0
2004	-	-	7251	282	44	12	7	1	2	0
2005	-	4149	3230	186	34	6	4	1	2	0
2006	-	5728	1295	126	21	8	4	2	2	0
2007	-	6388	814	85	19	6	3	2	2	0
2008	-	6903	482	64	14	4	4	1	2	0
2009	-	6678	284	38	13	1	1	2	0	0
2010	3835	2644	218	27	11	2	0	0	0	0
2011	4706	1099	139	25	9	2	0	0	0	0
2012	5523	668	165	27	8	2	0	0	0	0
2013	6091	336	89	15	8	3	0	0	0	0
2014	6951	182	77	19	5	2	0	0	0	0

This table provides a count, by statement year, of the claims that are shown as denied and resisted on the statutory annual statements. For each statement year, the number of claims listed is shown by five-year claim periods. For instance, on the 2001 statutory annual statements for life insurers, there were 5,003 denied and resisted claims with claim years listed as 2000 to 2004. On the 2001 statements, there were also three claims listed for claim years 1970 to 1974. It was not until the 2009 statements when all claims for the 1920 to 1974 period were cleared from the Schedule F. Claim year, as indicated in Schedule F of the statutory annual statement, is the year of the insured's death (Caswell, 2015). 197 claims have no claim year listed. 761 claims have invalid years (listed as after 2014).

### Denied and Resisted Claims (Ordinary Life Only) – By Claim Year (1970–2014)

Statement Year	CLAIM YEAR													
	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
2001	-	-	-	-	-	-	-	-	-	-	-	-	-	3510
2002	-	-	-	-	-	-	-	-	-	-	-	-	3770	1616
2003	-	-	-	-	-	-	-	-	-	-	-	3928	1878	625
2004	-	-	-	-	-	-	-	-	-	4085	1930	675	325	
2005	-	-	-	-	-	-	-	-	4149	1836	759	342	177	
2006	-	-	-	-	-	-	-	3962	1766	593	342	195	98	
2007	-	-	-	-	-	-	3904	1877	607	371	217	110	70	
2008	-	-	-	-	-	4179	1788	595	341	215	114	75	50	
2009	-	-	-	-	4147	1608	480	267	176	102	68	53	41	
2010	-	-	-	3835	1585	543	239	156	121	74	47	46	38	
2011	-	-	3324	1381	579	238	132	80	70	49	24	25	32	
2012	-	3477	1512	534	313	128	70	97	60	52	15	22	64	
2013	-	3867	1499	496	229	157	61	51	47	20	21	12	17	29
2014	4317	1712	545	261	116	78	30	26	33	15	17	12	19	23

To get a more granular look at the data, this table shows the denied and resisted claim counts for claim years 2001 to 2014 on an individual claim year basis. For instance, in 2001, there were 3,510 denied or resisted claims listed on the Schedule F for life insurers. By 2014, there were only 23 claims still listed as denied and resisted for 2001. Unfortunately, given the limited information on Schedule F, it is not possible to determine if the 23 claims listed for claim year 2001 on the 2014 Schedule F were included in the numbers from the 2001 statement or if these were claims not identified until a later date.

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# Abstracts of Significant Cases Bearing on the Regulation of Insurance 2017

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## United States District Courts

*Pharm. Care Mgmt. Ass'n v. Gerhart*, 852 F. 3d 722 (8th Cir. 2017)

Pharmaceutical Care Management Association, a trade association representing pharmacy benefits managers (PBMs), filed an action against Iowa's insurance commissioner and attorney general seeking a declaration that an Iowa statute was preempted by the federal Employee Retirement Income Security Act of 1974 (ERISA) and violated the dormant Commerce Clause of the U.S. Constitution. The Iowa statute at issue regulates how PBMs, which act as third-party plan administrators, establish generic drug pricing and requires certain disclosures on pricing methodology be made to the network pharmacies and to the insurance commissioner.

The district court dismissed the claim, holding that the statute did not have an impermissible "connection with" ERISA, as it does not unduly restrict the administration of any ERISA plan, does not mandate the provision of any benefits or require a particular pricing methodology. It also found that the statute did not impermissibly reference ERISA, as it did not act "immediately and exclusively" on ERISA plans. On appeal, the Eighth Circuit reversed the dismissal, finding that the statute was preempted by ERISA. The court held that the statute referenced ERISA because it applied to PBMs that administer prescription drug benefits for ERISA plans and explicitly exempted certain ERISA plans. It also found that, by requiring disclosures regarding pricing methodology, the statute had a "connection with" ERISA plans because "reporting, disclosure, and recordkeeping ... are

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integral aspects of ERISA” and, therefore, interfered with the national scheme of plan administration.

*Onyx Ins. Co. v. N.J. Dep’t of Banking and Ins., No. 16–2153, 2017 WL 3393833 (3d Cir. Aug. 8, 2017)*

In this case involving New Jersey’s Unsatisfied Claim and Judgment Fund, the U.S. Court of Appeals for the Third Circuit upheld a lower court ruling dismissing the claim of a risk retention group (RRG). Onyx, an RRG, had argued the federal Liability Risk Retention Act of 1986 (LRRRA) preempted New Jersey’s statutory scheme, which excluded RRGs from participating in the fund that assesses member insurers and makes personal injury payments to cover uninsured pedestrians. The court ruled that LRRRA’s express language indicates a state “may” require an RRG to participate in state-established mechanisms for equitable apportionment among insurers of losses and expenses. The state has discretion whether to include RRGs in the fund and, furthermore, the state’s actions are not discriminatory absent an express LRRRA violation.

*U.S. v. Anthem, Inc., 855 F.3d 345 (D.C. Cir. 2017)*

In this antitrust case, the U.S. Court of Appeals for the D.C. Circuit upheld a lower court’s ruling that the proposed merger between Anthem and Cigna, the second- and third-largest sellers of health insurance to large companies in the U.S., would violate the federal Clayton Antitrust Act. The court agreed with the federal government that Anthem failed to show the kind of extraordinary efficiencies that would counterbalance likely price increases in a highly concentrated market following the merger.

The court rejected Anthem’s argument that a merged entity would allow for product innovation by incorporating Cigna’s customer-facing programs and Anthem’s low rates. The court found this benefit to be uncertain in timeliness or effectiveness, while the upward pricing pressure due to the loss of a competitor would be immediate. Furthermore, the court affirmed the lower court’s ruling that Anthem had failed to provide sufficient evidence that it could not improve product offerings on its own.

*Blue Cross and Blue Shield of N.C. v. U.S., 131 Fed. Cl. 457 (2017)*

In this suit to collect full Risk Corridors Program payments from the federal government, Blue Cross and Blue Shield of North Carolina (Blue Cross) alleged a violation of Section 1342 of the federal Affordable Care Act (ACA), as well as breach of Blue Cross’s qualified health plan (QHP) agreement with the federal government, breach of implied-in-fact contracts, breach of the covenant of good faith and fair dealing, and violation of the Takings Clause of the U.S. Constitution. ACA Section 1342 established the Risk Corridors Program to cap the profits and



losses of insurers offering QHPs. The federal government had made only partial payments to Blue Cross.

The U.S. Court of Federal Claims found in favor of the federal government, holding that ACA Section 1342 does not establish a deadline for full payments. The court also found no reasonable reading of the QHP agreement that would create an obligation to make full, annual risk corridors payments. Furthermore, it found the U.S. Congress did not intend for statutory obligations in the ACA to contractually bind the federal government. The court also ruled that an implied covenant of good faith and fair dealing cannot expand contractual duties.

*State of Cal. v. Trump, No. 17-cv-05895-VC, 2017 WL 4805588 (N.D. Cal. Oct. 25, 2017)*

The District Court for Northern District of California denied preliminary injunction to 17 states challenging the executive order terminating payments under the ACA cost-sharing reduction (CSR) provision. The injunction was intended to continue CSR payments to low-income participants on the federal exchanges (lowering their out-of-pocket expenses) pending the outcome of a lawsuit challenging the validity of CSR program funding. That lawsuit was initiated by the U.S. House of Representatives against the Obama administration, and several states intervened in the suit to advocate for the validity of the CSR program following the 2016 presidential election. A decision is expected in 2018.

The court agreed with the Trump administration that a preliminary injunction was not warranted, holding that individual states had taken sufficient measures to shield lower-income people from the impact of the executive order. The court noted that California and other states had worked with insurers to compensate for lost CSR payments by concentrating premium increases in subsidized “Silver” plans, resulting in increased tax credits for insureds between 100% and 400% of the federal poverty level. The court further ruled that 38 states accounted for the termination of CSR payments when setting 2018 rates. While giving some credence to the states’ argument that termination of CSR payments creates confusion and may deter consumers from obtaining coverage, the court ultimately concluded that a preliminary injunction order would not alleviate confusion.

*King v. Nat’l Gen. Ins. Co., No. 15-CV-00313-DMR, 2017 WL 588291 (N.D. Cal. Feb. 14, 2017)*

Putative class members filed suit against a number of insurers with whom they contracted to receive private passenger automobile insurance. Policyholder plaintiffs are all “good drivers” entitled to a discount on the rate the policyholder would otherwise be charged. Policyholders allege that the agents of the defendant insurers within the same control group failed to cross-offer a policy with the lowest rates for coverage because defendant insurers concealed this requirement from the agents. Defendants claim that two of the insurers are entitled to “super

group” exemptions from the cross-offer requirement and that three of the insurers are restricted from making cross-offers to consumers who are not members of certain affinity groups (e.g., AAA, AARP, etc.).

This is the third round of motions to dismiss the action. Defendant insurers argue that the determination of “super group” status is within the exclusive jurisdiction of the California Department of Insurance (CDI). Policyholders argue that because they are not asking for a determination as to the reasonableness of rates, a court can decide the matter. The court held that, while it could make the “super group” determination, it would exercise discretion to invoke the primary jurisdiction doctrine to take advantage of the CDI’s administrative expertise.

*Gerhart v. U.S. Dept. of Health & Human Servs.*, 242 F.Supp.3d 806 (S.D. Iowa 2017)

The U.S. District Court for the District of Iowa granted a motion to dismiss in this action involving Risk Corridors Program payments. The U.S. Department of Health and Human Services (HHS) withheld partial risk corridors payments for an insolvent insurer and used the amounts to offset an alleged debt arising from a startup loan. The Iowa insurance commissioner, in his capacity as liquidator of CoOpportunity Health, Inc., requested declaratory relief applying Iowa law to all claims against the insurer, rejecting HHS’ claim of “super priority,” and prohibiting HHS from setting off or netting any payments owed to CoOpportunity against claimed debts.

The court agreed with HHS that jurisdiction was appropriately placed in the U.S. Court of Federal Claims because the requested damages can be addressed monetarily under the federal Tucker Act. Reversing the holding of funds or prohibiting the offset would both result in the payment of money from HHS; as such, the Court held that money would adequately address the alleged harm. The court also ruled that opining on the choice of law would be tantamount to an advisory opinion and, therefore, would be outside the court’s jurisdiction.

*Jacob v. UNUM Life Ins. Co. of Am.*, No. 16-cv-17666, 2017 WL 4764357 (E.D. La. Oct. 20, 2017)

Policyholder, Jacob, appeals the denial of disability benefits, arguing that the court should review her claim *de novo*, as the policy’s discretionary clause is void under Texas law. The plan’s discretionary clause provides that the policy administrator’s determinations are reviewed by the courts only for an abuse of discretion. Texas has a relevant statute and regulation, both of which prohibit the use of discretionary clauses in insurance policies. At issue is whether either of these apply based on their effective dates and on the facts surrounding the issuance of an amendment to the plan. The regulation applies “on or after any . . . amendment of the form occurring on or after June 1, 2011.” The statute took effect

June 17, 2011. UNUM issued the plan in 1997 and issued an amendment to the plan in 2014.

The court determined that Texas law prohibits the plan's discretionary clause, reasoning that, if the amendment constituted a new policy, the statute would apply and if the amendment amended the existing policy, the regulation would apply. The court also rejected UNUM's argument that the agency's regulation was invalid, holding that the agency has broad authority to adopt necessary and appropriate rules "to implement the powers and duties of the department under [the insurance] code," as well as specific authority to adopt rules prohibiting companies from engaging in unfair or deceptive practices.

## State Courts

### California

*Assoc. of Cal. Ins. Cos. v. Jones*, 386 P.3d 1188 (Cal. 2017)

This case involves a challenge to rules promulgated under the insurance commissioner's authority granted by California's Unfair Insurance Practices Act (UIPA). In the wake of California wildfires, homeowners found that they were substantially underinsured when it came to replacing their homes. To address this problem, the insurance commissioner issued rules to standardize insurers' replacement cost calculations and clarified that estimates given by insurers that did not comport with the new rule could be considered misleading under UIPA. The rule required that an estimate include all expenses necessary to rebuild the insured structure and that the insurer verify its estimate methods annually.

Plaintiffs, the Association of California Insurance Companies and the Personal Insurance Federation of California (collectively, Association), filed a declaratory judgment action challenging the validity of the rules, claiming that they exceeded the commissioner's authority, improperly restricted insurance underwriting and violated insurers' right to free speech. The trial court found that the regulation exceeded the commissioner's authority by attempting to define additional practices under UIPA by rule. The appellate court affirmed, finding that UIPA did not define "incomplete replacement cost estimates," noting that the omission "was a deliberate choice." The California Supreme Court reversed, holding that the commissioner had broad authority under UIPA to bring enforcement actions and to promulgate rules. The court did not believe that the legislature's failure to define "incomplete replacement cost estimates" meant that the commissioner could not do so. The court held that the Association did not meet its burden to show that a noncompliant estimate would not be misleading in most cases.

## **Illinois**

*Catledge v. Dowling, 82 N.E.3d 781 (Ill. App. Ct. 2017)*

Policyholder Catledge filed a suit seeking review of the Illinois Department of Insurance's (IDI) order upholding the cancellation of his homeowners policy. Nationwide Mutual Fire Insurance company notified Catledge that his policy had been cancelled due to a "substantial change in risk" when the home went into foreclosure. The IDI granted Catledge's request for a hearing on the matter and the hearing officer found the cancellation was allowed under Illinois law. The IDI acting director entered a final order adopting the recommendations of the hearing officer. Catledge then filed a complaint in state court seeking judicial review.

The trial court granted the IDI's motion to dismiss based on a finding that Catledge had failed to exhaust his administrative remedies. The appellate court affirmed this decision because Catledge did not seek rehearing of the acting director's order before seeking judicial review. The court did not find that Catledge had met any of the exceptions to the exhaustion doctrine, as he asserted that a rehearing would be done by the same hearing officer without providing any evidence for that claim.

## **Indiana**

*First Am. Title Ins. Co. v. Robertson, 65 N.E. 3d 1045 (Ind. Ct. App. 2016), reh'g denied (Jan. 31, 2017)*

This case, on remand from the Indiana Supreme Court, involves the Indiana Department of Insurance's (IDOI) market conduct order in the examination of First American Title Insurance Company. First American had originally filed a petition for review in state court claiming that the IDOI failed to timely file its order in the matter. The case went up to the Indiana Supreme Court, which held that the trial court erred in failing to grant the IDOI's motion to dismiss for First American's failure to file the agency record.

On remand to the trial court, First American filed a writ of prohibition and mandate, a request for declaratory relief and an amended petition for judicial review. The request for declaratory relief included a claim that an administrative agency's void action is subject to collateral attack at any time. The IDOI filed a motion to dismiss, arguing that the Indiana Supreme Court already determined that First American's administrative procedure claim failed and, because the declaratory judgment action was based on the same claim, both were barred by res judicata and law of the case doctrines. The trial court granted the motion to dismiss. The Court of Appeals affirmed the order, finding that the claims were barred by res judicata. The court reasoned that First American's claims concerned whether the order was timely filed and that such fact-sensitive issues should be resolved by the administrative agency.

*Discovery Ins. Co. v. N.C. Dept. of Ins., No. COA17-285, 2017 WL 4364481 (N.C. Ct. App. Oct. 3, 2017)*

In this case involving fraudulent claims against the North Carolina Reinsurance Facility (NCRF), a statutorily created entity reinsuring all motor vehicle liability insurers in the state, the Court of Appeals of North Carolina upheld the insurance commissioner's order of restitution. The petitioner, Discovery Insurance Company, learned that one of its claims executives had issued checks for fraudulent payments totaling \$5.3 million, with \$1.3 million of that amount reimbursed by the NCRF as auto liability claims payments. The NCRF sought reimbursement of \$1.3 million from Discovery and ultimately obtained a favorable order from the insurance commissioner. Discovery appealed.

The court held the NCRF was properly authorized to recoup fraudulent funds under a statutory catch-all provision empowering the entity to take any action necessary to accomplish the purpose of the NCRF. This provision allows the NCRF to order reimbursement without the necessity of commencing a civil lawsuit. The court also rejected Discovery's argument that the NCRF was estopped from seeking repayment because the NCRF allegedly did not follow its own claims audit process. The court found Discovery violated its own duty to obtain claimant confirmation on a reasonably representative number of claim payments; therefore, Discovery had unclean hands and could not assert an estoppel claim.

*Progressive Am. Ins. Co. v. Garrido, 211 So.3d 1086 (Fla. Dist. Ct. App. 2017)*

The Florida Third District Court of Appeal overturned a lower court's ruling that Florida's exclusion of chiropractors from its statutory list of "medical professionals qualified to diagnose an emergency medical condition" was unconstitutional. The court ruled that separate treatment of chiropractors under the personal injury protection statute had a rational basis and should survive an equal protection claim. The court acknowledged that chiropractors may be as qualified as other medical professionals to diagnose patients with an emergency condition, but declined to substitute judicial fact-finding for legislative fact-finding. The statutory exclusion bears a reasonable relationship to a legitimate governmental objective.

## Cases in Which the NAIC Filed as *Amicus Curiae*

*Moda Health Plan, Inc. v. United States, No. 17-1994 (NAIC brief filed Aug. 28, 2017)*

The NAIC submitted an amicus brief in the U.S. Court of Appeals for the Federal Circuit in the case of *Moda Health Plan v. United States* on Aug. 28, 2017. The NAIC filed this brief in support of Moda Health Plan, which had prevailed in its arguments in the U.S. Court of Federal Claims. The case involves the ACA Risk Corridors Program, under which insurers operating on state exchanges were subject to caps on their profits or losses beyond a certain threshold. The federal government has paid 12.6% of what it owes Moda and other insurers for losses under the Risk Corridors Program. The NAIC's brief asserted that nonpayment of risk corridors amounts on a national scale has negatively impacted state insurance regulators' ability to oversee rates, licensing, capital adequacy and liquidation of companies. Nonpayment has also suppressed competition, ultimately hurting consumer choice and affordability.

*Amica Life Ins. Co.v. Wertz, No. 1:15-cv-01161-WJM-CBS, D. Colo. (NAIC brief filed Oct. 27, 2017)*

The NAIC submitted an amicus brief in support of plaintiff Amica Life Insurance Company's motion for summary judgment on Oct. 27, 2017. The underlying declaratory judgment action filed by Amica against a life insurance policy beneficiary centered on the enforceability of a two-year suicide exclusion contained in a policy issued pursuant to the uniform standards approved by the Interstate Insurance Product Regulation Commission (IIPRC). While Amica argued the two-year suicide exclusion should apply, defendant Wertz argued that Colorado's one-year suicide exclusion statute was applicable, as adoption of the IIPRC uniform standards represented an unconstitutional delegation of authority to an interstate agency. In light of the perceived conflict between the IIPRC uniform standards and Colorado law, the U.S. District Court for the District of Colorado certified a question to the Colorado Supreme Court asking for it to rule on the matter. The Colorado Supreme Court rejected the opportunity to address the question, leaving the issue to the federal court for its consideration. The NAIC's brief detailed the development of the NAIC *Interstate Insurance Product Regulation Compact* (#692), while also addressing the constitutional issues considered during its development. The NAIC's brief also argued that Colorado's adoption of Model #692, as well as its adherence to the IIPRC uniform standards, was an appropriate delegation of authority to the IIPRC.

# Journal of Insurance Regulation

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Submissions should relate to the regulation of insurance. They may include empirical work, theory, and institutional or policy analysis. We seek papers that advance research or analytical techniques, particularly papers that make new research more understandable to regulators.

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References to published literature should be inserted into the text using the “author, date” format. Examples are: (1) “Manders et al. (1994) have shown. . .” and (2) “Interstate compacts have been researched extensively (Manders et al., 1994).” Cited literature should be shown in a “References” section, containing an alphabetical list of authors as shown below.

Cummins, J. David and Richard A. Derrig, eds., 1989. *Financial Models of Insurance Solvency*, Norwell, Mass.: Kluwer Academic Publishers.

Manders, John M., Therese M. Vaughan and Robert H. Myers, Jr., 1994. “Insurance Regulation in the Public Interest: Where Do We Go from Here?” *Journal of Insurance Regulation*, 12: 285.

National Association of Insurance Commissioners, 1992. *An Update of the NAIC Solvency Agenda*, Jan. 7, Kansas City, Mo.: NAIC.

“Spreading Disaster Risk,” 1994. *Business Insurance*, Feb. 28, p. 1.

Footnotes should be used to supply useful background or technical information that might distract or disinterest the general readership of insurance professionals. Footnotes should not simply cite published literature — use instead the “author, date” format above.

Tables and charts should be used only if needed to *directly support* the thesis of the paper. They should have descriptive titles and helpful explanatory notes included at the foot of the exhibit.

Papers, including exhibits and appendices, should be limited to 45 double-spaced pages. Manuscripts are sent to reviewers anonymously; author(s) and affiliation(s) should appear only on a separate title page. The first page should include an abstract of no more than 200 words. Manuscripts should be sent by email in a Microsoft Word file to:

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